



General Purposes Committee

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

**Wednesday, January 9, 2019
4:00 p.m.**

Pg. # ITEM

MINUTES

GP-3 *Motion to adopt the **minutes** of the meeting of the General Purposes Committee held on December 17, 2018.*



ENGINEERING AND PUBLIC WORKS DIVISION

1. **CITY BUILDINGS – BUILDING FACILITIES DESIGN GUIDELINES
AND TECHNICAL SPECIFICATIONS**
(File Ref. No. 06-2050-01) (REDMS No. 6047006 v. 4)

GP-13

See Page GP-13 for full report

Designated Speaker: Jim Young

STAFF RECOMMENDATION

That the proposed “City of Richmond Building Facilities Design Guidelines and Technical Specifications” presented as Attachment 1 and described in the staff report dated January 9, 2019, from the Director, Engineering be endorsed and used in planning for future corporate facilities.



COMMUNITY SAFETY DIVISION

2. **NON-FARM USE FILL APPLICATION FOR THE PROPERTY LOCATED AT 21800 RIVER ROAD (YEE)**
(File Ref. No. 12-8080-12-01) (REDMS No. 5981518 v. 10)

GP-97

See Page GP-97 for full report

Designated Speaker: Carli Williams

STAFF RECOMMENDATION

That the non-farm use fill application submitted by Joanna Yee for the property located at 21800 River Road for the purposes of developing a vegetable farm and the corresponding staff report titled “Non-Farm Use Fill Application for the Property Located at 21800 River Road (Yee)” dated November 14, 2018, be referred to the Agricultural Land Commission (ALC) for the ALC’s review and decision.



COMMUNITY SERVICES DIVISION

3. **BC POVERTY REDUCTION COALITION’S “ABC” PLAN**
(File Ref. No. 07-3000-01) (REDMS No. 6051450 v. 2)

GP-114

See Page GP-114 for full report

Designated Speaker: Kim Somerville

STAFF RECOMMENDATION

- (1) *That the BC Poverty Reduction Coalition’s proposed Municipal Resolution, “Call for the ABC Plan for an Accountable, Bold and Comprehensive poverty reduction plan for British Columbia,” be endorsed; and*
- (2) *That the resolution be sent to the Premier, the Minister of Social Development and Poverty Reduction and Richmond Members of the Legislative Assembly.*



ADJOURNMENT





General Purposes Committee

Date: Monday, December 17, 2018

Place: Anderson Room
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day
Councillor Kelly Greene
Councillor Alexa Loo
Councillor Bill McNulty
Councillor Linda McPhail
Councillor Harold Steves
Councillor Michael Wolfe

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 General Purposes Committee held on December 3, 2018, be adopted as circulated.

CARRIED

COUNCILLOR ALEXA LOO

1. **BYLAWS REGULATING MASSAGE PARLOURS**

(File Ref. No. 12-8060-01)

Councillor Loo spoke to potential changes to bylaws that would render operating massage parlours challenging. As a result, the following **referral motion** was introduced:

It was moved and seconded

That staff be directed to review existing bylaws for unregulated massage service providers and report back with recommendations.

CARRIED

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COMMUNITY SAFETY DIVISION

In accordance with Section 100 of the *Community Charter*, Councillor Carol Day declared to be in a conflict of interest as her husband owns a bed and breakfast and left the meeting (4:05 p.m.)

2. ONE-YEAR REVIEW AND BYLAW AMENDMENTS FOR SHORT-TERM RENTALS

(File Ref. No. 12-8275-09; 12-8060-20-009899/009898) (REDMS No. 5868680 v. 11; 5962960; 5878824; 5878827)

In reply to queries from Committee, Carli Williams, Manager, Community Bylaws and Licencing, advised that (i) all short-term rental complaints, including those in multi-family dwellings, are received through a centralized complaints line that allows staff to examine a variety of enforcement options depending on the alleged contravention, (ii) residents of multi-family dwellings are encouraged to seek solutions through their Strata Corporations and (iii) tickets issued under the City's Notice of Bylaw Violation Dispute Adjudication bylaw are capped at a maximum of \$500 in accordance with the *Community Charter*.

It was moved and seconded

- (1) *That Notice of Bylaw Violation Dispute Adjudication Bylaw No. 8122, Amendment Bylaw No. 9899, to add penalties related to short-term rentals, be introduced and given first, second and third readings;***
- (2) *That Richmond Zoning Bylaw No. 8500, Amendment Bylaw No. 9898, to reinstate a provision to allow a 5-room bed and breakfast business at 13333 Princess Street, be introduced and given first reading; and***
- (3) *That staff be instructed to report back on a licencing program, including an analysis of resources for its implementation, to regulate boarding and lodging in order to create a public registry.***

CARRIED

Councillor Day returned to the meeting (4:09 p.m.)

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3. APPLICATION FOR A NEW LIQUOR PRIMARY LIQUOR LICENCE FROM MONSTER L KARAOKE LTD, AT 8400 ALEXANDRA ROAD UNIT 130

(File Ref. No. 12-8275-30-001) (REDMS No. 6038880)

It was moved and seconded

(1) *That the application from Monster L Karaoke Ltd., for a new Liquor Primary Liquor Licence to operate a karaoke lounge establishment, at premises located at 8400 Alexandra Road Unit 130, with liquor service, be supported for:*

(a) *a new Liquor Primary Liquor Licence with primary business focus of entertainment, specifically a karaoke lounge with total person capacity of 50 occupants; and*

(b) *liquor service hours for Monday to Sunday, from 9:00 AM to 2:00AM;*

(2) *That a letter be sent to Liquor Control and Licensing Branch advising that:*

(a) *Council supports the applicant's new Liquor Primary Liquor Licence application and the hours of liquor service with the conditions as listed above;*

(b) *the total person capacity set at 50 occupants is acknowledged;*

(c) *Council's comments on the prescribed criteria (Section 71 of the Liquor Control and Licencing Regulations) are as follows:*

(i) *the impact of additional noise and traffic in the area of the establishment was considered;*

(ii) *the potential impact on the community was assessed through a community consultation process;*

(iii) *given that this is a new business, there is no history of non-compliance with this establishment;*

(d) *as the operation of a licenced establishment may affect nearby residents, businesses and property owners, the City gathered the views of the community through a community consultation process as follows:*

(i) *residents, businesses and property owners within a 50 metre radius of the establishment were notified by letter. The letter provided information on the application with instructions on how to submit comments or concerns; and*

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- (ii) *signage was posted at the subject property and three public notices were published in a local newspaper. The signage and public notice provided information on the application with instructions on how to submit comments and concerns;*
- (e) *Council's comments on the general impact of the views of residents, businesses and property owners are as follows:*
 - (i) *the community consultation process was completed within 90 days of the application process; and*
 - (ii) *that based on the number of letters sent and no opposed responses received, Council considers that the approval of this application is acceptable to the majority of the residents, businesses and property owners in the area and the community.*

CARRIED

FINANCE AND CORPORATE SERVICES DIVISION

4. SISTER CITY ADVISORY COMMITTEE FOUR-YEAR ACTIVITY PLAN (2019-2022)

(File Ref. No. 01-0100-30-SCIT1-01) (REDMS No. 6027517)

In reply to queries from Committee, Mike Romas, Manager, Customer Services, provided the following information:

- a recommendation on a proposed additional Sister City from the Sister City Advisory Committee is anticipated in early 2019;
- the Sister City Advisory Committee recognizes the need to expand the sport exchange program, and has presented to the Richmond Sports Council on this initiative;
- in addition to funding provided, the Sister City Advisory Committee supports school exchanges by facilitating programming events like receptions and tours; and
- there is an opportunity to highlight the City's 140th anniversary through the annual City-to City recognition program activity.

Discussion took place and the Sister City Advisory Committee's efforts on the proposed art and photo exchange programs were recognized; also, it was noted that staff be mindful of the current political climate between Canada and China.

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In response to queries regarding the proposed financial impact, Andrew Nazareth, General Manager, Finance and Corporate Services, advised that the Sister City Program has an annual operating budget of \$11,000, which is part of the City's annual base budget and allocated from property taxes; as the Sister City Advisory Committee's activity plan is on a four-year cycle, the remainder of the proposed program budget has been considered as part of surplus allocations, thereby preventing a tax increase in the year the program budget is considered by Council.

Discussion ensued on potentially increasing the annual operating budget in an effort to move away from utilizing surplus allocations to fund the Sister City Program; the Chair directed staff take Committee's comments under advisement and examine how the Program's budget is administered.

Discussion then took place on sourcing corporate sponsorships to offset costs and it was noted that discounts were extended by organizations for travel costs in the past.

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

It was moved and seconded

- (1) *That the staff report titled "Sister City Advisory Committee Four-Year Activity Plan (2019-2022)", dated November 23, 2018, from the Manager, Customer Service, be received for information;*
- (2) *That the 2019-2022 Sister City Advisory Committee Program Activity budget of \$239,050 be referred to the budget process including timing and the source of funds for consideration; and*
- (3) *That staff liaise with the Sister City Advisory Committee for potential travel including budget and program details and report back.*

CARRIED

COMMUNITY SERVICES DIVISION

5. RICHMOND LAWN BOWLING CLUBHOUSE SITE AND PROGRAM UPDATE

(File Ref. No. 06-2052-25-LBOW1) (REDMS No. 6030445 v. 54; 6036730; 6045609)

Elizabeth Ayers, Director, Recreation and Sport Services, accompanied by Jim Young, Senior Manager, Capital Buildings Project Development, remarked that staff is seeking Council direction on three matters: (i) the location of the lawn bowling greens, (ii) the location of the replacement Clubhouse, and (iii) programming for the replacement Clubhouse.

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In reply to queries from Committee, staff provided the following information:

- the Richmond Lawn Bowling Club pledged \$90,000 towards the construction of the replacement Clubhouse; however staff are unaware of the Club's fundraising capacity for additional funds;
- the Club prefers a 4,900 square foot Clubhouse as they would like additional space to host banquets and increase the number of lockers; however, staff believe that this can be achieved through thoughtful design with a 4,300 square foot Clubhouse;
- each of the proposed options can accommodate the Club's current membership; however the Club prefers the largest option for its Clubhouse in order to accommodate special events; in an effort to address the Club's desire to host special events, staff have suggested utilizing the Minoru Centre for Active Living, which has a full service catering kitchen;
- the pan-abode structure poses challenges in expanding the current Clubhouse;
- relocating the two lawn bowling greens is estimated to cost approximately \$980,000; resurfacing the two lawn bowling greens is estimated to cost approximately \$350,000;
- the existing lawn bowling facility does not accommodate the Club's current membership; for instance, there are no change facilities, lockers are inadequate with some being situated in sheds;
- staff support upgrading lawn bowling amenities as the sport is popular among the City's growing older adult population and meets several of the City's recreation framework initiatives as it is a very social sport, and provides community connections particularly for older adults;
- it is anticipated that a larger Clubhouse will present opportunities to expand on the Club's current membership;
- through the design process, any future Clubhouse layout would be more efficient, thereby accommodating more people; and
- the current Clubhouse's pan-abode structure does not lend itself well to renovations or expansions.

Discussion took place and the following Committee comments were noted:

- the proposed updates for the existing lawn bowling amenities present the City an opportunity to build a first class facility that can attract provincial and international events;
- the relocation or replacement of approximately 19 trees is concerning;

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- the need for the largest Clubhouse option cannot be justified in light of the Club's membership numbers and the proximity of the Minoru Centre for Active Living as an alternate space for the Club to host large events; and
- there is a need to examine the overall plan for Minoru Park in conjunction with the lawn bowling amenities.

Ivan Wong, Vice-President of the Richmond Lawn Bowling Club, stated that the current Clubhouse was built in 1963 and is very small as it can only accommodate 60 people comfortably. The Club prefers a larger Clubhouse in an effort to attract and host provincial and international events.

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

It was moved and seconded

That the staff report titled "Richmond Lawn Bowling Clubhouse Site and Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development be referred back to staff to examine more green options that would allow for the potential re-use and expansion of the Clubhouse and avoid removing trees.

DEFEATED

Opposed: Mayor Brodie
Cllrs. Au
Loo
McPhail
McNulty

It was moved and seconded

That, subject to the budget process,

- (1) *Attachment 1 – South Green Relocated be selected as the preferred location for the lawn bowling greens, as described in the staff report titled "Richmond Lawn Bowling Clubhouse Site and Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development;*
- (2) *the Clubhouse to the east of the relocated lawn bowling greens as shown in Attachment 1 be selected as the preferred site for the Richmond Lawn Bowling Clubhouse, as described in the staff report titled "Richmond Lawn Bowling Clubhouse Site and Program Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development; and*

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- (3) *That Program Option 3 be selected as the preferred program for the Richmond Lawn Bowling Clubhouse, as described in the staff report titled "Richmond Lawn Bowling Clubhouse Site and Program Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development.*

The question on the motion was not called as discussion took place on the preferred location for the lawn bowling greens and program options for the Clubhouse.

The question on Part (1) of the motion was then called and it was **DEFEATED** with Cllrs. Au, Day, Green, Loo, Steves and Wolfe opposed.

It was moved and seconded

That, subject to the budget process, the lawn bowling greens be resurfaced but not be relocated, as described in the staff report titled "Richmond Lawn Bowling Clubhouse Site and Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development.

CARRIED

Opposed: Cllrs. McNulty
McPhail

It was moved and seconded

That, subject to the budget process, Clubhouse Site Option 2 as shown in Attachment 3 be selected as the preferred site for the Richmond Lawn Bowling Clubhouse, as described in the staff report titled "Richmond Lawn Bowling Clubhouse Site and Program Update," dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development

The question on the motion was not called as discussion took place on the footprint of the proposed new Clubhouse and in particular, whether a narrower building would allow for pedestrian circulation around the Clubhouse. The Chair remarked that the final configuration of the Clubhouse would be of interest to Council.

The question on the motion was then called and it was **CARRIED** with Cllrs. Loo, McNulty, McPhail and Wolfe opposed.

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The following **amendment motion** was introduced:

It was moved and seconded

That Part (3) of the main motion be amended to read as follows:

“That Program Option 2 be selected as the preferred program for the Richmond Lawn Bowling Clubhouse, as described in the staff report titled “Richmond Lawn Bowling Clubhouse Site and Program Update,” dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development.”

DEFEATED

Opposed: Cllrs. Au
Day
Greene
Steves
Wolfe

The following **amendment motion** was introduced:

It was moved and seconded

That Part (3) of the main motion be amended to read as follows:

“That Program Option 1 be selected as the preferred program for the Richmond Lawn Bowling Clubhouse, as described in the staff report titled “Richmond Lawn Bowling Clubhouse Site and Program Update,” dated November 29, 2018, from the Director, Recreation Services and the Senior Manager, Capital Buildings Project Development.”

DEFEATED

Opposed: Mayor Brodie
Cllrs. Loo
McNulty
McPhail
Wolfe

The question on Part (3) of the main motion was then called and it was **DEFEATED** with Mayor Brodie and Cllrs. Au, Day, Greene, Steves, and Wolfe opposed.

It was moved and seconded

That staff report back on additional options for the size of the Lawn Bowling Green Clubhouse and program.

The question on the referral motion was not called as Committee requested that staff provide information regarding what other municipalities have for lawn bowling amenities.

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The question on the referral motion was then called and it was **CARRIED**.

ADJOURNMENT

It was moved and seconded

That the meeting adjourn (5:22 p.m.).

CARRIED

Certified a true and correct copy of the
Minutes of the meeting of the General
Purposes Committee of the Council of the
City of Richmond held on Monday,
December 17, 2018.

Mayor Malcolm D. Brodie
Chair

Hanieh Berg
Legislative Services Coordinator



City of Richmond

Report to Committee

To: General Purposes Committee

Date: January 9, 2019

From: John Irving, P.Eng. MPA
Director, Engineering

File: 06-2050-01/2018-Vol 01

Re: **City Buildings – Building Facilities Design Guidelines and Technical Specifications**

Staff Recommendation

That the proposed “City of Richmond Building Facilities Design Guidelines and Technical Specifications” presented as Attachment 1 of this report, and as described in the report dated January 9, 2019, from the Director, Engineering be endorsed and used in planning for future corporate facilities.

John Irving, P.Eng. MPA
Director, Engineering
(604-276-4140)

Att. 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

This report proposes to provide the “City of Richmond Building Facility Design Guidelines and Technical Specifications” to City staff, stakeholders, and the general public, presented as Attachment 1.

This report supports Council’s 2014-2018 Term Goal #1 A Safe Community:

Maintain emphasis on community safety to ensure Richmond continues to be a safe community.

This report supports Council’s 2014-2018 Term Goal #2 A Vibrant, Active and Connected City:

Continue the development and implementation of an excellent and accessible system of programs, services, and public spaces that reflect Richmond’s demographics, rich heritage, diverse needs, and unique opportunities, and that facilitate active, caring, and connected communities.

This report supports Council’s 2014-2018 Term Goal #3 A Well-Planned Community:

Adhere to effective planning and growth management practices to maintain and enhance the livability, sustainability and desirability of our City and its neighbourhoods, and to ensure the results match the intentions of our policies and bylaws.

This report supports Council’s 2014-2018 Term Goal #4 Leadership in Sustainability:

Continue advancement of the City’s sustainability framework and initiatives to improve the short and long term livability of our City, and that maintain Richmond’s position as a leader in sustainable programs, practices and innovations.

In parallel with the Council adopted Child Care Guidelines, Affordable Housing Guidelines and Enhanced Accessibility Design Guidelines, the Building Facilities Guidelines will assist City staff in providing Contractors, Consultants, Developers and the Public with a better understanding of what City expectations are for the design and construction of City-owned or City-leased buildings.

The proposed Guidelines will be used for future City building projects and renovation of existing City buildings. The preparation of the guidelines was coordinated by the Capital Building Project Development department in consultation with various other City departments.

Analysis

Consultation on Guidelines

The proposed “City of Richmond Building Facilities Design Guidelines and Technical Specifications” were developed to assist the design of new building construction and tenant improvements to existing buildings.

The architectural design, form and character of any given project is not addressed in these Guidelines. The Guidelines address the layer of technical detail that exists below these more recognizable elements.

During the process of developing the guidelines and technical specifications, a number of internal stakeholder meetings were held to solicit input for the consultant's initial and final drafts. An internal Stakeholder Committee was created to lead and endorse the process and was comprised of City staff from the following departments:

- Building Approvals;
- Planning and Development;
- Facility Services;
- Sustainability;
- Public Works Administration;
- Community Services; and
- Transportation

Benefits

The proposed “City of Richmond Building Facilities Design Guidelines and Technical Specifications” will help reduce staff time spent guiding developers, contractors and consultants about what to consider when building new facilities or renovating the existing buildings. The document provides a reference tool that can be used to assist with preparing design elements that are expected by the City and offers direction about how to incorporate these features.

The proposed document supports the City's goals to design and build sustainable buildings and reduce environmental impacts by including features and performance requirements that are leading edge and encourage innovative designs. By referencing the City's High Performance Building Policy, green building techniques and innovative building materials would be incorporated into the design of buildings which would help reduce GHG emissions, create greater efficiencies within buildings, and make them sustainable. As a result, the proposed guidelines would improve building operational efficiencies, reduce the City's total carbon footprint, and increase building resiliency. This would also ensure the City remains a leading municipal government in sustainability and environmental design.

Implementation

Once approved, the “City of Richmond Building Facilities Design Guidelines and Technical Specifications” document will be referenced by City staff to guide the design of all City facilities. The guidelines will be posted on the City's web site, available to developers contemplating making a community amenity contribution as part of a rezoning application.

Next Steps

As a reference document for consultants and contractors, the Guidelines will be distributed to industry and provided through the planning and procurement process. It is expected that the guidelines will need to be revised from time to time based on potential changes to the BC Building Code, sustainable building practices and lessons learned from the various facility

projects. Staff will continue to collect this information and engage external stakeholders in further enhancement of the guidelines which will be brought forward to Council in future revisions as required.

Financial Impact

None.

Conclusion

Staff recommend that the proposed “City of Richmond Building Facilities Design Guidelines and Technical Specifications”, be approved and used for future City facilities either constructed or renovated by the City as capital projects or by developers as community amenity contributions.



Martin Younis, B.Eng., M.Eng.
Senior Project Manager
(604-204-8501)
JK-jk

Att. 1: Building Facilities Design Guidelines and Technical Specifications (September 2018)

Building Facilities

DESIGN GUIDELINES AND TECHNICAL SPECIFICATIONS



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These City of Richmond Building Facilities Design Guidelines and Technical Specifications ["The Guidelines"] were approved by City Council on (mm/dd/yyyy) as an administrative document to be updated from (TBD by council).

The City of Richmond provides these Guidelines to assist City staff and the development community with a better understanding of what City expectations are for the design and construction of City-owned or City-leased premises. The Guidelines are provided to the public as well as a resource on an information only basis.

Therefore, while the content is thought to be accurate on the publication date shown, the Guidelines are provided on an "as is" basis, and without warranty of any kind, either expressed or implied.

The City of Richmond, its elected officials, officers, agents, employees and contractors will, in no event, be liable or responsible for losses or damages of any kind arising out of the use of the Guidelines. Additionally, changes may be made to the Guidelines without prior notice.

The information contained in the Guidelines is always subject to the provisions of all governing legislation and bylaws including, without limitation, the BC Building Code, the City of Richmond Zoning Bylaw 8500, the City of Richmond Building Regulation Bylaw 7230, and the City of Richmond Subdivision and Development Bylaw 8751, Transportation Association Canada (TAC) regulations, City of Richmond Engineering Design Specifications, Master Municipal Construction Documents (MMCD), the City of Richmond MMCD Supplementary Specifications and Detailed Drawings, including all as they may be amended or replaced from time to time.

Executive Summary



Richmond City Hall exemplifies a civic building with good design quality and the use of durable materials.

Construction of new City-owned facilities in Richmond, or the renovation of existing City-owned ones, represents a significant investment of public resources for the municipality. Further, ongoing upkeep of City buildings requires additional resources, to ensure that the original investments in City building assets are well-maintained and operating with optimum efficiency.

It has been City Council policy for many years, to set out administrative procedures and guidelines that provide appropriate direction for the design and development of City building assets, in order to promote a good return on investment in civic infrastructure and better serve the community. The City continues to be keenly interested in fostering a high level of design quality in its buildings and open space and engineering infrastructure, but also in ensuring that the design of these built assets is such that operation and maintenance goals are met, and that upkeep costs are minimized as much as possible.

The intent of these Design Guidelines and Technical Specifications is to organize into a single resource document, what the City's general expectations are for the design and delivery of the various components that make up a City-owned construction project. It is not intended to provide barriers or limit the creative inputs of designers or constructors that work on the City's behalf, but rather to delineate in a general way, what aspects of design and materiality the City wishes to see delivered in its buildings and associated public works.

Construction of a new build, renovation of a City-owned or leased building, maintenance of City facilities or development of civic infrastructure can, generally be a complex undertaking. With this resource document, the intent is that with City expectations for design and construction of civic assets clearly identified, the task of delivering functional, resilient and quality civic infrastructure can be better facilitated.

Introduction

1.0 Introduction

1.1 Mission Statement

It is the intent of The City of Richmond to standardize requirements for City-owned construction projects, both for new builds and for the renovation of existing buildings. The goal is to provide clear direction to developers, architects, contractors, material suppliers, installers, and others in the development industry, regarding the City's expectations for the design and delivery of the various components that make up City-owned construction projects.

1.2 Intent of Guidelines and Technical Specifications and How They Are to be Applied

In the City of Richmond, the construction of new buildings and the renovation of existing ones is mandated through the development and buildings approval process. The intent of these Guidelines and Technical Specifications is to provide general performance and specification requirements for the various components that make up a City-owned building project. It is intended that this information will provide assistance to the contractors and vendors involved in the building project to gain project approvals, as well as deliver the appropriate building assemblies, service systems and material finishes that the City expects in completed buildings.

1.3 City of Richmond's Commitment to Quality and Resilience in City Buildings

The City wants to facilitate quality construction, and optimize life-cycle benefits and overall building resilience in its new builds and building renovations, and in its new and rehabilitated public spaces. This initiative is based on the following core planning principles:

- meeting the needs of the community.
- commitment to public engagement in the delivery of useful and resilient City-owned and City-leased buildings and public spaces.
- optimally meeting program and functional requirements for the visiting public and for staff in civic buildings.
- embodying principles of sustainability in City new builds and renovations that minimize maintenance costs over the life of the facility.
- commitment to sound public finance economic practice.
- commitment to working pro-actively with all stakeholders in the delivery of quality buildings and public spaces.
- commitment to partnering with other civic bodies or community organizations.
- commitment to delivering public buildings and open spaces that enhance accessibility and independence for all building users.



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Contemporary new builds and renovations typically feature complex mechanical and electrical systems. These Guidelines and Technical Specifications provide direction for delivering appropriate service systems and building assemblies for City-owned buildings.

Introduction

1.4 How the Development Process in the City of Richmond Works, and How Principles to Incorporate Quality Construction and Resilience in Buildings and Open Spaces Can be Integrated into the Development Process

1.4.1 Overview of the Process

The City wants to work with the public, the development community, the various players in the non-profit sector, and with other involved groups, to help create high quality, fully resilient and accessible buildings and open spaces.

To facilitate this process, it is important for building and public space project proposal applicants to follow an appropriate development methodology in order to promote applications that successfully meet City and Provincial guidelines and requirements for new development.

An overview of the types of approvals process involved is as follows:

City Approvals

- a) Zoning
 - confirm whether proposed use is permitted under the sites existing zoning
 - if not, a rezoning application and review process is required. This involves staff review, a Public Hearing, and adoption by City Council.
- b) Development Permit (DP)
 - A DP regulates building form and character. Staff reviews the process for compliance with approved design guidelines (includes landscape plan.)
- c) Building Permit
 - City approval that allows construction to begin. It is comprised of working drawings and specifications that demonstrate compliance with the Building Code, Development Permit requirements, and these Design Guidelines and Technical Specifications.
- d) Final Building Permit
 - City final approval and commissioning of the constructed facility, indicating that it is ready for use.



The City of Richmond is committed to constructing high quality, resilient and fully accessible buildings, for new builds, tenant improvements and renovated City facilities.

Definitions Pertaining to City-Owned Buildings and Public Spaces

2

2.0 Glossary

Developments incorporating Building Resilience and Construction Quality have a descriptive and regulatory language that is specific to the requirements of this design and construction strategy:

Accessibility

A design standard that allows for persons with disabilities to approach, enter, pass to and from, and make use of an area and its facilities, without the assistance of a third party or caregiver. Accessibility allows for independence of use and movement by individuals who have a loss or a reduction of functional ability, including persons in wheelchairs or those with a sensory disability, such as visual or hearing impairment.

Active Transportation Routes

Human-powered transportation modes such as walking, cycling or rollerblading. Providing barrier-free design typically enhances the functionality of Active Transportation Routes, as well as improves accessibility for people with diverse abilities.



Active Transportation Routes.

Adaptable Buildings and Public Spaces

Anticipating future needs, or changing aspects of existing buildings and public spaces to make them more functionally useful, to people with diverse abilities. For example, bathrooms without grab bars can be constructed with backing in the wall framing, to enable the addition of grab bars in the future.

Aging in Place

The ability to live in one's home for as long as possible. Often this will depend on the living space being adaptable in order to assist with livability and health and wellness goals.

ANSI

The American National Standards Institute [ANSI] is a standards organization that oversees the development of voluntary consensus standards for a large variety of products, services, systems, and personnel in the United States. In addition, the organization coordinates U.S. standards with international standards to try to ensure consistency.

ARCNet

Attached Resource Computer Network [ARCNet] is a communications protocol for local area networks of mechanism, through coaxial cabling.

ASHRAE

The American Society of Heating, Refrigerating and Air-Conditioning [ASHRAE] is an international standards organization for numerous building related systems. It is the organization's mission to advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry.

Definitions Pertaining to City-Owned Buildings and Public Spaces

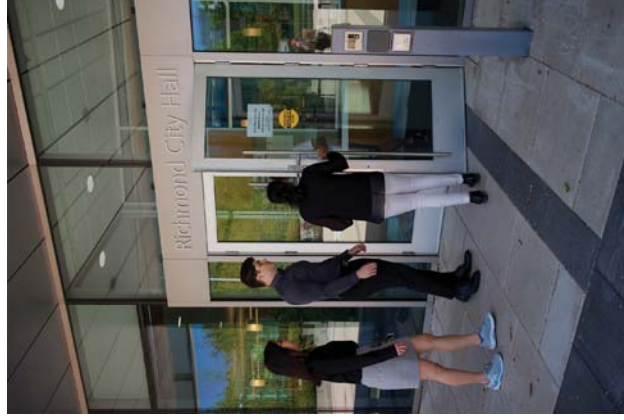
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Assistive Listening Device

Wireless sound transmission systems that improve sound reception for persons with hearing disabilities. Such systems provide adjustable amplification for the user, while blocking out background noise disturbances.

Automatic Door / Power-Assisted Door

A door equipped with power-operation and controls that open and close the door without manually touching the door. Switches for such doors typically are push plates to enable accessibility, but can also include photoelectrical devices, or floor mat actuators.



Power - assisted doors to promote accessibility should be installed at building entrances and key interior doors, such as public washroom doors.

BACNet

Is an ANSI / ASHRAE standard communications protocol for direct digital control networks and automated building mechanisms. It was designed to be used for applications such as heating, ventilation, and air-conditioning control, lighting, access control, and fire detection systems and their associated equipment.

Barrier-Free Design

A design philosophy that looks to eliminate physical barriers on the ground plane that impede freedom of movement. Primarily concerned with avoiding curbs, steps or changes in grade that make movement in a wheelchair difficult or impossible, barrier-free design also helps the average person's ease of mobility, since trip hazards are avoided or eliminated.

BC Building Code

The legislation that governs the design and construction of new buildings, additions to buildings, alterations to existing buildings, and the occupancy of any building. The BC Building Code sets out the minimum requirements for accommodating accessibility in buildings.

Block Programming

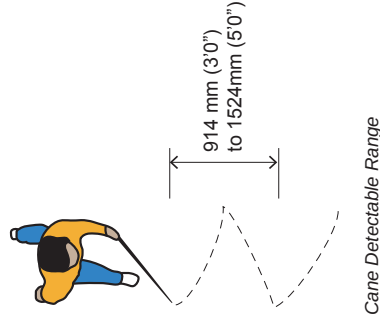
Is a pre-programmed set of instructions (block) that can be used in a Direct Digital Control (DDC) system to control a specific action or transfer function. To understand the specific action that the block programming can accomplish, it is crucial that the pre-programmed instructions are able to be interpreted.

Canadian 2017 NECB

The National Energy Code of Canada for Buildings (NECB) 2017 provides minimum requirements for the design and construction of energy-efficient buildings and covers the building envelope, systems and equipment for heating, ventilating and air-conditioning, service water heating, lighting, and the provision of electrical power systems and motors.

City-Owned Buildings and Public Spaces

Definitions Pertaining to



Cane Detectable

The condition of an object being within the detection range of a user's cane as it is swept or tapped.

Circulation Path

A way of passage for pedestrians, including walkways, hallways, courtyards, stairways and stair landings. Accessible circulation paths must meet minimum regulatory standards in order to comply with building code requirements.

Clear Space

The minimum unobstructed floor area or ground space required to accommodate a single stationary wheelchair, scooter, or other mobility device, including the user of the device.

Closed-Circuit Telephone [Enterphone]

A house or courtesy phone, or a telephone to gain entrance to a building. The telephone should be installed at an appropriate mounting height to provide accessibility.

Colour Contrast and Conspicuity

Must be provided on building elements like stair nosings or signage, to promote legibility for persons with low vision challenges. Research shows that elements are more conspicuous when there is a colour contrast of at least 70%, with light-coloured characters on a dark background providing the best readability.

Crime Prevention through Environmental Design [CPTED]

An approach to building and urban design which can foster feelings of security for residents and users. CPTED principles should also endeavor to accommodate principles of Enhanced Accessibility.

Detectable Warning and Indicator Surface

A surface treatment on pedestrian walkways, ramps and stairs, that provides a warning for persons with visual impairments of obstructions on the circulation path. As well, when providing for colour contrasts, indicator surfaces must be textured differently in order to be cane-detectable.

Direct Digital Control [DDC]

Refers to the building automation system that will typically be used to control lighting and HVAC mechanical systems in a building.

Disability

A limitation occurring when an individual's physical environment fails to accommodate their functional needs. The experience of a disability can be alleviated by designing environments that accommodate a range of physical and sensory capabilities.

Egress, Means of

A continuous and unobstructed path of exit travel, in a vertical or horizontal travel direction, or a combination of both, that provides for the ability to safely leave a building. On upper floors of a building, an accessible means of egress allows for exit to be accommodated without the use of stairs, elevators or escalators, by means of providing areas of rescue assistance, such as areas of refuge or protected lobbies.

City-Owned Buildings and Public Spaces

Definitions Pertaining to

Energy Star® and Energy Star® Certified [Also, Energy Star® Portfolio Manager®]
Energy Star® is an international standard for energy efficient consumer products. Energy Star® qualified products meet strict technical specifications for energy performance --- tested and certified.

Energy Star® Certified refers to products and buildings that meet strict North American energy performance standards. Typically these products and buildings use 20-30% less energy than required by comparable federal standards.

Energy Star® Portfolio Manager® is an online tool that can be used to measure and track energy use, water consumption, and greenhouse gas emissions, and to benchmark your building's performance against similar type buildings in Canada. A certification is provided when a building scores above the 75th percentile on the Energy Star® performance scale.



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Front End Software

Typically refers to a direct digital control graphical package and user interface that the building operator will usually interact with to review operating building systems, change scheduling, and access system use data.

Gateways

Pre-programmed hardware devices in a direct digital control system that act as communication protocol translators for different protocols, such as from BACNet to ARCNet and Tridium.

General Control Language

Refers to a direct digital control system programming language that is textual.

HVAC

Heating, Ventilation and Air Conditioning [HVAC] is the technology of indoor environmental comfort. HVAC system design is a sub-discipline of mechanical engineering, based on the principles of thermodynamics, fluid mechanics, and heat transfer.

HVI

The Home Ventilating Institute [HVI] is a non-profit association offering a variety of services for manufacturers including, but not limited to, test procedures, certification and verification programs for airflow, sound and energy performance, and market support. Its mission is to advance residential ventilation practices for healthy, energy-efficient homes.

IESNA

The Illuminating Engineering Society of North America [IESNA] is a non-profit organization that publishes standards for the lighting industry.

IP

Refers to Internet Protocol, the principal communications protocol in the Internet protocol suite for relaying datagrams across network boundaries.

Floor Area Ratio [FAR]

A calculation where the total floor area of a building or development is divided by the area of the site. With respect to building accessibility issues, since providing enhanced accessibility is often about providing more space in a building --- which often can often encroach into the maximum FAR permitted --- a municipality can provide floor space exclusions so that economics of development of a building with a level of enhanced accessibility is not as negatively impacted.

Definitions Pertaining to City-Owned Buildings and Public Spaces

2

MERV

The minimum efficiency reporting value [MERV], is an ASHRAE measurement scale designed to rate the effectiveness of air filters, based on a rating scale of 1 to 16. Higher MERV ratings correspond to a greater percentage of air particles being captured on each pass through a filter. A MERV 16 filter will capture more than 95% if particles sized from 0.3 to 10 micrometers.

Mixed-Use Development

A building or development that contains two or more uses, such as retail, office, institutional and residential uses. Mixed-use developments are more urban in character and must incorporate barrier-free design attributes to help foster the establishment of complete and accessible communities.

MSTP

Multiple Spanning Tree Protocol [MSTP] is an open source communications protocol language connecting terminal controllers to a main direct digital control processing system, and is defined by the applicable networking standard IEEE 802.1Q.

2

Multi-Use Pathway

Paths that typically accommodate both bicycle and pedestrian use on the same path system. Both uses benefit from a continuous barrier-free design without curbs or steps, but care must be taken to design the multi-use path in order to avoid conflicts between pedestrians, and pedestrians who use mobility-assisting devices such as wheelchairs or strollers, and cyclists.

NRCan

Natural Resources Canada [NRCan] works with other government departments, the provinces and territories, and other Canadian and international partners to address energy needs and potential, while considering new policies, practices, and technologies.

Operable Portion of Piece of Equipment

The part of a piece of equipment that is used to activate, de-activate or adjust how it performs. These include door handles, push buttons, and coin slots.

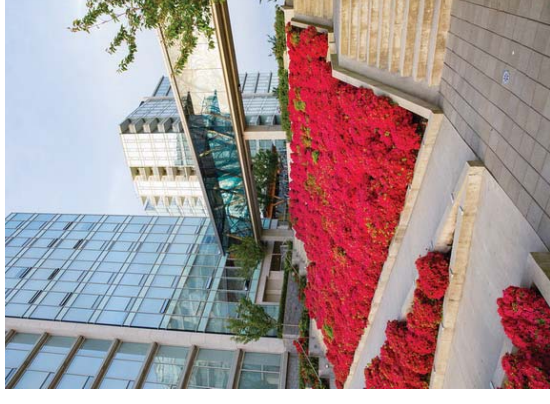
Ramp, including Ramp Slope and Cross Slope

A ramp could be less than 1 in 20 [5%]. The City's Engineering Design Specifications specifies that the "maximum slope of the wheelchair ramp should not exceed 6% and appropriate landing pads be provided (as per TAC). Cross slopes at ramps must be minimized to allow for surface drainage [maximum 6.35 mm (¼") in one foot], while not compromising the safety of the ramp.

Handrails and guards are required by code to accommodate safe use of ramps.

Regulations for ramps at street curb cuts differ from typical walking surface ramps.

Refer to City of Richmond Engineering Design Specifications for regulations concerning curb cut- related ramps at street sidewalks.



Stairs and ramps can be integrated to enhance the public realm.

Resilient Cities and Neighbourhoods

An urban planning strategy that encourages new development to be built for the long term, with an emphasis on a high level of energy utilization, and a reduction in the need to replace buildings systems or components. Elements that provide accessibility in buildings must be designed with the same level of resilience in mind.

Definitions Pertaining to City-Owned Buildings and Public Spaces

2

SEER

The Seasonal Energy Efficiency Ratio [SEER] rating of a unit is the cooling output during a typical cooling season divided by the total electric energy input during the same period. The higher the unit's SEER rating, the more energy efficient it is. In North America, the SEER is the ratio of cooling in British Thermal Units (BTU's) to the energy consumed in watt-hours.

Service Entrance

Typically a non-public entrance, provided for the delivery of goods and services. As such entrances often also provide entry for staff, principles of accessibility should also be considered.

Signage

Providing for general information or way-finding in buildings and in the public realm, signage should provide for a wide range of effectiveness in communication, and include an appropriate combination of written word, pictorial, and tactile information, including Braille.

2 Speaking Port

A piece of security equipment that provides for effective two-way communication. Often amplification of voice levels is required to deliver effective communication at speaking ports.

Step Code

The BC Energy Step Code is a Provincial standard enacted in April 2017 that provides an incremental and consistent performance-based approach to achieving more energy-efficient buildings that go beyond the requirements of the basic BC Building Code. The Province has set a requirement that all new buildings must be net-zero energy ready by the year 2032. It is the City of Richmond's desire to show leadership in the transition to net-zero energy by constructing its new City-owned buildings to the highest applicable step, with Level 3 being the present target goal.

Sustainability

Meeting present needs without compromising the ability of future generations to meet their needs. Sustainability is described as having three main components: economic, social and environmental. Providing for accessibility and barrier-free design enhances the social sustainability of urban places for the long term.

The BC Energy Step Code emerged from a desire to provide a consistent set of higher-efficiency standards for the building industry, while offering local governments a simple and effective set of standards to support their efforts to meet targets for energy efficiency and greenhouse gas emissions. The Energy Step Code Council is keenly interested in ensuring the BC Energy Step Code is adopted in a coordinated and thoughtful manner to ensure these benefits come to fruition for all parties. For that reason, it is important that local governments follow the guidance offered in this document.

The Energy Step Code Council is also encouraging local government leadership by requiring the Upper Steps for any public-building project that may be on the horizon, such as a community centre or public-safety complex. These buildings will serve as high-profile case studies – building local capacity while demonstrating to the market what can be accomplished. By referencing one or more steps of the standard, your community is doing more than just accessing co-benefits and ensuring your industry has a head start on changes to the BC Building Code. It is contributing to a growing national effort to dramatically reduce energy demand in buildings across the country.

BC Energy Step Code
A Best Practices Guide for Local Governments
Version 1.2 September 15, 2017

Definitions Pertaining to City-Owned Buildings and Public Spaces

2

TCP/IP

Transmission Control Protocol / Internet Protocol. It is the principal communication protocol in the Internet protocol suite for relaying datagrams across network boundaries.

Technically Not Feasible [Building Renovations and Alterations]

When an existing building is being altered, at times a building upgrade cannot be contemplated because of structural or building services considerations. In some instances building upgrades that promote use of the building by persons with disabilities should be contemplated, even though they do not provide complete compliance with minimum code requirements for new construction, and are “technically not feasible”.

An example of such a condition would be the installation of a wheelchair lift in a building that cannot accommodate installation of a code-compliant elevator. [Note: inadequate budget is not a reason to relax full code compliance].

Transit-Oriented Development [TOD]

An urban planning strategy that looks at encouraging pedestrian-oriented developments by clustering higher density urban developments around public transit infrastructure investments, such as rapid transit stations.

Transit-oriented developments must incorporate accessible design and further benefit from barrier-free and enhanced accessibility strategies.

Truncated Domes

Small domes with flattened tops that are inset into paving as tactile warnings at hazardous places such as transit platforms or at stair and ramp landings. They also can act as directional cues for pedestrians at curb edges at curb ramps.

Universal Design

The design of spaces, environments and products to be usable by all people, including those with disabilities, without the need of specialized design. Universal Design is linked to “Enhanced Accessibility” and barrier-free design, as well as the concept of Visitability.

Virtual Metering

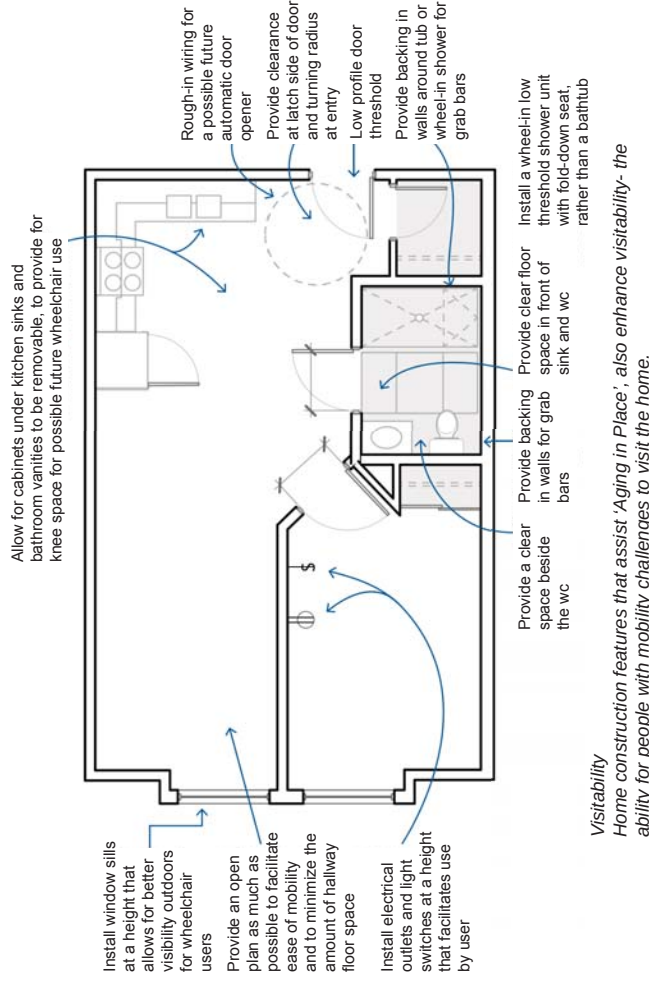
Function of monitoring energy use of specific systems or pieces of equipment, based on demand and run time, through a building’s direct digital control system and analog current transducers.

Visitability

A strategy to change home construction practices, so that all new housing incorporates features that improve access and functional comfort for people with mobility challenges, both in their own homes and in other dwelling units that they may visit.

Wayfinding

The spatial problem-solving process that a person uses to reach a destination. Wayfinding is assisted by orientation clues that can be made available in the local setting, and includes signage, surface textures, colours, illumination, acoustic treatments, and other architectural features.



Basic Universal Housing Unit (also known as adaptable housing unit)

Features to assist "aging in place"
One bedroom unit shown - minimum unit size 535 sq. ft.

Principles Guiding The Design for City-Owned Facilities

3

3.0 Principles Guiding Design for City-Owned Facilities

The City of Richmond's goal is to have its buildings reflect design choices that enhance overall construction quality, embody best practices in construction technology, work to minimize long-term operations and maintenance costs, and promote building usefulness, resilience and longevity. These principles should be applied to all types of City-owned construction projects, whether new builds, renovations or alterations, heritage projects, or tenant improvements.

3.1 Functional Program

- identify building areas and functional components that are to be included in the civic asset.
- identify functional inter-relationships for the proposed spaces along with area requirements.

engage internal and external stakeholders throughout program development

3.2 Site Planning and Building Form

- review site opportunities and constraints, and take into account building orientation and how the public will access and use the building.
- assume that wall assemblies will have a high level of energy utilization.
- review solar orientation impacts, and formulate early design options for glazing based on general principles of solar orientation and façade design:
 - North Façade - minimize glazed areas and heat loss as much as possible.
 - East Façade - provide for potential early morning heat gain with glazing, but limit late morning heat gain by the use of shading devices.
 - South Façade - provide for shading devices at glazed areas.
 - West Façade - provide for shading devices at glazed areas, especially relating to late afternoon sun and associated heat gain.

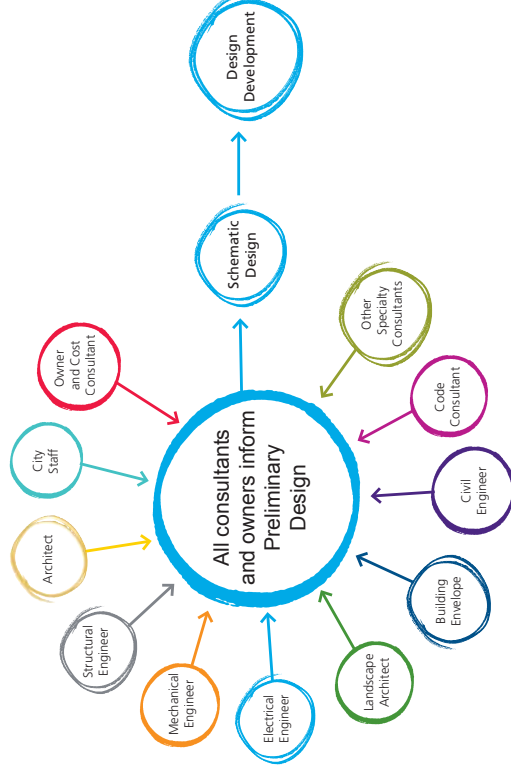
3.3 Integrated Design Process

- early on in the design process, involve all building design consultants in a design charrette where the design goals for the civic asset are clearly articulated.
- create a well-defined set of performance objectives for the new building or

renovated space, and associated outdoor spaces, and identify strategies for achieving desired outcomes.

- identify general building systems that are expected to be incorporated in the building early on at the schematic design stage, for the benefit of all consultants.
- clarify consultants', and staff and user group representatives' roles and responsibilities.

INTEGRATED DESIGN - THE TEAM APPROACH



Principles Guiding The Design for City-Owned Facilities

3

3.4 Energy Efficiency and Reducing Greenhouse Gas Emissions

Ensure that City buildings or spaces are built with occupant safety, comfort, and indoor environmental quality in mind. Refer to the following documents:

- Sustainable “High Performance Building Policy for City-Owned Facilities Policy 2307, adopted by Council 24 February 2014.
- Optimizing Maintenance and Energy Performance. (City Administrative Procedure Reference - see Appendices)
- Requirements over BC Building Code - implementation of British Columbia “Step Code” provisions at a high level [Target of Level 4].

Also, consider the following:

- Building Commissioning.
- on-site renewable energy systems.

3.5 Integration of Building Automation Systems

Optimize the City’s Building control and energy monitoring capacity to maximize efficiencies.

- standardize the City’s DCC systems and graphic Interface in new and existing buildings. (City Administrative Procedure Reference - see Appendices)

3.6 Optimizing Building Lighting Systems (City Administrative Procedure References)

- standardize lighting types in relation to function.
- optimize performance in building exterior and interior lighting through specification of appropriate lighting fixtures and controls.

3.7 Air Quality

- reduce emissions and particulate pollutants into the environment.

3.8 Indoor Air Quality

- optimize the design of indoor environments to promote occupant comfort, health, and enjoyment. (City Administrative Procedure Reference - see Appendices).

3.9 Water Usage and Quality

3.9.1 Indoor Use

- reduce indoor potable water use, reducing the burden on local water supply and wastewater demands.
- optimize water efficiency (City Administrative Procedure Reference)

3.9.2 General Environmental Water Quality Considerations

- stormwater balance
 - stormwater retained on site to the same level of annual volume allowable under redevelopment conditions.
- stormwater retention and re-use
 - look to recycle stormwater where feasible for sanitary flushing purposes or irrigation for landscaping.
- removal of suspended solids before dispersal into the sewer system.
- control E.coli
- create drought-tolerant landscapes

3.10 Solid Waste Management - See City of Richmond Waste Management Guidelines

- waste streams and collection.
- deal with bulk waste.
- deal with and recycling construction and demolition debris.
- elimination of waste through education and performance tracking.
- use of recycled construction materials.

3.11 Ecological and Pedestrian and Public Realm Considerations

- connectivity of pedestrian areas.
- weather protection.
- lighting of pedestrian areas and shielding exterior lighting.
- reduction of glare and reducing light spillage and pollution.
- existing tree protection.
- tree planting requirements on street frontages and in parking lots.
- reduction of urban heat island effect.
- biodiversity in the landscape and limitation of invasive species.
- bird friendly design and limitations to glazing near the ground plane.
- roof reflectivity and design.
- roof vegetation issues.
- ground-scape porosity and limiting the speed of site drainage.

Design Guidelines and Technical Specifications 4

4.0 Design Guidelines and Technical Specification References

4.1 Purpose

- organize the design, construction, material and building system requirements for City-Owned Projects into industry-standard specification system nomenclature.
- to be used as a tool for preparing cost estimates early in the design process.
- for use by consultants who are ultimately responsible for ensuring that the completed Project meets the standards and conforms to the regulations of all authorities having jurisdiction.



MasterFormat, published by CSI and CSC, is a master list of numbers and titles classified by work results. It is primarily used to organize project manuals and detailed cost information, and to relate drawing notations to specifications.

4.2 Applicable Regulations and Policies

- British Columbia Building Code
- City of Richmond Zoning and Development Bylaws
 - Official Community Plan
 - Applicable Area Plans
 - Redevelopment Permit Guidelines
 - Richmond Social Development Strategy
 - Affordable Housing Strategy
 - Enhanced Accessibility Design Guidelines
 - Child Care Design Guidelines
- Sustainability
 - Stand-alone and Mixed Use Projects
 - Tenant Improvement
- Building Envelope Standards
- Energy Utilization and Building Performance
 - BC Step Code
 - references to ASHRAE Standards

4.3 Technical Specification Sections

Consultants for City-owned building projects should use the Divisions and Sections annotations in this document, as a basic guideline for the formulation of construction specification document packages accompanying construction drawings.

Specification packages will vary from project to project, and it is the consultant's responsibility to ensure that the specification requirements adequately describe the scope of work associated with the specific project.

Note: the following specification references are organized according to the construction industry standard Masterformat Specification System.

Design Guidelines and Technical Specifications

4

4.4 Outline Specification - General Requirements

4.4.1 Procurement and Contracting Requirements

- a) Instructions to Bidders
 - refer to documents distributed by the City of Richmond or its agents
 - the Bidder will comply with all bidding requirements and will ensure that the Work will be performed in accordance with the Bid Documents without exception.
 - any proposed alternate wordings to the Bid Documents or Form of Contract, must be submitted with the Bid Submission, and the City of Richmond or its agents, reserve the right to accept any or none of the proposed alternate wordings.
- b) Form of Agreement and General Conditions of the Construction Contract
 - standard CCDC contracts will be utilized.
- c) Supplementary General Conditions of the Construction Contract
 - the City of Richmond reserves the right to include Supplementary General Conditions to the standard forms of contract as may be required to identify City objectives for the specific construction contract.
- d) Division 01 - General Requirements
 - the number of General Requirements Sections will vary from project to project, but typically, the number of Sections is extensive in order to fully delineate the responsibilities of the General Contractor or Construction Manager who is contracted to construct the work.

4.4.2 Overview of New Construction General Design Requirements

- provide new buildings that respond to the City's needs and those of the anticipated users and tenants of the buildings.
- provide designs for new durable buildings, that are efficient and cost effective. Designs should stress simplicity and ease of construction, as well as ease of maintenance. Building siting, form, and choice of building materials and systems should consider life cycle costs in response to the site's location, orientation and context.

4.4.3 Overview of Conversion of Existing Buildings

- Confirm the proposed use is permitted under the City's Official Community Plan, Area Plans and Zoning Bylaw 8500
- assess the design and condition of the existing building in order to determine whether the existing building can accommodate the proposed uses and functional program within the constraints of available budgets.
- incorporate the recommendations of a structural engineering consultant and code consultant regarding meeting change of use structural capacity and fire and life safety requirements.
- ascertain how a proposed renovation can best meet BC Step Code energy utilization targets.
- determine the optimal approach to addressing building envelope concerns without compromising the integrity of existing building assemblies in the long term.
- meet requirements for access for people with disabilities, including the provision of an accessible elevator in multi-floor buildings.



Branscombe House, City of Richmond.

Design Guidelines and Technical Specifications 4

4.4.4 Overview of Location Considerations, Building Form and Site Planning

- Refer to any applicable design guidelines for the area in the Official Community Plan and associated Area Plans
 - take into account opportunities for solar access, and use by the public including access to transit and pedestrian routes. If ambient noise is an issue, consider acoustic mitigation measures as part of site planning.
 - incorporate sustainability features and siting criteria.
 - building form should be simple, efficient and easy to build, but not ignore neighbourhood context in its design or the benefits of articulation in the exterior appearance of the building.
- Foundation plans should be simple and the continuity of load-bearing elements should be maintained between floors. Avoid constructing heated space over unheated space (exposed floors). Provide simple roof designs that drain rainwater efficiently and avoid ice-damming. Avoid numerous projects or recesses in façade articulation.
- the building design and its exterior spaces should promote accessibility of use for persons with disabilities, including access from parking areas. Exterior spaces should accommodate ease of snow removal.
 - Project design should also incorporate CPTED [Crime Prevention Through Environmental Design] strategies.

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4.4.5 Overview of Design and Specification Requirements

- (to Pre-Building Permit Application Stage)
- Conform Zoning and whether a rezoning application is required. (Note: only Council can approve a change in land use)
 - Preliminary Review Stage, including vehicle parking and loading.
 - Pre-Development Permit Application Stage / Checklist.
 - includes Building Code review, compliance with BC Energy Step Code, Building Envelope Standards, Civil Engineering and Landscaping.
 - requirements for specialist consultants, including acoustic, security, hardware, energy modeling and food services [kitchen] consultants.
 - Development Permit Application Stage.
 - Pre-Building Permit Application Stage, including Draft of Construction Documents and referring to Checklists.
(Refer to City Administrative Procedure References)
 - includes Energy Performance Standards compliance and Building Envelope specifications.



Site Planning opportunities can provide possibilities for extending on-site open space into the public realm, to create small plazas and pedestrian amenity areas.

Design Guidelines 4 and Technical Specifications

4.5 Outline Specification

- **Construction Standards and Notes on Best Practices**
- with reference to Masterformat Sections

4.5.1 Consultant Inspector - Terms of Reference

The City of Richmond will provide or appoint an Owner's Representative or Consultant Inspector with the purpose of:

- reviewing construction contract documents to advise on consistency with the City's objectives for the project, including conformity with the Design Guidelines and Technical Specifications.
- reviewing construction work to establish compliance with City objectives. Note that the role of this Inspector does not assume any of the contractual or professional responsibilities of the design consultants or contractors who are engaged on the project.

GP Sample Site Visit Report

The Consultant Inspector will attend job and site meetings when construction is in progress, and provide reports of same.

A Sample Site Visit Report is included in the Appendix of this document.

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4.5.2 Subsurface Investigation

The City of Richmond will provide for a geotechnical investigation report for the City-owned or leased project site, that indicates the following:

- identifies soil conditions.
- provides recommendations for excavation, dewatering, pre-loading, and foundation design for the building and associated site development.
- provides recommendations for backfill and compaction.
- provides curb, pavement and hard surfacing design, including loadings from heavy vehicles that may utilize the paved areas.

The geotechnical report is provided for information only, and no guarantee of subsurface conditions is made, other than those documented at exact borehole investigation locations. Any Contractor engaged by the City to make improvements or install new construction on the site is required to make him or herself familiar with all existing conditions and with the findings of the geotechnical report.

Specification Reference - Section 00 31 32 - Soils Investigation Data

4.5.3 Excavation, Backfill and Compaction

The Contractor will comply with all municipal bylaws and applicable building codes as well as all Master Municipal Construction Documents and Richmond Supplements to these, especially as they relate to subsurface and paving work.

Comply with the recommendations of the project's Geotechnical Engineer for all excavation and shoring, fills and backfill, and drainage for the project.

The Contractor will engage and pay for independent testing as specified by the Geotechnical Engineer.

Specification Reference - Section 01 35 43 - Environmental Protection

Section 01 57 13 - Erosion and Sediment Control

Section 31 00 00 - Earthwork

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4.5.4 Exterior Surface Finishes - Hard and Soft Surfaces / Landscaping

- Provide well-designed exterior surface and landscape areas that are simple in design and layout and that require lower amounts of maintenance.
- Provide parking areas as required by the City of Richmond, and that meet accessibility and parking area delineation standards.
- Under-building structured parking should be designed to meet building and occupant security requirements. Provide for visibility into stair and elevator vestibules with rated glass assemblies within the requirements of applicable codes, and provide for safe lighting levels.
- Landscaping over building and parkade structures requires careful attention in order to avoid ongoing maintenance. Avoid small areas of sod and trees and shrubs with aggressive root systems.
- Locate trees to avoid maintenance resulting from falling leaves in gutters or catch basins, or tree root issues at building foundations.

Specify plantings that require little or no irrigation. Generally employ native plant species.

Specification Reference - Section 03 35 00 - Concrete Finishing

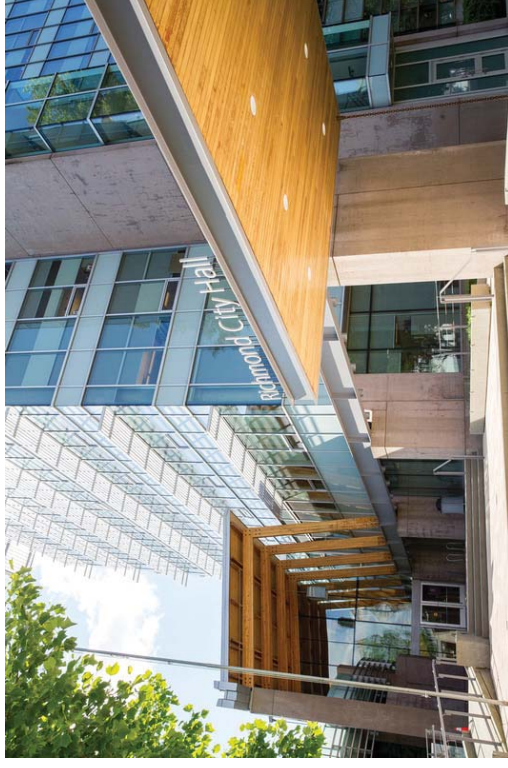
- Section 31 22 13 - Rough Grading (Landscape)
- Section 32 01 90 - Landscape Establishment Maintenance
- Section 32 05 23 - Concrete for Exterior Improvements
- Section 32 14 13 - Precast Concrete Unit Paving
- Section 32 12 16 - Asphalt Paving
- Section 32 17 23 - Pavement Markings
- Section 32 91 21 - Growing Medium and Finish Grading
- Section 32 93 10 - Trees, Shrubs and Groundcovers

4.5.5 Building Envelope

The City of Richmond requires that a registered architect or engineer licensed to practice in the province of BC be engaged to provide building envelope consulting services on any City building project, preferably as a sub-consultant to the architect for the project.

The building envelope consultant should have at least five years relevant local building envelope experience, and provide a scope of services consistent with best practice local industry standards. They should ensure that the assemblies specified for the proposed building possess acceptable water management characteristics, and are designed to meet the intent and requirements of the BC Building Code, the BC Energy Utilization Step Code, and other applicable standards.

Specification Reference - Section 01 40 00 - Quality Requirements
Section 01 43 39 - Mock Ups
Division 07 - Thermal and Moisture Protection
Division 08 - Openings



Ensure building envelope detailing sheds the weather in an appropriate manner, and meets energy utilization performance standards.

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4.5.6 Environmental Design Rating Systems

The City of Richmond typically requires certification by third party environmental rating systems or agencies, such as LEED or Passive House, unless indicated as such by the city or another authorized sponsor organization. Review pertinent requirements with city staff.

Specification Reference - Section 01 33 16 - Design Submittal Requirements (Performance Design Criteria)
Section 01 33 29 - General LEED Requirements
Section 01 60 13 - LEED Product Requirements
Section 01 60 14 - Passive House Standards and Project Requirements

4.5.7 Basic Concrete Materials and Methods

Architectural and/or structural concrete specifications should be prepared by the project's architect and/or structural engineer.

The Contractor will appoint and pay for a CSA certified inspection agency to review concrete mix designs and perform concrete testing in accordance with latest CAN/CSA and other relevant industry standards.

The architect should prepare concrete topping specifications to ensure compatibility with floor finish materials, including specification of moisture content requirements. Repairs to defective concrete must be done as soon as possible after the removal of formwork, and after the consultant has established a material and methods schedule for concrete repair. The consultant reserves the right to reject concrete installations with defects comprising over 1% of the area of the concrete or if defects are in close proximity. Defective concrete will be removed and replacement concrete will be installed at no additional cost to the project.

Floors that are left exposed, or that receive carpeting, resilient flooring, or sheet membrane waterproofing, should be finished flat, free from defects that would telegraph through finish materials.

Provide control joints at required locations to control cracking.

Concrete sidewalks and paving should meet municipal engineering standards.

Specification Reference - Section 03 33 00 - Cast-In-Place Concrete
Section 03 35 00 - Concrete Finishing
Section 03 54 00 - Concrete Self-Leveling Topping

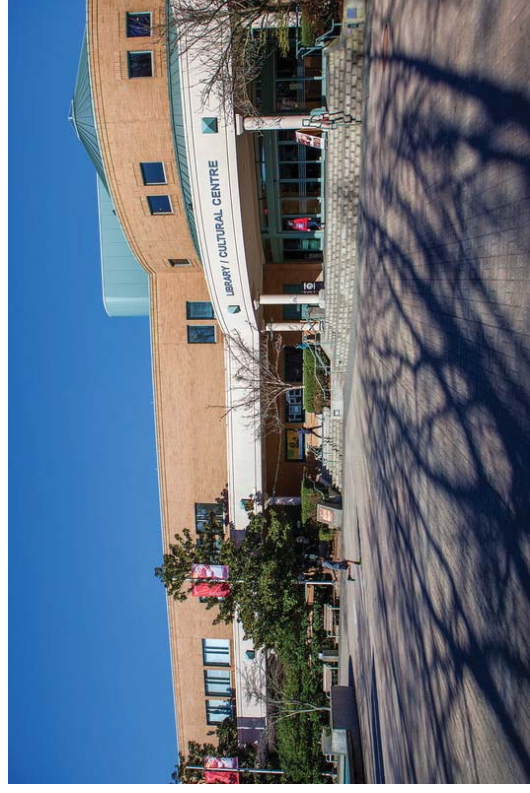
4.5.8 Basic Masonry Materials and Methods

A pre-construction meeting is required with the masonry contractor and the consultant to review specifications, submittals and construction issues. A site mock-up of masonry construction will be made for review by the design consultant and City inspector before construction begins.

Meet all BC Masonry Guide specifications as well as industry standards for brick veneer, concrete block, all connectors metal flashings and thru-wall membrane flashings, and mortar mixes.

Concrete unit paving is not preferred, owing to differential settlement problems that are typical in the City of Richmond.

Specification Reference - Section 04 21 13 - Brick Masonry
Section 04 22 00 - Concrete Unit Masonry
Section 04 50 00 - Masonry Restoration and Cleaning [Existing Buildings]



Ensure masonry assemblies are detailed to the technical standards of the Masonry Institute of BC.

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4.5.9 Basic Metals Materials and Methods

Steel Structural design should be provided by the structural engineer and architect.

Cold-Formed Metal Framing

- provide complete wind load-bearing steel stud system with accessories, to design loads specified on the structural drawings. Install insulation and vapour barrier in areas that will become inaccessible as construction progresses, and protect these installations from the weather as required.

Miscellaneous Metals

- The Contractor will retain a structural engineer registered in the Province of BC to prepare signed and sealed shop drawings for guardrails, handrails and other miscellaneous metal fabrications.
Finish for miscellaneous aluminum or steel metals should be powder coat paint.
Anchoring systems to be typically vertically mounted base plates with neoprene gaskets.

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Specification Reference	-	Section	05 10 00	-	Structural Steel
		Section	05 40 00	-	Cold-Formed Metal Framing
		Section	05 50 00	-	Metal Fabrications
		Section	05 58 00	-	Historic Metalwork Restoration
[Existing Buildings]					



Miscellaneous metals should have a powder coat paint finish.

4.5.10 Rough Carpentry

Provide lumber grades and products as shown on the structural drawings.

Minimum standards for Rough Carpentry Products:

Interior Floor Sheathing:

- use T&G D.Fir or Spruce plywood, glue and screw.

Floor Underlayment:

- 3 ply, 9mm (11/32") thick spruce plywood with the finish face double-sanded and the back face lightly sanded. Prior to installation, confirm that the finish product will be acceptable to the resilient flooring manufacturer.

Exterior Deck Sheathing:

- Sheathing grade, D.Fir T&G plywood. If PVC deck waterproofing is to be installed, use select tight face plywood.

Exterior Fascias and Trims:

- No.2, S-P-F textured (combed) finish, pre-primed, not less than 51mm (2") nominal thickness for new builds. For heritage buildings, typically nominal 51mm (2") thick D.Fir select pre-primed S4S material is required.

Exterior Heavy Timber Construction, Landscaping:

- No.2, S-P-F pressure-treated material.

Fencing:

- cedar with Hem-Fir treated posts set in concrete, all stained.

Wire Mesh (Fencing or Storage Lockers):

- 76x76mm (3"x3") x 10 gauge welded wire mesh, galvanized.

Sill Gaskets:

- close cell polyethylene foam.

Cavity Furring:

- cedar or pressure-treated Hem-Fir.

Grab-Bar and Railing Blocking:

- 38x235mm (2x10) typical. See BC Building Code and City of Richmond Accessibility Standards for locations of grab bars. Provide blocking or backing for all fixtures and fittings, in addition to that for grab bars and railings.

Wood Preservatives:

- ACQ preservative typical for all exterior wood locations in contact with concrete, masonry, or where moisture may occur, at roof upstands in flat roofs, planters, heavy timber construction, fence posts and cavity furring. Important: Treat all field cut surfaces of pressure-treated wood with two brush coats of ACQ preservative.

Specification Reference - Section 06 10 00 - Rough Carpentry

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4.5.11 Finish Carpentry

Workmanship must conform to the Quality Standards for Architectural Woodwork as published by the Architectural Woodwork Manufacturers Association of Canada [AWMAC], latest edition.

For Child Care Facility millwork, refer to City of Richmond Child Care Design Guidelines and Technical Specifications.

Minimum standards for Finish Carpentry Products:

Baseboards, Trims and Window Sills:

- typically these are to be solid wood, pre-primed. No MDF products allowed for these installations.

Casework

AWMAC custom grade typical:

- Wood cabinets for Transparent Finish—Grade A face veneer, with adjustable shelving veneer plywood core.

Plastic Laminate Cabinets—all surfaces P.Lam, with adjustable shelving veneer plywood core.

Countertops

Composite acrylic polymer type non-porous countertops, with integral monolithic splash (e.g. “Corian”)

Cabinet Hardware

- D-pulls, polished or brushed chrome finish.

Wall Protection:

- 9mm (3/8”) veneer face plywood with solid wood trims and battens is acceptable, as is plastic laminate or PVC wainscoting.

Shelving:

- typically veneer finish plywood similar to cabinet gable and cabinet door finishes for office millwork. In selected storage closets, plastic-coated wire shelving, full width between walls, with wall and intermediate supports is acceptable.

Specification Reference - Section 06 20 00 - Finish Carpentry

Section 06 20 11 - Landscape Finish Carpentry

Section 06 40 00 - Architectural Woodwork

Section 06 42 00 - Restoration of Existing Architectural Woodwork

[Existing Buildings]



Finish carpentry and exposed wood structure should be detailed and finished to provide for long-term resilience, as well as add to the aesthetic appeal of the building.



Resilient and wipeable, easily cleaned finish surfaces are required for architectural millwork. Note the lower counter with knee space for wheelchair users.

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4.5.12 Dampproofing and Waterproofing

Refer to the Geotechnical Report regarding subsurface drainage requirements and requirements for waterproofing below finish grade habitable spaces.

All dampproofing and waterproofing products and detailing to be reviewed by the Building Envelope Consultant, who will also review installations of same in the field, including (but not limited to):

- waterproofing materials for suspended parkade slabs and decks over habitable spaces.
- waterproofing for balconies over non-habitable spaces.
- dampproofing, composite drainage mats and protection board.

Specification Reference - Section 07 11 13 - Bituminous Dampproofing
Section 07 14 00 - Fluid-Applied Waterproofing
Section 07 16 16 - Crystalline Waterproofing

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4.5.13 Insulation

Insulation, thermal bridging and air-tightness construction assemblies and values must be engineered to meet the minimum requirements of Level 3 of the BC Energy Step Code. Energy modeling and Building Envelope Consultants to verify that proposed construction assembly details meet all requirements.

For existing buildings, ensure that insulation upgrades are not deleterious to the integrity of the existing building assemblies in the long term. Modify and relax energy utilization upgrades as required in order not to negatively impact the longevity of the existing building structure or exterior or interior finishes.

Acoustic insulation to be included in wall and floor assemblies in order to meet code-required STC ratings. [In existing heritage buildings, maximize meeting STC requirements while respecting the integrity of existing heritage interior and exterior finishes that are to be retained].

Specification Reference - Section 07 21 00 - Thermal Insulation and Poly Vapour Barrier
Section 07 21 29 - Foamed-In-Place Insulation
Section 07 26 00 - Vapour Retarders
Section 07 27 00 - Self Adhesive Air-Vapour Barrier / Membrane Flashing

Section 07 27 10 - Sheathing Membrane

4.5.14 Exterior Finishes

Select exterior building finishes and provide appropriate detailing to achieve long term durability, and functional and aesthetic design quality for the civic building asset. Consider neighbourhood context and overall community character when selecting exterior finishes. Refer to any applicable design or heritage conservation area guidelines for guidance on exterior bushes and landscaping.

Specification References - Division 04 Masonry
Section 07 42 13 - Metal Composite Material Wall Panels
Section 07 44 53 - Fibre Reinforced Cementitious Panels
Section 07 46 23 - Wood Siding and Shingles



Select exterior finishes that will provide long-term building resilience.

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and Technical Specifications

4.5.15 Roofing, including Roof Hatch

Acceptable Products - dependent on design objectives and building resilience goals (all to be reviewed with the Building Envelope Consultant):

- Asphalt or Wood Shingles
- Low slope membrane roofing
- Sheet metal roofing

All material and workmanship standards must conform to the guarantee standards of the Roofing Contractors Association of BC [RCABC], as published in the RCABC Roofing Practices Manual, latest edition.

- provide a minimum 5 year Roofing Warranty from the RCABC
- provide roof edge safety barriers, fall protection and fall arrest as per the BC Building Code and WCB requirements.
- provide roof drain, rainwater leader and gutter and downspout systems that effectively shed the weather without creating undue wear or staining on adjacent finish materials.
- provide roof hatches with high performance insulation values.

Specification References - Section 07 31 13 - Asphalt Shingles
Section 07 31 14 - Wood Shingles
Section 07 52 11 - SBS Modified Bituminous Roofing and Waterproofing Membrane
Section 07 61 00 - Sheet Metal Roofing
Section 07 62 00 - Sheet Metal Flashing, Trims, Gutters and Downspouts
Section 07 72 33 - Roof Hatches



4.5.16 Fire-Stopping and Smoke Seals

- Furnish and install all required fire-stopping and smoke seals within fire resistive wall and floor assemblies.
- All fire-stopping and smoke seals should be listed by Underwriters' Laboratories of Canada [ULC], and should form a draft tight barrier to retard the passage of smoke, flame and hose stream, as noted in the appropriate ULC classification.
- Mechanical and electrical penetrations through rated floor, roof and wall assemblies are to be fully coordinated with the Mechanical and Electrical Divisions, and all penetrations will be fire-stopped with the appropriate ULC-listed fire-stopping system, to the satisfaction of the consultant and the authority having jurisdiction.
- Strict sequencing protocols for the installation of fire-stopping should be followed:
 - no installation is to proceed unless review and return of fire-stopping shop drawings has been completed.
 - fire-stopping to floor and roof slab penetrations must precede drywall track installation.
 - fire-stopping must precede fireproofing installations.
 - fire-stopping at slab edge detail to exterior wall panels and at window panels must be done with all panel installations.
 - fire-stopping must precede mechanical pipe insulation (ensure air and vapour barriers are continuous also).

Specification References - Section 07 81 16 - Cementitious Spray Fireproofing
Section 07 84 00 - Fire-stopping



Underwriters Laboratories of Canada (ULC) is an independent product safety testing, certification and inspection organization that is accredited by the Standards Council of Canada (SCC), and which supports governmental product safety initiatives.

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4.5.17 Joint Sealants

Install as required by the BC Building Code, the Building Envelope Sections of these Guidelines, or as directed by the Building Envelope Consultant.

Select the type of joint sealant, or tape sealant, to suit the requirements of the specific construction assembly.

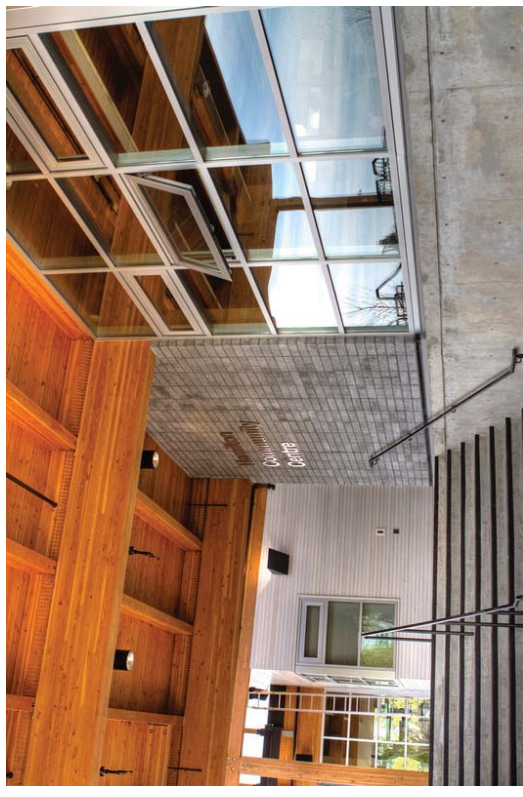
Colour of the joint sealant to be selected by the consultant, from the manufacturer's complete range of available colours.

Install acoustic sealant in sound-rated gypsum wallboard assemblies. Seal all lapped and end joints in polyethylene vapour barriers.

Pay strict attention to workmanship aspects of sealant installations:

- establish correct depth to width relationships for installation of backer materials and sealants. Control the depth of the joint to the sealant manufacturer's recommended thickness.
- apply sealant in continuous beads, without open joints, voids, air pockets or embedded impurities.
- finished caulking must be smooth, free from ridges, wrinkles, sags and air pockets, and have a slightly concave shape.
- remove excess caulking promptly as work progresses, and do not damage adjacent finished surfaces.

Specification References - Section 07 92 00 - Joint Sealing



Joint sealants are an important part of the building envelope, in particular at the juncture of dissimilar exterior finishing materials.

There are a wide variety of different sealant systems available, and care must be taken to specify the appropriate system for the particular building condition.

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4.5.18 Doors

Install doors as required by the BC Building Code and as directed by the Building Envelope Consultant for exterior doors.

To maximize building resilience and service longevity, select doors and hardware to suit function and location.

4.5.18.1 Metal Doors and Frames *Steel Doors and Frames*

- doors and frames to exit stairs, service rooms and suite entrance frames from public corridors must conform to the Canadian Steel Door and Frame Manufacturer's Association's Specifications.
- fire-rated doors should be fabricated in accordance with underwriter's requirements, labeled as required.
- for corridor fire doors, provide smoke seal and maximum area of wired glass permitted by code.

GP doors in elevator vestibules and stairs at parking garages should provide maximum glazing allowed by code.

- for exterior doors provide flush panel design with polyurethane core insulation, extruded aluminum low profile (accessible) sills with width to match frame depth, and mechanically fastened, extruded aluminum weatherstripping with neoprene inserts, and an adjustable sweep at the sill.

Exterior Steel Glazed Panel (Swing) Doors in Wood Frames

- double-glazed stile and rail insulated door with prefinished baked enamel sheet steel. Low profile (accessible) aluminum sill, door weatherproofing and adjustable door sweep at the sill.

Exterior Aluminum Entrances and Storefront Doors [and Curtain Wall]

- sealed glazing thermal aluminum fabrications meeting all best practices for quality assurance.
- main building entries should be equipped with automatic door openers with operating devices located in accessible locations. Sliding doors with "electric eye" are preferred, but double swing doors are acceptable. Automatic, power-operated doors should be provided and serviced by local installers.

Overhead Doors and Gates

- electrically operated overhead metal doors and gates with heavy-duty hardware and high security and safety features.

4.5.18.2 Wood Doors and Frames

Wood doors must conform to the Quality Standards for Architectural Woodwork as published by AWMAC, commercial grade.

- wood doors with clear finish should be solid core, with solid wood frames for matching clear finish.
- painted wood doors should be solid core, and typically have flush tempered hardboard faces, pre-primed. Frames will be finger-jointed PSF frames, pre-primed for paint.
- avoid bi-fold and sliding bypass doors.

4.5.18.3 Stacking Partition Systems, Security Grilles and Acoustic Folding Doors

These door systems should be locally sourced and maintained. Provide for all door clearances and structural supports to ensure doors operate freely and are resilient in operation for the long term.

Provide good one side 13mm (1/2") plywood as the wall finish in door recess pockets. Acoustic Folding [Accordion] doors will have a minimum STC rating of 35.

Specification Reference - Section 08 11 13 - Hollow Metal Doors and Frames
Section 08 14 00 - Wood Doors

Section 08 21 00 - Restoration of Existing Wood Doors [Renovations]

Section 08 32 13 - Sliding Glass Doors

Section 08 33 23 - Overhead Doors and Gates

Section 08 35 00 - Stacking Partition System and Security Grilles

Section 08 35 13 - Acoustic Folding Doors

Section 08 41 13 - Aluminum-Framed Thermal Entrance Doors

Section 08 43 13 - Aluminum-Framed Storefronts

Section 08 44 13 - Glazed Aluminum Curtain Wall

Section 08 81 00 - Glass and Glazing

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4.5.19 Windows

In specifying windows and the ratings for air and water tightness and wind load resistance, the Consultant will refer to energy utilization and Step Code design standards that deliver required performance levels, as well as conforming to the following minimum ratings as noted in CSA A440-98:

- Air Tightness: A-3
- Water Tightness: B-3
- Wind load resistance: C-3

Confirm all requirements with the energy modeling and building envelope consultants.

- Operable windows should meet or exceed the requirements for sash strength stiffness, and ease of operation noted in CAN/CSA A440. Opening windows should be equipped with glass fibre mesh screens in an aluminum frame.
- Windows should be EnergyStar rated for the local BC climate zone.
- Detail window installations to maintain the continuity of the air barrier at rough

openings, as well as at junctions with other structural assemblies or at entrances and storefronts.

- Correctly locate and install flashings, deflectors and weep holes to ensure proper drainage of moisture to the building exterior.

Provide flashing with end dams over window heads and sill flashing with end dams at window sills.

- All installations to be field tested to confirm compliance with CSA A440 required ratings.



High performance windows are becoming more readily available, and can greatly enhance achievement of a building's energy utilization objectives.

Products:

Vinyl Window Assemblies

- awning or casement windows only; sliders are not acceptable.
- provide a certification for required performance levels for U-factor, SHGC and air leakage.
- the PVC frames should be continuous multi-chambered tubular vinyl extrusions with internal steel reinforcement.

Wood Windows

- typically will be specified only when new windows are installed in a building with existing wood windows.
- perform work in accordance with AWMAC Quality Standards, custom grade.

Metal Windows and Curtain Wall

- typically, vinyl frames are preferred over metal for energy utilization reasons.
- provide a certification for required performance levels for U-factor, SHGC and air leakage.

Glass and Glazing

- install heat strengthened and tempered glass where required for fire and life safety.
- install sealed units in accordance with Insulating Glass Manufacturers of Canada guidelines and CAN/CGSB guidelines.

Specification References - Section 08 44 13 - Glazed Aluminum Curtain Walls
 Section 08 51 13 - Aluminum Windows
 Section 08 52 00 - Wood Windows
 Section 08 53 10 - Plastic (PVC) Windows
 Section 08 61 00 - Restoration of Existing Wood Windows [Renovations]
 Section 08 80 50 - Glass and Glazing

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4.5.20 Finish Hardware, Architectural and Security

Architectural Hardware

Provide a detailed finish hardware schedule prepared by an Architectural Hardware Consultant [AHC] showing each separate type of hardware item, including make, model, material, function, size, finish, or other pertinent information.

The Schedule should also include a door by door description of all hardware items to be supplied with each door specified for the project. This Schedule will also incorporate all security door hardware items specified in the Security specification.

Typical Products:

- lever handles
- Schlage locking devices with C1, C2, or C3 cylinders.
- no mag-locks.

Security System and Hardware

Engage a Security Consultant to delineate security requirements for the building, including door security items.

The Security Contractor must be provincially licensed by the Security Programs Division of the Ministry of Public Safety and the Solicitor General, to install and provide commissioning for security systems.

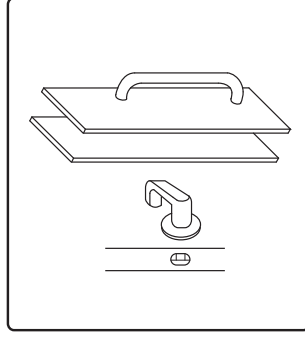
Specification References - Division 08 - Openings

Section 08 70 00 - Door Hardware

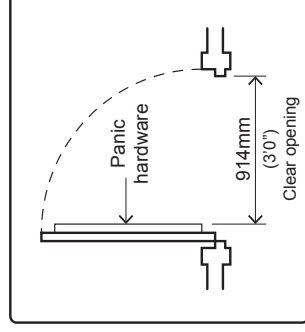
Section 08 70 01 - Door Hardware Schedule

Division 27 - Communications

Division 28 - Electronic Safety and Security



Example of accessible hardware.



Minimum clear opening at doors.



Extensive glazing at doorways into interior lobbies enhances wayfinding and building security. Install security hardware with ease of use and accessibility in mind.

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4.5.21 Interior Finishes

Floors

- provide resilient flooring typically in general use and wet areas. High durability flooring is required at entries and high traffic areas. All work to be installed as per the National floor Covering Association Specification Standards Manual, current edition.
- vinyl tile or sheet vinyl floor goods with welded seams are acceptable. With sheet vinyl, install flash coving in wet areas, in lieu of standard vinyl base. Avoid natural fibre “linoleum” type products in wet areas.
- if ceramic floor tile is used, a larger tile size is preferred, with a darker colour of grout. Provide ceramic tile base.
- provide walk-off mats at entries.
- carpet tile is a preferred product compared to wall-to-wall carpet.
- avoid carpet with underlay.

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Specification References - Section 09 30 13 - Ceramic Tiling
Section 09 65 10 - Resilient Flooring
Section 09 65 16 - Athletic Flooring
Section 09 68 00 - Carpeting
Section 10 90 00 - Miscellaneous Specialties
(Walk-Off Mats)



Flooring materials in new builds and renovations should be resilient and highly durable. Vinyl tiles and carpet tiles are preferred to sheet goods, to facilitate replacement and repair. Ensure that 5% extra stock of the total flooring area material is supplied and retained for maintenance purposes.

Walls and Ceilings

Walls and Partitions

- painted drywall is the typical finish.
- consider acoustic requirements and fire-rated assemblies and shaftwalls.
- in lieu of abuse-resistance drywall, install wall protection board or wainscoting. Provide corner guards in high traffic areas.
- provide for water-resistant drywall or cementitious panel board behind ceramic wall tile.
- provide all required access panels. Coordinate with mechanical and electrical consultants and contractors to ensure access panels locations allow for all required maintenance operations.
- where sound absorptive panels are fixed to walls, integrate these so as not to conflict with service access requirements.

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Ceilings

- commercial quality T-Bar acoustic ceilings are required in lieu of finished drywall ceilings. Provide an acoustical NRC rating of 70 or better.
- in order to access services in ceiling areas, ensure the acoustical tile ceiling systems are designed for ease of removal and replacement without damage to the ceiling tile.
- provide washable ceiling tiles in kitchens and washrooms.
- provide fire-taped gypsum wallboard assemblies as required above T-bar ceilings.

Specification References - Section 09 21 16 - Gypsum Board Assemblies
Section 09 22 16 - Metal Stud Framing
Section 09 30 13 - Ceramic Tiling
Section 09 51 13 - Acoustic Panel Ceilings
Section 09 84 13 - Fixed Sound Absorptive Panels
Section 10 90 00 - Miscellaneous Specialties
(Corner Guards, Wall Protection)

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Painting

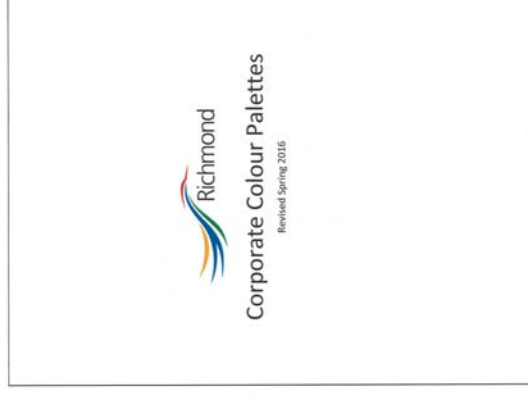
- all work should conform to the latest edition of the Architectural Painting Specification Manual of the Master Painters Institute [MPI]. All painting and decorating work should be inspected by a Paint Inspection Agency (inspector) acceptable to the specifying authority and the local MPI Accredited Quality Assurance Association.
- the painting work will include surface preparation of substrates as required for the acceptance of painting, including cleaning, small crack repair, patching, caulking, making good surfaces and areas of existing assemblies, priming and back-priming as required under MPI Manual preparation procedures.
Note: It will be the general contractor or construction manager's responsibility to ensure that all trades preparing finished surfaces and materials, do so in a workmanlike manner that does not unduly add scope to preparation work of the painting trade.
- all surfaces requiring painting should be inspected by the Paint Inspection Agency prior to commencing painting. The inspector will notify the Consultant of any defects or problems requiring additional preparation work.

- all drywall areas will receive a coat of sealing primer.
- in addition, if defects in the substrate become apparent after a prime coat is applied, the inspector will advise in writing what additional preparation work is required, before the go-ahead to apply finish coatings is provided.

General Paint Product Notes:

- use low VOC paints and sealants.
- gloss levels:
 - G5 (semi-gloss) - Kitchen, Washrooms, Laundry, Janitor's Room and all doors, door frames and interior trims.
 - G3 (eggshell) - typical for walls [Matte finishes not acceptable]
- refer to City of Richmond Corporate Standards for City Colour Palette requirements.

Specification References - Section 09 21 16 - Gypsum Board Assemblies
Section 09 91 10 - Painting
Section 07 92 11 - Joint Sealants



For acceptable colour palettes for City buildings' exteriors and interiors, refer to the Corporate Colours Memorandum included in the Appendices section of this document.

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4.5.22 Washrooms and Accessories

Common and Accessible Washrooms

Refer to BC Building Code and City of Richmond Enhanced Accessibility Standards

- Plumbing Fixtures
 - accessible height wall-hung or tank style WC's with bolted tops.
 - self-rimming drop-in sinks in accessible vanities with accessible type plumbing brass preferred to single wall-hung sinks.
 - wheel-in showers where required rather than bathtubs.
- Washroom Accessories
 - grab bars (or future adaptability for same in housing units to accommodate aging-in-place).
 - hand dryers are preferred to paper towel dispensers.
 - if paper towels are used, accommodate requirements for outside paper towel containers.

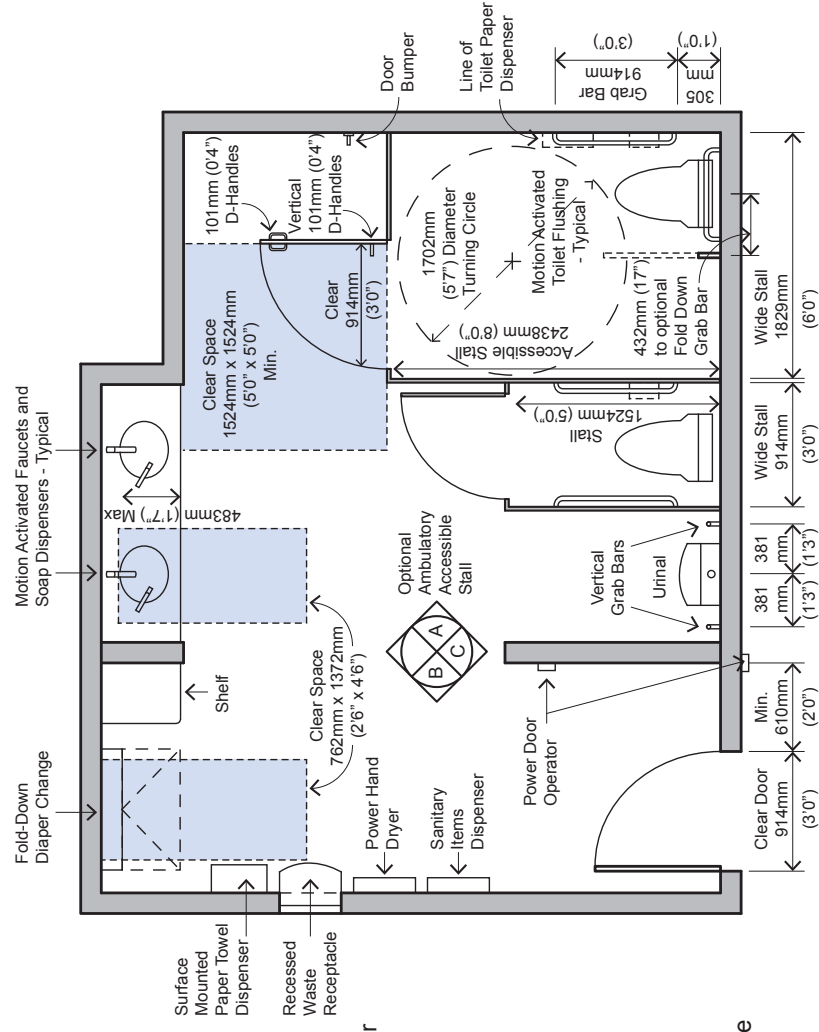
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Include recessed refuse containers, or under-counter receptacle with opening in washroom countertop.
provide toilet paper dispensers, soap dispensers and wall mirrors rated for use by people with disabilities.
provide a dry counter area, or separate shelf, for temporary storage of purses or books.

- Lighting should be installed at sufficient levels to accommodate use by individuals with lower vision. Combine over mirror lighting over vanities with general room lighting.
- Toilet Partitions - should be ceiling-hung, with no supports to floor level.
 - Acceptable products
 - plastic laminate covered high density particle board
 - metal with baked enamel finish
 - Hardware - heavy duty polished chrome or brushed nickel with tamper-proof screws.
- Diaper change table are typical in Washrooms.

Note: Common Washrooms should also incorporate Accessibility features to promote Enhanced Accessibility and Visibility.

Typical Accessible Washroom Plan



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Washrooms in Child Care Facilities

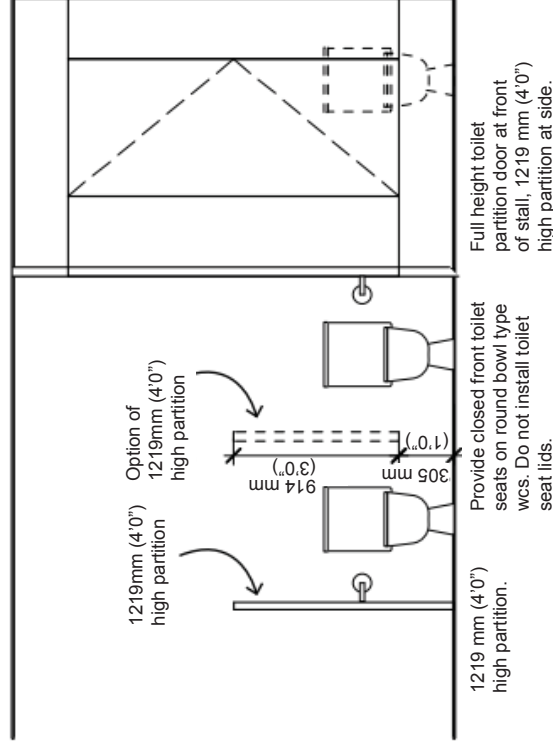
Refer to City of Richmond Child Care Design Guidelines and Technical Specifications

- Toilets - tank style WC's with round bowls. Remove lids from toilet seats.
- Sinks - wall-mounted sinks preferred, or self-rimming drop in vanity sinks.
 - faucets to have temperature control (120 degree F maximum).

Generally, for Washroom Specifications

Specification References - Section 10 21 14 - Toilet Compartments
 Section 10 28 14 - Toilet and Bath Accessories
 Division 22 - Plumbing
 Division 25 - Lighting

Washroom for Group Child Care 30 Months to School Age



Source: City of Richmond Child Care Design Guidelines and Technical Specifications
 Review all design details with City of Richmond Child Care Coordinator.

4.5.23 Staff and Common Area Kitchens and Kitchenettes.

Millwork - see 4.5.11 Finish Carpentry

- for staff and common area kitchens - millwork standards:
 - accessible design standards required.
 - plywood carcass construction.
 - "corian" countertop with all outside corners eased.
 - AWMAC requirements.
- double bowl stainless steel kitchen sink preferred.
- accessible design standards required.
- provide an additional stainless steel hand sink in community serving kitchens

Appliances

- Provide an "Energy Star" rating
- Dishwasher
 - residential quality typical
 - for community serving kitchens consider a commercial style under-counter dishwasher with a sani-cycle.
- Refrigerator
 - 21.5 cu. ft. refrigerator preferred.
 - pull-out bottom freezer type is preferred for enhanced accessibility.
- consider separate refrigerator only and freezer for serving the community.
- Microwave-countertop unit is preferred for accessibility.
 - 2.0 cu.ft. 1100 watt.
- Range [typically not required; microwave is satisfactory unless noted otherwise] 30 inch wide 4 burner stove with oven, with controls out of reach of children in child care facilities or where children might be present. Where children will not be users (e.g. Staff Kitchenettes), provide a cooktop set in a counter with knee space under, and with front of counter range controls, for enhanced accessibility.
 - range hood.

Note: for Affordable Housing Units - see City of Richmond Affordable Housing Resource Guide

Specification References - Section 06 40 00 - Architectural Woodwork
 Section 11 31 00 - Residential and Commercial Appliances
 Division 22 - Plumbing

Design Guidelines and Technical Specifications

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4.5.24 Laundry Room

- for Child Care Facilities in City-Owned buildings
- see City of Richmond Child Care Design Guidelines and Technical Specifications.
- other City-owned buildings
- provide all required clearances for wheelchair users.

Specification References - Section 06 40 00 - Architectural Woodwork
Section 11 31 00 - Residential and Commercial Appliances
Division 22 - Plumbing

4.5.25 Staff Areas in City-Owned Buildings

Staff Office

- for City-Owned buildings
- See 4.5.11 - Finish Carpentry
- provide desk/work table.
- countertop has room for photocopier, if stand-alone photocopier not provided.

Staff Room

- provide kitchenette as per 4.5.24 over.
- provide lockers for staff.
- accessible washroom for staff-use is preferred. Confirm if low-threshold accessible wheel-in shower is required.

Specification References - Section 06 40 00 - Architectural Woodwork
Section 10 90 00 - Miscellaneous Specialties (Metal Lockers)
Division 22 - Plumbing

4.5.26 Janitorial, Maintenance, and Storage Areas

Janitor's and Maintenance Rooms

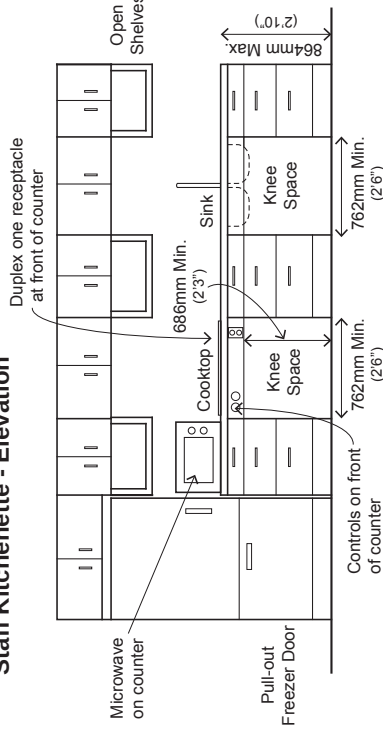
- provide resilient flooring and consider flash covering
- provide mop sink with splash protection on walls
- provide maintenance equipment racks for mops, etc., and storage shelves

General Storage in City-Owned Facilities

- configure as per specific program requirements.
- provide storage racks - "Interlok" no-bolt shelving as the design standard.

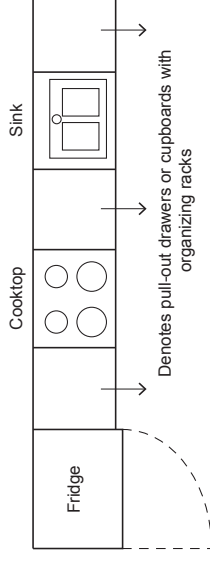
Specification References - Section 06 20 00 - Rough Carpentry
Section 06 40 00 - Architectural Woodwork
Section 10 90 00 - Miscellaneous Specialties

Staff Kitchenette - Elevation



Staff Kitchenette - Plan

Note: Cooktop may not be required. Review with staff.



Design Guidelines and Technical Specifications

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4.5.27 Additional Interior Design Considerations

General Finish Requirements

- no rough surfaces and corners eased.
- see Section 08 80 50 - Glass and Glazing.
- unframed type fixed to walls using concealed clips (number as recommended by the mirror manufacturer).
- use low VOC Mirror adhesive.

Window Blinds

- see Section 12 21 00 - Window Coverings.
- determine requirements and window blind preferences from City Facilities staff for the specific building installation.
- [Note safety requirements for Child Care Facilities - see City of Richmond Child Care Design Guidelines].

supply and install horizontal and vertical louvre blinds, or draperies, as required.

Mailboxes

provide front-loading gang type mail boxes, aluminum finish. confirm capacity requirements for mailbox design, and acceptability with Canada Post, and meet requirements for enhanced accessibility.

Notice Boards and Tackboards

- tack boards with hardwood backing typical.
- provide all backing in walls as required to install boards.

Signage

- see Section 10 14 19 - Signage.
 - includes (unless programmed otherwise):
 - exterior wall-mounted and free-standing building signage.
 - emergency exit and fire plan signage.
 - wall-mounted acrylic room identification signage, including Building Accessibility-related signage.
- (Note: do not use peelable lettering).

Typical Specification Reference is Section 10 90 00 - Miscellaneous Specialties, Unless noted otherwise.

Elevator Design Considerations

- see Section 14 24 23 - Hydraulic Passenger Elevators
- select an elevator installation and maintenance company with a good history of service with the City of Richmond. Consult with City of Richmond facilities staff.
- elevator and accessory design must comply with Building Code mandated standards for accessibility, as well as for enhanced accessibility, as per the City Richmond Design Guidelines for Enhanced Accessibility.
- consider acoustic separation requirements to minimize perceived elevator noise concerns.

Seismic Bracing

- provide seismic bracing as required for all fixtures, furniture and equipment.
- provide letters of assurance for seismic bracing of mechanical and electrical items.

Garbage and Recycling Area Specifications - Refer to City of Richmond Waste Management Design Guidelines

- for general building facilities, locate in a functionally appropriate location, near an elevator, and also easily accessible for pick-up by garbage and recycling vehicles and trucks.
- base required garbage and recycling handling areas on anticipated loads, and numbers of required bins and totes.
- provide for interior recycling and trash receptacles at recycling stations.
- Provide appropriate signage to guide separation of recyclables and trash by the visiting public and by staff.
- review all environmental program requirements as identified by City staff.

Bird Control

- see Section 10 81 13 - Bird Control Devices
- provide devices to prevent birds from landing and roosting on specified surfaces, like roof edges and under roof eaves.
- bird spike strips is the preferred device.

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and Technical Specifications

Fall Arrest and Restraint

- see Section 11 24 10 - Fall Arrest and Restraint Devices.
- custom design, supply and installation of a roof and building mounted safety tie back and lifeline anchor system incorporating a fall arrest and fall restraint safety system.
- comply with Workers Compensation Board [WCB] requirements.
- allow for any additional structural members in the building framing to enable the structural system to accept the additional load.

Food Service Equipment

- see Section 11 40 00 - Food Service Equipment.
- consult with a Kitchen Consultant to determine requirements.
- coordinate with the Mechanical Sections for supply and exhaust fans, exhaust ductwork and fire-rating of same, service rough-ins and fittings, fire-suppression systems, and other items required to complete the food service installation.

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- coordinate with the Electrical Sections for connections to fire alarm systems, service requirements, wiring, disconnects, and other electrical materials required to complete the food service equipment installation.
- coordinate with Section 06 40 00 - Architectural Woodwork for kitchen millwork requirements.

4.5.28 Additional Exterior Design and Landscaping Considerations

Refer to any applicable design guidelines for guidance on exterior design and landscaping (note: Landscape Plan is required as per of a Development Permit).

- see Section 12 93 00 - Exterior Site Furnishings
- materials and installation of standard manufactured catalog items including but not limited to waste containers, benches, and bike racks.
- consult with City of Richmond Facilities and Parks staff regarding models and requirements for exterior site furnishings.

Bike Racks

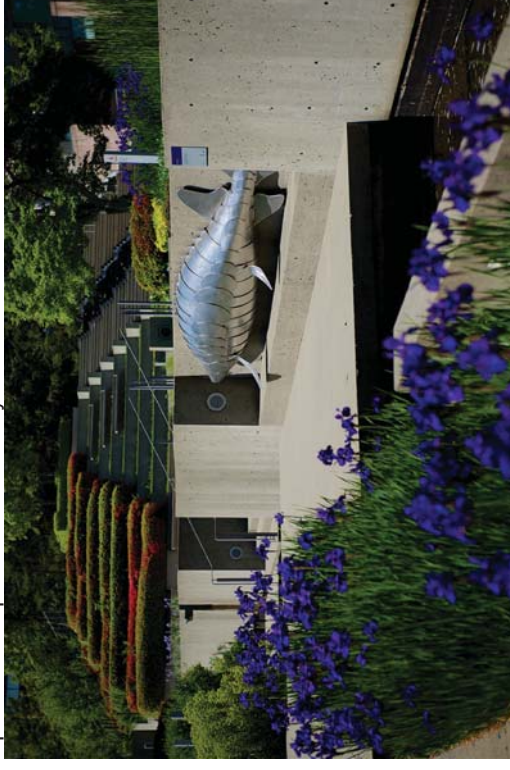
- comply with City of Richmond's Zoning Bylaw 8500, Section 7 Parking and Loading regarding requirements for bicycle parking.
- install bike racks under cover if feasible.

Scooters and Strollers

- provide space in City buildings inside front entries for scooter and stroller storage
- provide a scooter changing station.

Public Art

- review public art requirements with City staff.



Consider integrating public art into public landscaping.

- 4.5.29 General Mechanical Considerations**
Refer to City Administrative Procedures in the Appendix of this Document
- *City of Richmond Building Equipment, Monitoring, and Integration Requirements (15 pages)*
 - *Sustainable “High Performance” Building Policy - City-Owned Facilities [Policy 2307, adopted by Council 24 February 2014] (2 pages)*

4.5.29.1 Incorporation of Best Practices in Design and Construction to Optimize Building Performance

- follow sustainable design, and operation and maintenance best practices in the design and delivery of mechanical systems for new and existing buildings, in the context of approved budgets.
- emphasize conservation, optimized building performance, and continued improvement in energy use, water efficiency, and indoor environmental quality.

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- maximize efficiency of mechanical systems by providing a system of controls and building automation system for optimal programming capability of the mechanical system. Allow for measurement and verification systems that provide for continuous optimization.
- provide an Operations Plan that maximizes the operational efficiency of the mechanical system. Ensure that all servicing, maintenance, and replacement parts can be installed in a functional and workmanlike manner. Demonstrate on the Mechanical Consultant's drawings, and on the As-Built Project Record drawings, that all maintenance procedures can be undertaken without extraordinary or costly effort.

 City of Richmond	
Page 1 of 15	ADMINISTRATIVE PROCEDURE
File Ref:	City of Richmond Building Equipment, Monitoring, and Integration Requirements

City of Richmond Administrative Procedures for integrating mechanical and electrical requirements in City-owned buildings are included in the Appendices of this document.

4.5.29.2 General Mechanical Sections

Availability of Equipment, Servicing and Replacement Parts.

- all equipment, devices and controls support from a knowledgeable local technical support staff, including local sales representatives and local field service/factory trained representatives, especially regarding servicing of all equipment.
- all replacement parts and components need to be readily available (preferred less than 10 day delivery wait time), and cost effective.

Fire Suppression

- see Division 21 - Fire Suppression.
- provide fire suppression systems throughout the Building including:
 - wet sprinkler systems in heated areas.
 - dry sprinklers in exterior and unheated areas including covered parking, attics, concealed spaces, balconies, and other similar locations.
 - standpipe systems.
 - portable fire extinguishers. [Typically, locate these in recessed cabinets in corridor locations].

Plumbing

- see Division 22 - Plumbing.
- for piping requirements see Section 22 11 00 - Facility Water Distribution and Equipment.
 - City preference is for ball valves at piping terminations. Provide valve tags.
 - City preference is for clear lamacoid labeling on all piping, identifying piping function and flow direction.
- Refer to City “Equipment Naming” protocols [See Appendix]
 - provide floor drains in all wet areas.
 - City preference is for hard-wired touchless wash-basin faucets and automatic toilet flushing mechanisms. Sinks should be of the drop-in, self-rimming variety (no trough sinks). Plumbing brass should be polished chrome.
 - City preference is for wall-hung W/C's.
 - for Child Cares, provide for reduced hot water temperatures at all child accessible faucets.
 - for special uses, such as Art Studios and Firehalls, include separate hot and cold water controls.
 - provide Grease Traps to reduce the discharge of fats, oils and grease [FOG] into the City's sanitary systems. Fully automatic “grease recovery devices” are a preferred product.

Design Guidelines and Technical Specifications

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Heating, Ventilation and Air Conditioning [HVAC]

- see Division 23 - HVAC
- for acoustic issues also refer to:
 - Section 06 20 00 - Rough Carpentry (Acoustic Control Framing)
 - Section 07 21 00 - Insulation (Noise Stop)
 - Section 07 92 00 - Joint Sealants (Acoustic Sealant)
- if not a stand-alone facility, the City-owned facility should have its own HVAC systems, separate from the rest of the building of which it is a part.

Controls

- see Division 25 - Integrated Automation
- Refer to the following City of Richmond Administrative Procedures in the Appendix of this Document:
- Direct Digital Control (for Buildings) and Energy Monitoring Guidelines [Appendix 6.3]
 - Direct Digital Control (for Buildings) and Energy Monitoring Guidelines.
 - non City managed new construction for City maintained spaces [Appendix 6.2].



Mechanical and electrical equipment should be installed to facilitate ease of long-term maintenance. Avoid installing equipment in confined spaces or configurations, or in locations that have access problems. All City facilities must have a detailed Operations and Maintenance Plan detailed on the Consultants' Project Documents and on the Contractor's As-Built Documents, that demonstrates that all mechanical and electrical equipment can be accessed and maintained in a functional and workmanlike manner.

4.5.30 General Electrical Considerations

Refer to City Administrative Procedures in the Appendix of this Document

- City of Richmond Building Equipment, Monitoring and Integration Requirements [Appendix 6.4]
- Sustainable "High Performance" Building Policy - City-Owned Facilities [Policy 2307, adopted by Council 24 February 2014] [Appendix 6.1]

4.5.30.1 Incorporation of Best Practices in Design and Construction to Optimize Building Performance

- as for mechanical systems design, follow sustainable design, and operation and maintenance best practices for electrical systems in new and existing buildings, in the context of approved budgets.
- emphasize conservation, optimized building performance and continued improvement in energy use, building systems efficiency and indoor environmental quality.
- provide a system of controls and building automation that allows for optimal programming capability for all building systems, electrical and mechanical. Include measurement and verification systems that allow for continuous optimization.
- provide and Operations Plan that allows for the maximum operational efficiency of the electrical system.

4.5.30.2 General Electrical Sections

Coordination with Mechanical HVAC Systems [See Division 23]

- specify equipment with Energy Star certification whenever possible.
 - use high efficiency motors and pumps.
- Availability of Equipment, Servicing and Replacement Parts
- all equipment, devices and controls require support from a knowledgeable local technical support staff, including local sales representatives and local field service/factory trained representatives, especially regarding servicing of all equipment.
 - all replacement parts and components need to be readily available (preferred less than 10 day delivery wait time), and cost effective.

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and Technical Specifications

Integrated Automation [See Division 24]

- optimize the City's building control and energy monitoring capacity to maximize maintenance and operational efficiency.
- only City-prequalified Supply and Installation Contractors for Direct Digital Controls [DDC] systems will be contracted for this work.
- meet City requirements for DDC graphics and operator interface (which will run on the City's web servers).
- Coordinate all work through the City's IT department to arrange loading of graphics, databases, and security requirements.

Power and Distribution [See Division 26]

- lighting, mechanical and plug loads need to be segregated on separate electrical panels for energy monitoring purposes.

Optimize Building Lighting Systems [See Division 26]

- lighting design should incorporate sustainability principles and products and systems should be energy conserving, long life, have a low cost of ownership and be accessible for service and maintenance.
- daylight harvesting opportunities should be implemented in areas where natural daylight is available.
- all lighting should be designed to suit the task and location.
- in general, where feasible and economical, LED lighting is preferred, and is the typical project standard.

[See City of Richmond Administrative Procedures for lighting system Requirements.]

Maintenance of Lighting Fixtures and Electrical Equipment

- consideration must be given to ensure access for maintenance activities. Luminaires and equipment should be accessible from ladders on flat surfaces such as floors or stair landings, or from powered lifts with a maximum lift of 6.1m [20 feet].
- [Note: Building access, floor construction, and elevators should be designed to permit entry and use of standard lift equipment for proper and safe maintenance.]

Fire Detection and Alarm [See Division 28]

- all battery pack lighting, remote heads and exit lights should be LED type and manufactured by an approved local supplier [e.g. "Ready-Lite" or approved equal].

Electronic Safety and Security [See Division 27 - Communications]

- review requirements with operations and maintenance, and City IT staff, for access, surveillance, and after-hours security.

5.0 Checklists

- 5.1 Preliminary Design Stage Checklist for an Integrated Design Process and Schematic Design
- 5.2 Design Development / Pre-Development Permit Application Checklist
- 5.3 Final Detail Design and Pre-Building Permit Application and Construction Tender Drawings Checklist

5.1 Preliminary Design Stage Checklist for an Integrated Design

Process and Schematic Design

Design Action Component

1. Functional Program

Implementation Detail

- city representatives identify building areas and functional components that are to be included.
- identify functional inter-relationships for the proposed spaces, along with area requirements.
- identify project goals and project budget targets.

2. Pre-Design

- architect / Coordinating Consultant meets with City representatives to establish project goals, including site opportunities and constraints, and energy utilization and high performance building targets, as well as working within budget constraints.
- architect / Coordinating Consultant creates sketch plans to inform the Integrated Design Process, including preliminary exterior wall assemblies that locate thermal and air barrier locations in principle.

3. Integrated Design Process

- engage experienced consultants for the work.
- have all consultant roles clearly identified.
- ensure that consultants are familiar with City requirements for high performance buildings, especially mechanical and electrical systems.
- ensure all consultants are fully involved in the integrated design process.
- respond to site constraints and site orientation issues to inform the schematic design.
- engage stakeholders

4. Schematic Design

- define building areas and functional inter-relationships.
- identify building structure and cladding systems.
- identify glazing percentages and window shading, and bird-friendly design strategies.
- identify possible thermal bridging conditions.

- create an energy model to inform the design process.
- identify options for heating and cooling and domestic hot water systems.
- create a short-list of all building components, including all assemblies and junctions.
- confirm all schematic design strategies by means of a design charrette with all city representatives and consultants.
- confirm the schematic design meets project budget targets.

5.2 Design Development / Pre-Development Permit Application Checklist

Design Action Component		Implementation Detail
1. Detailing		- detail all building assemblies and components, including all building systems. Identify mechanical equipment and controls and lighting selections.
2. Modeling		- model all assemblies and thermal bridges, utilizing standard program models. Model environmental conditions, such as internal heat gains, over-heating and moisture path issues.
		- confirm all proposed assemblies or required revisions.
		- confirm energy utilization standards are on target.
3. Cost Control		- engage a cost consultant, or a construction manager to provide a detail costing.
		- confirm project budgeting is on target.
4. Drawings and Outline Specification		- prepare the Design Development Documents package.
5. Certification Submission		- if required, submit the Design Development package to the certifying authority or consultant.
		- incorporate required design adjustments in the Design Development package.

5.3 Final Detail Design and Pre-Building Permit Application and Construction Tender Drawings Checklist

Design Action Component		Implementation Detail
1. Finalize Detailing		- confirm all building assemblies and systems, and finishing material schedules and equipment schedules.
		- refer to City of Richmond Design Guidelines for Enhanced Accessibility, and for Housing Projects to the Affordable Housing Resource Guide.
		- For Child Cares, refer to the Child Care Design Guidelines.
2. Quality Control		- confirm detailing and equipment incorporates City of Richmond materials and systems requirements. [These Design Guidelines and Technical Specifications].
		- confirm energy utilization, and building performance requirements.
3. Confirm Consistency between Consultants' Documents		- confirm that Architectural documents are consistent with the document packages of the other consultants work, especially the Structural, Mechanical and Electrical packages. [Note: ensure that the consultants' work does not incorporate standard details that do not reflect the designed construction assemblies for the project. Check all dimensional requirements for specified products and systems, and ensure there is consistency between all of the consultants' drawings and specifications].
4. Cost Control		- with the assistance of a cost consultant or construction manager, confirm that budget targets are being met, before the project is issued for tender.

6

Appendices

6.0 *Appendices*

- 6.1 Sustainable “High Performance” Building Policy - City-Owned Facilities [Policy 2307, adopted by Council 24 February 2014]
- 6.2 City of Richmond Direct Digital Control (for Buildings) and Energy Monitoring Guidelines - Non-City managed new construction for City maintained spaces. [January 2016]
- 6.3 City of Richmond Direct Digital Control for Buildings) and Energy Monitoring Guidelines
- 6.4 City of Richmond Building Equipment Monitoring and Integration Requirements [July 2018]
- 6.5 City of Richmond General Lighting Guidelines [January 2016]
- 6.6 City of Richmond Entrance, Intercom/Video Systems Specifications for City of Richmond Buildings [28 January 2016]
- 6.7 City of Richmond Security, Fire Alarm, Access and Video Systems Specifications for City of Richmond Buildings [January 2018]
- 6.8 City of Richmond Waste Management [January 2016]
- 6.9 City of Richmond Roof-Top Playground Design Guidelines [August 2016]
- 6.10 City of Richmond Irrigation Design Guidelines for Roof-Top and Grade Related City Owned Projects [November 2016]
- 6.11 City of Richmond Mechanical Systems Naming Protocol
- 6.12 City of Richmond Standard Colour Palette

6 Appendices

6.1 Sustainable “High Performance” Building Policy - City-Owned Facilities [Policy 2307, adopted by Council 24 February 2014]

POLICY 2307:

It is Council policy to:

1. Ensure that newly constructed civic buildings or spaces are built with consideration of occupant safety, comfort and indoor environmental quality, in the context of approved budgets.
2. Ensure effective internal stakeholder engagement is carried out through an integrated design process during the planning, design, implementation, and completion of new facilities or spaces and associated outdoor areas. An integrated design process utilizes a collaborative design approach, involving consultants, staff and user group representatives, to set a well-defined vision and performance objectives for new building or spaces, and to identify strategies for achieving the desired outcomes.
3. Incorporate high performance attributes into new civic facility or space design and construction to the maximum extent that relate to:
 - The most current Leadership in Energy and Environmental Design (LEED®) New Construction (NC) classification will be used as the standard by which to assess new facility construction. LEED® Gold certification be set as the desired target of building performance for new City buildings.
 - That at a minimum score of 10 points be targeted from LEED® Optimize Energy Performance criteria where a lifecycle assessment demonstrates reductions in operational costs and/or payback periods are within acceptable levels.
 - For other criteria of LEED® for NC, consideration will be given to measures that reduce energy and water use, reduce maintenance and operational costs, reduce greenhouse gas emissions, and optimize indoor environmental quality.
4. Follow sustainable operation and maintenance best practices guidelines for new and existing buildings, which emphasize conservation, optimized building performance, and continued improvement in energy use, water efficiency, and indoor environmental quality.
5. Maximize energy and operational efficiency through the selective re-commissioning of civic facilities on an on-going basis. Re-commissioning is a form of quality assurance testing that is carried out to ensure that building physical plant systems operate as effectively as possible given occupancy patterns and building function.
6. Target no net increase in corporate building energy use and related greenhouse gas emissions, as compared to 2012 levels by:
 - Aiming to not increase energy demand or GHG emissions when constructing replacement infrastructure; and/or
 - Striving to offset increased energy demand and GHG emissions through reductions at other civic facilities.
7. Aim to construct net zero energy and carbon neutral corporate buildings by 2030.

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6.2 City of Richmond Direct Digital Control (for Buildings) and Energy Monitoring Guidelines - Non-City managed new construction for City maintained spaces. [January 2016]

1. REQUIREMENTS:

- i. One of the City's two prequalified Supply and Installation Contractors for Direct Digital Controls (DDC) Systems must be used for the mechanical and lighting control of City owned and/or operated space – currently either ESC Automation or Control Solutions.
- ii. Lighting control is to be tied into separate DDC controllers, which will be provided by one of the prequalified contractors, with the location and number to be specified by the Electrical Design Consultant as part of the electrical design tender package.
- iii. Graphics for the operator interface must be prepared to meet City requirements, which highlight energy efficiency and comfort. Graphic functionality for energy use monitoring will include, but is not limited to, energy use breakdown between electricity and natural gas, further segregation of each fuel type into energy use of separate end uses, to further segregation of energy use of specific systems and equipment. The operator interface for City will run on the City's web-servers.
- iv. The DDC system will be remotely accessed by the City's web based operator interface. Data will be collected at a maximum of 15 second intervals for all points during the commissioning process to ensure system stability and tuning. VPN network connectivity will be provided by the Supply and Installation Contractor for secure access of sufficient bandwidth to support this.
- v. Any energy use monitoring and billing of a City space, which is located within a building that is not City owned and managed, will be done through sub-meters that are BACnet enabled and not on a pro-rated basis.
- vi. A water meter that is BACnet enabled is required to monitor use of any mechanical makeup water system such as cooling tower, chill water system, heating water system, heat pump system, Geo/ground loop and Solar system.
- vii. A BTU meter that is BACnet enabled is required for the heat pump loop to monitor the energy usage of City space.
- viii. Once the mechanical and lighting DDC points list for the space has been initially defined, the City requests that they are provided to the City along with the mechanical and electrical specifications, to allow for the timely opportunity to review and comment before finalization.
- ix. Lighting, mechanical, and plug loads need to be segregated on separate electrical panels for energy monitoring purposes.
- x. Once the preliminary electrical directories for each electrical panel have been defined, the City requests that they are provided to the City, to allow for a timely opportunity to review and comment before finalization.
- xi. City personnel or the City's DDC consultant will conduct its own inspections of the system design, installation and functionality, and will prepare its own deficiency lists during the construction process and final inspection. The deficiency lists will need to be corrected prior to City sign off on completion.

6.3 City of Richmond Direct Digital Control for Buildings) and Energy Monitoring Guidelines

1. DEFINITIONS:

ARCNet:

- Attached Resource Computer Network (ARCNet) is a communications protocol for local area network of mechanism, through coaxial cabling.

ASHRAE:

- The American Society of Heating, Refrigerating and Air-Conditioning (ASHRAE) is an international standards organization for numerous building related systems. It is the organization's mission to advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry.

ANSI:

The American National Standards Institute (ANSI) is a standards organization that oversees the development of voluntary consensus standards for a large variety of products, services, systems, and personnel in the United States. In addition, the organization coordinates U.S. standards with international standards to try to ensure consistency.

BACNet:

- Is an ANSI/ASHRAE standard communication protocol for direct digital control networks and automated building mechanisms. It was designed to be used for applications such as heating, ventilation, and air-conditioning control, lighting, access control, and fire detection systems and their associated equipment.

Block Programming:

- Block programming, is a pre-programmed set of instructions (block) that can be used in a Direct Digital Control (DDC) system to control a specific action or transfer function. To understand the specific action that the block programming can accomplish, it is crucial that the pre-programmed instructions are able to be interpreted.

DDC:

- Direct Digital Control (DDC), refers to the automation system that will typically be used to control lighting and HVAC mechanical systems in a building.

Front End Software:

- Typically refers to a direct digital control graphical package and user interface that the building operator will usually interact with to review operating building systems, change scheduling, and access system use data.

Gateways:

- Are pre-programmed hardware devices in a direct digital control system that act as communication protocol translators for different protocols, such as from BACNet to ARCNet and Tridium.

General Control Language:

- Refers to a direct digital control system programming language that is textual and is somewhat straightforward to use.

IP:

- Internet Protocol (IP) is the principal communications protocol in the Internet protocol suite for relaying datagrams across network boundaries.

MSTP:

- Multiple Spanning Tree Protocol (MSTP) is an open source communication protocol language connecting terminal controllers to main direct digital control processing system, and is defined by the applicable networking standard IEEE 802.1Q.

Virtual Metering:

- Refers to the function of monitoring energy use of specific systems or pieces of equipment, based on demand and run time, through a building's direct digital control system and analog current transducers.

6

Appendices

6.3 Continued

2. DIRECT DIGITAL CONTROL KEY REQUIREMENT STRATEGIES:

The City of Richmond has identified fundamental key requirements that should act as an overarching strategy for its direct digital control systems at existing and new facilities. These requirements will allow for the increased optimization of maintenance time and funding, more effective integration of new facilities to the City's existing building control systems, and increased capacity to monitor building equipment and system run time and energy use.

The following key requirements are to be applied when replacing existing DDC systems or installing new DDC systems:

i. Ensure interoperability of DDC products through a non-proprietary communication protocol:

Utilize the communication protocol standard BACNet, as currently defined in the ANSI/ASHRAE Standard 135 – 2010, to ensure that DDC products from various manufacturers can be used throughout the City's DDC system, and the City is not bound to use a specific manufacturer's proprietary systems.

ii. Eliminate the need for DDC gateway infrastructure:

Generally DDC systems consist of the groups of primary controls and terminal unit controls, which are connected through high and low speed networks to the user interface computer and management system. Utilizing the non-proprietary communication protocol BACNet to connect controls to the interface computer, removes the need for gateway hardware to be installed as part of a DDC system when various products with different communication protocols are used.

iii. Reduce the use of proprietary programming languages:

The City prefers the use of basic textual languages, such as General Control Language, for the programming of its DDC systems. Block programming would be considered if the internal operation of each block was easily obtained when necessary and effective training was provided by the manufacturer as needed.

iv. Ensure user interface graphics are customizable:

The City prefers the use of user interface graphics that can be customized to the needs of the City and its operators, and can allow for some level of consistency between different DDC systems.

v. Enable effective in-house programming:

The City prefers to have trained and knowledgeable in-house staff and operators complete desired changes to DDC systems programming, such as equipment scheduling and set point adjustments, in all DDC equipped City facilities.

vi. Ensure the equipment and energy use can be monitored effectively through the DDC system:

The ability to track energy use of each DDC equipped facility should be enabled through the DDC system. The energy use profile of each facility needs to be able to be broken down to its end use, e.g. electricity, gas, lighting, space heating, cooling, ventilation, plug loads, domestic hot water heating, building processes, etc., and will be specific to the facility and its function. The monitoring of energy usage needs to also be able to be provided on an equipment by equipment basis, e.g. HVAC Unit #1, lighting for the multipurpose room, etc.

vii. Enable the opportunity for data analytics and fault detection and diagnostics:

The City's DDC systems need to allow for future incorporation of data analytic software tools, and fault detection and diagnostic programs. These tools and programs, if established carefully, will allow for the quick assessment and diagnosis of mechanical system anomalies and/or failures.

6

Appendices

6.3 Continued

3. DDC REPLACEMENT OR NEW INSTALLATION GUIDELINES:

This section is intended to provide more specific requirement guidelines when considering the replacement of an existing DDC system, designing a new facility, or the City is taking ownership of a new facility. These guidelines highlight key interoperability, energy use monitoring and basic operation aspects of a DDC system, and are not meant to cover all aspects of a DDC system's functionality.

1. General

1.1. DDC systems comprise of all aspects of monitoring and control of the specified systems and must include an operator control language which is either textual (TCL) or block (BPL) as specified.

2. Communication Protocol

2.1. The DDC System panels shall consist of native BACnet, microprocessor based, peer to peer, networked devices with the BACnet stack embedded in every controller. The controller connected to the input or output device shall deliver the associated BACnet point directly to the BACnet network without passing through any other device. Gateways are not permitted.

2.2. The control system shall consist of a high-speed, peer-to-peer network of DDC System panels and a web-based operator interface. Depict each mechanical system, lighting system, and building floor plan on a system graphic accessible by mouse click. A web server with a network interface shall gather data from this system and generate web pages accessible through a conventional web browser on any PC connected to the local network or through VPN over the Internet. Operators shall be able to perform all operator functions through the web browser interface.

2.3. System shall use the BACnet protocol for communication to the operator workstation, web server and for communication between control panels and modules. Schedules, setpoints, trends, multipoint trends, alarms and other required data shall be BACnet objects. Controller and operator interface communications shall conform to the latest BACnet ANSI/ASHRAE Standard (Current ANSI/ASHRAE Standard 135).

2.4. Complete DDC system programming language, programming tools and sequence of operation development environment will be provided to the City so that the City operators are able to write their own Sequences of Operation and load the programs into the controllers in the future. All programming tools and software available to an installing contractor shall be provided to the Owner.

3. DDC System Data

3.1. City DDC systems should be able to stream all data at five second intervals for short term storage and dynamic tuning, and at 5 minute intervals for permanent storage and later analysis.

3.2. DDC system data that is stored should be easily transferable to all common databases and cloud database services, and should support data tagging.

3.3. DDC system data that is stored should be easily exportable in CSV, Excel and XML format.

3.4. DDC system data should be stored and structured to allow interrogation by queries running on third party tools.

4. Installation

4.1. All installations shall conform both to manufacturer's recommended procedures and all applicable codes and regulations to the approval of authorities having jurisdiction including but not limited to the Canadian Electrical Code.

4.2. All equipment installed shall be mechanically stable and, as necessary, fixed to wall, ceiling or floor. Seismic restraint and anti-vibration mounts to be provided, if required, for the proper securing and isolation of the equipment.

4.3. All panels, enclosures and components shall be positioned to provide easy access for maintenance, replacement or expansion. All devices shall be neatly aligned vertically and horizontally. Wiring shall be concealed within Panduit in the enclosure. All terminations shall be made on labelled termination blocks. Each cover of any gutter box or electrical box containing terminations shall have a laminated photograph showing the interior of the box affixed to the outside of the box. Transducers and other accessory items shall not be mounted in the field. They shall be mounted in groups in centrally located control enclosures for ease of maintenance.

4.4. Equipment shall be installed in locations providing proper ambient conditions for its specified functioning, including adequate ventilation.

5. Wiring

5.1. All conduit, wiring, and cabling shall be installed to the applicable Codes and Regulations including the Canadian Electrical Code, and specified class, size, and type shall be approved by the City.

5.2. All wiring and cables shall be rated for the environment they are used in.

6. Labeling

6.1. All labeling identifying hardware and/or wiring throughout the project must match the as-built drawings.

6.2. Manufacturers' nameplates and UL or CSA labels shall be visible and legible after equipment is installed.

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6.3. At every power supply serving a control panel, electronic actuator or other device, provide a lamacoid label that identifies the panel and breaker serving it. At the breaker panel mark each breaker that serves a power supply for the DDC system and indicate which DDC panel that breaker serves.

7. Field Devices

7.1. All sensors provided under this contract shall be installed in accordance with the manufacturer's prescribed procedure in addition to the specified requirements.

7.2. Pipe mounted sensors shall be rigidly mounted and mountings shall be adequate for the environment within which the sensor operates. Electrical boxes shall be properly tightened down on top of wells so that they cannot be spun by hand.

7.3. Temperature wells shall of the appropriate size and type for sensing water temperatures, as required in the graphics and/or points list.

7.4. All conduits attached to sensors shall be sealed to stop air transmitted from other areas affecting sensor readings. Wire penetration to wall mounted sensors shall also be sealed.

7.5. Locate all ductwork point type sensors 6 (six) feet down stream of coil if possible and at least 6 (six) inches from edge of duct. Point sensors shall only be used in return air plenums, and in ducts under 2.0 square feet in cross-section.

7.6. Averaging duct sensors shall be suspended on laminated aircraft cable or similar strung across the duct to prevent stress on the sensing element or as prescribed by the sensor manufacturer's best practice.

7.7. Install room temperature sensors at 5 (five) foot heights.

7.8. Locate all ductwork point type sensors 6 (six) feet down stream of coil if possible and at least 6 (six) inches from edge of duct. Point sensors shall only be used in return air plenums, and in ducts under 2.0 square feet in cross-section.

7.9. The location of all devices and panels require approval of the City prior to installation. The north outdoor air sensor shall be located on the north side of a facility in an area that is always shaded, away from the influence of exhaust air or other sources of heat. The south outdoor air sensor shall be located on the south side of a facility in an area exposed to the sun. The south sensor shall have a metal housing which shall be painted flat black. Where a facility has two sections, such as a high rise and low rise, the north and south sensors shall be installed for each of the two sections.

7.10. All conduits attached to sensors shall be sealed to stop air transmitted from other areas affecting sensor readings. Wire penetration to wall mounted sensors shall also be sealed.

7.11. All conduits attached to sensors shall be sealed to stop air transmitted from other areas affecting sensor readings. Wire penetration to wall mounted sensors shall also be sealed.

7.12. Freeze stats shall be installed in strict accordance with manufacturer's best practice and supported on laminated aircraft cable or similar, without stress on any portion of the sensing element. Observe relative mounting height of vapour tension element to control box.

7.13. All panel mounted devices shall be neatly aligned and secured.

7.14. Field electrical boxes shall be mounted securely and parallel or perpendicular to building lines

8. As-Built Drawings

8.1. As-Built drawings shall be self-contained and shall not reference other legacy control drawings.

9. DDC Panel Programmability

9.1. The following features shall be included to support the creation and maintenance of the system database. The features shall be intrinsic to each panel and manipulated through the operator interface.

9.1.1. Database

- Provide means for adding, deleting, defining and modifying points and point types through the operator interface.
- Provide user definable scale ranges for analog points including non-linear relationships.
- Provide user definable units for analog and digital points.
- Provide ability to assign normal position of digital points.
- Provide links in the database such that if a point name is changed in the database, all database occurrences of that point will change automatically.

9.1.2. Trend Logs and Graphs

- Provide trend log reporting of user selected points (any input, output or virtual point), with adjustable sample time and sample period. Provide capability and implement the display of four or more points simultaneously on one graph. Provide automatic and manual scaling capability of horizontal and vertical axes. Provide normalized time base on the abscissa of all trend graphs so that hour and minute grid marks fall on normal time based intervals of 5, 10, 15, 30 and 60.

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Appendices

6.3 Continued

- All controllers shall sample and store trend data locally at the panel level, and transmit the trend data in bursts over the BACNet network for central storage. The DDC panel buffering and periodic burst transmission is a requirement to prevent network congestion and to meet the network performance specifications.
- 9.1.3. User Configurable Trend Logs
 - The system shall allow the operator to configure trend sample or change of value (COV) interval, start time, and stop time for each system data object and shall be able to retrieve data for use in spread sheets and SQL database programs.
 - The operator interface shall allow review of trend information stored at the controller level as well as in the central storage. Provide a means to seamlessly include controller stored trend data with centrally stored trend data. This means shall not require additional effort by the operator.

9.1.4. Alarm Processing

- Operator defined alarms for all real and virtual points with adjustable alarm entry and exit limits, custom messages and graphics links.
- Automatic logging of alarms and acknowledgements.
- User definable routing of alarms to printer, screen and email.
- Alarms to process within 10 seconds regardless of system states.
- Any critical alarm which may be specified for items such as generator, sump level alarm, freeze protection, high domestic hot water temperature, high transformer room temperature, primary equipment failures or alarms and other critical alarms shall be emailed to designated individuals.

9.1.5. Totalization

- Provide ability to count digital occurrences and totalize analog values through time.

9.1.6. Scheduling

- Provide scheduling feature for creation of start / stop schedules.

Weekly

- Minimum 20 schedules per system panel type BC, three schedules schedule per AAC.

- 8 start stops per day on each weekly schedule

Annually

- Provide annual schedule to define holidays

Extended Hours

- Provide over-ride schedule to permit extended operation on a particular date. When this schedule is used there shall be no need for the operator to undo the extended hours schedule as it is scheduled for a particular date.

9.1.7. (Proportional-Integral-Derivative) PID Controllers

- Provide resident 3 mode software controllers in each DDC panel and include the following tuning parameters:
 - Setpoint
 - Measured variable
 - Control Action - direct or reverse
 - Proportional Gain
 - Integral Gain
 - Derivative Gain
 - Bias
 - Sampling Time
 - Output from 0 to 100%
 - Dead-band

- Provide the ability to modify the values of the above attributes from the TCL or BPL as well as through PID setup template.

9.1.8. TCL and BPL Functions

- Provide the programming language and user interface to allow programming of the DDC panel sequence of operations. Each panel shall have resident and proven TCL or BPL which shall be capable of reading the value and/or status of all system points and initiating both digital and analog control actions from any user defined combination of calculations and logical expressions which shall at a minimum include:
 - Addition, subtraction, multiplication and division.
 - Square roots, summations, absolute differences.
 - Logical "and", "or", "less than" and "greater than".
 - Time delays, in seconds, minutes or hours.
 - Ability to embed comments in system generated documentation.
 - Ability to use time of day and day of year in algebraic calculations.
 - Ability for nested "if-then-else" logic statements.
 - Efficient method of discarding a number of highest or lowest readings from a group of samples.

10. Operator Interface

- 10.1. Provide a BACnet Advanced Operator Workstation B-AOWS to be installed on site or as directed by the Owner. Provide a web server to allow operator interface through their web browsers. Internet connectivity will be provided by the Owner. Coordinate with the Owner's IT group for provisioning of secure connections. The web server shall be accessible using a standard Internet Explorer, Netscape, Chrome, Firefox and Safari browser.

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10.2. If any Flash, Multimedia or third party plug-ins or similar are required for the browser, then the system shall be compatible with the most up to date versions of these plug-ins to ensure compatibility with other browser functions, and to satisfy security updates of plug-ins. Future releases of the software required to maintain compatibility with these plug-ins shall be provided free of charge for 5 years from Total Completion. Programming of the system sequences of operation through the browser is not a requirement of this specification but is desirable. Provide full details in your proposal.

10.3. Web server shall reside on the Ethernet network with peer building controllers. Each standard browser connected to server via the Ethernet LAN, Internet or through VPN shall be able to access all system information and graphic functionality from the complete BACNet LAN including Ethernet and MS/TP sections.

10.4. Web server and BC controllers shall communicate using BACnet IP protocol. Web server or workstation and control network backbone shall communicate using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol and BACnet/IP addressing as specified in the most current ANSI/ASHRAE 135, BACnet Annex J.

10.5. The workstation environment may reside on the web browser physical computer providing that practice performance standards are achieved as defined in the performance specification.

10.6. The software interface shall allow each authorized operator to execute the typical best practice functions as defined in the performance specification.

10.7. In addition to the capabilities of the B-OVS the Advanced Operator Workstation shall provide the typical best practice functions as defined in the performance specification.

10.8. DDC Panels, Addressable Sensors and Actuators: Provide Building Controllers (BC) and Advanced Application Controllers (AAC). Application Specific Controllers (ASC) are not permitted. Provide Smart Actuators (SA), and Smart Sensors (SS) as required to achieve specified performance or interface with existing actuators. Every device in the system which executes control logic and controls HVAC equipment must conform to a standard BACnet Device profile as specified in the most current ANSI/ASHRAE 135, BACnet Annex L standard. All BCs and AACs shall have hand-off-auto switches on binary outputs.

10.9. Building Controllers (BCs): Each BC shall conform to BACnet Building Controller (B-BC) device profile as specified in the most current ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-BC in the BACnet Testing Laboratories (BTL) Product Listing. Provide BCs for each piece or group of mechanical equipment with high point count or where memory and programming capacity is required for complex or global sequences of operation.

10.10. Advanced Application Controllers (AACs): Each AAC shall conform to BACnet Advanced Application Controller (B-AAC) device profile as specified in the most current ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-AAC in the BACnet Testing Laboratories (BTL) Product Listing. Provide AACs for pieces of mechanical equipment such as unitary air handlers, heat pumps, fan coil units, variable air volume boxes and induction units.

10.11. Application Specific Controllers (ASCs): ASCs are not permitted.

10.12. Smart Actuators (SAs): Each SA shall conform to BACnet Smart Actuator (B-SA) device profile as specified in the most current ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-SA in the BACnet Testing Laboratories (BTL) Product Listing.

10.13. Smart Sensors (SSs): Each SS shall conform to BACnet Smart Sensor (B-SS) device profile as specified in the most current ANSI/ASHRAE 135, BACnet Annex L and shall be listed as a certified B-SS in the BACnet Testing Laboratories (BTL) Product Listing.

10.14. BACnet Communication

10.14.1. Each BC shall reside on or be connected to a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol and BACnet/IP addressing.

10.14.2. BACnet routing shall be performed by BCs or other BACnet device routers as necessary to connect BCs to networks of AACs over MS/TP or Ethernet.

10.14.3. Each AAC shall reside on a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol with BACnet/IP addressing, or it shall reside on a BACnet network using the MS/TP Data Link/Physical layer protocol.

10.14.4. Each SA shall reside on a BACnet network using the ARCNET or MS/TP Data Link/Physical layer protocol.

10.14.5. Each SS shall reside on a BACnet network using ISO 8802-3 (Ethernet) Data Link/Physical layer protocol with BACnet/IP addressing, or it shall reside on a BACnet network using MS/TP Data Link/Physical layer protocol.

10.14.6. Select BACnet addressing so as to be compatible and fully interoperable with any existing BACnet systems in the facility.

10.14.7. Data Sharing. All controller firmware shall allow distributed controllers to share real and virtual object information seamlessly across networks.

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- 10.15. Stand-Alone Operation: Each controller shall operate independently from the network and other controllers in the event communication is lost. Global variables shared from other panels shall be maintained at their last value until communication is resumed. Each BC and AAC shall have its own time clock synchronized to the others but capable of maintaining correct time in the event of network communication loss. All I/O points specified for a piece of equipment shall be integral to its controller and associated expansion I/O. Loops shall not be closed across the network.
- 10.16. Environment:
- 10.16.1. Electronic hardware shall be suitable for anticipated ambient conditions.
- 10.16.2. Electronic hardware used outdoors or in wet ambient conditions shall be mounted in waterproof enclosures and shall be rated for operation at -29°C to 60°C (-20°F to 140°F).
- 10.16.3. Electronic hardware used in conditioned space shall be mounted in dust-protective enclosures and shall be rated for operation at 0°C to 50°C (32°F to 120°F) and 0 – 95% RH non-condensing.
- 10.17. Real-Time Clock: BCs and AACs shall have a real-time clock.
- 10.18. Serviceability:
- 10.18.1. Controllers shall have diagnostic LEDs for power, communication, and processor.
- 10.18.2. Wires shall be connected to a field-removable modular terminal strip or to a termination card connected by a ribbon cable.
- 10.18.3. Each BC and AAC shall continually check its processor and memory circuit status and shall generate an alarm on abnormal operation. System shall continuously check controller network and generate alarm for each controller that fails to respond.
- 10.19. Memory:
- 10.19.1. Controller memory shall support operating system, database, trend log storage and programming requirements.
- 10.19.2. Each BC and AAC shall retain BIOS and application programming for at least 72 hours in the event of power loss.
- 10.19.3. Trend Logs – Provide enough controller memory to handle the specified trend logs in addition to all other memory requirements while meeting specified performance.

- 10.19.4. PID Controllers – One controller CO for each output point connected to the panel.
- 10.19.5. Software Points - Three variables for each output point connected to the panel.
- 10.19.6. Textual Control Language – 60 (sixty) lines with 4 operators each, for each output point connected to the panel; or the equivalent using BPL.
- 10.19.7. Descriptors - Provide 1 (one) descriptor for each real or virtual point.
- 10.19.8. Totalizers - Provide 1 (one) Totalizer TZ for each digital input, output or binary virtual point in the panel.
- 10.20. Immunity to Power and Noise: Controllers shall be able to operate at 90% to 110% of nominal voltage rating and shall perform an orderly shutdown below 80% nominal voltage. Operation shall be protected against electrical noise, RFI, EMI and specifically and from keyed radios up to 5 W at 1 m (3 ft.).
- 10.21. Backup and Restore: Provide a means of automated system backup and restore so that all control language, databases, system state and trend log information is backed up to long term storage. Provide means of system restore so that a panel or entire system can be restored from the backup without operator intervention beyond initiation of the restore. Include any backup for databases supporting any gateways to legacy systems.
11. Effective Execution Time
- 11.1. The maximum permissible execution time is 1 (one) seconds and is defined as follows:
- 11.1.1. The time required for the CPU in the controller to execute all application software in the panel, from a point in the software back to the same point, assuming full memory usage, as defined in these specifications while simultaneously responding to normal operator or terminal display requests and carrying on normal inter-panel communications averaged over a 1 (one) minute period.
- 11.1.2. The execution time may be verified by setting up a counter in each panel and monitoring the counting rate. The counter will not be interrupt driven but shall count each scan.
12. Effective System Speed Testing
- This test is intended to address overall data throughput including inter-panel communications and display and will be monitored by evaluating system display response. The test will be carried out with the system fully commissioned and implemented including all specified trend logs. A complex graphic with 30 (thirty) points comprised of inputs and outputs from different panels will be assembled onto a single graphic.

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- The system will pass the performance test if the screen display of the graphic fully displays the graphics and all real time point values within 6 (six) seconds of clicking the selection button for the graphic. The contractor will take whatever steps are required including installing additional equipment, bandwidth and software to meet the performance requirements specified. The installation and project may be considered incomplete unless this performance standard is reasonably met. The web browser cache will be cleared prior to the test.

13. Spare Capacity Identification

- Identify spare point capacity by type for each panel on the network diagram to be submitted with the proposal. The system configuration shall be described in the network diagram provided with the proposal, and the spare point capacity shall be noted on a panel by panel basis for each point type by identifying the quantity of used points compared to total point capacity for that point type expressed as a fraction, e.g. 7/12 AI, 7/8 AO.

14. System Expansion Capabilities

The system shall have expansion capabilities to accommodate 3000 hardware points plus 6,000 software points without requiring additional licensing. It is anticipated that the terminal equipment will be added to the system over time with the potential for integrated lighting control.

15. Power Supplies and Line Filtering

- 15.1. Power Supplies
 - Control transformers shall be ULC listed. Furnish Class 2 current-limiting type or furnish over-current protection in primary and secondary circuits for Class 2 service in accordance with CEC requirements. Limit connected loads to 80% of rated capacity.
 - Transformers shall be contained inside separate electrical box enclosures adjacent to or below the DDC electronics and ancillary device panels.
 - DC power supply output shall exceed the output current and voltage requirements by 10% to allow for expansion of output devices. Unit shall not exceed output ripple of 5.0 mV maximum peak-to-peak. Regulation shall be 1.0% line and load combined, with 100-microsecond response time for 50% load changes. Unit shall have built-in over-voltage and over-current protection and shall be able to withstand 150% current overload for at least three seconds without trip-out or failure.
 - Unit shall operate between 0°C and 50°C (32°F and 120°F). EMR/RF shall meet FCC Class B and VDE 0871 for Class B and MILSTD 810C for shock and vibration.
 - Line voltage units shall be ULC recognized and CSA listed.

15.2. Power Line Filtering

Provide internal or external transient voltage and surge suppression for workstations and controllers. Surge protection shall have

- Dielectric strength of 1000 V minimum.
- Response time of 10 nanoseconds or less.

- Transverse mode noise attenuation of 65 dB or greater.
- Common mode noise attenuation of 150 dB or greater at 40-100 Hz.

16. Field Devices

16.1. General

16.1.1. Sensors, relays, current transducers and other input/output devices shall be neatly labelled at the time of installation with a durable tag as specified elsewhere.

16.1.2. All field devices shall be selected to have full compatibility with the DDC panels.

16.1.3. Any field device proposed for use which is not one of the products listed under "Standard of Acceptance" in the design specifications will be evaluated by the Consultant against the specified technical performance and the quality and characteristics of the products which are listed. If any proposed field device is deemed not equivalent to the specification, then the Contractor shall provide another device which does meet specification.

16.1.4. Devices shall meet the specific requirements listed, and shall be compatible with respect to power supply, signal characteristics, and other factors with the DDC system being proposed. Power supplies shall be provided as required for all devices.

17. Hardware Point Type Definition

The nomenclature for Hardware Point types needs to adhere to the project design specifications.

18. Hardware Point Requirements

The DDC system shall include all DDC hardware points specified in the points lists and graphics, and shall include all virtual points necessary to carry out the sequences of operation to be provided by the Owner.

19. Software Point Definitions

The nomenclature for Software Point types needs to adhere to the project design specifications.

20. Point Tags

Luggage tag style identification of field points shall be provided as per the project design specifications.

21. Sequence of Operation

The sequence of operations shall adhere to the project design objectives, and shall be commissioned at the time of installation and maintained and fine-tuned during the Warranty year.

6.4 City of Richmond Building Equipment Monitoring and Integration Requirements

[July 2016]

1. DEFINITIONS:

ASHRAE:

- The American Society of Heating, Refrigerating and Air-Conditioning (ASHRAE) is an international standards organization for numerous building related systems. It is the organization's mission to advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world. The Society and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry.

BACNet:

- Is an ANSI/ASHRAE standard communication protocol for direct digital control networks and automated building mechanisms. It was designed to be used for applications such as heating, ventilation, and air-conditioning control, lighting, access control, and fire detection systems and their associated equipment.

Canadian 2017 NECB:

- The National Energy Code of Canada for Buildings (NECB) 2017 provides minimum requirements for the design and construction of energy-efficient buildings and covers the building envelope, systems and equipment for heating, ventilating and air-conditioning, service water heating, lighting, and the provision of electrical power systems and motors.

Energy Star®:

- Is an international standard for energy efficient consumer products. The Energy Star ® name and symbol are administered and promoted in Canada by Natural Resources Canada. Energy Star® qualified products meet strict technical specifications for energy performance—tested and certified. Devices carrying the Energy Star® identification, such as computer products and peripherals, kitchen appliances, buildings and other products, generally use 15–30% less energy than required by federal standards.

Energy Star® Certified:

- Refers to Energy Star ® certified products and buildings that meet strict North American energy performance standards. Typically these products and buildings use 15–30% less energy and cause fewer greenhouse gas emissions than comparable products and buildings.

Energy Star® Portfolio Manager™:

- Is an online tool you can use to measure and track energy use, water consumption, and greenhouse gas emissions, and benchmark your building's performance against similar type buildings in Canada. Portfolio Manager™ uses a 1–100 Energy Star® performance scale: a score of 50 indicates average energy performance (50th percentile) while a score of 75 or more indicates top performance (75th percentile). A score of 75 or more in a particular year allows for the facility to be Energy Star® Certified. The Canadian version of the benchmarking tool is applicable to Financial Office, K–12 school, Hospitals, Ice/Curling Rink, Medical office, office, Residential Care Facility, Senior Care Community, Supermarket/Grocery Store.

HVAC:

- Heating Ventilation and Air Condition (HVAC) is the technology of indoor environmental comfort. HVAC system design is a subdiscipline of mechanical engineering, based on the principles of thermodynamics, fluid mechanics, and heat transfer.

HVI:

- Home Ventilating Institute (HVI) is a nonprofit association offering a variety of services for manufacturers including, but not limited to, test procedures, certification and verification programs for airflow, sound and energy performance, and market support. Its mission is to serve consumers and members by advancing residential ventilation for healthy, energy-efficient homes.

IESNA:

- The Illuminating Engineering Society of North America (IESNA) is a non-profit organization that publishes standards for the lighting industry. The mission of the organization is to advance knowledge and disseminate information for the improvement of the lighted environment to the benefit of society. The IESNA lighting standards are developed through technical committees that include hundreds of qualified individuals from the lighting and user communities.

MERV:

- The minimum efficiency reporting value (MERV), is an ASHRAE measurement scale designed to rate the effectiveness of air filters. The scale is designed to represent the worst case performance of a filter when dealing with particles in the range of 0.3 to 10 micrometers. The MERV rating is from 1 to 16. Higher MERV ratings correspond to a greater percentage of particles captured on each pass, with a MERV 16 filter capturing more than 95% of particles over the full range.

MSTP:

- Multiple Spanning Tree Protocol (MSTP) is an open source communication protocol language connecting terminal controllers to main direct digital control processing system, and is defined by the applicable networking standard IEEE 802.1Q.

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NRCan:

- Natural Resources Canada (NRCan) works with other government departments, the provinces and territories, and other Canadian and international partners to address energy needs and potential while considering new policies, practices, and technologies.
- NRCan's expertise in the areas of energy efficiency, and energy sources and distribution allows us to provide useful energy resources and help Canadians benefit economically, environmentally, and socially from the secure and sustainable production and use of Canada's energy resources.

SEER:

- The Seasonal Energy Efficiency Ratio (SEER) rating of a unit is the cooling output during a typical cooling-season divided by the total electric energy input during the same period. The higher the unit's SEER rating the more energy efficient it is. In North America, the SEER is the ratio of cooling in British thermal unit (BTU) to the energy consumed in watt-hours.

TCP/IP:

Transmission Control Protocol/Internet Protocol (TCP/IP) is the principal communications protocol in the Internet protocol suite for relaying datagrams across network boundaries.

Visual Metering:

- Refers to the function of monitoring energy use of specific systems or pieces of equipment, based on demand and run time, through a building's direct digital control system and analog current transducers.

2. OPTIMIZE MAINTENANCE AND ENERGY PERFORMANCE:

This section is intended to provide a basis by which corporate facilities can be maintained and monitored to maximize efficient resource use, and reduced maintenance and operational costs.

- Operation Plan: Each facility should have an operational plan developed that at a minimum includes an occupancy schedule, equipment run-time schedule, design set points for HVAC equipment, and design lighting levels. This plan should be regularly reviewed and optimized as needed.
- Measuring Energy Efficiency: Two options can be used to measure energy efficiency performance in comparison to typical buildings of similar type and function:
 - Option 1: Target an Energy Star® rating of 75% or higher, if eligible to receive an energy performance rating using the U.S. EPA's Energy Star® Portfolio Manager Tool (Canadian edition).
 - Option 2: If a building is not eligible to receive an energy performance rating using the U.S. EPA's Energy Star® Portfolio Manager Tool (Canadian edition), target increased energy efficiency of 20% as compared to typical buildings of similar type and function using national average energy data (National Resources Canada, Energy Star, et al).
- Measurement and Verification: Track the energy and water use of specific systems, and uses (i.e. lighting, HVAC, plug loads, etc.), and the building overall, to allow for continuous optimization. If possible, accomplish this requirement using the building automation system.
- Benchmarking and Tracking Building Energy Consumption: Regularly compare energy performance data with previous years' energy performance data, to ensure operational energy efficiency is being maintained.
- Ongoing Commissioning: Complete re-commissioning activities on an approximately five year cycle to address changes in facility occupancy, use, maintenance and repair. Make periodic adjustments and review of building operating systems and procedures essential for optimal energy efficiency and service provision.
- Building Automation System: Employ full building automation system for increased control and programming capability of mechanical system and lighting systems. It is required that City of Richmond pre-qualified building automation system supply and install contractors be used for new and replacement installations. Please see Section 5.0 for more details.
- Local Thermostat: If applicable, use programmable thermostat that include energy efficient options including but not limited to: night set back, programmability for each day, optimal start, and zones separated by function.

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viii. Heat Recovery Ventilation Systems: Heat recovery ventilation systems used in corporate facilities need to be Home Ventilating Institute (HVI) certified with 85% efficiency.

ix. Air or Ground Source Heat Pumps: Air or ground source heat pumps used in corporate facilities should be Energy Star® certified with a minimum target for energy efficiency of SEER 16.

x. Gas Fired Rooftop unit: Gas fired rooftop units used in corporate facilities will target a minimum energy efficiency rating of SEER 13.

xi. Heat Pump Rooftop units: Heat Pump rooftop units used in corporate facilities will target a minimum energy efficiency rating of SEER 15.

xii. Rooftop units: Economizer should be used for all rooftop units 5 tons or greater. All rooftop units, air handling units, Energy recovery ventilators (ERV), Heat recovery ventilators (HRV) and makeup air units, and shall use industry standard sized filters.

xiii. Natural Gas Boiler: Natural gas boilers used in corporate facilities will target a minimum efficiency rating of 95%.

xiv. Air Compressor: All pneumatic air compressors should be equipped utilizing automatic condensate drain system. Air compressors for corporate truck maintenance activities, require a minimum of 200 PSI operating pressure.

xv. Domestic Hot Water: Domestic natural gas hot water boilers used in corporate facilities and Domestic electric hot water boilers used in corporate facilities should be Energy Star® certified with a target minimum efficiency rating of 90%.

xvi. Appliances: Appliances (Air purifiers, , Laundry machines, Dishwashers, Freezers, Refrigerators, Pool pumps, Water coolers, Commercial food service equipment) used in corporate facilities should be Energy Star® certified.

xvii. Ozone Depleting Compounds: Refrain from using Ozone Depleting Substances. Ozone Depleting Substances include CFCs, HCGCs, halons and others used in refrigerants, fire extinguishing systems and chemicals (sterilants and solvents).

xviii. Electric motor and pump: Use high efficiency motors and pumps, whenever possible. Targeting 25% better than Canadian 2011 NECB performance curves for motors and pumps.

xix. Improved Lighting Efficiency: As budgets allow, high efficiency lighting technology and controls is preferred for all new installations, please refer to Section 6.0 Optimize Lighting System for further guidance on lighting guidelines.

xx. Lighting Levels: Refer to the IESNA standards for target lighting levels depending on building type and room function. In addition, please refer to Section 6.0 Optimize Lighting System for further guidance on lighting guidelines.

xxi. On-Site Renewable Energy: Implement renewable energy generation project, when lifecycle costs are effective at facilities to further reduce conventional energy purchases. Refer to NRCan website.

xxii. Equipment: All equipment, devices, controls needs be well supported by a knowledgeable local technical support staff, local sales representatives and local field service/factory trained representatives to assist in the selection, application and servicing of all equipment. All replacement parts and components need to be readily available (preferred less than 5 day delivery wait time) and cost effective.

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Appendices

6.4 Continued

OPTIMIZE WATER EFFICIENCY:

This section is intended to provide a basis by which corporate facilities can reduce indoor potable water use, reducing the burden on local water supply and wastewater.

- Water metering: New corporate facilities will include water meters. Where feasible, these meters will be remotely monitored by the building's automation and monitoring system. Where possible, it is preferred that an additional water meter is installed to monitor the water consumption for outdoor activities, and that this meter also be monitored through the building's automation system.
- Indoor plumbing fixture and fitting efficiency: The following table outlines the targeted water fixture efficiency flush/flow rates for civic facilities for both new construction and replacement projects, and the maximum flush/flow rates as per current BC building codes. Where feasible, it is preferred that purchased fixture products water usage is on the lower end of the range to maximize water conservation.

Table 1 – Targeted Fixture Flush/Flow rates for the City of Richmond

Fixture Type	Flow Rate (Litres per minute [LPM] or Litres per flush [LPF])
Dual-flush toilets	High flush = 6.0 LPF Low flush = 3.4 to 4.1 LPF
Urinals	1.9 LPF
Lavatory faucet	1.9 to 8.3 LPM
Kitchen faucet	5.7 to 8.3 LPM
Showers	5.7 to 7.6 LPM

- Water-Efficient Products: Where applicable reduce the use of potable water through the use of fixtures with automatic controls. In addition, for water using appliances it is required that Energy Star® certified products are used where ever possible.

- Water Harvesting: Whenever possible and practicable re-use storm water for landscaping and irrigation.

ENHANCE INDOOR ENVIRONMENTAL QUALITY:

The intent of this section is to provide a basis for optimizing indoor environments to promote occupant comfort, health, and enjoyment of the space.

- Minimum IAQ Performance: Meet or exceed most current ASHRAE Standard 62.1, Ventilation for Acceptable Indoor Air Quality.
- Ventilation and Thermal Comfort: Meet or exceed most current ASHRAE Standard 55, Thermal Environmental Conditions for Human Occupancy.
- Filtration Media: Utilize Minimum Efficiency Reporting Value (MERV) of at least 11 for equipment that requires filtration material. Where applicable, GeoPleat or Mini-Pleat filter with MERV 13 must be used. Filter media used in all HVAC equipment needs to be of standard sizing.
- Day lighting and lighting Controls: Automated lighting controls (occupancy/vacancy sensors with manual-off capability) are provided for appropriate spaces including restrooms, conference and meeting rooms, employee lunch room, training rooms and offices. Where ever possible and feasible there should be no on schedule for DDC controlled lighting and occupancy sensors should be used to solely recognize inactivity, with switches used to turn lights on.
- Low-Emitting Materials: Use low emitting materials for building modifications, maintenance, and cleaning. In particular, specify the following materials and products to have low pollutant emissions: composite wood products, adhesives, sealants, interior paints and finishes, solvents, carpet systems, janitorial supplies and furnishings.
- Environmental Tobacco Smoke Control: Prohibit smoking within and in the vicinity of the building as per the City of Richmond Public Health Protection Bylaw, Worker Compensation Board (WCB) Occupational Health and Safety Regulations, and Vancouver Coastal Health Authority regulations.

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Appendices

6.4 Continued

INTEGRATE BUILDING AUTOMATION SYSTEMS:

The intent of this section is to provide a basis for optimizing the City's building control and energy monitoring capacity to maximize maintenance and operational efficiency, and efficient building resource use. In addition, this section will be used to standardize the City's DDC systems and graphic interface in new and existing buildings.

- i. Prequalified Supply and Installation Contractors: One of the City's prequalified Supply and Installation Contractors for Direct Digital Controls (DDC) Systems must be used for the mechanical and lighting control of City owned and/or operated space.
- ii. Lighting Control: Lighting control is to be tied into separate DDC controllers (unless exempted by the City where in they may be tied in to HVAC DDC controllers), which will be provided by one of the prequalified contractors, with the location and number to be specified by the Electrical Design Consultant as part of the electrical design tender package. The electrical engineer will specify exact model numbers of luminaires and physically test the control interface prior to tender to ensure that the luminaires are compatible with the prequalified DDC systems.
- iii. DDC Graphics and Monitoring: Graphics for the operator interface must be prepared to meet requirements, which highlight energy efficiency and comfort. Graphic functionality for energy use monitoring will include, but is not limited to, energy use breakdown between electricity and natural gas, further segregation of each fuel type by each functional end use (e.g. ventilation, cooling, heating, pumping, lighting, plug loads, etc. – note that this requires tagging of end use into multiple categories), and by specific systems and equipment. The operator interface for the City will run on the City's web-servers. This work must be coordinated through the City's IT group to arrange loading of graphics, databases, and for security requirements.
- iv. Energy Data: All energy data collected will be stored on the City's Sequel Server. The City will provide connection credentials so that the supplied system can store the data. The system must also be capable of delivering this data using BACnet over Ethernet, BACnet over MSTP and BACnet over TCP/IP to third party data repositories capable of accepting BACnet data.
- v. DDC Access and Data points: The DDC system will be remotely accessed by the City's web based operator interface. Data will be collected at intervals not to exceed 15 seconds for all points during the commissioning process to ensure system capacity, stability and control loop tuning. These data points must include measurable variable, manipulated variable, and setpoint variable for each loop, as well as other variables, measurements and outputs as required to demonstrate the performance of the system. VPN network connectivity will be provided by the Supply and Installation Contractor for secure access of sufficient bandwidth to support this.

- vi. Energy Use Monitoring: Any energy use monitoring shall be done through sub-meters that are BACnet enabled, or through virtual metering.
- vii. Water Metering and Monitoring: A water meter will provide instantaneous and aggregated water consumption information of each mechanical makeup water system such as cooling tower, chilled water system, heating water system, heat pump system, Geo/ground loop and Solar system. The information will be delivered using BACnet over MSTP, BACnet over Ethernet, or BACnet over TCP/IP.
- viii. Hydronic Energy Monitoring: All hydronic that introduce or extract energy flows to the subject premises will be monitored. These will include measurement of flow and differential temperature. The calculation of energy and power will be performed at the meter or within the DDC system. The supply and return temperatures will be transmitted along with the flow information to the DDC system. The information will be delivered using BACnet over MSTP, BACnet over Ethernet, or BACnet over TCP/IP.
- ix. Points List Review: Once the mechanical and lighting DDC points list has been initially defined, the City requests that they are provided to the City along with the mechanical and electrical specifications, to allow for the timely opportunity to review and comment before finalization.
- x. Segregated Electrical Panels: Lighting, mechanical, and plug loads need to be segregated on separate electrical panels for energy monitoring purposes.
- xi. Electrical Directory Review: Once the preliminary electrical directories for each electrical panel have been defined, the City requests that they are provided to the City, to allow for a timely opportunity to review and comment before finalization.
- xii. Inspections: City personnel or the City's DDC consultant will conduct its own inspections of the system design, installation and functionality, and will prepare its own deficiency lists during the construction process and final inspection. The deficiency lists will need to be corrected prior to City sign off on completion.
- xiii. Documentation: In addition to hard copies of documents that may be specified, electronic copies of system documentation in PDF format are required.

6 Appendices

6.4 Continued

OPTIMIZE BUILDING LIGHTING SYSTEMS:

Corporate lighting guidelines and requirements are intended to provide the basis for optimizing building interior and exterior lighting controls and associated electrical use, and to standardize the type of lighting used depending on its function.

General Guidelines

- i. All interior building lighting shall be supplied from 120 volt power systems.
- ii. Lighting design shall incorporate the principles of sustainability and its products and systems shall be energy conserving, long life, have a low cost of ownership and be accessible for service and maintenance.
- iii. For interior building lighting solutions, Light Emitting Diode (LED) lighting is preferred.
- iv. For exterior lighting applications (wall mounted fixtures, low mast light fixtures in parking lot), LED lighting is preferred.

Daylight harvesting opportunities shall be implemented in areas where natural daylight is available.

Uniformity and low brightness contrast shall be achieved by judicious use of luminaires and their locations.

All lighting shall be designed to suit the task and task location rather than the general lighting. The most current NECB1 or ASHRAE 90.1, IESNA and WorkSafeBC standards shall be taken into consideration and photometric calculations submitted where requested. The light loss factor (LLF) which is used in these calculations, shall take into consideration the lamp lumen depreciation factor and dirt depreciation factors associated with the light source and environment.

When mounting luminaires in high ceiling spaces, consideration must be given to ensure access for maintenance activities. Indoor lighting shall be accessible either from ladders on flat surfaces such as floors or stair landings or from powered lifts with a maximum lift of 6.1 m. Building access, floor construction, and elevators shall permit entry and use of existing standard lift equipment for proper and safe maintenance. If special equipment is required for lighting maintenance, then the consultant shall, prior to tender, prepare and submit a Lighting System Maintainability Plan to the City of Richmond for review and approval and it shall contain documentation describing the special equipment, access arrangements for special equipment, and a maintenance schedule and spare parts list.

The lighting design proposed for all public areas such as corridors and stairways shall ensure the life safety of building occupants at all times and shall also minimize lighting energy required to zero, if possible, when the building is un-occupied. (i.e. lights off until occupancy has been detected or an emergency has occurred). A portion of the lighting fixtures shall be wired to an emergency power panel if an emergency generator is available. Lighting circuits fed from emergency power panels shall be arranged so that they may be switched or dimmed.

- x. In general, where feasible and economical LED lighting is preferred for all interior spaces. It is preferred for interior LED luminaires, such as troffers, that the driver be mounted in an easily accessible location i.e. not behind the luminaire, so as to reduce maintenance time if replacement is needed.
If there is not a strong business case for interior LED lighting, then linear fluorescent lighting is preferred. Linear fluorescent luminaires shall be equipped with 120 volt electronic ballasts and T8-25 watt lamps or with T8-32 watt lamps in low temperature locations. Bent 'U' tube fluorescent luminaires are not acceptable. Lighting solution proposals using T5 linear fluorescent systems are not acceptable.
- xi. Non-linear specialty fixtures such as pot lights, cylinders, wall sconces, wall washers and other decorative lighting shall be minimized. If using fluorescent fixtures, a maximum of 10% of the total quantity of fixtures in the building project is recommended.
- xii. HID fixtures such as Metal Halide (MH) or High Pressure Sodium (HPS) are not acceptable

Lamp, Ballast/Driver & Fixture Guidelines

- i. 2700° K to 3000° K shall be the typical color temperature range used for theatrical applications or highlighting any artwork.
- ii. 3500° K shall be the typical color temperature used for all interior applications.
- iii. 4000° K shall be the typical color temperature used for all exterior applications.
- iv. The use of LED lamps is encouraged and as substitutes for traditional applications involving CFL, MR-16, PAR 20, PAR 30, BR30, PAR 38 lamps, and linear fluorescent lamps. LED lamps shall be Energy Star rated.
- v. The use of LED fixtures is encouraged, and shall be DLC (Design Lighting Consortium) listed. The drivers shall have either 0-10V or phase dimming capability (for buildings where it is not practical to run low voltage wiring).
- vi. Lamps shall be the longest life available. Preference will be given to lamps and lighting containing the lowest amount of mercury and other toxic components.
- vii. If applicable, it is preferred that T5-HO and T8 fluorescent lamps be extra-long life or extended life lamps rated for 40,000+ hours operation with 3 hours per start
- viii. Where T5 HO lamps are used in enclosed fixtures, lamps rated for higher temperatures shall be used.
- i. All fluorescent lighting ballasts shall operate from 120 volt input voltage and shall be either instant start (when used with LED lamps) or program start electronic type (when used with fluorescent lamps) with normal ballast factor. All ballasts shall have parallel lamp operation. Acceptable manufacturers are Philips Advance, GE Lighting, Sylvania Lighting and Universal Lighting.
- ii. Ballast output frequency shall be greater than 42 kHz.
- iii. Dimming ballasts shall be program start with either line voltage or 0-10 volt control.
- iv. Ballasts shall have lamp end-of-life detection and shutdown circuitry that meets the most current ANSI standards.

6 Appendices

6.4 Continued

Energy Allowances

- i. All interior lighting shall not exceed the energy density limits as defined in the most current NECB or ASHRAE 90.12 lighting power densities standard, using either the whole building area method or the space by space evaluation method. For the whole building area evaluation method, the standard is currently 0.90 watt per square foot.
- ii. All exterior building lighting shall not exceed the lighting power density limits as defined in the most current NECB2 or ASHRAE 90.12 standard.

Lighting Controls

- i. All interior lighting (including stairwells) shall have controls such that when the lighting is not needed, it will automatically be either turned off or dimmed to a low output condition, and shall conform to the most current relevant NECB2 or ASHRAE 90.12 standard.
- ii. All lighting control systems shall be fully tested and commissioned and a Lighting System Commissioning Report shall be prepared and certified by a responsible professional as per the most current relevant NECB2 or ASHRAE 90.12 standard.
- iii. As per the DDC integration requirements, where low voltage relay controls are provided for new building projects they shall include a BACnet compatible DDC interface device to allow for all scheduling functions related for the lighting systems to be controlled by the building's DDC system.
- iv. All exterior building mounted lighting and exterior building area lighting shall be controlled by photocell or astronomical time clock. Lighting which is powered from the building electrical system shall be controlled by the building's DDC system.
- v. Occupancy sensors shall be dual technology type with both Passive Infrared (PIR) and acoustic/ultra-sonic sensors, and may be either line voltage or low voltage types. Low voltage occupancy sensors with 1 or 2 poles and local power packs are preferred. Slave power packs are not acceptable.
- vi. Offices shall have light control switches at all entrances, exits and vestibules. These interior spaces shall also have occupancy sensors integrated with the control switch or mounted at a high level in a corner and arranged for semi-automatic operation such that manual operation of the local switches is required to energize the lighting while occupancy sensors and local switches will de-energize the lighting. Large spaces may need more than one sensor.
- vii. Corridors, lobbies, washrooms and similar public spaces shall have occupancy sensors, mounted at high levels, and arranged for full automatic operation to dim the light fixtures to a level which meets the minimum requirements for emergency egress during periods of vacancy.
- viii. Occupancy sensors are not permitted in interior spaces that may be or may become hazardous, such as electrical and mechanical service rooms.
- ix. Where feasible, all offices, corridors, stairways and other public spaces shall incorporate daylight harvesting via use of interior mounted photocells and arranged to take advantage of free illumination while maintaining acceptable minimum illumination levels within the space.
- x. LED dimmers shall be compatible with the LED lamps used and their drivers.

Exit Signage

- i. Exit lighting shall be provided in accordance with the BC Building Code and the Canadian Electrical Code as amended by BC Electrical Safety regulations.
- ii. All exit signs shall be illuminated by LED light sources and shall have an emergency power NiCad battery.
- iii. Exit signs shall be powered at 120 volts from emergency power panels, if available.
- iv. The "Running Man" style EXIT sign that conforms to the CAN/ULC-S572 standard is required as set out by the BC Building Code.

Emergency Lighting

- i. Emergency lighting must be installed in accordance with the latest revision of the B.C. Building Code and City of Richmond's Bylaw No. 8306 (Fire Protection and Life Safety).
- ii. Provide standby emergency generator if motor loads require emergency power.
- iii. All battery pack lighting, remote heads and exit lights shall be LED type and manufactured by 'Ready-Lite' or an approved equal. 'Ready-Lite' products are available from local suppliers and shall be stocked by City of Richmond. It is important that City of Richmond have stock so that repairs can be done quickly and effectively as required for the life safety system.
- iv. The battery packs shall be long life type and either 12 volts DC or 24 volts DC and shall be in accordance with CSA C22.2 No. 141.
- v. All battery packs shall be mounted on the wall using anchors capable of supporting the weight, or mounted on an appropriately sized shelf, supplied from 'Ready-Lite' or an approved equal. Generator and Electrical rooms shall be provided with an emergency battery lighting pack.
- vi. If a 12 volt DC battery lighting pack is used for emergency lighting power, it shall be rated for 36 watt to 360 watt and should not be self-testing.
- vii. If a 24 volt DC battery lighting pack is used for emergency lighting power, it shall be either a 360 watt unit or a 720 watt unit, and should not be self-testing.
- ix. For both 12 volt DC and 24 volt DC systems, the heads and remote heads shall be 9 watts each.
- x. Battery packs that are fed from a 120 volt AC source shall have a 120 volt duplex receptacle mounted adjacent so that the battery pack can be plugged into the receptacle, to facilitate testing and replacement when needed.

6.5 City of Richmond General Lighting Guidelines
[January 2016]

1.0 GENERAL

1.1 Related City of Richmond Guidelines

- 1 High Performance Building Policy
- 2 City of Richmond Sustainable Operation and Maintenance Requirements

1.2 Coordination Requirements

- .1 City of Richmond Facilities
- .2 City of Richmond Project Development
- .3 City of Richmond Information Technology

2.0 MATERIAL AND DESIGN REQUIREMENTS

2.1 General

- .1 All interior building lighting shall be supplied from 120 volt power systems.
- .2 Lighting design shall incorporate the principles of sustainability and its products and systems shall be energy conserving, long life, have a low cost of ownership and be accessible for service and maintenance.

- .3 For interior building lighting solutions, preference shall be given to Light Emitting Diode (LED) and linear fluorescent light sources.

4. For exterior lighting applications (wall mounted fixtures, low mast light fixtures in parking lot), preference shall be given to LED light sources. Fluorescent light sources may be used selectively.

- .5 Daylight harvesting opportunities shall be implemented in areas where natural daylight is available.

6. Uniformity and low brightness contrast shall be achieved by judicious use of luminaires and their locations.

7. All lighting shall be designed to suit the task and task location rather than the general lighting. ASHRAE 90.1-2010, IESNA and WorkSafeBC guidelines shall be taken into consideration and photometric calculations submitted where requested.

8. The designer shall take into account 4 to 5 year fluorescent lighting group re-lamping program. All maintenance factors shall be maximized because of the expected clean environment in the facilities.

9. When mounting luminaires in high ceiling spaces, consideration must be given to ensure access for maintenance such as lamp and ballast changing. Indoor lighting shall be accessible either from ladders on flat surfaces such as floors or stair landings or from powered lifts with a maximum lift of 6.1 m. Building access, floor construction, and elevators shall permit entry and use of existing standard lift equipment for proper and safe maintenance. If special equipment is required for lighting maintenance, then the consultant shall, prior to tender, prepare and submit a Lighting System Maintainability Plan to the City of Richmond for review and approval and it shall contain documentation describing the special equipment, access arrangements for special equipment, and a maintenance schedule and spare parts list.

- .10

- In general, where feasible and economical LED lighting is preferred for interior spaces. It is preferred for interior LED luminaires, such as troffers, that the driver be mounted in an easily accessible location i.e. not behind the luminaire, so as to reduce maintenance time if replacement is needed.

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6 Appendices

6.5 Continued

2.2 Lamps	2.4	Energy Allowances
.1 Lamps shall be the longest life available. Preference will be given to fluorescent lamps containing the lowest amount of mercury.		.1 All interior lighting shall not exceed the energy density limits as defined in ASHRAE 90.1-2010 section 9.5 (Building Area Method) or 9.6 (Space by Space Method).
.2 It is preferred that T8 fluorescent lamps be Extra Long Life or Extended Life lamps rated for 40,000 hours operation with 3 hours per start.		For the Building Area Method, the energy density limit is 0.90 watt per square foot.
Preferred manufacturers are: General Electric, Osram Sylvania, or Philips		.2 All exterior building lighting shall not exceed the energy density limits as defined in ASHRAE 90.1-2010 section 9.4.3.
.3 T8 - 25 watt lamps with 3500° K color temperature shall be the typical lamp used for linear fluorescent lighting.		Lighting Controls
.4 T8 - 32 watt High Lumen fluorescent or LED lamps shall be the typical lamp used in low temperature locations.	2.5	.1 All interior lighting (including stairwells) shall have controls such that when the lighting is not needed, it will automatically be either turned off or dimmed to a low output condition, and shall conform to the new ASHRAE 90.1-2010 standard (sections 9.4.1, 9.4.2).
.5 T5 HO fluorescent lamps shall be Extra Long Life or Extended Life lamps. Preferred manufacturers are: General Electric, Osram Sylvania, or Philips.		.2 All lighting control systems shall be fully tested and commissioned and a Lighting System Commissioning Report shall be prepared and certified by a responsible professional as per ASHRAE 90.1-2010 standard (section 9.4.4)
.6 Where T5 HO lamps are used in enclosed fixtures, lamps rated for higher temperatures shall be used.		.3 Where low voltage relay controls are provided for new building projects they shall include a BACnet compatible Building Management System (BMS) interface device which shall be wired to the local BMS control panel. This will ensure that all scheduling functions related to lighting systems will be under the control of the BMS system.
Preferred manufacturers are Philips Extreme Temperature series or Sylvania Constant series.		.4 All exterior building mounted lighting and exterior building area lighting shall be controlled by photocell or astronomical time clock. Lighting which may be powered from the building project electrical system shall be under the control of the BMS scheduling system.
2.3 Ballasts		
.1 All fluorescent lighting ballasts shall operate from 120 volt input voltage and shall be program start electronic type with standard ballast factor. Ballasts shall have parallel lamp operation. Acceptable manufacturers are: General Electric, Osram Sylvania, Philips/Advance or Universal.	.5	Occupancy sensors shall be dual technology type with both Passive Infrared (PIR) and acoustic/ultra-sonic sensors, and may be either line voltage or low voltage types. Low voltage occupancy sensors with 1 or 2 poles and local power packs are preferred. Slave power packs are not acceptable.
.2 Ballast output frequency shall be greater than 42 kHz.		
.3 Dimming ballasts shall be program start with either line voltage or 0-10 volt control.		
.4 Ballasts shall have lamp end-of-life detection and shutdown circuitry that meets ANSI standards.		

6 Appendices

6.5 Continued

- .6 Offices shall have light control switches at all entrances, exits and vestibules. These interior spaces shall also have occupancy sensors integrated with the control switch or mounted at a high level in a corner and arranged for semi-automatic operation such that manual operation of the local switches is required to energize the lighting while occupancy sensors and local switches will de-energize the lighting. Large spaces may need more than one sensor.
- .7 Corridors, lobbies and similar public spaces shall have occupancy sensors, mounted at high levels, and arranged for full automatic operation.
- .8 Occupancy sensors are not permitted in interior spaces that may be or may become hazardous, such as electrical and mechanical service rooms.
- .9 All, offices, corridors, stairways and other public spaces shall incorporate daylight harvesting via use of interior mounted photocells and arranged to take advantage of free illumination while maintaining acceptable minimum illumination levels within the space.
- .10 LED dimmers shall be compatible with the LED lamps used and their drivers.

Exit Signage

- .1 Exit lighting shall be provided in accordance with the BC Building Code and the Canadian Electrical Code as amended by BC Electrical Safety regulations.
- .2 All exit signs shall be illuminated by LED light sources and shall have an emergency power NiCad battery.
- .3 Exit signs shall be powered at 120 volts from emergency power panels, if available.
- .4 The "Running Man" style EXIT sign which conforms to the CAN/ULC-S572 standard shall be used.

2.7 Emergency Lighting

- .1 Emergency lighting must be installed in accordance with the latest revision of the B.C. Building Code and City of Richmond's Bylaw No. 8306 (Fire Protection and Life Safety).
- .2 Provide standby emergency generator if motor loads require emergency power.

- .3 All battery pack lighting, remote heads and exit lights shall be LED type and manufactured by 'Ready-Lite' or approved equal. 'Ready-Lite' is available from local suppliers and shall be stocked by City of Richmond. It is important that City of Richmond have stock in standard sizes so that repairs can be done quickly and effectively as required for the life safety system.
- .4 The battery packs shall be long life type and either 12 volts DC or 24 volts DC and shall be in accordance with CSA C22.2 No. 141.
- .5 All battery packs shall be mounted on the wall using anchors capable of supporting the weight, or mounted on an appropriately sized shelf, supplied from 'Ready-Lite' or approved equal.
- .6 Generator and Electrical rooms shall be provided with an emergency battery lighting pack.
- .7 If 12 volt DC is used they shall be rated for 36 watt to 360 watt and should not be self testing as clients do not understand the self test and call in a trouble call unnecessarily.
- .8 If 24 volts DC are used they shall be either a 360 watt unit or a 720 watt unit only. They shall also be a basic model without meters or self testing.
- .9 For both 12 volt DC and 24 volt DC systems, the heads and remote heads shall be 9 watts each.
- .10 Battery packs that are fed from a 120 volt AC source shall have a 120 volt duplex receptacle mounted adjacent so that the battery pack can be plugged into the receptacle. This is to facilitate testing and replacement when needed.

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Appendices

6.6 City of Richmond Entrance, Intercom/Video Systems Specifications for City of Richmond Buildings [28 January 2016] [1 page]

1. ENTRANCE/VIDEO SYSTEMS SPECIFICATIONS

- 1.1 All specified entry doors shall be controlled by an entry audio intercom which will communicate via a supplied phone line, existing phone line may be used if one exists.
Acceptable part numbers are Viking K-1200 or K-1200EWP, no exceptions allowed.

All entry door stations will require a home run, minimum 1" conduit from the K1200 unit to a predetermined location as per the specified drawings.

The entry door unit will require a single gang box flush mount at a height of no higher than 44".

In applications where flush mounting is not an option, then a surface mount conduit stubbed to the top of the surface mount K1200 unit will suffice.

The system will be programmed to allow communication to staff via locals or specified phone number as per instructions from location coordinator.

- 1.2 All required entry door locations shall have a 12-volt electric strike installed to release the door. Accepted brands are RCI S6514 series and/or Von Dupron, model number will be determined by the type of door installed and hardware operating such door and code requirements.

All strikes will require a home run, via a minimum 1/2" conduit supplied to a predetermined location as per the specified drawings. All conduit for strikes must terminate in the frame that houses the strike or directly to the device.

- 1.3 The video monitoring system for each entry door will consist of a camera at the entry door location. Acceptable brand and part numbers will be Hikvision DC-2CD2122FWD-IS Armored Dome cameras, if using IP cameras or Hikvision DS-2CE55C2N if using Analogue camera. All cameras will be home run via a minimum 3/4" conduit to a determined location as per specified drawings.

- 1.4 All cameras shall terminate to a Hikvision NVR or similar distribution hub located in an acceptable location for the project. **The NVR will not contain a hard drive or allow recording of any images, unless proper procedures and authority is given by the City of Richmond, and all Guidelines of the Privacy Impact Assessment are met.**

All video camera installations must adhere to the specifications of the personal information protection act, regarding video camera installations.

- 1.5 A video monitor shall be supplied at the locations determined by the specified drawings. The acceptable brand and part numbers of the monitors will be Wbox 19 or 22led or similar brand CSA approved led monitor.
- 1.6 Each monitor must be wall mounted with an approved monitor wall bracket, model shall be determined by the size and weight of the monitor at the specified location and height in drawing. A mounting plate of no less than 19mm plywood or similar product must be supplied at the monitor locations, sufficient in size to support the weight and size of supplied monitor, drywall anchors not permitted. All monitors will require a home run via a minimum 3/4" conduit to the determined location as per the specified drawings.
- 1.7 No wiring may be exposed to the outside of a building unless in approved conduit for outdoor use.
- 1.8 A 120 VAC circuit must be supplied at each monitor location, all outdoor locations must have a GFI circuit installed as per electrical code.
- 1.9 A 120 VAC circuit must be supplied at the determined hub or home run location as determined by the specified drawings.

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6.7 City of Richmond Security, Fire Alarm, Access and Video Systems Specifications for City of Richmond Buildings [January 2018]

1. SECURITY ALARM SYSTEMS

- 1.1 All external doors shall be hardwired with a single, station Z 22AWG 4 conductor wire, or a minimum 1/2" conduit from each location to the security panel termination point.
- 1.2 The Security system must be a Napco brand, model number will depend on size of building and location requirements, no substitutions. Gem1632, Gem3200, Gem9600, GemX255.
- 1.3 All buildings will require a minimum of one Napco RP1CAE2 keypad at or near a specified entry door or doors, each keypad will require a minimum Cat V 24AWG 8 conductor wire to that location to at the security panel termination point, and/or a minimum 1/2" conduit connecting to that location.
- 1.4 All rooms exposed to outer windows, or doors or rooms of sensitive nature shall require a commercial grade motion sensor, a Bosch PPR1-W16 or similar detector mounted at a maximum of 8 feet. Each of these locations shall require a minimum station Z 22AWG 4 conductor or preferably a CAT V 24AWG or a 1/2" conduit if required and shall be terminated at the security panel termination point.
- 1.5 All cabling and /or conduit shall be home run to the security panel termination point and conduit runs can be combined as long as size as conduit is increased based on size an amount of cable does not exceed the maximum allowed.
- 1.6 A minimum of 24" X 24" space is required for the security alarm panels at the wiring termination point, this may increase in size depending on the with size of building and equipment required.
- 1.7 No wiring may be exposed to the outside of a building unless in approved conduit, all access points must be supervised for tampering.
- 1.8 A 120 VAC circuit, with an individual breaker and a double gang box shall be required to allow hardwiring of transformers. Plug in transformers/power bars are not accepted.
- 1.9 A minimum of 1 dedicated telephone line shall be required at the panel termination point for communications to the monitoring station.

2. ULC FIRE ALARM MONITORING SYSTEMS FOR CITY OF RICHMOND BUILDINGS

- 2.1 All fire alarm panels must be monitored for Alarm, Supervisory/Trouble & Tamper.
- 2.2 The Fire alarm monitoring system panel must be a DSC ULC Fire alarm monitoring panel, no substitutions, proprietary equipment not accepted.
- 2.3 Alarm monitoring panel must be mounted at a height of no higher than 72" and have unobstructed access to the panel at all times.
- 2.4 All cabling shall be home run to the monitoring panel termination point and must be in conduit no exposed wiring shall be allowed; conduit runs can be combined as long as size as conduit is increased depending on how many conduit runs are combined. The use of Cat 5 or 6 cabling is prohibited as per ULC specifications.
- 2.5 A 24" X 30" approximate space is required for the alarm monitoring panels at the wiring termination point
- 2.6 No wiring may be exposed to the outside of a building unless in approved conduit, all exposed panels must be tamper proof. All conduit must run into the monitoring panel through the designates conduit knockouts.
- 2.7 A 120 VAC circuit, with an individual marked breaker must be directly wired to the panel, with either Bx or conduit. No plug-in transformers/power bars are allowed.
- 2.8 A minimum of 1 dedicated telephone line phone line shall be required at the panel termination point for communications. All telephone lines must be in conduit and must be a direct line that does not connect to PBX or phone switch, the line cannot be shared with a burglar alarm panel or other device.
- 2.9 System must meet or exceed current ULC specifications
- 2.10 Monitoring station must be ULC AA approved.

6 Appendices

6.7 Continued

3. ACCESS SYSTEMS SPECIFICATIONS FOR CITY OF RICHMOND BUILDINGS

- 3.1 All specified entry doors shall be controlled via a HID proximity card reader mounted outside the specified entry door or doors.
- 3.2 The Access system must be a Honeywell Webs AX System consisting of a minimum 1 controller and expansion devices as deemed necessary to complete the system. This is the only system that can be specified for the COR access system, no substitutions Allowed.
- 3.3 Each controlled door shall require the following:
 - 3.4 Door contact mounted at the top of each opening on the opening edge of each door, a hinged controlled contact is acceptable, 1 station Z 22AWG wire to each door contact.
 - 3.5 Honeywell IS310 request to exit sensor mounted at the top of each door, station Z 22AWG or Cat V to each sensor.
 - 3.6 Hid brand RP40 or similar Proximity card reader on the outside of each door controlled, at a height of the strike mechanism or no higher than 36", a minimum of 1 - 22 AWG shielded 6 conductors to each card reader in the system, no substitutions.
 - 3.7 12 or 24-volt DC electronic strikes, or similar locking hardware acceptable, no mag-locks will be approved, minimum 18AWG gauge 2 conductors to every electronic door lock in the system, wire size may increase with cable length.
 - 3.8 A 24" X 48" space is required for the access panels at the wiring termination point, this could change depending on size of building or system required.
 - 3.9 No wiring may be exposed to the outside of a building unless in approved conduit, all outer access points must be tamper proof.
 - 3.10 A 120 VAC circuit, with an individual breaker and a double gang box shall be required to allow hardwiring of transformers. Plug in transformers and or power bars are not allowed.
 - 3.11 A network drop with a specified static IP address on the City intranet network is required at the Access panel location. This connection will be supplied by the City of Richmond IT Dept.

4. VIDEO SYSTEM SPECIFICATIONS FOR CITY OF RICHMOND BUILDINGS

- 4.1 All digital video cameras must be a Hikvision or similar, no proprietary equipment or devices allowed.
- 4.2 All analogue video cameras must be non-proprietary devices.
- 4.3 All video cameras must be designated for their appropriate application, outdoor cameras for outdoor applications, indoor cameras for indoor applications etc.
- 4.4 All recording devices must be Hikvision or Milestone, selection of equipment will be determined on scope of work and size of project, no proprietary equipment or software allowed.
- 4.5 No Cameras can view sensitive or private areas and all installations must adhere to the strict provisions of the privacy act.
- 4.6 All equipment must have factory default password removed and changed to specified password determined by City of Richmond.
- 4.7 No access to the video playback files is allowed by City Staff unless special authorization from the City of Richmond Legal Dept. and access to these files must always be locked out.
- 4.8 All video equipment installations must have the authorization by the City of Richmond Facilities dept. No installations to any City buildings is allowed without this written authorization, No exception to this rule.
- 4.9 All installations must be done by a licensed contractor, licensed in the Province of BC. for the installations and servicing of Video surveillance systems, no exceptions allowed.
- 4.10 A 120-vac. circuit must be supplied at the NVR or DVR head end location.
- 4.11 A network drop with a specified static IP address on the City intranet network is required at the Access panel location, and will be supplied by the City of Richmond IT Dept.

6.8 City of Richmond Waste Management "Let's Trim Our Waste" – Waste Management Design Guidelines

The Guidelines present key strategies and general advice for meeting the City's requirements for garbage and recycling management, and provides recommendations and formulas for calculating space needs for collection bins and loading areas.

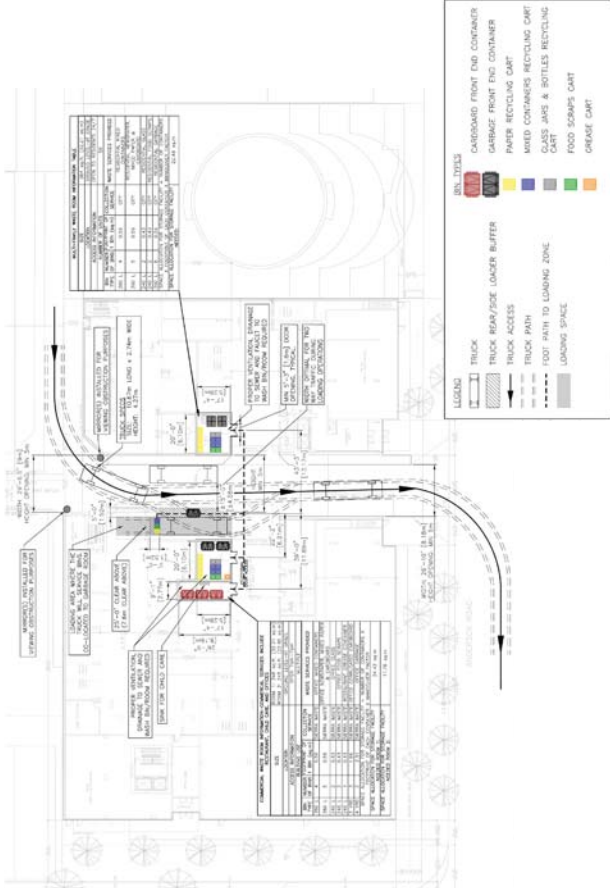
Guide to Estimating the Recycling and Garbage Bins Your Complex Needs for Weekly Collection

OFFICE

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OFFICE FLOOR AREA (M ²)	MIXED CONTAINERS		MIXED PAPER (including newspaper)		FOOD SCRAPS & YARD TRIMMINGS		CARDBOARD BIN		GARBAGE	
	360 LITRE BINS (#)		240 LITRE BINS (#)		CUBIC YARD BINS (# x SIZE)					
1-500	1	1	1	1	1 x 3 yd ³	1 x 3 yd ³			1 x 3 yd ³	
501-600	1	1		2	1 x 3 yd ³	1 x 3 yd ³			1 x 3 yd ³	
601-900	1	2		2	1 x 3 yd ³	1 x 3 yd ³			1 x 3 yd ³	
901-1,000	1	2		3	1 x 3 yd ³	1 x 3 yd ³			1 x 3 yd ³	
1,001-2,000	2	4		5*	1 x 3 yd ³	1 x 3 yd ³			1 x 3 yd ³	
2,001-3,000	3	6*		7*	1 x 3 yd ³	1 x 3 yd ³			1 x 4 yd ³	
3,001-4,000	4	7*		10*	1 x 3 yd ³	2 x 3 yd ³			2 x 3 yd ³	
4,001-5,000	5*	9*		12*	1 x 4 yd ³	2 x 3 yd ³			2 x 3 yd ³	

* It is more space efficient to use bins at this point. Please consult with a waste services provider to discuss which containers are suitable.



6

Appendices

6.9 City of Richmond Roof-Top Playground Design Guidelines

[August 2016]

Below are notes for the developer and consultant team for guidance in designing the outdoor play areas on slab. Note that these are intended to supplement, and should be read in conjunction with the City of Richmond Child Care Design Guideline.

- 1) Minimum Growing Medium Depths on slab:
 - a. 900mm for trees
 - b. 450mm for shrubs and perennials
 - c. 300mm for lawn

Note: Wherever possible, the slab should be dropped in order to achieve the above required minimum soil depths as a means to minimize use of retaining walls. All planters should be a minimum of 900mm width and include high efficiency irrigation. Soil loading to be reviewed by and co-ordinated with the project Structural Engineer. Inspection chambers are to be included at all slab drains located within planters. Ensure that all planters include drainage through inclusion of planter drains or block outs in planter walls located at the drainage layer below finished grade.

- 2) Growing media to meet the current BC Landscape Standard for Level 2 "Groomed" and Level 3 "Moderate" Areas. A soil analysis report is to be provided to the Landscape Consultant and City for review prior to placement on site. Soil analysis report to be performed on the proposed growing medium from samples taken at the supply source within three weeks prior to placement on site.

- 3) The top of slab should be a minimum of 250-300mm below the proposed finished grade in order to accommodate landscape build up (drainage and paving materials). The proposed exterior finished grade should match the proposed interior finished floor elevation i.e. there should not be a step up or down to the exterior spaces from the building interior.

- 4) Wherever possible, bi-level drains should be used. Sand interceptors are to be included at all drains.

- 5) Preferred resilient surfacing on slab:
 - a. Pour in Place Rubber Surfacing. Dark colours such as black, red, or dark tinted colours should not be used.
 - b. Artificial turf.
 - c. Sand is recommended for play value, but not permitted for use as a resilient surface at play or climbing structures.

Note: All resilient surfacing to meet CAN/CSA-Z614-14 guidelines. Engineered wood fibre and pea gravel are not permitted for use on slab.

- 6) Play equipment / elements to be fastened to a housekeeping slab(s) in order to protect the structural slab and membrane.
- 7) A raised edge that is 100mm minimum and 300mm maximum height is to be provided around sand play areas in order to retain the sand. The raised edge should be either rounded concrete, or logs on side or end (peeled and free of splinters), or a combination of the two. Access to the sand area for the age group that is servicing should be considered.
- 8) All exposed edges on hardscape and furnishings to be rounded or eased.
- 9) Landscape to be maintained at Level 4 "Open Space / Play" as outlined in the current version of the BC Landscape Standard.

6.10 City of Richmond Irrigation Design Guidelines for Roof-Top and Grade Related City Owned Projects [November 2016] [10 pages]

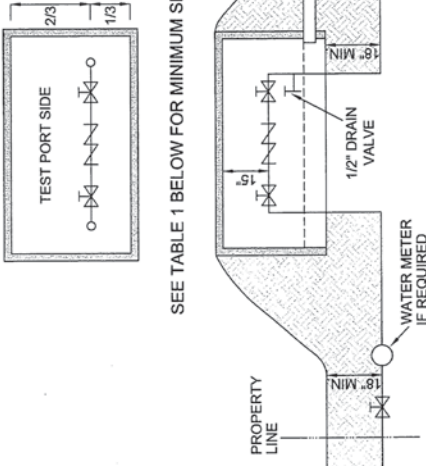
- 1.1 The requirements for both roof top and grade related details are that the:
 - Controller to be Toro Sentinel Satellite SSAK-12-XXX-6-N-S (Note that the XXX is a placeholder for wall mounted vs. pedestal Developer / Consultant to determine mounting based on project).
 - Developer / Consultant to provide irrigation shop drawings to the City for review.
- 1.2 The following irrigation valve and sprinkler details are applicable for grade applications.
 - Above Ground Chamber for Reduced Pressure & Double Check Valve Assemblies
 - IR-B-1
 - IR-C-1
 - IR-C-3
 - IR-C-4
 - IR-S-1
 - IR-S-2
 - IR-S-3

Only the following irrigation valve and sprinkler details are applicable in roof top applications.

- IR-C-2
- IR-C-3
- IR-C-4
- IR-S-2

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Above Ground Backflow Assembly Chamber



SEE TABLE 1 BELOW FOR MINIMUM SIZE

The following installation practices are common to all backflow assemblies:

1. Unless the backflow assembly has been evaluated and approved for vertical installation by an approved testing agency, it shall only be installed in a horizontal configuration.

Table 1: The minimum required size for a box installed in a berm for backflow assembly installation	
a. 3/4" - 1" assemblies:	250mm x 330mm
b. 1 1/4" - 2" assemblies:	360mm x 500mm
c. 2 1/2" - 6" assemblies:	600mm x 1500mm
d.	For larger installation, submit drawings for review

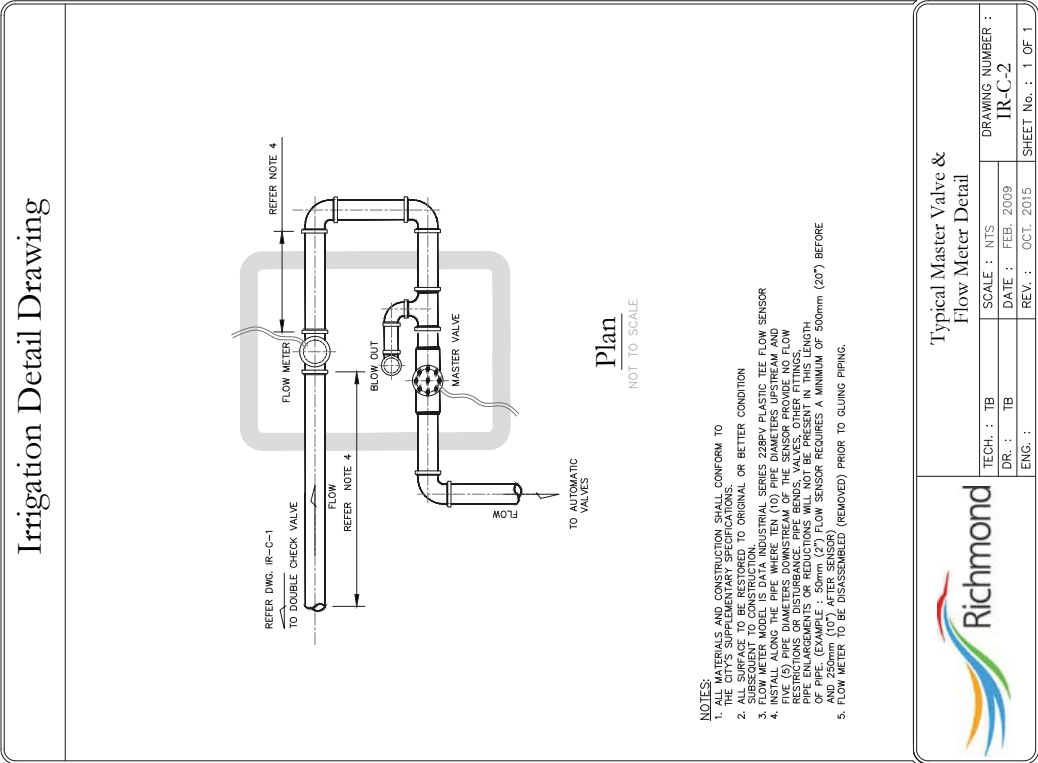
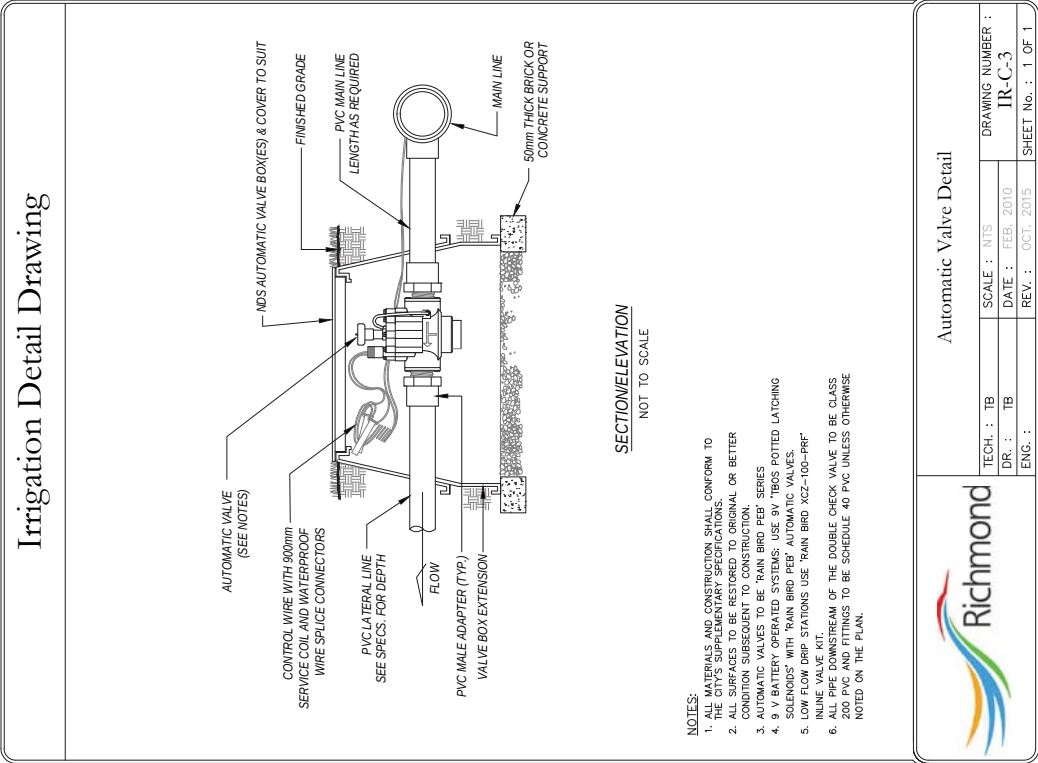
2. An approved air gap is required on an RPBA between the dump port and the daylight drain.
3. "Y" pattern backflow assemblies must not have test cocks falling downwards.
4. Sufficient drainage must be provided to prevent the assembly from being submerged.

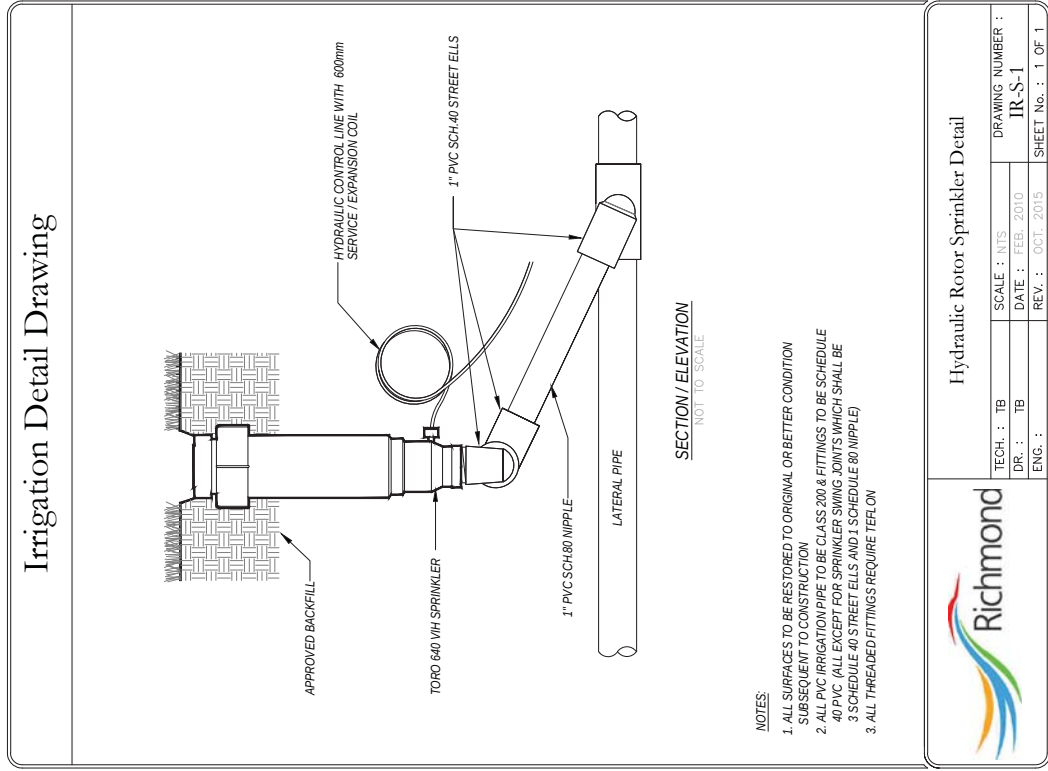
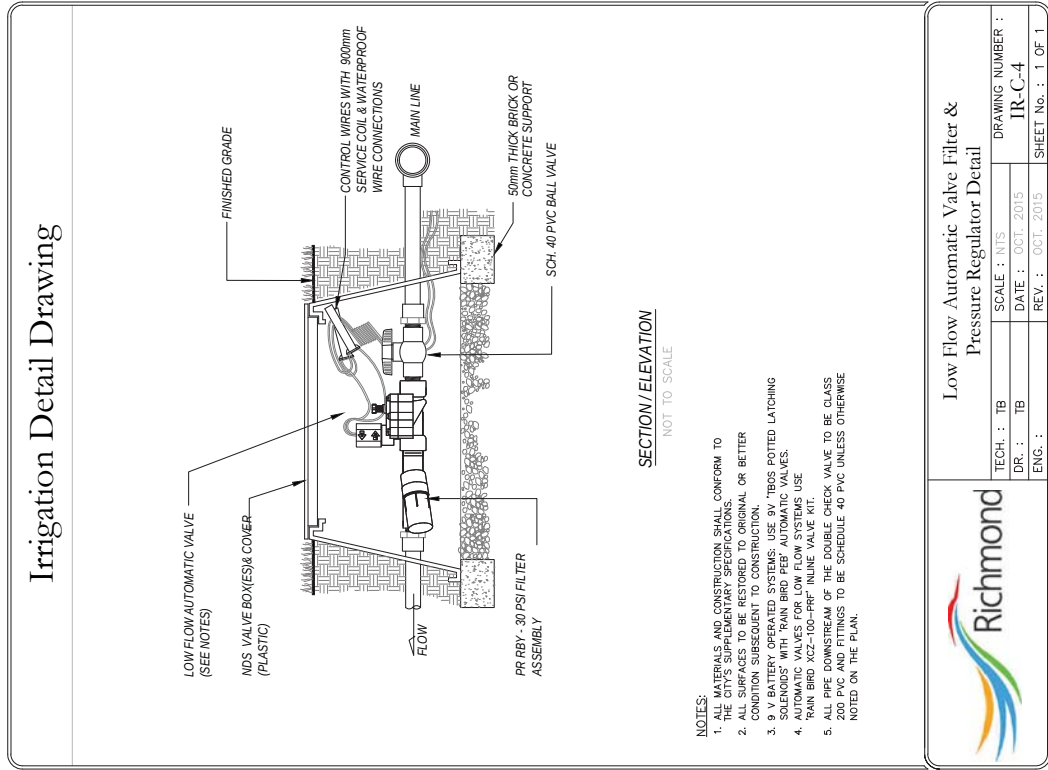


City of Richmond
Civility & Treacy Shared Urban Development

**Above Ground Chamber for
Reduced Pressure Principle &
Double Check Valve Assemblies**

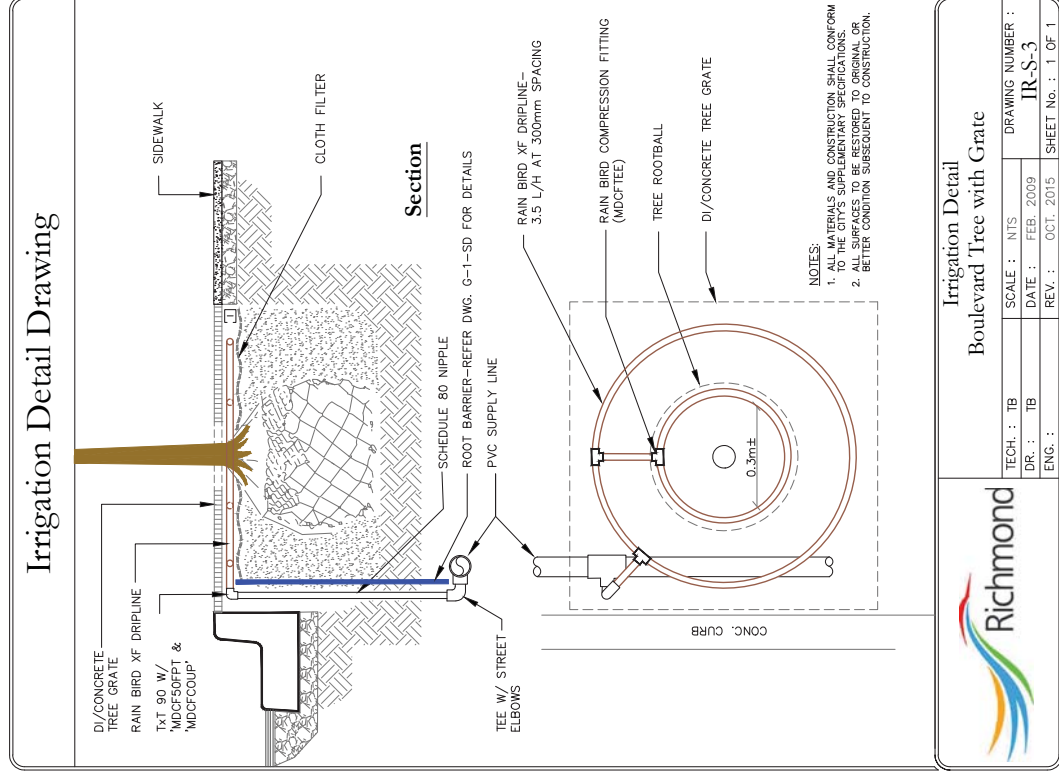
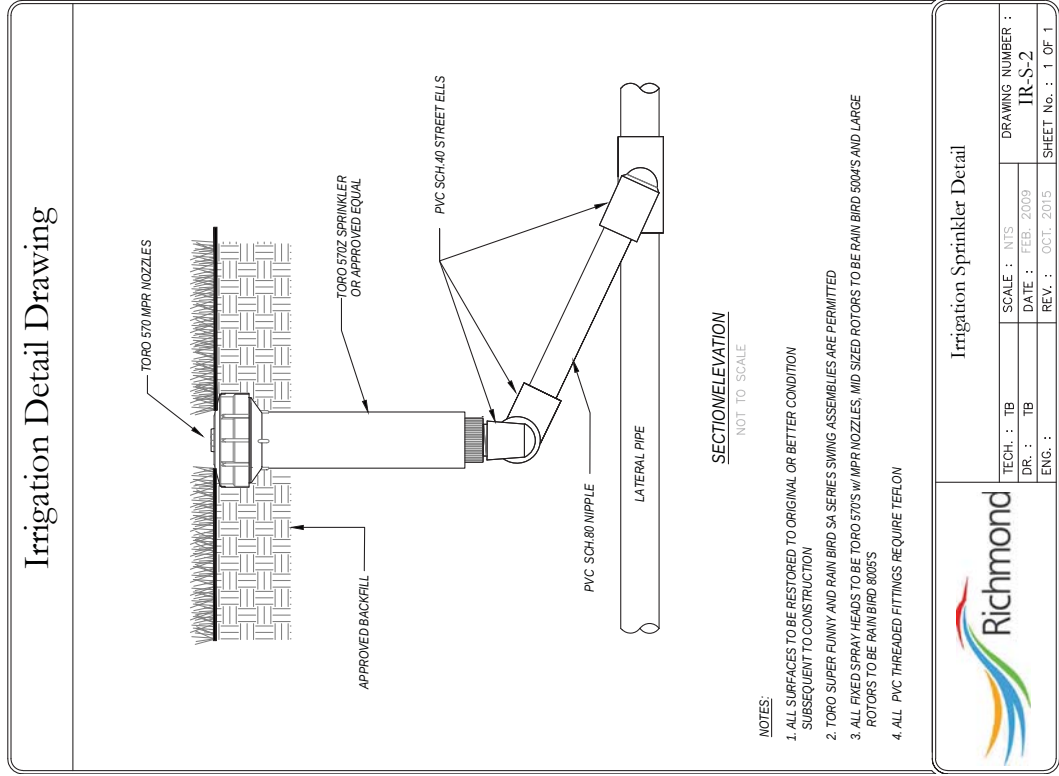
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6 Appendices

6.10 Continued



Appendices

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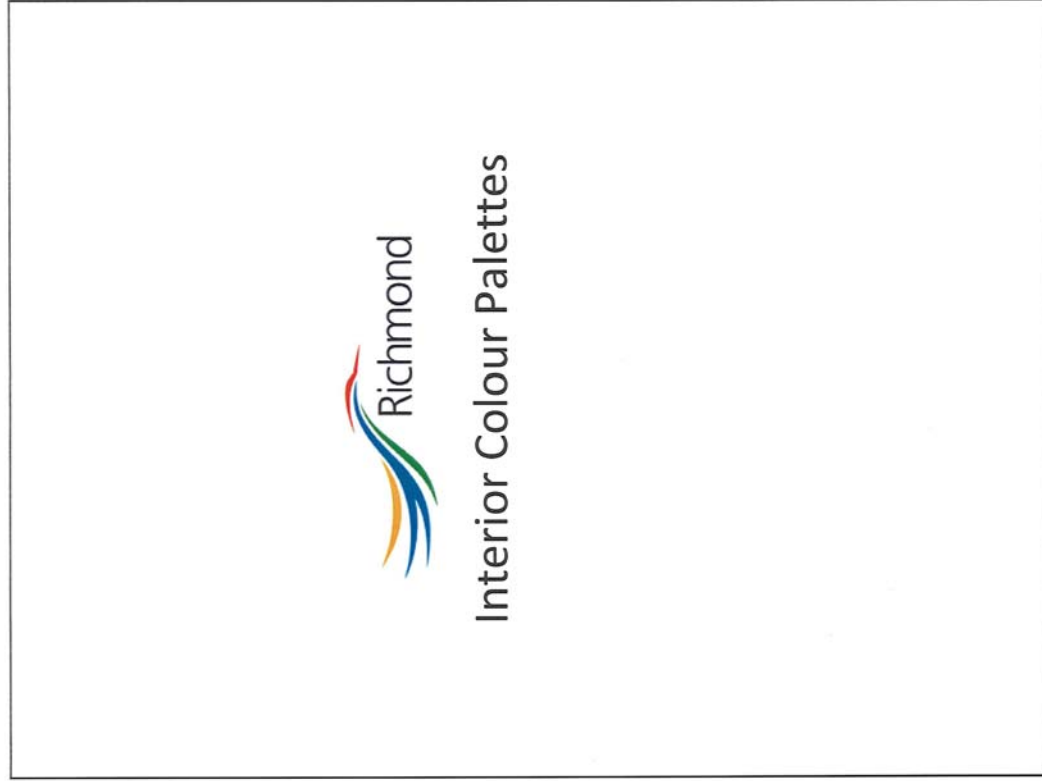
6.11 City of Richmond Mechanical Systems Naming Protocol

City of Richmond Labelling Standard Example	Notes
If there are 4 Air Conditioners, 2 on the first floor of a building and 2 on the second floor of a building, they will be labelled as follows: AC-1.001.000 AC-1.002.000 AC-2.001.000 AC-2.002.000 If there are 4 Air Handling Units located on the roof, they will be labelled as follows: AHU-R.001.000 AHU-R.002.000 AHU-R.003.000 AHU-R.004.000	*This indicates the level the unit is on (e.g. Level 1; Level 2; Level 3; Roof; Basement) *This number refers to the number of units on the specific Level/Floor * This indicates how many times the unit has been replaced. "000" indicates that the unit is new and has not yet been replaced.
System	Label
Air Compressor	ACOM
Air Conditioner	AC
Air Handler	AHU
Air Separator	AS
Carbon Monoxide Detector	AD
Backflow Preventer	BP
Baseboard Heater	BBH
Boiler System	BLR
Boiler System Modulating	BLRC
Boiler System One Stage	(BLRA)
Boiler System Two Stage	(BLRB)
Buffer Tank	BT
Cabinet Unit Heater	CAB
Ceiling Fan	CF
Chilled Water System	CLR
Chiller	CH
Circulation Pump	CP
Combustion Air Supply	CAS
Compressed Air System - Controls	CMPC
Compressed Air System - Medical	CMPM
Compressed Air System - Process	CMPP
Condenser Cold Water System	DCW
Condenser Water System	CWS
Constant Air Volume	CAV
Cooling System	CLG
Cooling Tower	CT
Dehumidifier	DEH
Direct Expansion Cooling	DX
Domestic Cold Water System	DCW
Domestic Hot Water Storage Tank	DHWST
Domestic Hot Water Tank	DHW
Dry Cooler	DC
Dual Duct Air System	DD
Electric Coil	EC
Electric Duct Heater	EDH
Electric Entrance Heater	EEH
Electric Heating System	EH
Electric Meter	KWH
Electric Unit Heater	EUH
Energy Recovery Ventilator	ERV
Entrance Heater	EH
Exhaust Fan	EF
Expansion Tank	ET

Fan Coil System	FC
Fluid Cooler	
Forced Flow Convactor	FF
Forced Flow Heater	FFH
Furnace Single Zone	FUR
Generator	GEN
Geo-exchange System	GEOX
Glycol System	GLY
Heat Exchanger	HE
Heat Pump System	HP
Heat Recovery Ventilator	HRV
Heating Coils	HC
Heating Water System	HTG
Hot Water Heating System	HW
Humidifier	HUM
Infrared Heater	IPR
Make-up Air System	MAU
Mixing System	MB
Multi-Zone Air System	MZ
Outdoor Air (Ambient) Temperature	OA
Pool Equipment	PE
Preheat System	PHT
Pressurized Fans	PFAN
Pump	P
Radiant Panel System	HRP
Radiation System	
Reheat System	
Roof Top Unit	RTU
Single Zone System	SZ
Snow Detector	SD
Solar System	SOL
Split AC	
Steam Generator	SG
Storage Tank	ST
Temperature Predictor	TP
Terminal Reheat System	TR
Unit Heater (Gas)	UH
Unit Heater (Infrared)	UHI
Variable Air Volume Systems	VAV
Variable Air Volume Temperature Systems	VVT
Variable Frequency Drive	VFD
Variable Exhaust System	VES
Ventilation Systems	VTL
Water Metering System	H2O
Water to Water Heater	WWH

6 Appendices

6.12 City of Richmond Standard Colour Palette



Corporate Colours City Of Richmond

Interior Colour Palette #1

Main Walls	OC-9 Ballet White	Ballet White OC-9
Accent Walls	HC-105 Rockport Gray	Rockport Gray HC-105
Doors & Trim	HC-164 Puritan Gray	Puritan Gray HC-164

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Appendices

6.12 Continued

Corporate Colours City Of Richmond

Interior Colour Palette #2

Main Walls	Gray Owl OC-52	Gray Owl OC-52
Accent Walls	Gray Horse 2140-50	Gray Horse 2140-50
Doors & Trim	Storm Cloud Gray 2140-40	Storm Cloud Gray 2140-40

Corporate Colours City Of Richmond

Interior Colour Palette #3

Main Walls	Edgecomb Gray HC-173	Edgecomb Gray HC-173
Accent Walls	Gray Horse 2140-50	Gray Horse 2140-50
Doors & Trim	Hudson Bay CC-810	Hudson Bay CC-810

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Appendices

6.12 Continued

Corporate Colours
City Of Richmond

Interior Colour Palette #4

Main Walls	CC-80 Gray Mist	Gray Mist CC-80
Accent Walls	AF-100 Pashmina	Pashmina AF-100
Doors & Trim	CC-810 Hudson Bay	Hudson Bay CC-810

Corporate Colours
City Of Richmond

Interior Colour Palette #5

Main Walls	OC-12 Muslin	Muslin OC-12
Accent Walls	CC-336 Wild Mushroom	Wild Mushroom CC-336
Doors & Trim	HC-76 Davenport Tan	Davenport Tan HC-76

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Appendices

6.12 Continued

Corporate Colours City Of Richmond

Interior Colour Palette #6		
Main Walls	OC-14 Natural Cream	Natural Cream OC-14
Accent Walls	HC-172 Revere Pewter	Revere Pewter HC-172
Doors & Trim	HC-108 Sandy Hook Gray	Sandy Hook Gray HC-108

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Appendices

6.12 Continued

Corporate Colours
City Of Richmond

Exterior Colour Palette #1

Main Body	HC-83 Grant Beige	Grant Beige HC-83
Accent 1	HC-107 Gettysburg Gray	Gettysburg Gray HC-107
Accent 2	HC-155 Newburyport Blue	Newburyport Blue HC-155

Corporate Colours
City Of Richmond

Exterior Colour Palette #2

Main Body	AF-680 Wish	Wish AF-680
Accent 1	CC-546 Metropolis	Metropolis CC-546
Accent 2	HC-155 Newburyport Blue	Newburyport Blue HC-155

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Appendices

6.12 Continued

Corporate Colours
City Of Richmond

Exterior Colour Palette #3

Main Body	AF-100 Pashmina	Pashmina AF-100
Accent 1	2135-30 Nocturnal Gray	Nocturnal Gray 2135-30
Accent 2	2134-20 Midsummer Night	Midsummer Night 2134-20

Corporate Colours
City Of Richmond

Exterior Colour Palette #4

Main Body	CC-90 Natural Linen	Natural Linen CC-90
Accent 1	AF-155 Weimarner	Weimarner AF-155
Accent 2	2112-10 Mink HC-155 Newburyport Blue	Mink 2112-10 Newburyport Blue HC-155

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Appendices

6.12 Continued

Corporate Colours City Of Richmond

Exterior Colour Palette #5

Main Body	HC-108 Sandy Hook Gray	Sandy Hook Gray HC-108
Accent 1	OC-14 Natural Cream	Natural Cream OC-14
Accent 2	HC-100 Gloucester Sage	Gloucester Sage HC-100

Corporate Colours City Of Richmond

Exterior Colour Palette #6

Main Body	CC-500 Ranchwood	Ranchwood CC-500
Accent 1	138 Mack Green Rust Seat	Mack Green 138
Accent 2	CC-90 Natural Linen	Natural Linen CC-90



City of Richmond

6911 No. 3 Road, Richmond, BC V6Y 2C1

Telephone: 604-276-4000

www.richmond.ca



City of Richmond

Report to Committee

To: General Purposes Committee

Date: November 14, 2018

From: Carli Williams
Manager, Community Bylaws and Licencing

File: 12-8080-12-01/Vol 01

Re: **Non-Farm Use Fill Application for the Property Located at 21800 River Road (Yee)**

Staff Recommendation

That the non-farm use fill application submitted by Joanna Yee for the property located at 21800 River Road for the purposes of developing a vegetable farm and the corresponding report titled "Non-Farm Use Fill Application for the Property Located at 21800 River Road (Yee)" dated November 14, 2018, be referred to the Agricultural Land Commission (ALC) for the ALC's review and decision.

Carli Williams
Community Bylaws and Licencing
(604-276-4136)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Engineering	☒	
Finance	☒	
Sustainability	☒	
Law	☒	
Policy Planning	☒	
Transportation	☒	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

The City of Richmond (the “City”) is in receipt of a soil deposit application (the “Application”) submitted by Joanna Yee (the “Applicant”) for the property located at 21800 River Road (the “Property”). The Application to deposit soil is considered to be a non-farm use by the Agricultural Land Commission (ALC). The intent of the Application is to place soil on the Property to improve the Property’s agricultural capability for the purpose of developing a vegetable farm.

The Property is situated within the Agricultural Land Reserve (ALR) and as such is subject to provisions of the *ALC Act*, *ALR Use, Subdivision, and Procedure Regulation*, and the City’s *Soil Removal and Fill Deposit Regulation Bylaw No. 8094* (the “Bylaw”).

Pursuant to applicable provincial regulations, non-farm use soil deposit applications require Council authorization to be referred to the ALC for their review and approval. As such, a non-farm use soil deposit application must be submitted to the City for review and a decision from Council. Should the Application be referred to the ALC and should it subsequently be approved by the ALC, the Applicant would be required to satisfy the requirements of the Bylaw before a soil deposit permit would be issued by the City.

This report supports Council’s 2014-2018 Term Goal #8 Supportive Economic Development Environment:

8.3 The City’s agricultural and fisheries sectors are supported, remain viable and continue to be an important part of the City’s character, livability, and economic development vision.

Analysis

The Property is located at 21800 River Road and is zoned AG1 (Agriculture). The current zoning permits a wide range of farming and compatible uses consistent with the provisions of the *ALC Act*, *ALR Regulation* and the City’s *Official Community Plan (OCP)* and *Zoning Bylaw 8500*.

The Applicant is applying to deposit 6,750 cubic metres of topsoil over approximately 0.9 ha of the 1.79 ha site in order to produce vegetables for local consumption. The Applicant estimates that the duration of the project will be six months.

Uses on Adjacent Lots

- To the North: Fraser River
- To the East: ALR – Land is in agricultural production
- To the South: ALR – Land is in agricultural production
- To the West: ALR – Land is not in agricultural production

Table 1: Existing Property Information and Proposed Changes

Item	Existing	Proposed
Owner (006-177-051)	Joanna (Yui) & Anthony (Kam) Yee	No change
Applicant	Joanna (Yui) & Anthony (Kam) Yee	No change
Authorized Agent	Dennis Beckrud	No change
Lot Size	1.79 hectares (4.41 acres)	No change
Land Uses	Not in production	Vegetable production
OCP Designation	Agriculture	No change
ALR Designation	Property is within the ALR	No change
Zoning	AG1	No change
Riparian Management Area (RMA)	15.0 meters RMA	No change

Project Overview

The total project area of the Property is approximately 1.79 hectares (4.41 acres). The Property is currently not in agricultural production. An assessment of the property by the proponent's professional Agrologist (the "Agrologist"), maintains that historically "there is little evidence of agricultural activity" on the Property.

The stated reason for importing topsoil:

- To place soil on the Property to improve the Property's agricultural capability for the purpose of developing a vegetable farm.

The Property's soils have been mapped as EM-BU. EM refers to Embree soil, which is a medium textured deltaic deposit containing organic strata. BU refers to Blundell soil, which consists of 15-40 cm of organic material over medium textured deltaic sediments. The agrologist report (Attachment 1) states the agricultural capability of the soils on the Property is Class 4 which limits what type of crops may be grown on the Property. The capability assessment highlights that the low elevation of the Property leads to wet soil conditions which undermines productivity as confirmed by the Agrologist. The objective is to improve the quality of the soil to a Class 2 soil which is soil deemed to have "minor limitations that require good going management practices or slightly restrict the range of crops, or both" (Source: Land Capability Classification for Agriculture in B.C., 1983).

The proposed scope of the project involves placing 6,750 cubic metres of topsoil over approximately 0.9 ha of the Property (approximately 965 truckloads). The fill depth will be approximately 0.6m deep. The agrologist advises that the proposed placement of the topsoil will improve the Property's ability to produce crops and raise the level of the land which will improve drainage and reduce soil saturation.

The proposal includes stripping soil previously placed on the Lands without approval and re-using the soil for creating an access road. The Applicant will be required to ensure the access road is built as per requirements within the ALC's *Bylaw No. 2 – Placement of Fill in the ALR*.

The Applicant has stated that the proposed duration of the project will be six months. City staff note that the proposed duration may be longer depending on availability of the appropriate type of soil required to complete the project.

The Agrologist concludes the following:

“[T]he agricultural capability [of the Property] will increase to a Class 2, depending on the quality of the topsoil that can be placed on [the] property.”

Richmond Agricultural Advisory Committee Consultation

The Agricultural Advisory Committee (AAC) discussed the proposal on February 1, 2018 and September 13, 2018.

Following the September 2018 meeting, the AAC introduced and passed the following motion:

That the Agricultural Advisory Committee supports the soil deposit application at 21800 River Road given the improvement of farmable land subject to the following conditions:

- a) That the frequency of inspections by City Staff is every 1,500 cubic meters or every six months, whichever comes earlier; and*
- b) That a legal agreement is registered on title to ensure in the event that the land is sold, the obligation is transferred to the new owner to complete the project.*

Staff Comments

City staff have prepared a comprehensive soil deposit permit (the “Permit”) that addresses a number of key issues, including but not limited to, protection of the surrounding Riparian Management Areas (RMA), public safety, drainage, eliminating impacts to neighbouring properties and City infrastructure, security deposits, and the permitted hours/days of operation.

Staff are recommending that in addition to the regulations within the Bylaw, that the importation of soil be restricted from occurring on Saturdays, in addition to Sundays, statutory holidays, and between the hours of 6:00 p.m. and 8:00 a.m. in order to ensure appropriate monitoring of the project by City staff. Such a restriction would be included within the Permit conditions; however, the restriction would not limit the Applicant or contractor(s) from undertaking earthmoving and other associated project work on the Property outside the permitted days and hours for importing soil.

The Applicant will be required to maintain an accurate daily log of trucks depositing soil on the Property. This log will be made available for inspection by City staff when requested. At the sole discretion of the City, alternate measures may be required of the Applicant (i.e. topographic survey) in order to establish the volume of soil deposited on the Property following completion of the project.

As per the conditions of the proposed Permit, security deposits required by the City will not be returned until all conditions, as stated in the Permit and the ALC approval, should one be granted, are satisfied in their entirety, to the satisfaction of the City. City staff are to conduct a final inspection and receive confirmation in writing from the Applicant's qualified professional(s) and the ALC, that the project has been completed as approved prior to returning the security deposits.

Staff will recommend to the ALC as a condition of approval, that the Applicant be required to post a performance bond in a form and amount deemed acceptable by the ALC. The performance bond should be of a sufficient amount to ensure that the project and all required monitoring measures are completed as proposed and to ensure the rehabilitation of the Property in the event the project is not completed. The performance bond will be held by the ALC.

Staff will also recommend to the ALC that the project be monitored by a professional Agrologist and that the Agrologist provides quarterly inspection reports to the City and ALC or upon request by ALC and/or City staff. This will be a separate condition within the Permit.

Should approval be granted by the City and ALC, City staff shall maintain consistent monitoring of the Property to ensure compliance with the conditions of the Permit and ALC approval.

Drainage & Geotechnical Considerations

A site Grading Plan has been reviewed and accepted by City Engineering staff. In addition, a topographic survey has been provided.

The Applicant has also provided a geotechnical assessment of the proposal. The report recommends the necessary steps to be undertaken by the Applicant in order to mitigate any slope stability or settlement concerns on the neighbouring properties arising from the fill. Engineering staff are satisfied with the plan as outlined and the Permit conditions will identify requirements stipulated in the assessment.

Permit conditions will provide staff the latitude to request a geotechnical report at any time should the Manager of Community Bylaws or designate consider it necessary. Staff will require a closure report from the geotechnical engineer following completion of the project.

Environmental Considerations

The proposed soil deposition is outside of the Riparian Management Area (RMA) that runs along River Road; however, the open watercourse adjacent to the River Road right-of-way is a protected RMA.

Should a permit be granted, the Applicant shall be required to take all necessary precautions to prevent sedimentation from reaching the RMA or any stream, creek, waterway, watercourse, ditch, drain, catch basin, culvert, or manhole either on or adjacent to the Property. City staff will inspect to ensure compliance prior to the importation of any soil. There will be a separate condition within the Permit that requires that such measures be sustained throughout the duration of the project.

The Applicant is exempt from an Environmentally Sensitive Area Development Permit (ESA DP) as a Farm Plan was provided to the City consistent with the exemptions permitted in the Official Community Plan. In order to mitigate any damage to the stand of conifer trees located on the neighbouring property to the west, the Applicant shall, as a condition of the Permit, provide a minimum 3.0m setback between the toe of the proposed fill slope and the west property line.

The City has no record of Schedule 2 activities on the property as defined by the Contaminated Sites Regulation. Schedule 2 of the Contaminated Sites Regulation outlines commercial and industrial activities which have a greater potential to contaminate a site than non-scheduled activities and typically have additional provincial permitting requirements associated with development.

Agricultural Considerations

The proponent has provided a Farm Plan (Attachment 2) as required by the City. The Farm Plan outlines the cost of the project, the means of irrigation, planting plan, etc. In addition, the proponent has retained a professional agrologist and submitted an agrologist report outlining the proposal.

Bruce McTavish (MSc, MBA, PAg, RPBio) has reviewed the proposal on behalf of the City and has provided recommendations to staff that will be incorporated into the soil deposit permit issued by the City, should approval be granted.

Should the proposal be approved, the City will require that a qualified agrologist be retained to monitor the project and provide regular reporting. Regular reporting will include that the agrologist inspect the soil at the source site(s) prior to delivery to ensure that only topsoil is delivered to the site.

Should an agrologist not be retained or cease providing regular oversight and reporting, the City would reserve the right, as per the Permit conditions, to suspend and/or void the Permit until such time as a new qualified agrologist, agreeable to both the City and ALC, is retained to monitor the project and provide regular reporting.

Road & Traffic Considerations

A traffic management plan will be required to be submitted and approved by the City's Transportation Department prior to the City issuing the Permit. The City shall require that all trucks importing soil enter and exit River Road from the east end at Westminster Highway. Traffic control measures must be in accordance with the "Traffic Control Manual for Work on Roadways" as published by the Highways Engineering Branch, BC Ministry of Transportation and Highways and per Traffic Bylaw No. 5870.

Should the soil deposit project receive approval, additional permit conditions will require that the Applicant provide the City the following security bonds:

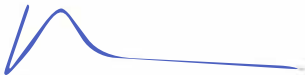
- \$5,000 pursuant to section 8(d) of the current Boulevard and Roadway Protection Regulation Bylaw 6366 to ensure that roadways and drainage systems are kept free and clear of materials, debris, dirt, or mud resulting from the soil deposit activity; and
- \$10,000 pursuant to section 4.2.1 of the current Soil Removal and Fill Deposit Regulation Bylaw No. 8094 to ensure the full and proper compliance with the provisions of this Bylaw and all other terms and conditions of the Permit.

Financial Impact

None.

Conclusion

Staff recommend that Council refer the non-farm use application to deposit soil on the property located at 21800 River Road to the ALC for the Commission's review and consideration.



Mike Morin
Soil Bylaw Officer, Community Bylaws
(604-204-8625)

MM

Att. 1: Agrologist Report (02 Aug 2017)
2: Farm Plan (submitted May 2017)



Agrologist's Report for 21800 River Road, Richmond, British Columbia

August 2, 2017

Introduction

The purpose of this report is to provide a professional agrologist's report supporting an application to remediate a 0.9 ha section of a 1.8 ha property in the Agricultural Land Reserve in the City of Richmond that will enhance the value of agricultural land for growing vegetable crops. The area where fill was deposited will be remediated to restore it for agricultural use. The soil deposit will not have negative impacts on neighbouring properties.

The area proposed to be filled on this property has mainly drainage limitations because of its very low elevation of approximately 7 m, which floods during freshet. It has no apparent history of agricultural production and has had some fill added to the property a number of years ago.

This soil fill deposit will be on a 0.9 ha of the property and will provide some topsoil to allow crops to be grown. The existing imported aggregate fill will be removed, and some of it will be used for an access road. It is anticipated that the property can be improved from its Class 4 Capability to Class 2 with the addition of quality topsoil. It is anticipated that good quality topsoil can be obtained from either UBC development lands or other development nearby.

This application for 6,750 cubic meters of primarily good quality topsoil is for an area of approximately 9,000 sq m on the southern part of the property.



Figure 1. Aerial view of the property (Google Earth) outlining the property boundary and the fill area (shaded)

This report is prepared by John Paul, Ph.D, P.Ag., who has extensive training and experience in all aspects of soil science, including soil chemistry, physics and classification, soil fertility and biochemistry. Dr. Paul has been working with soil deposit permits and other soils related work since 1998.

Property Description

According to information from the City of Richmond, the property has a civic address at 21800 River Rd, Richmond, V6V 1M4. It consists of a 1.79 ha parcel zoned AG1 in the ALR. The legal description is PID 006-177-051, LT 1 Sec 34 Blk 5N RGE 4W, New Westminster District Plan 7445.

Agricultural History of Property

This property is located in the Agricultural Land Reserve. There is little evidence of any agricultural activity on this property.



Figure 2. Aerial view of property in 2002 (Google Earth)

Land Uses on Neighbouring Properties

Land use on the property to the east is a vegetable farm. This is the farm that would like to expand to this property at 21800 River Rd. One of the limitations to growing vegetables on the property to the east is the high water table in the spring that delays spring planting until the water recedes in June.

To the west is a largely undeveloped agricultural property with some fill that was added. To the south are cranberry fields. The Fraser River is located to the north.

Soil Description

The soils on this property is classified as a EM-RU b in the area proposed to receive fill, and a LU-RC a in the southern half of the property (Luttmerding 1980).

EM refers to Embree soil, which is a medium textured deltaic deposit containing organic strata. BU refers to Blundell soil, which consists of 15-40 cm of organic material over medium textured deltaic sediments. The topography may be gently undulating.

Towards the south of the property, there is a combination of LU-RC. Lulu (LU) soil consists of 40-160 cm of partially decomposed organic material over moderately fine textured deltaic deposits. Richmond soil (RC) consists of 40-160 cm of well decomposed organic material over moderately fine deltaic deposits. The topography on the southern half of the property is level.

There has been some import of structural material on the north half of the property. Although it is of unknown origin, it does appear to be clean and devoid of debris and garbage.

The southern part of the property is designated by the City of Richmond as an environmentally sensitive area, likely

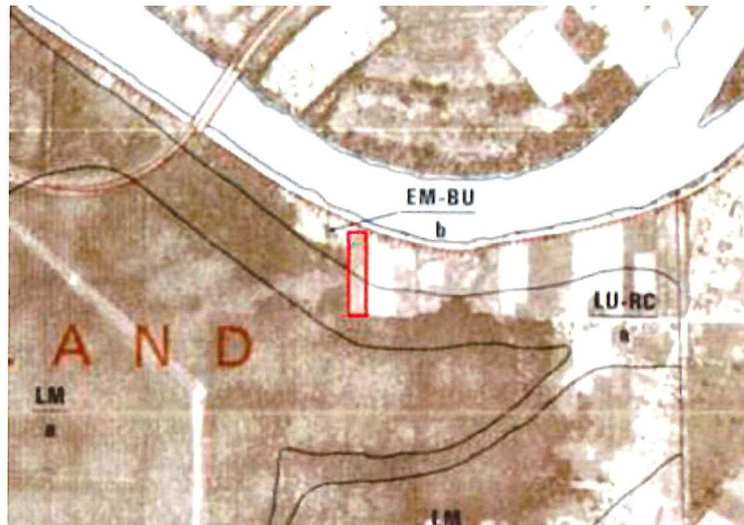


Figure 3. Soil type on and near 21800 River Rd., Richmond

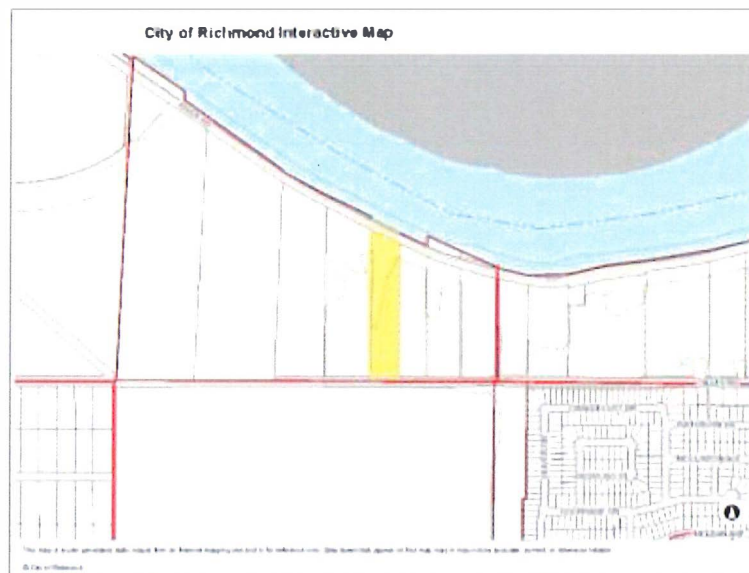


Figure 4. Map of property (shaded in yellow) showing the environmentally sensitive areas (cross hatched in green), as well as the close proximity to residential development (City of Richmond map).

due to the peat (organic soils) on this part of the property.

Soil Capability Classification for Agriculture

The agricultural capability of the soils on this property is depicted as Class 4 W, where Class 4 land is “*land in this class has limitations that require special management practices or severely restrict the range of crops, or both*” (BCMOE 1983).

The capability subclasses according to the Land Capability Mapping includes W (which confirms that the soil remains wet due to its very low elevation).

We expect that the agricultural capability will increase to a Class 2, depending on the quality of the topsoil that can be placed on this property.

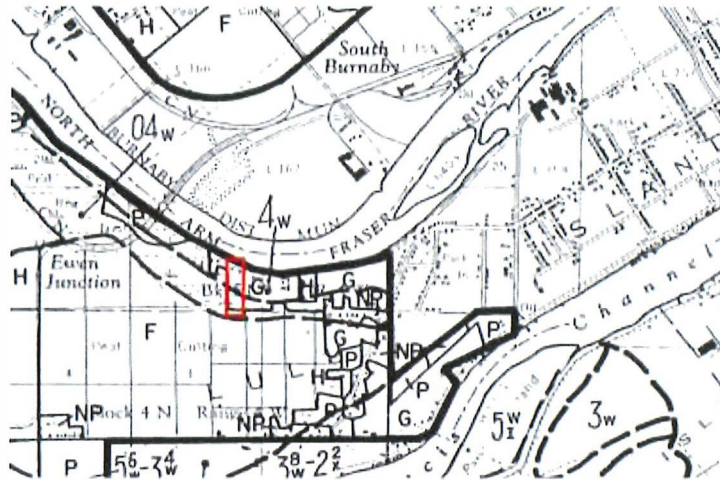


Figure 5. Agricultural capability of the property.

Site Inspection June 28, 2016

I visited the property on June 28, 2016. The photographs from this visit will be used to describe this property.

Figure 6 shows the fill that has been placed over some of the property. The depth of this fill is approximately 1 meter, based on visual observation relative to the neighbouring property. This fill will need to be removed as it was deposited over the native topsoil in order to allow the property to be farmed.

The fill that has been brought onto the property appears to be free of garbage or other foreign material. It is also evident that this material will not impede drainage in any way.



Figure 6. View of the property looking north from approximately 200 m from the roadway.

This imported fill appears to be suitable for an access road on the property.

Figure 7 shows the vegetable production on the property to the east. The existing topsoil is of excellent quality, however, as discussed with the farmer utilizing this property, the high water resulting from the spring freshet makes it difficult to grow crops before June.

The farmer growing vegetables on the property to the east is also planning to grow vegetables on the subject property and is anticipating being able to establish production earlier in the season.



Figure 7. View of the property immediately to the west of 21800 River Rd., showing successful vegetable production, even though it is established after the freshet in June.

Figure 8 shows the view of the properties to the west of 21800 River Rd.



Figure 8. View of western portion of the property from the southwest corner of the property along 272St

The Soil Remediation Plan

The goal of the soil remediation plan is to remove the existing imported fill. Most or all of it will be able to be used for an access roadway. Additional topsoil to overcome some of the drainage and flooding issues will allow agricultural production to occur on this area of the property. The result will be a gently sloping field with adequate drainage and ditching to remove excess water effectively.

The property elevations will be integrated with the ditches on the east and west boundaries of the property to ensure that the soil will not cause drainage concerns on neighbouring properties.

Sketches showing the existing elevations, the work area, and the cross sections are attached.

The estimated volume of fill required is 6,750 cubic meters.

Recommended Fill

Topsoil

A minimum of 0.6 m of good quality topsoil is required to be imported onto this property. This is important for the agricultural value of the property as well as to provide adequate organic matter for soil microorganisms and moisture retention.

The characteristics of any imported topsoil will include:

Textural range: < 70% sand, < 70 % silt, < 30% clay

Minimum organic matter content: 4%

% Coarse fragments allowed (> 2 mm diameter) < 5% - no sticks or stones larger than 5 cm

Electrical conductivity: < 2 dS/m

We recommend a soil analysis from a reputable local lab – for example Pacific Soil Analysis

Manufactured topsoil is not permitted.

Soil Deposit Plan

Only fill as approved by the professional agrologist will be accepted on this property.

The property owner/contractor is responsible for maintaining a record of the amount of soil being imported. The property owner also takes full responsibility of the quality of the soil being deposited.

The professional agrologist has the right to refuse any topsoil, or require it to be removed if it is deemed unacceptable.

Access and Internal Transportation

Access to the work area will be from the existing driveway on River Rd.

Dust and Mud Control

If the fill project is not completed during the dryer summer months, a wheel wash or a coarse gravel pad consisting of a 200 mm depth of 50-90 mm sized rock will be installed to reduce the risk of soil and mud being deposited on the road.

Drainage

The owner/contractor will ensure at all times that adequate drainage is maintained on the property. Adequate erosion control will be maintained along property boundaries and drainage ditches.

Vegetative Cover

The work area will be vegetated as soon as possible after the soil is deposited, particularly along the property boundaries and along the ditches to minimize the risk of erosion. The entire work area will be protected by silt fencing to prevent soil erosion.

Operational Conditions

The drawings and soil quantities as prepared in this professional agrologist's report will govern the work. The work will be carried out in phases within the work area, which will be confirmed in consultation with the professional agrologist.

The time period for the work will be two years, depending on the availability of soil and time of year.

The professional agrologist will preapprove all soil that will enter the property. All imported soil will be from pre-approved sites. The professional agrologist retains the right to order any imported soil to be removed from the property if it is deemed unsuitable.

The contractor/landowner will be responsible for maintaining an accurate record of the quantity of soil entering the property.

The contractor/landowner will be responsible for submitting load counts and soil volumes to the local municipality as well as any applicable fees.

Any water runoff from the work areas will be controlled to ensure that there are no negative effects on the environment or on neighbouring properties.

Professional Agrologist Reporting Requirements

A professional agrologist will be required to inspect the site monthly, and submit a progress report to the ALC bimonthly when work is actively underway.

A professional agrologist will be required to submit a final inspection report indicating that the property has been improved for agriculture as per plan.

Risk Assessment and Bonding Requirements

There are minimal risks associated with this fill plan because the site is small. Potential risks include managing the fill that had already been imported onto the property, poor quality of soil imported to the site, not enough topsoil provided, and erosion management in the ditches. The risks increase if the site is active during the winter months when more precipitation is expected.

I suggest a security of \$ 1,000 to meet the requirements of the Agricultural Land Commission.

This report has been prepared by John Paul, Ph.D, P.Ag



I certify that I have conducted the field observations and confirmed the information provided.

References

British Columbia Ministry of the Environment. 1983. Land Capability Classification for Agriculture in British Columbia. MOE Manual 1. Surveys and Resource Mapping Branch and Ministry of Agriculture and Food – Soils Branch.

Luttmerding, H.A. 1980. Soils of the Langley-Vancouver Map Area. Volume 1. British Columbia Soil Survey Report No. 15

Luttmerding, H.A. 1981. Soils of the Langley-Vancouver Map Area. Volume 3. British Columbia Soil Survey Report No. 18

Farm Plan for 21800 River Road Richmond BC

Site Description:

1.79 ha parcel at 21800 River Road Richmond BC V6V 1M4

Legal Description:

1 SEC 34 BLK5N RG4W PL 7445

Richmond Key: 344 Address: 21800 River Rd Zoning: AG1

Property Roll: 010943059 PID: 006-177-051 Plan: 7445

Owner / Operator: Joanna Yee

Current Land use: Dormant

Soil Capability Classification for Agriculture:

The agricultural capability of the soils on this property is depicted as Class 4 W, where Class 4 land is “*land in this class has limitations that require special management practices or severely restrict the range of crops or both*” (BCMOE 1983).

Soil Description:

The soils on this property are classified as EM-RU b and LU-RC a. EM refers to Embree soil, which is a medium textured deltaic deposit containing organic strata. BU refers to Blundell soil, which consists of 15-40 cm of organic material over medium textured deltaic sediments. Lulu (LU) soil consists of 40-160 cm of partially decomposed organic material over moderately fine textured deltaic deposits. Richmond soil (RC) consists of 40-160 cm of well decomposed organic matter over moderately fine deltaic deposits.

Soil Management Rationale:

By grading structural fill materials and crowning with organic top soils, this property can return to full production of local produce.

Uses and Crops:

Season 1 and Season 2 will be growing pesticide-free garden vegetables. By year 3, I would like to incorporate specialty hops for local markets.

Drainage:

The property is bordered on all 4 sides with ditches and a dyke. The property structural fill will be graded the length of the property, providing a high point crown in the middle. The land will slope from the crown to the perimeter ditches at 1.5 degrees pitch. More detailed information is included in the Agrologist and Geotech's reports.

Irrigation:

The scale of operation allows for the use of the properties existing water service. The water is distributed through pvc piping with drip-feeds in the garden beds.

Planting Plan:

Due to the low-lying elevation of the property, moisture does not allow for planting until late May or early June. I will be growing tomatoes, cucumbers, zuchinni, carrots and kale in the front half of the garden this year. I will market my produce through my gardening neighbours network and utilize his labour when necessary.

Financials**Startup Expenses:**

Richmond City Permit	\$1600.
Agrologists Report	\$1050.
Topographic Survey	\$500.
Goetechnical Report	\$2100.
Manpower / Labour	\$1300.
Water distribution Supplies	\$800.
Starter Plants	\$800.
Equipment Rentals / Installation	\$8000.

	\$16,150.

Projections:

1st year	4600lbs @ .75 /lb wholesale	\$3500. gross sales
2 nd year	6000lbs @ .75 /lb wholesale	\$4500. gross sales
3 rd year	6000lbs @ .75 /lb wholesale	\$4500. gross sales
4 th year	6000lbs @ .75 /lb wholesale	\$4500. gross sales
5 th year	6000lbs @ .75 /lb wholesale	\$4500. gross sales
	hops sales	\$5000. gross sales
6 th year		\$9500. gross sales
7 th year		\$11500. gross sales
8 th year		\$11500. gross sales
9 th year		\$12500. gross sales
10 th year		\$12500. gross sales



City of Richmond

Report to Committee

To: General Purposes Committee
From: Kim Somerville
Manager, Community Social Development
Date: December 11, 2018
File: 07-3000-01/2018-
Vol 01
Re: BC Poverty Reduction Coalition's "ABC" Plan

Staff Recommendation

1. That the BC Poverty Reduction Coalition's proposed Municipal Resolution, "Call for the ABC Plan for an Accountable, Bold and Comprehensive poverty reduction plan for British Columbia", be endorsed and
2. That the resolution be sent to the Premier, the Minister of Social Development and Poverty Reduction and Richmond Members of the Legislative Assembly.

Kim Somerville
Manager, Community Social Development
(604-247-4671)

Att. 6

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER 	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

At the December 10, 2018 Regular Council Meeting, the Richmond Poverty Response Committee delegated to Council about a non-agenda item, the BC Poverty Reduction Coalition's proposed resolution regarding the forthcoming provincial Poverty Reduction Strategy. It was moved:

That staff provide analysis on BC Poverty Reduction Coalition's ABC Plan regarding poverty reduction in BC and report back to a future General Purposes Committee Meeting.

This report supports Council's 2014-2018 Term Goals:

#2 A Vibrant, Active and Connected City:

2.2. *Effective social service networks.*

#5 Partnerships and Collaboration:

5.2. *Strengthened strategic partnerships that help advance City priorities.*

This report also supports the following Social Development Strategy Action:

Action 5 - Acknowledging that income data from Statistics Canada and other sources alone do not present a complete or fully reliable picture of poverty in Richmond, work with community-based organizations, senior governments and other partners to initiate a culturally-sensitive process to:

5.2 Support initiatives to help individuals and families move out of poverty, specifying the roles that the City and other partners and jurisdictions can play in pursuing viable solutions (e.g. job readiness programs, affordable housing measures).

Findings of Fact

The Richmond Poverty Response Committee provided three documents for consideration at the December 10, 2018 regular Council Meeting. These documents were all prepared by the BC Poverty Reduction Coalition, of which the Richmond Poverty Response Committee is a member:

- A proposed municipal resolution, "Call for the ABC Plan for an Accountable, Bold and Comprehensive poverty reduction plan for British Columbia" (Attachment 1);
- An explanation of the ABC Plan, "An Effective Poverty Reduction Plan: It's as simple as ABC" (Attachment 2); and

- A booklet outlining proposed roles for municipalities in addressing poverty, “What Municipalities Can and Can’t Do to Prevent and Reduce Poverty in our Communities” (Attachment 3).

On October 2, 2018, the Province announced the introduction of legislation to guide the development of BC’s first Poverty Reduction Strategy, Bill 39 – *2018 Poverty Reduction Strategy Act*. A staff memorandum dated October 2, 2018, “BC Poverty Reduction Strategy Act”, provided Council with background information about the Act on which the provincial Strategy will be based (Attachment 4). As indicated in the memorandum, noteworthy aspects of the legislation include:

- The use of Statistics Canada’s Market Basket Measure to measure poverty rates;
- A commitment to reduce BC’s overall poverty rate by 25 per cent and child poverty rate by 50 per cent in the next five years;
- The establishment of an independent advisory committee, including those with lived experience, to advise the Province regarding poverty reduction and prevention;
- An annual report identifying actions, impact and progress toward targets;
- Topics to address will include, but not be limited to housing; families, children and youth; education; employment; income supports; and social supports; and
- Thirteen populations will be considered, including youth, seniors, those with disabilities, immigrants and refugees, LGBTQ2S+, those with mental illness or addiction, and others.

The BC Poverty Reduction Strategy is anticipated to be released in February 2019. The BC Poverty Reduction Coalition is requesting advocacy to the Province at the earliest possible date to help ensure that the Strategy will be comprised of the strongest possible actions to reduce poverty.

Previous City Actions

On May 24, 2016, Council received a delegation from the Richmond Poverty Response Committee and the BC Poverty Reduction Coalition requesting that Council endorse the Coalition’s open letter on poverty reduction and forward the resolution to the Union of BC Municipalities (UBCM) requesting the development of a provincial poverty reduction plan, including concrete target and timelines. The resulting resolution was sent to the Province as well as the UBCM (Attachment 5). A similar resolution was passed at the September 2016 meeting, as endorsed by Council and other municipalities.

On February 27, 2017, Council considered a report from the Richmond Community Services Advisory Committee (RCSAC), “Municipal Responses to Child and Youth Poverty” and resolved to forward the report to the Premier, Leader of the Opposition, Richmond Members of Parliament, Richmond Members of the Legislative Assembly and Richmond Members of the Legislative Assembly candidates” (Attachment 6). The resulting letter to the Province includes a request to consider preparing a BC Poverty Reduction Plan.

Analysis

Now that a provincial poverty reduction strategy is imminent, the BC Poverty Reduction Coalition (BCPRC) is urging municipalities to forward a resolution to the Province emphasizing the importance of making the forthcoming plan “Accountable, Bold and Comprehensive” (Attachment 1). The BCPRC’s explanation of these criteria is found in Attachment 2, “An Effective Poverty Reduction Plan: It’s as simple as ABC”. A summary of the three components are as follows:

Accountable

The Poverty Reduction Strategy Act indicates that the province must reduce the poverty rate by at least 25 per cent and for those under 18 years of age by at least 50 per cent. The BCPRC proposes targets exceeding these minimum limits, include

- reducing the rate by 30 per cent within four years, and 75 per cent within 10 years,
- ensuring that particularly marginalized groups are included in these reductions,
- within two years, ensuring that all incomes are at least 75 per cent of the poverty line, and
- within two years, ensuring that no one has to sleep outside and ensuring that all homelessness is ended within eight years.

Bold

The BCPRC is proposing that:

- the province increase income supports, including raising welfare and disability rates to 75 per cent of the poverty line immediately (for others, a two-year time frame is requested as indicated above) and to 100 per cent in two years, and
- rent control be tied to the unit (not the tenant) and build and protect affordable social and rental housing.

Comprehensive

The BCPRC identifies seven policy areas for the province to address. Highlights include:

- Income Assistance: Increase rates and earnings exemptions while removing unnecessary reductions and barriers (no rates other than the above are mentioned),
- Employment: Increase the minimum wage to \$15 an hour for no exemptions and indexed to the cost of living; enhance and restore the coverage and enforcement of employment standards,
- Equity: Better address the needs of indigenous people, provide access to income assistance regardless of citizenship status, and provide free transit for children 0-18 years and a low-income pass for adults,

- Housing: Build 10,000 new social and co-op housing units per year and introduce stronger tenant protections, including unit rent controls, limits on annual rent increases and enforcement of the Residential Tenancy Act,
- Child Care: Improve early childhood educators wages, increase the number of licensed spaces and prioritize expanding the fee reduction program,
- Education and Training: Reduce tuition fees by 50 per cent and increase the availability of grants for low-income students; allow welfare recipients to attend post-secondary education and get apprenticeships; adequately fund K-12 education to mitigate inequalities,
- Health and Food Security: Expand community mental health and homes supports services and expand essential health services to include dental and optical care.

To date, the Cities of New Westminster and Vancouver have passed the proposed BCPRC resolution and anticipate that Port Moody, Powell River and Nanaimo will be reviewing it in the near future.

Richmond Context

For Metro Vancouver, including Richmond, the Market Basket Measure for poverty has been set at an income of approximately \$40,000 per year for a family of four and for an individual, at approximately \$20,000 per year. It is estimated that 21.5 per cent of Richmond residents live below the Market Basket Measure threshold. This amount is considerably less than that determined to be a 2018 Living Wage by the Canadian Centre for Policy Alternatives, estimated as approximately \$76,112 for a family of four in Metro Vancouver. The Living Wage incorporates additional expenses above and beyond those in the Market Basket measure, including the cost of child care, fees for two college courses and a minimal recreation budget.

Given the profound challenges faced by Richmond residents and others throughout the Province struggling to make ends meet with incomes at or below the poverty line, it is hoped that the Provincial strategy will provide significant opportunities to improve the quality of life for low-income Richmond individuals and families. While the BCPRC resolution will present significant challenges for the Province to meet, given the ambitious targets and timelines, staff recommend its endorsement as strong measures are required to reverse harmful trends such as the increasing gap between the rich and poor and the commensurate depth of poverty experienced by the most vulnerable.

Financial Impact

There is no financial impact.

Conclusion

Staff recommends the endorsement of the BCPRCs proposed resolution as significant steps must be taken to improve the circumstances of those living on the edge of or below a sufficient income to maintain health, dignity and the ability to participate in and contribute to society. Staff

also recommends that the resolution be conveyed by letter to the Premier, Minister of Social Development and Poverty Reduction and Richmond Members of the Legislative Assembly.

Once the BC Poverty Reduction Strategy is released in February 2019, staff will advise Council of its directions, actions and timeframes, with particular attention paid to proposed municipal roles.

A handwritten signature in black ink, appearing to read 'LSherlock'.

Lesley Sherlock
Planner 2
(604-276-4220)

- Att. 1: Municipal resolution: Call for the ABC Plan
- 2: An Effective Poverty Reduction Plan
 - 3: What Municipalities Can and Can't Do To Prevent and Reduce Poverty
 - 4: Memorandum: BC Poverty Reduction Strategy Act
 - 5: Letter Re: BC Poverty Reduction Coalition
 - 6: Letter Re: Richmond Community Services Advisory Committee Report

Municipal resolution: Call for the ABC Plan for an Accountable, Bold and Comprehensive poverty reduction plan for BritishColumbia

WHEREAS:

1. The poverty rate in British Columbia continues to be among the highest in Canada at approximately 1 in 8 using Canada's official poverty line (Market Basket Measure), and child poverty rates in BC are still 1 in 5;
2. Many impacts of poverty are experienced at the local level, and local residents pay for poverty in increased health care costs, higher crime, higher demand for community, social and charitable services, lack of school readiness, reduced school success, and lower economic productivity;
3. 4 people are dying every day in BC due to the opioid epidemic that the Provincial Health Officer of BC has declared a Public Health Emergency. Many more are sick from poverty with cancer, heart disease, diabetes, depression or other health issue; and the health of everyone is worse from living in such an unequal society;
4. A poverty reduction plan will save lives and money as it is a social and economic investment in our province;
5. There was unanimous support from all three provincial parties for legislated targets and timelines to reduce poverty in Bill 39: Poverty Reduction Strategy Act when it was passed on November 5, 2018;
6. BC is the last province in Canada to have a poverty reduction plan and is now developing a plan to be launched in March 2019;
7. The BC Poverty Reduction Coalition (the "Coalition") is a broad-based network of over 400 organizations including community and non-profit groups, faith groups, health organizations, indigenous organizations, businesses, labour organizations, and social policy groups;
8. The Coalition has renewed its call for a strong poverty reduction plan for BC by launching the ABC Plan, which outlines an accountable, bold and comprehensive poverty reduction plan to prevent and reduce poverty in BC.

THEREFORE BE IT RESOLVED:

THAT this council support the Coalition's ABC Plan for an accountable, bold and comprehensive poverty reduction plan for BC; and

BE IT FURTHER RESOLVED:

THAT this council advocate to the provincial government to develop and implement a provincial poverty reduction strategy that includes the measures within the ABC Plan before February 2019, with the commitment that this council will work with the provincial government in implementing this plan.

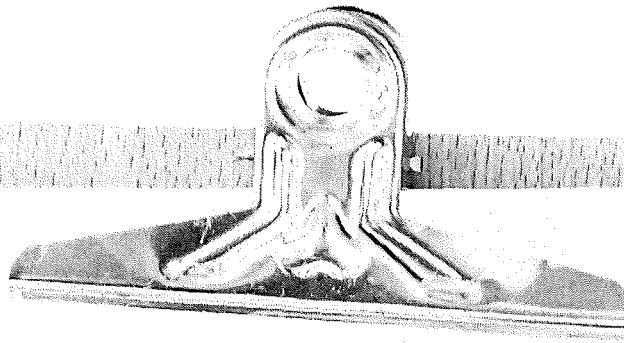
For more information:

Contact: Trish Garner, Community Organizer, BC Poverty Reduction Coalition

Email: trish@bcpovertyreduction.ca

Phone: 604-877-4553

Website: bcpovertyreduction.ca / ABCplan.ca



An Effective Poverty Reduction Plan: It's as simple as ABC

First Steps for an Accountable, Bold and Comprehensive Poverty Reduction Plan for BC

Over half a million British Columbians live in poverty; from youth aging out of care to sleeping on the streets to seniors struggling to buy food; from low-wage workers having to commute hours every day to people on income assistance trying to survive day by day; from newcomers to indigenous people who we welcome and acknowledge with words but not with enough financial support; from the homeless to those living one paycheque away from joining them; and from people with disabilities facing a lifetime of poverty to families trying to give their children the lives they never had.

In a wealthy province like BC, we can do better.

And the good news is that British Columbians want to do better. The majority of voters in BC's 2017 provincial election voted for bold action on poverty; and with all three major political parties now publicly committed to a poverty reduction plan, British Columbians can finally look forward to action to tackle poverty and the increasing levels of homelessness and inequality that we see in our communities.

This is a crisis that requires urgent action. 4 people are dying every day in BC due to the opioid epidemic that the Provincial Health Officer of BC has declared a Public Health Emergency. Many more are sick from poverty with cancer, heart disease, diabetes, depression or other health issue; and the health of all of us is worse from living in such an unequal society.

A poverty reduction plan will save lives.

It will also save money. It's an economic investment in our province. Initial funding should be provided by restoring tax fairness. Then, over the long term, a poverty reduction plan that puts in place strong, preventative measures to tackle both the depth and breadth of poverty costs far less than the cost of poverty, at \$8 to 9 billion per year for health and criminal justice costs, as well as lost tax revenue. Let's stop mopping the floor and fix the roof.

An Accountable, Bold and Comprehensive poverty reduction plan for BC is the solution to save lives and promote equality.

So far, the government has undertaken a poverty reduction consultation from October 2017 to March 2018. They visited communities throughout the province and heard consistent themes about the issues and the necessary solutions. They now plan to table legislation in the fall and launch the full plan in February 2019.

Now British Columbians expect action with an accountable, bold and comprehensive poverty reduction plan that reflects those themes. A plan needs to tackle immediate affordability challenges but, more importantly, go upstream to enhance our universal basic services to prevent these challenges in the first place and ensure healthy people and healthy communities throughout our province.

The over-arching vision and first steps matter in leading in the right direction.

That is why the BC Poverty Reduction Coalition with over 400 supporting organizations recommend the following first steps for the government's legislation and plan:

☑ **A is for Accountable.**

Embed strong accountability measures

- ◆ **Ensure long-term sustainability through legislated targets, timelines and accountability measures:**
 - ◆ Reduce BC's poverty rate by 30% within four years, and by 75% within 10 years.
 - ◆ Recognize that poverty is concentrated in particular marginalized groups and ensure concurrent declines in the poverty rates for these groups by 30% in four years, and by 75% in ten years.
 - ◆ Within two years, ensure that every British Columbian has an income that reaches at least 75% of the poverty line.
 - ◆ Within two years, ensure no one has to sleep outside, and end all homelessness within eight years (ensuring all homeless people have good quality, appropriate housing).
 - ◆ Commit to United Nations Sustainable Development Goal #1: "End poverty in all its forms everywhere" by 2030.
 - ◆ Create an independent, funded Office/Advocate to monitor the plan's implementation.
- ◆ **Make sure all Ministries are working together, including:**
 - ◆ Legislate a Poverty/Equity Lens at Treasury Board to ensure no Ministry can make decisions that will hurt people in poverty.
 - ◆ The Minister of Social Development and Poverty Reduction should present mandatory annual reports (including reports from all relevant Ministries) to the Legislature and to the public about actions taken, outcomes and advocacy to other levels of government.
- ◆ **Embed strong fundamental principles in the legislation and plan:**
 - ◆ Respect the human rights of people living in poverty.
 - ◆ Upstream approach focusing on the social determinants of health.
 - ◆ Poverty reduction as a social and economic investment for our province.

☑ **B is for Bold.**

Take bold, immediate action

- ◆ **Increase income supports, including raising welfare and disability rates to 75% of the poverty line (Market Basket Measure) immediately and to 100% of the MBM in 2 years.**
The first step would cost \$365 million while lifting everyone on income assistance to the poverty line would cost \$1.16 billion, only 2% of the provincial budget
- ◆ **Tie rent control to the unit (not the tenant), and build and protect affordable social and rental housing.**
Affordable is defined as 30% of income. An appropriate percentage of the housing to be built should be at welfare shelter rates and another set target should be tied to the senior shelter level.

✓ **C is for Comprehensive.**

Develop a comprehensive poverty reduction plan with short, medium and long-term actions in 7 policy areas:

- ◆ **Income assistance:** Provide adequate and accessible income support for the non-employed.
 - ◆ Increase and index income and disability assistance.
 - ◆ Increase earnings exemptions, and remove clawbacks and arbitrary barriers that discourage, delay and deny people in need.
- ◆ **Employment:** Improve the earnings & working conditions of those in the low-wage workforce.
 - ◆ Increase the minimum wage to \$15 an hour for all workers with no exemptions and index it to the cost of living.
 - ◆ Enhance and restore the coverage and enforcement of employment standards.
- ◆ **Equity:** Address the needs of those most likely to be living in poverty, including:
 - ◆ Restructure federal and provincial funding to better address the needs of all Indigenous people, including the large off-reserve population.
 - ◆ Guarantee access to income assistance for all regardless of citizenship status.
 - ◆ Provide free transit for children 0-18 years of age and a low-income transit pass for adults.
- ◆ **Housing:** End homelessness and adopt a comprehensive affordable housing and supportive housing plan.
 - ◆ Build 10,000 new social & co-op housing units per year that low income people can afford.
 - ◆ Introduce stronger tenant protections, including rent control on the unit (not the tenant), tighter limits on annual rent increases, adequately enforcing the Residential Tenancy Act (RTA) and the Manufactured Home Park Tenancy Act, and extending tenant rights to include all non-profit social housing currently exempt from the RTA.
- ◆ **Child care:** Provide universal, high quality, publicly-funded child care.
 - ◆ Improve the wages of early childhood educators.
 - ◆ Continue to increase the number of licensed spaces.
 - ◆ Prioritize expanding the fee reduction program so that the affordable child care benefit can be reduced over time, and ensure that low income families have access to free, high quality child care.
- ◆ **Education and training:** Enhance support for training and education for low-income people.
 - ◆ Reduce tuition fees by 50% and increase the availability of post-secondary grants for low-income students; allow welfare recipients to attend post-secondary education and get apprenticeships.
 - ◆ Adequately fund K-12 education to mitigate inequalities and to ensure adequate library staff and resources, and special needs assessment and support
- ◆ **Health and food security:** Enhance community mental health and home support services, and expand integrated approaches to prevention and health promotion services.
 - ◆ Expand essential health services in the public system, such as dental and optical care and community mental health services.

More information and take action at ABCplan.ca

For more information, visit:

ABCplan.ca

The **BC Poverty Reduction Coalition** is a coalition that includes community and non-profit groups, faith groups, health organizations, indigenous organizations, immigrant service agencies, businesses, labour organizations, and social policy groups. We have come together around a campaign aimed at seeing the introduction of a bold and comprehensive poverty reduction plan from the government of British Columbia that would include legislated targets and timelines to significantly reduce poverty, inequality and homelessness. We have over **80 Coalition Members** and over **400 supporting organizations** that have joined the call for a poverty reduction plan.

Vancity



vancouver
foundation

Vancity
Community Foundation

What Municipalities *Can* and *Can't* Do To Prevent and Reduce Poverty in our Communities

You're seeing increasing levels of homelessness in your community and you are turning to your local government to take action. However, solving the challenges of poverty requires all three levels of government working in collaboration. Municipal councils cannot address these pressing social issues alone and yet they face them daily as they show up at the local level within our communities. This is why it is so important to align municipal commitments with provincial and federal strategies.

Government budgets show the scale of responsibility and investment each level of government should be taking:

- Municipal: \$1.8 billion¹
- Provincial: \$50 billion
- Federal: \$340 billion

Local governments can play an important role in poverty reduction but much of that role must include strong advocacy to senior levels of government to impact their priorities and necessary investments.

Now is an especially critical time to advocate to the provincial government because they are developing a poverty reduction plan for BC for the first time!

Before the plan is launched in February 2019, municipal governments can join the call for the ABC Plan, which highlights that an effective poverty reduction plan must be Accountable, Bold and Comprehensive.

We've developed this resource to share what Local Governments and School Boards can do to combat poverty in our communities; and what they can't do. You can use this to hold your newly elected officials accountable to bold action *and* advocacy after they have been elected.

The BC Poverty Reduction Coalition (BCPRC) is an alliance of over 400 organizations throughout the province that have come together in the call for the provincial government to implement a strong poverty reduction strategy with legislated targets and timelines to significantly reduce poverty, inequality, and homelessness in BC. Our work is grounded in the foundation of universal human rights. We advocate for an accountable, bold and comprehensive plan that will take action in seven policy areas: income assistance, employment, housing, child care, education, health, and equity.

¹ maximum, using Vancouver as example

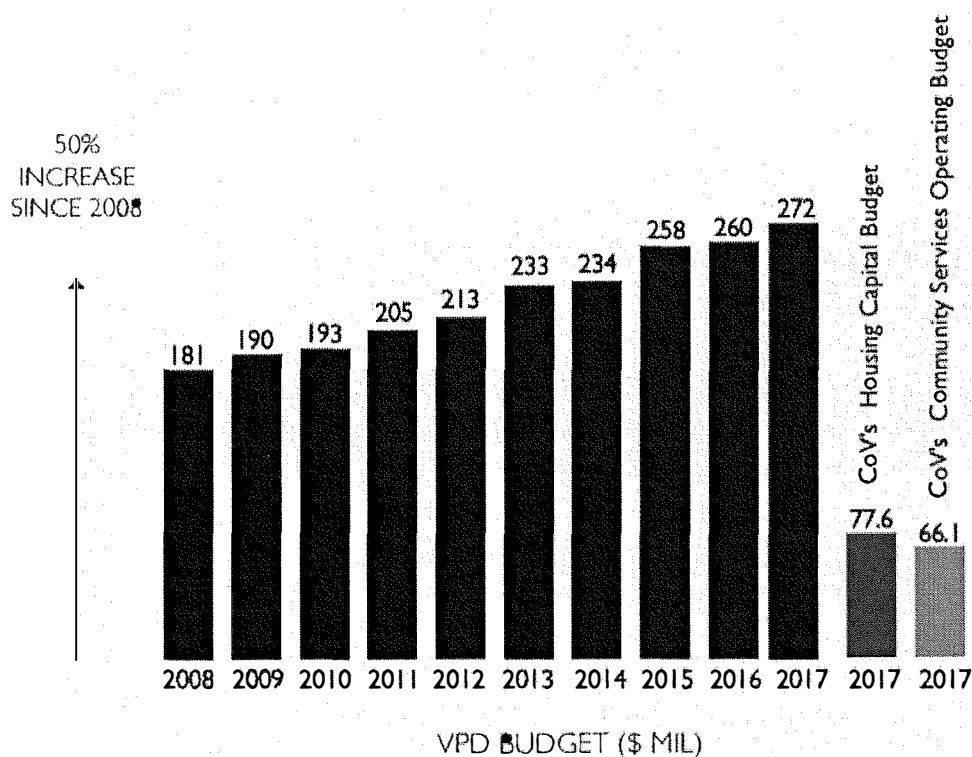
Human Rights

Municipalities are primarily responsible for the criminalization of poverty.

Many local governments across British Columbia have bylaws and local law enforcement practices that violate the human rights of people living in poverty. They have the potential to criminalize people who live in public space, increase stigma and restrict the delivery of harm reduction programs, emergency shelter, and other services for marginalized people. Local governments should listen to people living in poverty and address the ways that their bylaws infringe on their human rights and increase stigma and discrimination.

We recommend that municipal governments stop criminalizing poverty by revoking laws that penalize or discriminate against people for engaging in behavior necessary for survival because of homelessness and poverty, such as sleeping and erecting shelter in public spaces.

The best way to see government priorities is not by what politicians are saying but what they are spending our money on. That's exactly what the Carnegie Community Action Project did in their analysis of the Vancouver Police Department funding within the City of Vancouver's budget.² Here you can see the dramatic increase of almost \$100 million over 10 years, and the comparison to the City's housing investment and community services budget, which is far below public spending on the police.



² Carnegie Community Action Project, *No Pill For This Ill: Our Community Vision of Mental Health*, <http://www.carnegieaction.org/wp-content/uploads/2018/04/MH-REPORT-FINAL-1.compressed.pdf>

In addition to stopping the criminalization of poverty, municipal governments have an important role to play in combating discrimination against people in poverty. In particular, improperly managed public municipal consultations have become a forum for inappropriate language, harassment and the silencing of marginalized people. Having monitored and learned of countless attacks at public hearings against people with addictions and other disabilities, and people experiencing homelessness, Pivot Legal Society argues that “it is incumbent on municipalities to ensure that all people feel safe and welcome at public hearings on issues that matter to them and they have duties to protect people from discriminatory statements and ensure hearings do not become forums for abuse.”

Municipal planners and human rights advocates have developed special procedures for how councils should carry out public consultations concerning new affordable housing projects including:

- Layout clear ground rules.
- State that the only issues open for discussion are legitimate land use issues such as location, size, setback and parking requirements.
- Advise attendees that the meeting will not be a forum to make negative comments about the people who will be living there.
- Be clear that they will actively interrupt and object to discriminatory language or prejudicial comments.

We recommend local governments take these proactive measures to ensure that everyone is treated with respect.

Read more:

Pivot Legal Society submission on Human Rights in Canada

https://d3n8a8pro7vhmx.cloudfront.net/pivotlegal/pages/1850/attachments/original/1455843171/UN_submission.pdf?1455843171

“Community outcry should not block health and safety measures for people who are homeless” Pivot Legal Society Blogpost

http://www.pivotlegal.org/community_outcry_should_not_block_health_and_safety_measures_for_people_who_are_homeless

“In the zone: Housing, Human Rights and Municipal Planning” Ontario Human Rights Commission

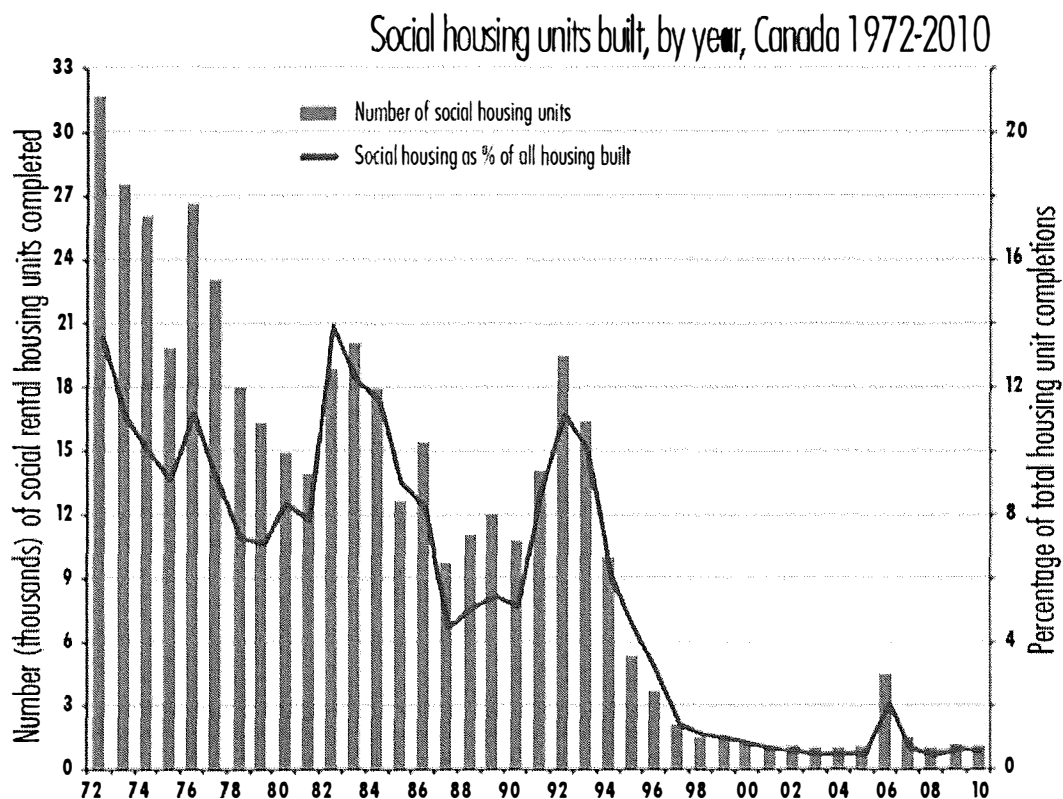
<http://www.ontla.on.ca/library/repository/mon/26002/315300.pdf>

Housing

BC has a housing crisis throughout the province with thousands of homeless and people facing housing insecurity struggling to survive in our communities, spending a huge share of their income on rent and/or living in sub-standard, over-crowded housing. According to the BC Non-Profit Housing Association, 45% of renters in BC are living in housing insecurity, spending more than 30 per cent of their income on rent; and 1 in 5 renters are spending more than half their income on rent leaving them with little left over to support themselves and their families.

Much of the focus is on municipal governments at the moment as we are seeing increasing levels of visible homelessness within our communities and we look to our closest level of government for action. However, the root causes of homelessness and the responsibility primarily lies with senior levels of government, which have not invested the resources they have over the last decades. The graph below shows the dramatic decline in federal housing investment since the 1970s.³

This level of federal funding in partnership with provincial funding provided between 1500-2000 new housing units per year in BC, and the number of homeless people was much lower.



³ Calculate by Walks, Alan from CMHC Canadian Housing Observer, various years; Figure 2 in Walks, Alan and Clifford, B. (2015), "The Political Economy of Mortgage Securitization and the Neoliberalization of Housing Policy in Canada," Environment and Planning A. 47(8): 1624-1642

Local governments can still play an important role in building and protecting affordable housing through partnerships with local non-profits, co-operatives, and, in particular, other levels of government, which have the necessary resources. Municipal contributions can include:

- providing public land and funds toward the creation of non-profit affordable housing
- protecting existing affordable housing supply through retention and replacement policies including policies that protect against the demolition of existing affordable housing and replacement with more expensive homes
- zoning specifically to retain and encourage rental housing in their communities, and through inclusionary zoning, they can require developers to create non-market housing as a condition for new development sites
- streamlining permitting and rezoning processes specifically for non-profit affordable housing

In all this work, it is important to emphasize that affordable housing must meet a diversity of needs. A set percentage of the housing to be built should be at welfare shelter rates and another set target should be tied to the senior shelter level. There also is a dire need for specific units for accessible, adaptable housing options and 3 and 4 bedroom units suitable for families with children.

Read more:

BC Non-Profit Housing Association's Make Housing Central Campaign

https://housingcentral.ca/SITES/HousingCentral/2018_Civic_Campaign/HousingCentral/2018_Civic_Campaign.aspx

BC Society of Transition Houses: BC Municipal Election Toolkit

<https://bcsth.ca/wp-content/uploads/2018/09/municipal-election-toolkit-2018-09-24.pdf>

Vancouver Tenants' Union's Renters Report Card

https://d3n8a8pro7vhmx.cloudfront.net/vancouvertenantsunion/pages/135/attachments/original/1538619170/Renters_Report_Card_-_Website_Information.pdf

Health and Food Security

Poverty is a fundamental determinant of health, and the health care costs of poverty add up to \$1.2 billion per year in BC. So, all of the other policy recommendations outlined here will have a direct impact on improving the health of low-income people.

However, local government can enhance and expand access to health initiatives, including:

- providing free or discounted recreational services and access to programs for low-income children, youth, families and individuals
- if people are not being housed, supporting them where they are, including developing public amenities like water fountains, public washrooms and public showers – careful consideration needs to happen to ensure these amenities are universally accessible and safe
- increasing food security through zoning that would ensure low-income neighbourhoods have access to reasonably priced, quality fruits and vegetables
- supporting community gardens and community kitchens to provide affordable, nutritious food; schools can also provide healthy meals and nutritional information to students

The epidemic of opioid overdose deaths, at a rate of 4-5 overdose deaths each day is a public health emergency. While federal laws often get the most attention, municipal bylaws and local law enforcement practices also have the potential to increase stigma and restrict the delivery of harm reduction programs, emergency shelter, and other services for marginalized people.

Local governments need to ensure that they do not restrict access to health services including harm reduction programs and addiction treatment options in their communities.

Read more:

First Call Municipal Election Toolkit (See page 8)

<https://firstcallbc.org/wordpress/wp-content/uploads/2018/09/2018-Municipal-Election-Toolkit.pdf>

Municipal Election Engagement Toolkit for Food Security Advocates

<https://gateway2.phabc.org/wp-content/uploads/sites/2/2018/10/Municipal-Election-Toolkit-revised-Oct-1-2018.pdf>

BC Poverty Reduction Letter about water fountains to the City of Vancouver

<http://bcpovertyreduction.ca/wp-content/uploads/2018/10/2016-COV-Water-Fountains.pdf>

Open Letter to the Government of BC about the need for an Opioid Action Plan

<http://bcpovertyreduction.ca/2017/11/bc-needs-an-opioid-action-plan-open-letter-to-the-government-of-bc>

Equity

There are multiple ways that municipal governments can address the over-representation of poverty amongst particular groups to ensure equity. These are just a couple of examples:

1. Marginalized groups often rely on public transportation and face high costs and long travel times as unaffordable housing causes people to move further and further away from work. However, responsibilities for transit may vary depending on your local community. Your municipality may be one of the 60 local governments that pays into BC transit and shares responsibilities for developing and maintaining the province-wide transit system. Within Metro Vancouver, Mayors, the Chief of the Tsawwassen First Nation, and the elected representative of Electoral Area "A" sit on the Mayors' Council on Regional Transportation, which provides accountability to Translink.

We recommend that mayors advocate for provincial funding to ensure equitable access to our public transit system including affordable transit measures such as free transit for all children and youth and reduced transit fares for low-income individuals and families.

2. Indigenous people are far more likely than non-indigenous people to live in poverty and experience homelessness. The Truth and Reconciliation Commission of Canada has five Calls to Action that directly apply to municipal governments:
 - fully adopt and implement the United Nations Declaration on the Rights of Indigenous Peoples as the framework for reconciliation
 - repudiate concepts used to justify European sovereignty over Indigenous peoples and lands, such as the Doctrine of Discovery and terra nullius, and reform those laws, government policies, and litigation strategies that continue to rely on such concepts
 - provide education to public servants on the history of Aboriginal peoples, including the history and legacy of residential schools, the United Nations Declaration on the Rights of Indigenous Peoples, Treaties and Aboriginal rights, Indigenous law, and Aboriginal–Crown relations
 - work with other levels of governments, churches, Aboriginal communities, former residential school students and current landlords to develop and implement strategies and procedures for the ongoing identification, documentation, maintenance, commemoration, and protection of residential school cemeteries or other sites at which residential school children were buried
 - work collaboratively with the National Centre for Truth and Reconciliation to identify and collect copies of all records relevant to the history and legacy of the residential school system, and provide these to the National Centre for Truth and Reconciliation

These actions are just a starting point to address the ongoing effects of colonialism.

Read more:

#AllOnBoard Campaign Website

<https://www.allonboard.ca>

Truth and Reconciliation Commission of Canada: Calls to Action

http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Calls_to_Action_English2.pdf

Childcare

Local governments are responsible for many local regulations, such as development zoning, and can require that child care spaces be included in new buildings. School Boards can ensure stability for the many child care programs that operate on school sites.

Given that senior levels of government have far more responsibility and potential to invest, local governments can also endorse the \$10aDay Child Care Plan calling on the provincial government to begin building a better child care system. The \$10aDay Child Care Plan is the community's solution to BC's child care crisis. 32 local BC governments support the Plan but they do not have the resources or mandate to implement it alone. The provincial government has made significant investments in child care and needs to keep moving towards universal child care. Local governments who have already endorsed the Plan support the next steps the campaign is calling for at the provincial level.

Read more:

First Call Municipal Election Toolkit (See page 4)

<https://firstcallbc.org/wordpress/wp-content/uploads/2018/09/2018-Municipal-Election-Toolkit.pdf>

\$10aDay Child Care Plan Website

<https://www.10aday.ca>

Education

The under-funding of public education has meant an increase in school fees, such as those now collected for field trips, supplies, sports and arts, and specific course materials. This causes great family stress, and children from low-income families often exclude themselves from activities and programs. The role of public education in giving every child an equal chance is seriously undermined by the inequity created by school fees. Public school boards can reduce or eliminate fees that act as barriers to inclusion for low-income students as well as continuing to advocate to the provincial government for adequate funding.

Almost 1 in 4 LGBT youth in BC are forced out of their homes so, without guaranteed family support, school safety and inclusion can have a direct impact on reducing queer and trans homelessness and long-term poverty. **School Boards should publicly support the SOGI curriculum and implement strong gender identity and sexual orientation policies to allow schools to fully support queer and transgender students and ensure their safety and inclusion.**

Read more:

First Call Municipal Election Toolkit (see page 8)

<https://firstcallbc.org/wordpress/wp-content/uploads/2018/09/2018-Municipal-Election-Toolkit.pdf>

BC Confederation of Parent Advisory Councils Submission on Provincial Public Education Funding

https://bccpac.bc.ca/images/Documents/Resources/BCCPAC_SSC-Submission_Oct-11-2018.pdf

Poverty is an LGBTQ Issue, BC Poverty Reduction Coalition (see submission to Vancouver School Board)

<http://bcpovertyreduction.ca/campaigns/lgbtq>

Low Wages

Despite public perception, poverty in BC is primarily working poverty. The majority of poor children in BC live in families with parents in the paid labour force, many of them working full-time and often multiple jobs. Local governments have a responsibility to avoid contributing to the problem of low-wage poverty.

We recommend that local governments and school boards becoming living wage employers to embed the responsibility to pay all their employees a living wage and only contract for services with companies that pay a living wage.

However, the provincial government is responsible for legislating the minimum wage and exemptions to that wage (for example, piece rate farmworkers who harvest fruit and vegetables) so local governments should advocate to them to increase the incomes of low wage workers. The provincial government is also responsible for employment standards, which desperately need to be enhanced and adequately enforced; for example, BC is the only province without the provision of paid sick leave.

Read more:

First Call Municipal Election Toolkit (see pages 8-9)

<https://firstcallbc.org/wordpress/wp-content/uploads/2018/09/2018-Municipal-Election-Toolkit.pdf>

Living Wage for Families Campaign Website

<http://www.livingwageforfamilies.ca>

BC Employment Standards Coalition

<http://bcemploymentstandardscoalition.com>

Level the Playing Field campaign for paid sick leave

https://www.leveltheplyingfield.ca/sick_leave_petition

Income assistance

The current income assistance system in BC is fundamentally broken. People in desperate need are being denied assistance, and if lucky enough to navigate all the structural and administrative barriers to welfare and have their application accepted, they are subjected to a life of “survival,” struggling to meet the most basic needs of shelter and food.

Local governments do not have jurisdiction over income and disability assistance. They should advocate to the provincial government for increased income and disability assistance rates as part of the ABC Plan for an effective poverty reduction plan. Other measures suggested in this document can help reduce costs for people living on deeply inadequate income and disability rates.

Read More:

First Call Municipal Election Toolkit (see page 7)

<https://firstcallbc.org/wordpress/wp-content/uploads/2018/09/2018-Municipal-Election-Toolkit.pdf>

Raise the Rates Campaign Website

<https://www.raisetherates.org>



**City of
Richmond**

Memorandum
Community Services Division
Community Social Development

To: Mayor and Councillors

Date: October 2, 2018

From: Lesley Sherlock
Planner 2

File: 07-3000-00/Vol 01

Re: BC Poverty Reduction Strategy Act

Background

On October 2, 2018, the Province announced the introduction of legislation to guide the development of BC's first Poverty Reduction Strategy (Attachment 1). This draft legislation, Bill 39 – 2018 Poverty Reduction Strategy Act (Attachment 2), defines the scope of the Strategy to be released by March 31, 2019. Noteworthy aspects of the proposed legislation include:

- A commitment to reduce BC's overall poverty rate by 25% and child poverty rate by 50% in the next five years;
- The establishment of an independent advisory committee, including those with lived experience, to advise the Province regarding poverty reduction and prevention;
- An annual report identifying actions, impact and progress toward targets;
- Topics to address will include, but not be limited to housing; families, children and youth; education; employment; income supports; and social supports; and
- Thirteen populations will be considered, including youth, seniors, those with disabilities, immigrants and refugees, LGBTQ2S+, those with mental illness or addiction, and others.

Community Consultation

The draft BC Poverty Reduction Strategy is already under development, based on community consultations held between October 2017 and March 2018 with the groups identified above. Consultations were held in 28 communities around the Province, including one held in Richmond attended by 80 to 90 participants as well as the Minister for Social Development and Poverty Reduction, the Honourable Shane Simpson. Attendees included those with lived experience of poverty, front line workers, advocates, non-profit and business representatives, and a wide range of community members. A transcript of the Richmond meeting is attached (Attachment 3).

Affordable housing emerged as the top concern in all communities consulted, as noted in the report "What We Heard About Poverty in BC" (2018, Province of British Columbia). Other key issues identified in Richmond and elsewhere included mental health and addictions, child care, legal aid, employment, income, education and training, food security, transportation and access to services. A myriad of actions to address poverty and related issues were proposed to the Province, based on the key issue areas identified.

Targets

Statistics Canada's Market Basket Measure will be used by the Province to measure poverty rates and will become Canada's Official Poverty Line once legislated, (see August 28, 2018 Staff Memo to Mayor and Councillors regarding Opportunity for All: Canada's First Poverty Reduction Strategy [Attachment 4]). The proposed Provincial targets aim to reduce overall poverty by 25 per cent and child poverty by 50 per cent in the next five years, compared with the Federal strategy which aims to reduce poverty at the national level by 20 per cent by 2020 and 50 per cent by 2030. A key difference is that the Provincial strategy specifies a separate rate for child poverty reduction that is more ambitious than that proposed by both Provincial and Federal governments for the overall population.

While questioned due to possible unreported offshore income based on Canadian and foreign income tax laws, Richmond's poverty rate based on the 2016 Census (living with low after-tax income based on average household needs) is 22.4 per cent, higher than the overall rate for Metro Vancouver (16.5 per cent). Its child poverty rate is 25.6 per cent, the highest in the region. Regardless of the veracity of these statistics, it is hoped that the Provincial strategy will provide significant opportunities to improve the quality of life for low-income Richmond individuals and families.

Municipal Role

While specific roles for local governments are not referenced, the legislation, if enacted, will require that consideration be given to coordinating supports provided by provincial, federal, indigenous and local governments. The pending 2019 BC Poverty Reduction Strategy may include more explicit roles and actions for mutual engagement and implementation. Staff will provide further information as it becomes available and will actively pursue any opportunities to work collaboratively with Provincial and Federal governments, statutory organizations and local service providers as these strategies unfold.

Please contact me if you would like further information.



Lesley Sherlock
Social Planner
(604-276-4220)

Att. 4

pc: SMT
Ted Townsend, Director, Corporate Communications and Marketing
Kim Somerville, Manager, Community Social Development
Denise Tambellini, Manager, Intergovernmental Relations and Protocol Unit
Barry Konkin, Manager, Policy Planning

British Columbia News

Historic legislation sets targets, timelines to reduce poverty

<https://news.gov.bc.ca/18173>

Tuesday, October 2, 2018 10:35 AM

Victoria - British Columbia's first Poverty Reduction Strategy, guided by legislation introduced today, will lift thousands of people out of poverty, create more opportunities to break the cycle of poverty and make it easier for people to participate in their community.

The Poverty Reduction Strategy Act will define the scope of the strategy, which will be released in early 2019, and sets poverty reduction targets and timelines that government must meet.

"A strong province is built on a foundation of equity, inclusion and opportunity for everyone," said Shane Simpson, Minister of Social Development and Poverty Reduction. "We know that poverty is a serious issue in our province. That was driven home throughout the consultation as thousands of people told us about the impossible challenges they face each day. Social issues have been ignored for too long and that is why we are committing this government, and future governments, to break the cycle of poverty and improve people's lives."

The legislation is shaped by the experiences, voices and hopes of more than 8,500 people who took part in a broad public engagement on poverty from November 2017 to March 2018. If passed, the legislation will:

- Commit government to reduce B.C.'s overall poverty rate by 25% and child poverty rate by 50% in the next five years.
- Establish an independent advisory committee that will represent the breadth and depth of personal and professional experiences of poverty in B.C. and advise the minister on matters relating to poverty reduction and prevention.
- Require government to report annually on its progress to reduce poverty.
- Require government to release its first poverty reduction strategy by March 31, 2019. The strategy must focus on the key issues faced by people living in poverty including housing, education, employment, income supports and social inclusion.

The commitment to a poverty reduction strategy, in addition to addressing liveable wages under B.C.'s new Fair Wages Commission and exploring basic income, is a component of the Confidence and Supply Agreement with the B.C. Green Party caucus. The work of the Fair Wages Commission and the basic income expert panel will inform future updates to the poverty reduction strategy.

"It is our shared responsibility to make sure that everyone has the tools, resources and social supports they need to improve their lives," said Mable Elmore, Parliamentary Secretary for Poverty Reduction. "Hundreds of thousands of people in our province experience poverty, and this kind of long-term government commitment is what is required to lift people up and achieve real progress."

Quotes:

Adrienne Montani, provincial co-ordinator, First Call –

"First Call's Child Poverty Report Card shows one in five B.C. children live in poverty and we have called for a 50% reduction in B.C.'s child poverty rate since 2009. We are pleased that government has listened and has this target and timeline in legislation. Reaching this target will benefit the health and well-being of thousands of children and youth, and may well reduce the number of children coming into government care. Our coalition looks forward to working with government to deliver on this target and help more children, youth and families thrive."

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Dawn Hemingway, co-chair, Minister's Poverty Reduction Advisory Forum –

“The only way to seriously tackle the complex issue of poverty reduction is to have a meaningful and ambitious strategy that enforces targets and deadlines. This legislation is a significant step forward in making poverty reduction a reality in British Columbia.”

Quick Facts:

- British Columbia is the only province in Canada without a poverty reduction strategy despite having the second-worst rate of poverty.
- Based on the latest statistics available, in 2016 approximately 557,000 people were living in poverty in B.C., including 99,000 children.
- Between November 2017 and March 2018, government engaged in a provincewide consultation about how to reduce poverty and inequity and provide opportunities for people to be successful. Thousands of people participated in the consultation, more than half had lived experience.

Learn More:

To read the legislation: <https://www.leg.bc.ca/parliamentary-business/bills-and-legislation>

Learn more about B.C.'s commitment to reduce poverty for the people of B.C.:

<https://engage.gov.bc.ca/bcpovertyreduction>

Media Contacts

Ministry of Social Development and Poverty Reduction

Communications

250 387-6490

**2018 Legislative Session: 3rd Session, 41st Parliament
FIRST READING**

The following electronic version is for informational purposes only.
The printed version remains the official version.

**HONOURABLE SHANE SIMPSON
MINISTER OF SOCIAL DEVELOPMENT
AND POVERTY REDUCTION**

**BILL 39 – 2018
POVERTY REDUCTION STRATEGY ACT**

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Explanatory Note

HER MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of British Columbia, enacts as follows:

PART 1 – DEFINITIONS

Definitions

- 1 In this Act:

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"advisory committee" means the committee under section 10;

"annual report" means a report under section 8;

"strategy" means the strategy under section 2.

PART 2 – POVERTY REDUCTION STRATEGY

Division 1 – Development of Strategy

Minister to develop strategy

- 2 (1) The minister must develop a strategy to reduce and prevent poverty in British Columbia.
- (2) The minister must
- (a) post the strategy in accordance with section 9 (a) by March 31, 2019, and
 - (b) review and update the strategy at least once every 5 years after that date.

Poverty reduction and prevention initiatives

- 3 (1) The strategy must include initiatives intended, over the 5-year period beginning on January 1, 2019, to reduce the poverty rate for 2024 below the poverty rate for 2016 by at least
- (a) 25% among all persons, and
 - (b) 50% among persons under 18 years of age.
- (2) The strategy must include initiatives intended to reduce and prevent poverty by increasing the following:
- (a) the affordability of goods, services and housing to persons living in poverty and other low-income British Columbians;
 - (b) the opportunities for persons living in poverty to move out of poverty;
 - (c) the inclusion of persons living in poverty in community life and in systems of supports.
- (3) For the purposes of subsection (1), the poverty rate must be measured using the market basket measure published by Statistics Canada as the "Market Basket Measure" or "Canada's Official Poverty Line".
- (4) The minister must review the targets set in subsection (1) before December 31, 2023 and, after doing so, may lay a report before the Legislative Assembly respecting future targets for the reduction of poverty.

Commitment to Indigenous peoples

4 The strategy must reflect a commitment to

- (a) reconciliation with Indigenous peoples,
- (b) the Calls to Action of the Truth and Reconciliation Commission, and
- (c) the United Nations Declaration on the Rights of Indigenous Peoples.

Scope of strategy**5** (1) In developing and updating the strategy, the minister must consider

- (a) the breadth and depth of poverty, and
- (b) the full range of persons living in poverty.

(2) Without limiting subsection (1), the minister must consider the following topics:

- (a) housing;
- (b) families, children and youth;
- (c) education;
- (d) employment;
- (e) income supports;
- (f) social supports.

(3) Without limiting subsection (1), the minister must consider the following groups:

- (a) children;
- (b) youth;
- (c) persons of all genders;
- (d) Indigenous peoples;
- (e) persons living with disabilities;
- (f) persons living in rural and remote communities;
- (g) immigrants and refugees;
- (h) LGBTQ2S+ persons;
- (i) seniors;
- (j) persons and families working and earning low incomes;
- (k) persons living with or fleeing abuse;
- (l) persons living with mental illness or addiction;
- (m) persons of colour.

Accessibility and coordination**6** In developing and updating the strategy, the minister must consider the accessibility and coordination of

- (a) initiatives included in the strategy, and
- (b) supports provided to or for persons living in poverty by or on behalf of the following:
 - (i) the government;
 - (ii) the government of Canada;
 - (iii) Indigenous governments;
 - (iv) local governments.

Description of effects

- 7 The strategy must include a description of the effects that the minister intends poverty reduction and prevention to have on British Columbians as a whole.

Division 2 – Reporting and Publication

Annual reporting

- 8 (1) The minister must prepare, by October 1 of each calendar year, beginning in 2020, a report on the previous calendar year that describes the following:
- (a) the actions taken to implement the strategy;
 - (b) the effects of the strategy on poverty reduction;
 - (c) any progress made towards the targets set in section 3 (1).
- (2) An annual report on a calendar year must include the comments provided under section 10 (4) (a) in relation to that calendar year.
- (3) The minister must lay each annual report before the Legislative Assembly as soon as practicable and, promptly after doing so, must post the annual report in accordance with section 9 (a).

Publication

- 9 The minister must
- (a) post the strategy and the annual reports on a publicly accessible website maintained by or on behalf of the minister, and
 - (b) make the strategy and the annual reports available in accessible formats.

PART 3 – COMMUNITY INVOLVEMENT

Advisory committee

- 10 (1) The minister must establish a committee to advise the minister on matters relating to poverty reduction and prevention.
- (2) At least half of the members of the advisory committee must be women.

(3) The advisory committee must include a representative from at least each of the following groups:

- (a) Indigenous peoples;
- (b) persons living in poverty;
- (c) persons living with disabilities;
- (d) local governments;
- (e) organizations that advocate for persons living in poverty;
- (f) the business community;
- (g) unions;
- (h) academics;
- (i) persons living in rural and remote communities.

(4) Without limiting subsection (1), the advisory committee has the following duties:

- (a) to give the minister comments in relation to a calendar year on the matters referred to in section 8 (1);
- (b) to advise the minister in relation to consultations under section 11.

(5) Members of the advisory committee must be

- (a) reimbursed for reasonable travelling and out-of-pocket expenses necessarily incurred by them in discharging their duties under this Act, and
- (b) if they are living in poverty, paid an honorarium.

Consultations

11 (1) In developing and updating the strategy, the minister must consult with representatives of at least the groups referred to in section 10 (3).

(2) Consultations under subsection (1) must be carried out in a manner that is intended to

- (a) ensure the strategy is informed by the experiences of persons living in poverty, and
- (b) uphold the commitment under section 4 to Indigenous peoples.

Supports for participation

12 The minister may provide monetary or other supports to or for persons living in poverty to enable them to

- (a) serve on the advisory committee, or
- (b) participate in consultations under section 11 (1).

Section 5 of *Offence Act* does not apply

13 Section 5 of the *Offence Act* does not apply to this Act or the regulations.

Regulations

14 The Lieutenant Governor in Council may make regulations referred to in section 41 of the *Interpretation Act*.

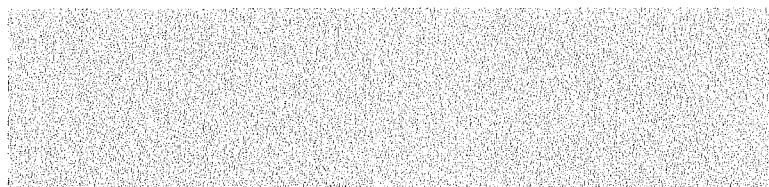
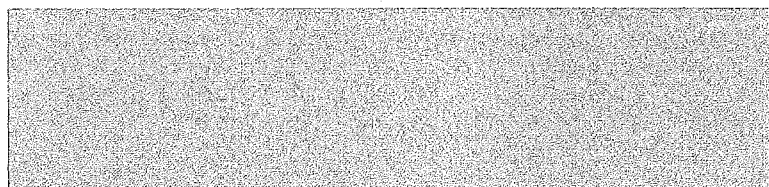
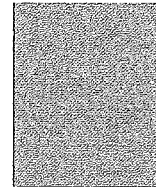
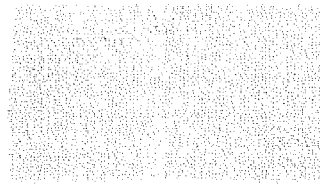
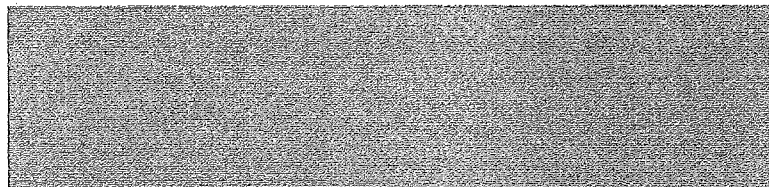
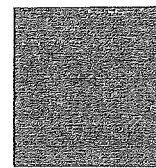
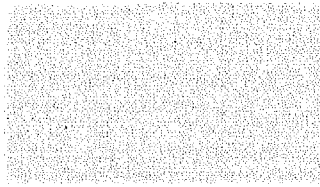
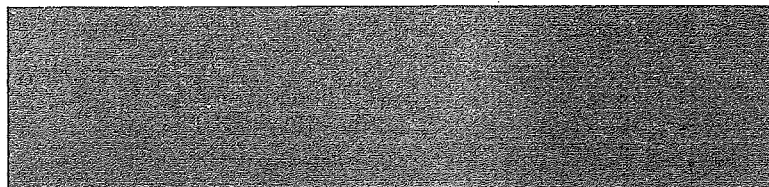
Commencement

15 This Act comes into force on the date of Royal Assent.

Explanatory Note

This Bill provides for a strategy to reduce and prevent poverty.

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Transcript:
Community Meeting
on Poverty Reduction

Richmond, BC
January 25, 2018

Introduction and Event Summary

On January 25, 2018, the Ministry of Social Development and Poverty Reduction hosted a community meeting in Richmond, BC to discuss poverty and poverty reduction with local residents. The event brought together approximately 80 to 90 participants including people with lived experience of poverty; poverty reduction front line workers and advocates; people from the non-profit and business sectors; and other community members from all walks of life.

The event began with a welcome from Elder Roberta Price, followed by opening remarks from Shane Simpson (Minister for Social Development and Poverty Reduction).

Participants then engaged in round table discussions in groups of 8 to 10 people per table. Each table had a dedicated facilitator from a local community group or from SPARC BC who helped to guide the conversations. Each table also had a dedicated note taker who helped to record the discussion.

There were two rounds of discussion which focused on the following questions:

1. What are the issues facing you and people living in poverty right now?
2. What would address these issues and help you and others out of poverty?

Following the discussions, participants were invited to put a sticky dot beside the strategies or solutions that were most important to them. Each participant received four (4) sticky dots. Following the individual priority setting exercise, participants were asked to determine as a table the top three (3) priorities from the evening and to report these priorities back to the room.

The Minister of Social Development and Poverty Reduction shared some closing remarks.

Document Organization

This document contains the transcripts from the flip chart notes from those in attendance. The flip chart notes have been transcribed verbatim, correcting only for spelling and grammar as needed. The notes are organized according to the feedback received to the two questions beginning with:

1. What are the issues facing you and people living in poverty right now?
2. What would address these issues and help you and others out of poverty?

Question 1: What are the issues facing you and people in poverty right now?

- Effects of poverty
 - o Stuck/ low mobility
 - o Hard to break out of the cycle of poverty
 - o Malnutrition
- Education
 - o Key to breaking the cycle - opportunity
- People need
 - o Housing
 - o Nutrition
 - o Food Security
 - o Day Care
 - o Unless the system is changed, poverty won't go away
- Challenges
 - o It can be tough on a single parent
 - o Family support can help
 - o We are an individualistic society
 - o Neighbourly support is not always there
 - o Must address the root causes
 - o Requires municipal support as well as all levels of government
 - o Poverty is the result of poor policies
 - o Greed keeps people poor
- Housing
 - o We need money to build more low rental housing
- Kids living in poverty
 - o We know the early years are important
 - o Parents can't afford childcare
 - o Many teachers are feeding hungry children at school –using their own resources
 - o "It used to be that I would bring a box of granola bars and give them out to kids that are hungry, now I am bring 3 boxes and it is not enough"
 - o Kids can't learn if they are hungry
 - o There is also a stigma that kids feel - "I make extra sandwiches but I pretend that I made a mistake and made too many – ask kids to help me out"
- Pressures on families
 - o The pace of life has changed as well as the types of economic opportunities available to people – people are now working 2 to 3 jobs just to get ahead
 - o Some people are working seven day a week
 - o There are fewer sport opportunities for kids unless you have a lot of money –winter sports are very expensive
 - o Most income goes into housing, daycare and transportation – for many families there is very little left over

- Rules for income assistance
 - o People are cut off by the Ministry if you start earning more \$15,000 but at this income level you are still in poverty
 - o People need other supports – i.e. there should be transportation supports
 - o Disabilities should not be at poverty level
 - o Poverty affects people's mental health
- Housing costs are high
 - o A 3 bedroom townhouse rents for \$2,300/ month not including utilities
 - o People need more affordable housing
 - o Childcare costs \$1,700 per month per child
 - o There has been no new social housing built in Richmond in the last 30 years
- Food security
 - o We need a lunch program in the schools like Scandinavian
 - o Some kids only get one (1) meal per day
 - o If there was a lunch program that was equally available for all kids it could be a socially positive experience- there would be no judgment or stigmatizing of poor kids
 - o It is do-able but we are too busy buying stealth bombers
- Community capacity
 - o Corporations are not pitching in
 - o Governments have a role to play
 - o Governments should not rely on charities to do it all
 - o Charities help but the help is not consistent – people get help at Christmas but poverty is all year round
 - o There are not enough social workers and the ones who are there are over worked- people cannot always make the best decisions because they are burnt out
- Incomes
 - o People need a fair or living wage
 - o Minimum wage at \$15 per hour could help but \$15 may still be too low
 - o There are not enough good full time jobs
 - o A lot of people have to go to different part-time jobs
 - o Employers like part-time jobs because they don't have to pay benefits
 - o There need to be more union jobs with benefits
 - o If people lose their jobs they also lose their benefits
- Sense of responsibility
 - o We need to have a sense of responsibility to take care of everyone in the community – including people in poverty
 - o We often hear that "There is no poor people in Richmond"
 - o People at the top need to make a commitment – that's part of the solution
 - o There is stigma around poverty
 - o It can mean that people don't want to talk about it or are too ashamed to seek assistance
- Poverty denial
 - o Poverty is a taboo topic for some cultures

- Some people believe that families and individuals are in poverty because they didn't work hard enough
- "Poverty is in the mind" according to one
- There are examples of programs (i.e. New York) where people are given the opportunity to gain employment skills/ given access to education and help to get their feet on the ground
- These programs work because they help to address the root cause. However, it should also be noted that education and training might not be enough – structural changes to the economy (i.e. automation) has meant that there are fewer full-time jobs.
- Housing
 - Housing is a real issue in Richmond
 - There are too many new towers being built and the community is losing the older more affordable rental housing
 - There has been very little new affordable housing being built – need more co-op housing developments
 - People can't always own a house but they should still have a right to housing – rental housing
 - The issue is people in rental house don't have stability – they need to move a lot – it puts pressure on families
 - There are too many empty houses – too many absentee landlords and foreign buyers
 - The new empty house tax might help to free up housing for higher income people but it won't help low income families and seniors who can't afford housing
 - For most households their wages are still too low to carry the cost of housing at the current price
 - Young people have more barriers
 - To have empty houses is a crime especially with all of the homelessness
- Food security
 - People need access to healthy, nutritious food
 - People with disabilities can't access food
 - There are not enough grocery stores in Richmond
 - The price of food is too high and it continues to go up
 - Wages cannot keep pace with the increase in the cost of food
 - More working people are falling behind
- Housing
 - Need to look at other countries
 - Need to have more social inclusion to solve housing issues
 - Need to see what other countries have done
 - There is not enough affordable/social housing to meet community needs
 - Government develops policy to empower non-profit housing providers to increase the number of social housing units available
 - Builders and developers make a lot of money on every residential unit
 - The City has an Affordable Housing Fund – what do they do with the funding?
 - It takes a long time for new housing

- The zoning process is too long, permitting process
- Need to add more density to make units more affordable
- Child care spaces
 - Need to have more buildings with childcare
 - Kids are left at home alone because there is not enough childcare
 - \$10 day for childcare is not really affordable
- Housing for seniors
 - Long term housing for seniors is a problem
- Income inequality
 - Guaranteed income is needed
 - Basic income and supports
- Transportation
 - Transit is not affordable
 - The compass card is expensive
 - Mobility affects your ability to get a job
 - Not affordable, not accessible, travel too far
 - People having to live far out and travel more
- Education
 - Should be free post-secondary education
 - Tuition fees are too high
 - Need to look at other countries
 - How to make education free at low cost for people who need it
- Other factors
 - Taxes are too high
 - Takes political will
 - Part of the same poverty circle
 - Poverty affects mental health and health in general
- Barriers to employment
 - People with disabilities can work but can't find jobs
 - There is discrimination for all minorities –recent immigrants, people with disabilities, refugees – many of these groups live in poverty because they can't access opportunities
 - Our country brings people to our province but is there really inclusion?
 - Are programs accessible to everyone?
 - Accessibility to diverse population, different gender, race, class, education, sexual orientation, people with diverse sizes
 - The market is so competitive even being overweight could be a reason to discriminate against someone
 - Discrimination or a lack of inclusion a big barriers to employment
 - Age can also be a factor - people have barriers because we are too old or too young
 - Single parents who can't find affordable childcare
 - Recent immigrants face barriers - hard to access employment
 - Childcare is key to removing barriers (1 Vote)

- Food security
 - o People need access to food and water
 - o More water fountains are needed
 - o Food at food bank is often past the expiry date – need access to fresh healthy food choices (2 Votes)
- Health supports
 - o Over counter needed medication not covered (1 Vote)
 - o People do not have access to a family doctor (1 Vote)
 - o So many medications are not covered by Pharmacare (1 Vote)
 - o There are gaps in medical coverage for new immigrants/no status
 - o The waiting period to access MSP is three (3) months – this is unfair, if people need to see the doctor during this period there are high user fees
 - o Dental and orthotics are not covered (1 Vote)
 - o There is a gap in the dental care coverage for kids
- Affordable housing (3 votes)
 - o There is a lack of choices in the rental housing market
 - o There should be restrictions on rental rates – how much landlords can charge or the types of rent increases allowed (1 Vote)
 - o Landlords keep raising rents every year (1 vote)
 - o Landlords see rentals as investments not necessarily as shelter (1 Vote)
 - o The shelter rates are too low relative to the rents = my full cheque (Including support is used for shelter) – it leave nothing else to live off – I have to depend on my family
 - o In addition to rent, other costs like hydro are increasing
 - o Rent supplements are not enough
 - o Rooming Housing / SRO housing are not real housing choices – the quality of the housing and living conditions are poor
 - o The choices are not straight forward
 - o Moving is stressful and expensive
- Income support
 - o The minimum wage is too low
 - o The income assistance rates are too low (1 Vote)
- Low income families
 - o There are too many fees that low income parents cannot afford –i.e. school fees, the cost of field trips – the money is not available without support
- Income assistance
 - o All talk, no action
 - o People get tired of the fight
 - o Should be called the Ministry of Loneliness
 - o Why is the PWD application form so long
 - o Housing – Landlords keep raising rents every year (1 vote)
 - o Landlords see rentals as investments not necessary shelter (1 Vote)

- Low shelter rates = full cheque (Including support is used for shelter and leaves nothing to live off (have to depend on a family)
- Access to health supports
 - Lack of proper and personalized health care
- Recent immigrants
 - Very difficult to transfer education/ degrees for immigrants
 - Lots of red tape and fees and strict timelines (2 Votes)
 - Means difficult to access opportunities to use your training
- Systemic barriers
 - Income supports
 - There are too many constraints that means you are unable to improve your situation
 - Legislated poverty
 - Education helps to improve self-esteem but it is still had to look for work when you are homeless on the streets
 - Public attitudes – have to break them down through advertising, promotions, public meetings
 - Need to show support for people on the street/ on welfare
- Addictions
 - People struggling to pay rent - easier to take drugs
 - Not being able to find a place to sleep – turned to drugs
 - People are vulnerable when you are on the streets
 - People feel alone
 - Drugs are cheap and easy to find –they are always there
- Homelessness
 - The cost of housing is an issue
 - High rents mean that people are unable to find a place to live
 - Have to find a place with other people who abuse drugs (2 Votes)
 - Struggle with working, drugs and finding a place to live (1 Vote)
 - Constant circle – finding a place to live and being evicted (1 Vote)
 - People don't want recovery houses in their backyard
 - It is a struggle being on the streets
 - Poverty results in extreme homelessness
- Transportation
 - Cost
 - Unable to get to appointments/programs
 - UGM able to provide bus passes sometimes
- Cost of poverty
 - People are digging themselves into a hole –it is often too difficult to get out
 - Not enough
- Housing
 - Rent is high
 - Not much is leftover once the rent is paid

- Can't buy quality food, can't get enough
- Rent is so high
- People are renting out uninhabitable places
- The housing is infested with cockroaches, bedbugs etc.
- Homelessness
 - Being homeless is a full time job
 - Extremely difficult
 - Need help meeting basic needs
 - Even help with getting ID is an issue
 - So many barriers and rules – there needs to be a more streamlined process
- Services
 - Need one central place with the different agencies in the same building
 - Need to have relationship between agencies - i.e. income assistance, health services
 - Strong relationships between organizations/agencies
- Stigma
 - There is a stigma to being poor
 - People feel depressed/frustrated with their situation
 - There is the pressure of everything facing them
 - Trying to look for money leads someone to do something illegal
 - Make enough right now but no security for the future- no time for planning
 - Mindset of being poor, facing negative impressions from the society
 - People make assumptions and hold prejudices that are unfair (1 Vote)
- Addiction
 - People are trying to escape, trying to fit in
- Housing prices
 - Losing a place to live for homeless people
 - Can't afford to live in BC
 - Poor quality of life
 - Poor living conditions
 - People are being forced out, more homelessness
 - New buildings are being built but are not helping all of the people who need help
 - Need more housing choices, more places to live
 - Without an address cannot address other issues –i.e. missing out on appointments
 - People need access to basic essentials like food and shelter (1 Vote)
- Hopelessness/Compounding Problems
 - Loss of hope
 - Can't afford to go to school and work
 - Fail at school and problems add up (1 Vote)
 - Have to work multiple jobs
 - Not enough hours (jobs), all part time, not enough full time jobs (1 Vote)
 - Job hours cut, incurs debt, catch up but fall back again (3 Votes)

- Income and supports
 - o Minimum wage is too low
 - o Even if you work full time at minimum wage the rent is too high (3 Votes)
 - o No savings, living pay cheque to paycheque (3 Votes)
 - o Ability to make more and spend less (1 Vote)
 - o The difficulty to transfer credentials over from immigrants (5 votes)
 - o The situation of the parents passes onto kids (2 Votes)
 - o If you can't afford to pay for extracurricular activities –i.e. pets, clubs, sports then it means that kids are not able to participate – have less opportunities to learn
- Housing
 - o Lack of housing
 - o There are expenses (buying and renting)
 - o Cost of living is greater than income
 - o People moving out of their communities because of affordability
 - o Stores closing in the community
 - o Families moving to Surrey due to affordability
 - o Cost of living/affordability is an issue
 - o Everywhere, but why is it a big issue here?
 - o People selling houses just because prices are increasing then they rent also at a high price
- Income
 - o Minimum wage is too low
 - o Incomes are not increasing enough to keep pace with rising costs
 - o There is growing social disparity/inequality – rich versus poor
 - o People need a living wage – people are working 2 jobs but not able to make ends meet
 - o When income increases so does cost of bills
 - o Cannot keep the same standard of living as they cannot afford it any more
- Employment for people with disabilities
 - o Employment for people with disabilities is an issue
 - o Income affects social life, self-esteem, and opportunities
 - o Without employment - no support to get back, loss of friend etc.
 - o Not enough employers with experience employing PWD (excuses: liabilities)
 - o Job creation for PWD with no experience
 - o Challenges for PWD to obtain experience and find employment
- Health Care
 - o Health coverage is limited and many of the services that are needed are expensive –i.e. physio and other therapies
 - o MSP Coverage is too low for these services
 - o Need to be aware of the needs of people receiving PWD assistance – many costs are not covered –i.e. some medication and prescription costs
 - o Over the counter medications are too expensive
 - o People who cannot afford to cover the costs themselves might opt not to take it – can create more harm and more costs over the longer term.

- Childcare
 - o Look at Sweden for a model for childcare
 - o Here the cost of childcare is too high
 - o Income from work – goes to child care
 - o One parent has to give up work for childcare
 - o It should be a right for everyone who want to work and have children
 - o Just want the basic needs to be met
- Education
 - o Post-Secondary education is not affordable
- Transit
 - o Public transit is expensive
- Systemic Challenges
 - o The way the system is set up is hard –some people can't access (i.e. many women face difficulties accessing the system)
 - o You are not able to speak to someone
 - o Sometimes the problem is not sorted out for weeks
 - o The amount of money that people receive is too low
- Income Pressures
 - o Minimum wage too low
 - o Refugees have difficulty upgrade their education
 - o Face food bank/housing issues
 - o Hard to access housing
 - o Impossible to find housing
 - o Single mothers not able to find childcare and can't work
 - o Lots of women in poverty
 - o Women are forced to stay in violent relationships because too expensive to leave
 - o People face difficult choices – harsh environment - much harder more difficult
 - o Hard to cope with the high cost of living
 - o People struggling with addictions because it's hard
- Poverty Reduction
 - o Social Development and Poverty Reduction is a good name
 - o Should not just focus on employment -some people cannot enter the work force because of barriers
 - o People are so desperate due to cost of living
 - o Have to work 2 minimum wage jobs to make ends meet
- Access to services
 - o People have long waiting times to see a doctor
 - o There are waiting lists for programs
 - o There are not enough supports services –i.e. women are trapped in violent relationships but have nowhere to go
 - o Women who are homeless are invisible and many face horrible stressful situations
 - o It can become a vicious cycle

- If you would give her \$1000 this would work attending MCFO appointments
 - Know a woman (Grandma) who is taking care of grandkids because the funding was scaled back
 - People need help meeting basic needs
- Income
 - Ontario pilot looks good
 - Gives you much more power – you don't have to prove it – you are entitled to it
 - Gives more freedom/more control over decisions
 - More help should be given to those who are on the borderline of poverty – they are doing everything to advance their life – a bit of help would change so much
 - It is difficult for single mothers who are going to school
- Cost of Housing
 - Rent is a minimum of \$1000 per month
 - There is a mismatch between income and cost of living
 - Means people have not control over their situation
 - Need to have better rent controls -regulations for amount of rent that can be charged
 - A 1000 sq ft unit on Commercial Drive was renting for \$3,000.
 - People can't afford to live in BC
 - Landlords can behave poorly – i.e. raise the rents due to the housing market
 - Issues are intertwined
 - There is no security for families – too expensive
 - Stability of people's lives – living in poverty – barriers
- Recent immigrants
 - A lot of middle eastern refugees – families like to settle in areas close to each other
 - Large families that need childcare
 - English language learning outback – ESL classes that grade your learning
- Barriers to Housing
 - Landlords are afraid to rent to people with mental health.
 - Discrimination against people receiving disability assistance (1 vote)
 - No access to housing for people who are addicted
 - Need money for affordable housing
 - We need way more affordable housing being built
 - Where do people go to live
 - It takes too long to build housing and shelter
 - Rental housing is too expensive – people are forced to rent rooms and pay board
 - People on disability are so normalized with their circumstances
- Access to social and recreational opportunities
 - Access to recreational and leisure activities costs money
 - Physical activities helps prevent alienation
- Social isolation
 - Isolation/vulnerability makes people a target for crime

- Homeless senior with dementia are vulnerable to theft –i.e. cashing cheque at money mart – people watch - it makes the senior a target for crime
- Income Assistance
 - Housing should be a right for everyone
 - People on assistance only receive shelter if they have housing
 - No security deposit if owner the owner lives there
 - Slow turnaround time to receive shelter cheques for people on assistance
 - SDPR – people all over province dealing with clients
 - Very bad medication coverage – many medications are not covered
 - No one knows what's happening in SDPR
 - There are no straight answers –sometimes it can take weeks for a response
 - The system is very broken
 - Low income seniors cannot afford their medication
 - No dental care, no free clinics, no proper nutrition
- Health supports
 - Health supports are lacking for low income people
 - Senior homes are not healthy places
- Impacts of poverty
 - Your environment can affect your overall being and shortening one's life
 - When you are poor you life is consumed by surviving
 - You feel isolation and alienation
- Income Assistance
 - People live in fear of being cut off of assistance
 - Everyday people are afraid today of what's happening –what would happen if they were to lose their medical assistance?
 - Fear that they will not get assistance because somehow the Ministry thinks that you are not telling the truth - looking for fraud
 - There are so many barriers like the requirement for monthly stubs
 - Having security in the office is intimidating – concern that the office is unsafe
 - The service model is problematic - 1-887 number does not work
 - There are no workers to talk to
 - You call the number and the Ministry staff treat people like they are not human
 - You feel that there is no respect or dignity
 - It feels like a revolving door
 - Sometimes you can call the 1-877 number and you have to wait as long as two hours
 - Sometimes you have to call back next day
 - People need access to an advocate
 - You live in fear that you will say something wrong because you don't know the rules
 - It also feels like the rules are constantly changing
- Stigma and Helplessness
 - The general population does not realize how close people are to poverty
 - In some ways it could happen to anyone

- A lot of people can be one pay cheque away from poverty and homelessness
- There is a stigma placed on people living in poverty
- Some people don't ask for help because of this stigma
- People feel this stigma and live with the constant trauma
- Many people do not have a choice
- A story was offered of a grandmother who was receiving PWD – she was raising her grandson and was trying to find work to pay for his prom tickets. She knew that he couldn't go to the prom because she could not pay the school fees
- RCMP, paramedics, and service people are affected as well – they are traumatized because they see the effects of poverty everyday and feel helpless to create change
- Food insecurity
 - Food security is lacking
 - Most poor people do not have access to healthy nutritious food
 - Their diets do not include fresh food
 - Often they have to ration the food
 - Lack of food can affect people's ability to learn –especially children in school
 - Lack of access to healthy food also has long term consequences for one's health
- The poverty trap
 - Social assistance can trap people in poverty
 - The basic income assistance rates are too low
 - It leave no money left over for food or transportation
 - Without a bus pass it is not possible to get to a job
 - People can't even get ID
 - Rates have stayed low for a long time –they have not kept up with the cost of living
 - The rates don't reflect the fact that BC has a high cost of living.
- Mental Health and Other Supports
 - People are normalized - they don't even know that they have a mental health problem
 - They don't understand their situation; they are so used to living in poverty
 - People are afraid to speak up – it is hard to ask for assistance
 - Sometimes It is hard for people with mental health issues to get assistance if they are not on income assistance already
 - The lack of services pushes people into poverty
 - Need affordable housing
 - Hard for someone earning minimum wage to cover everything
 - Homeless people feel isolated
 - It is difficult for those who have a mental health issues – can get worse
 - There are no centralized resources to turn to
 - It is hard to get to services without transportation
 - There is a need to recognize homelessness and the vulnerability of people with mental health challenges
 - There should be education to help deal with the stigma of homelessness
 - All levels of government should pay more attention to people who are homeless

- Richmond gave more money to animal shelter than to working to address homelessness
- People struggle to keep roof over their heads
- Once you are homeless it affects you health – you have less access to nutritious food
- Government should be proactive rather than reactive
- Richmond City Council is not doing enough to prevent poverty – there needs to be a more proactive response to address poverty
- Need a middle ground to manage – create a stepping stone that can help people out of poverty
- Need to recognize differences across different cultures and be more sensitive
- Need more programs in school
- Start with children, provide breakfast or lunch program for all kids
- Lack of education about drug/addiction and related issues
- Education should start with children at a young age
- Education about mental health needs to start early as well
- There are not enough facilities to help and house people with mental health issues

Question 2: What would address these issues and help you and people out of poverty?

- Food security
 - There should be a nutritious food program in every school in BC (2 Votes)
 - The program should not just be bread or soup and a bun
 - It should be available to everyone and just be part of lunch
 - If it is available to everyone it would help to reduce the stigma
- Business
 - Get businesses involved
 - Instead of throwing food out maybe there is a way to make it available
 - There are lost of rules and regulations that could make this difficult but it could make a difference
 - Maybe it is possible to create a school salad bar similar to the types of initiatives that are part of the Farm to Cafeteria program
 - Maybe there could be green houses built on school property and the different aspects of growing and harvesting good could be part of the school curriculum
 - Cooking class can could help to produce food for the salad bars while the school could also enter into partnerships with local farmer
- Employment
 - People need full time jobs with benefits (i.e. sick leave protection) (1 Vote)
- Affordable childcare (1 Vote)
- Affordable housing (2 Votes)
 - All 3 levels of government have to commit to work together
 - Housing decisions are influenced by developers through political donation

- Ensure that the housing meets the needs of those who live in the community (3 Votes)
- Education
 - People need job training and access to free education (1 Vote)
- Health services
 - Need to consider the needs of socially isolated adults especially in minority communities – (i.e. the Chinese) – need to find a way to get them support
- Housing Markets
 - Eliminate speculation in housing (3 Votes)
 - Eliminate the commodification of housing (2 Votes)
 - 40-50% of market pre-sales are done over seas
 - In Richmond there is a lot of speculation –people are purchasing and flipping houses and condos
 - The housing market is not correcting – price just keep going up
- Employment
 - Ensure that people have access to employment and skill training (1 Vote)
- Youth
 - Young people are couch surfing/living with roommates
 - They are having to go to food banks to pay their student loans
- Day Care
 - Provide subsidized daycare that includes a hot meal to fuel kids (4 Votes)
 - Day care costs are too expensive especially for parents who have part time jobs (it is cheaper to stay at home some days to care for children)
 - There are not enough day care spaces - some parents have to go to multiple day cares to fill the gaps.
 - Need day cares that are available on weekends and evenings (2 Votes)
 - Day care should be linked to school locations (2 Votes)
- Minimum Income
 - People should be given a minimum income that is adequate(4 Votes)
 - Income should be based on a fair wage or living wage
 - People need a guaranteed livable income (3 Votes)
 - There should be no means test
- Affordable Housing
 - There should be rent controls – not only on existing rental units but should remove the ability to re-price the unit when someone moves (2 Votes)
- Income
 - People should be entitled to a liveable, dignified, thriving income
- Child care
 - There should be a universal child care policy – affordable (2 Votes)
 - MSP rates should be eliminated
- Transportation
 - Transit passes should cover more than a single fare should cover more zones

- Transit passes should be cheaper
- There should be more transit accessibility for people in low income
- Housing
 - Build more subsidized housing (1 Vote)
 - Move away from relying on private housing developers
 - Be more strict rent control
 - Consider a tax on speculation
 - Stop building for investment market (2 Votes)
 - Bring sanity to housing prices
 - Encourage municipalities to adopt different approaches to their zoning
 - Adopt stricter rules and requirements on vacation rentals and short term rentals as well as around AirBnB
 - Return to a housing market that is designed to meet the needs of the people who live there – i.e. rental market for locals
 - Encourage more long term rental housing supply and protect the housing stock that is available
- Food Security
 - Food programs for schools, every day in every school -nutritious food (1 Vote)
 - More education around food and how to cook nutritious food at a low cost (1 Vote)
 - More community gardens
 - More food – urban gardens in Richmond
 - Programs to recover food in grocery stores that are going to waste
 - Make it easier for this food to go to charity while the food is still edible (1 Vote)
 - More flexibility around food that is close to or at the expiry date
 - Put controls on food waste
 - Find ways to reduce the amount of food that is wasted (1 Vote)
 - Store owners should have to pay a penalty for any food that they are wasting
 - Zurich is a good model to look at – they have found ways to use food before it is wasted
 - Provide education on how to preserve food –i.e. making jam or other food products
- Support with Income Assistance
 - Make more social workers available for those who want/need one
 - More community navigators
 - Service and supports all in one place
 - Create a resource hub/ centre
 - Information should be available in printed format in plain language
 - There should be one place that you can go to get all of the information that you need
 - Stop strict criteria to get help (1 Vote)
 - There should be coverage for medicine that is prescribed over the counter for things like allergies, lice, pain, gastro problems
 - Make help readily available so that you don't have to fight for it

- There should be more government supports delivered by people who care about the issues instead of through IT and technology – this should be for all areas of the public service –health, income supports, social assistance (1 Vote)
 - Raise income assistance rates (3 Votes)
 - Continue to work to reduce barriers (1 Vote)
- Support for recent immigrants and refugees (1 Vote)
 - Make it easier and cheaper for recent immigrants to transfer their skills and training
 - Provide better supports to refugees
 - Help provide navigation and support for ESL
 - Drop the hard to understand jargon/language (1 Vote)
 - Work to build community
- Service Delivery
 - Government needs to shift away from technology
 - This means creating a whole new way of thinking/focus
 - The focus should be on people not on technology
 - People have to think ahead about preventative solutions– Invest now for a better/cheaper tomorrow
 - There should be better access to services faster. i.e. Methadone treatment.
 - More and better access to harm reduction treatments
- Supports for Families
 - More family support workers (3 Votes)
- Transportation
 - Bus passes should be available to anyone who lives in poverty (3 Votes)
 - Transportation is key
- Other supports
 - There should be public water fountains and cooling stations (Like Vancouver)
- Housing
 - There should be more rent Control
 - Landlords have to stop raising rents every year = people need stable housing
- Public Awareness
 - There is value in getting the concerns/issues out there
 - Making the issues more public and building public awareness and support
 - Videos and news articles help to put a public face to the story
 - Helps to build better understanding with more exposure (1 Vote)
 - Need to educate society to help to break down the myths –remove misconceptions
- Access to Services
 - People need access to counselling – a support system
 - People need someone to help with homelessness
 - People need access to better social housing – longer term
 - Access to stable, affordable housing will allow people to focus on their lives
 - People need security of tenure in their housing (3 Votes)
 - People need counselling/assistance with budgeting etc. (1 Vote)

- Need a resource centres that provides a range of services and that has more hours/availability, more staff that are trained, more follow through (1 Vote)
 - Need to ensure that people are getting the help they need
 - Could be one resource centre with different organizations/representatives
 - Better rehabilitation programs – instead of sending to prison – offer better or more rehabilitation services (1 Vote)
- Minimum Wage
 - There is the need for higher minimum wage
- Training and Skills Development
 - People need to be equipped with skills like resume writing, typing, internet and job, search skills including support in developing these skills
 - More people should be able to take courses, go to school,
 - More encouragement, inspire people to go to school
 - More balance, being able to go to school, being of assistance, same with work (1 Vote)
- Income Assistance
 - Income assistance rates and supplements need to increase (2 Votes)
 - There should be a basic income for everyone (guaranteed income) (1 Vote)
 - Residential tenancy branch – improvements re moving out timelines
- Ministry:
 - Staff need to show empathy
 - Need more staff/more resources
 - More investments in the social services
 - More outreach
 - Build trust
 - Offer more counselling outside of methadone
 - More long term solutions (1 Vote)
- Housing and Supports
 - There should be more integration between housing, employment
 - Housing and supports should be treated more as a package instead of passing person around from one resource to another (2 Votes)
 - We need more shelters, food for the homeless (4 Votes)
- Inequality
 - More privileged people should pay more taxes (13 Votes)
 - Better education, affordable, make education more accessible (4 Votes)
 - Education for lifestyle choices – more choice (2 Votes)
 - For people to know they could do it, to have motivation (1 Vote)
 - Increase affordability, purchase power(1 Vote)
 - Promote more income equity
 - Support small and local businesses (2 Vote)
 - Fair taxation
- Healthy childhood development
 - Create programs for kids that are struggling to reduce stigma (1 Vote)

- Let the kids fit in even if they are on assistance
- Housing Affordability
 - Decrease rent (2 Vote)
- Access to education and opportunities
 - Provide education for all
 - Decrease barriers for students
 - Fair system for people entering the market (Jobs, housing, transport) (10 Votes)
 - Make it more bearable for people trying to get out poverty so they can make it (2 Votes)
 - Make sure immigrants can get proper training in English (4 Votes)
- Income Assistance
 - People on PWD should not be financially penalized for being in a relationship
- Housing
 - Need real housing alternatives
 - How can we change things so that people feel more secure in their housing even if the cost of their housing is going up
- Empathy
 - Decision makers should be people in the field (doctors etc. are not bureaucrats)
 - Decision makers should be more connected to people receiving PWD.
 - Give PWD more decision power or at least allow their opinion to be heard
- Service Delivery
 - Shifting from a medical deficit model to prevention (3 Votes)
 - More funding for prevention and choice
 - Think of community instead of individuals
 - Need a system that looks at the long run rather than a short run solution
 - Basic needs of life should be covered. Universal benefits (6 Votes)
 - The income/assets test for PWD application is degrading
- Transit
 - Different color compass card is not needed if public transit is free – it just makes people stand out
 - The cost of transit would be lower if there were no gates etc. (lower environmental impact)
 - What is the incentive for taking public transit?
- Childcare
 - Universal Childcare
- Health Care
 - Flexible healthcare/ medications
 - Give people credits and let them focus their credits on the medications/ therapies that they each need
 - Transferrable medical coverage
- Building Community
 - Promote a shift to a sharing culture (2 votes)
 - Support tax increases for the greater good of the community (1 Vote)

- Open minded about job creation/ opportunities for PWDs.
- Supports in the Community
 - Mental Health Pathways
 - Assisted living for 18 – 60
 - Make it that people can make their own medical decision (1 vote)
 - Free public transit (3 Votes)
 - Universal childcare (1 vote)
 - Support a guaranteed income – should be universal not means tested
 - Need to support the dignity of the individual
 - Create conditions for people to thrive
- Affordable Housing
 - Rent controls should apply to units
 - \$1700 a month for a 500 sq. ft. place is too much
 - There is not enough publicly funded housing
- Medical Services
 - MSP rates should not to be charged on a monthly basis – pay in taxes
- Transit
 - Reduce transit fares – they are too high – it costs \$180 per month for a 3 Zone
 - Single fares are too high– barrier to get around
 - Subsidized transit – have to live in Surrey but work in Vancouver – expensive
 - There should not be different prices for transit - no more zones – 1 Zone
 - \$9 a day is too much for a transit pass
 - Many of the transit busses are not accessible
 - Buses takes too long to come - too long a wait
- Influence of the Development Industry on Housing Costs
 - Province and city to move away from private developers
 - Issue is cost of housing
 - Empty units – tax – speculation driving up prices
 - Start building – for people not investors
 - Vacancy rate is less than 1%
 - Short controls on vacation rentals – no air b and b's outside of home
 - Long term rental housing
 - Need to find a way to go from 1% to 3% vacancy
- Food Security
 - Cost of Food
 - Should have breakfast program in schools each day
 - Access to healthy, nutritious food should be part of basic education.
 - Provide nutritious food to kids at low cost
 - Educational price – food and education
 - Community gardens can help families
 - Help supermarkets donate food that is close to the expiry date to charities
 - There should be more flexibility on expiry dates on food

- Income Security
 - o There should be a minimum Income for all people
 - o It should be more than \$710 per month
 - o Use media, radio, and advertising to promote the benefits of a guaranteed minimum income – build awareness among the rich
 - o There needs to be a drastic increase in income assistance rates - more for shelter
- Service Delivery
 - o There should be cuts to the bureaucracy
 - o Medical and dental costs should be covered for everyone
 - o There should be more case workers
 - o People need to be able to call the 1-800 number and talk to someone right away
 - o Need more clarity on eligibility requirements for clients and advocates – applied consistently
 - o Services should be centralized -one place to go for help
- Seniors
 - o Seniors need access to a health care plan that covers medical and dental
 - o Seniors shouldn't have to worry about medication costs (1 vote)
 - o More access to seniors housing/ in home support (1 vote)
- Inclusion
 - o Community events that reach across all abilities/ classes/ races/ religions
 - o Mental health – people need support to help their physical well-being
 - o Free community centre programs for people with disabilities, low income (1 Vote)
 - o Communities need to be activated
 - o Expand participation, more eyes would be able to see the problem (4 Votes)
- Access to Services
 - o There should be access to treatment, wrap around services -no waiting
 - o There should be housing that is supportive and accessible
 - o Programs and supports should be geared to where a person is at
 - o Programs should not be isolating/alienating
 - o Need to increase shelter allowance from \$375 or provide housing for that level
- Income Equality
 - o Taxes should be higher for people with more money
 - o There are long-term savings by lifting everyone out of poverty
 - o Helping people out of poverty will save on services (4 Votes)
 - o There needs to be more social and economic inclusion
 - o We need to address the loss of industry = loss of community
 - o Find ways to replace the jobs that we lost from the loss of industry
 - o Retraining people = focus on jobs for the average person
- Housing
 - o Need to increase shelter allowance from \$375 or provide housing for that level
 - o People are renting a room for \$800 per month and have no locks on their door

- Perhaps there is a “billet program” that could be introduced – bring people together organizing and educating – make community a big family
 - Each individual needs to take responsibility (1 Vote)
 - Take much more presence in the press, more positive reports
 - Richmond City Council should accept modular housing (4 Votes)
 - There should be more facilities for treatment (3 Votes)
 - Enhance current educational programs
 - There are many good people in community who would be willing to participate in a billet programs, teamed with media and good positive stories
- School Food Programs
 - Have breakfast program for kids on their way to school to avoid stigma
 - Food allowance program
 - Utilize/ make community food gardens on public land
 - City operates gardens and provide free groceries (1 Vote)
 - Richmond should utilize land for public gardens instead of daffodils and tulips
- Families and Children
 - More funding for early childhood education (1 Vote)
 - CAP universal child bonus (1 Vote)
 - More programs for school on addiction and mental health
 - Free educational program for adults
 - Provide kids with access to education, daycare
 - Support healthy and nutritious access to food
 - Work to break the stigma of poverty
- Services
 - Easy access to treatment
 - Basic needs of life are covered – universal benefit
 - Activation of communities – expansion of programs
 - Make it so that fewer people are blind to poverty.
 - More facilities for treatments, especially in REMP treatment and crisis
 - Ensure that services are available when people decide to go to treatment
 - More programs for schools on addiction and mental health
 - Work to take stigma away from mental illness –break the stereotype
 - More social workers on staff to help people who need help
 - More advocacy
 - Create a resource centre/service hub
 - Shift the focus from the medical deficit model to prevention
 - More funding prevention
 - Show respect for people to make their own decisions
 - People should be encouraged and supported in making their own medical decisions
- Housing
 - Address foreign speculation

- Address the commodification of housing
- It is tough conversation but we have it –We need to ask the question of whether we are building homes and neighbourhoods
- To address the housing crisis we need the commitment of all levels of government
- There are good models like housing co-ops
- People need better access to social housing
- Provide incentives to landlords to reduce rent costs (e.g. tax credit for landlords)
- Addresses soaring rent costs
- Supports
 - People need more support obtaining ID and navigating the process
 - There should be a minimum income for everyone (more than \$710 per month)
 - People should not have to fear being cut off assistance – they should feel supported
 - The basic income assistance rates need to go up
 - There should be trauma-informed training to educate frontline service providers about the effects of trauma
- Community Education
 - Educate communities about homelessness to build buy in for supported housing
 - Build neighbourhood support for use of underutilized lands for temporary housing
- Income Security
 - Help people gain access to employment
 - Focus on greater pay equity
 - Create fair and living wages
 - Support full time employment with benefits
 - Support a guaranteed basic income
- Income Assistance
 - Fund Family Support Workers
 - Provide funding for support programs
 - Have the Ministry see itself as being in “the people business”
 - Raise PWD and income assistant rates
 - Simplify and streamline the process
 - Support people to access services, especially those with low computer literacy
- Transportation
 - Focus on transit accessibility
 - Work to support subsidized bus passes
 - More people should have access to discounted or free bus passes
- Income Support
 - Raise the rates
 - Higher minimum wage
 - Fair pay with benefits
 - There should be a \$15 minimum wage and affordable and available childcare
 - People should be able to have an affordable lifestyle –one that they want to live

- Partnerships
 - o Cities should be allowed to make their own decisions with adequate funding
 - o There should be partnerships across all levels of government
 - o Privatized services should be made public
- Strengthen the current system
 - o We need to strengthen the system (i.e. Income support, taxation, child tax benefit)
 - o So much of the assistance provided is not based on people's current circumstances – they system needs to be more flexible, make it fit, peoples circumstances, not vice versa
- Address the stigma
 - o The current system has stigma and prejudices
 - o There is a lack of quality and quantity of resources
 - o Need to find a way to expand the current resources and programs
- Housing
 - o Have to take steps to drive down housing values
 - o Have to prevent speculation



**City of
Richmond**

Memorandum
Community Services Division
Community Social Development

To: Mayor and Councillors
From: Lesley Sherlock
Social Planner
Date: August 28, 2018
File: 07-3000-01/2018-Vol 01
Re: **Opportunity for All: Canada's First Poverty Reduction Strategy**

Background

On August 21, The Honourable Jen-Yves Duclos, Minister of Families, Children and Social Development, announced the release of "Opportunity for All: Canada's First Poverty Reduction Strategy". The Executive Summary is included as Attachment 1.

The Strategy consists of three pillars:

Dignity: Lifting Canadians out of poverty by ensuring basic needs – such as safe and affordable housing, healthy food and health care – are met;

Opportunity and Inclusion: Helping Canadians join the middle class by promoting full participation in society and equality of opportunity; and

Resilience and Security: Supporting the middle class by protecting Canadians from falling into poverty and by supporting income security and resilience.

Government initiatives supporting each pillar are identified in the Strategy, including new and pre-existing programs and investments. A list of new programs and expenditures, either implemented or announced since the Liberal government assumed power in late 2015, is included in Attachment 2. For example, the Canada Child Benefit, the National Housing Strategy and the Early Learning and Child Care Plan all represent increased investment that will contribute to poverty reduction. These additional and pre-existing resources will help the government to achieve its stated poverty reduction goals of 20% by 2020 and 50% by 2030 (from 12% in 2015 to 6% by 2030). No new funding announcements were made with the introduction of this Strategy.

Official Poverty Line

To measure poverty reduction progress, this Strategy sets Canada's first "Official Poverty Line". It is a "market basket measure", reflecting the income required to cover the actual cost of goods and services needed to attain a modest standard of living. To reflect variations in the cost of living across the country, the income level has been calculated for 50 different communities based on location and population size. The goods and services considered in this measure include clothing

and footwear, nutritious food, personal care items, household supplies, transportation and shelter costs, including water, heat and electricity. Calculations are based on amounts needed for individuals and families, with the latter calculation based on a “reference” family of four (two adults aged 25–49 years, a 9-year-old girl and a 13-year-old boy). For individuals, the income needed is estimated to be half as high as that required by a family.

For Metro Vancouver, including Richmond, the poverty line has been set at an income of approximately \$40,000 per year for a family of four; therefore, for an individual, at approximately \$20,000 per year. While not referenced in the Federal Strategy, this amount is considerably less than that determined to be a 2018 Living Wage by the Canadian Centre for Policy Alternatives, estimated as approximately \$76,112 for a family of four in Metro Vancouver. The Living Wage incorporates additional expenses including the cost of child care, fees for two college courses and a minimal recreation budget.

Measurement

In addition to tracking population level income changes in relation to the Official Poverty Line, a range of other indicators will be tracked over time to monitor progress toward the stated poverty reduction targets. The monitoring of these indicators will be publicly available through an on-line “dashboard” providing data as it becomes available, including both annual and intermittent results, depending on the data source, as well as long-term trends. Data sources to be monitored include the annual Canadian Income Survey, the annual Canadian Community Health Survey, the Census, the National Homelessness Information System, the Labour Force Survey, the Program for the International Student Assessment and Adult Competencies, the Longitudinal Administrative Databank and the Survey of Financial Security.

Legislation

Significantly, the country’s first Poverty Reduction Act will be introduced to the legislature at a future sitting (date to be determined). Once passed, the Act will enshrine the adoption of an Official Poverty Line and reduction targets, as well as the formation of a National Advisory Council on Poverty, in legislation.

Municipal Role

In this Strategy, the federal government indicates that it will work closely with provinces, territories, municipalities and other entities, including community groups, to ensure that poverty reduction efforts are “aligned and complementary”. Specific roles for municipalities are not identified, but will be embedded in specific undertakings, for example, in the implementation of Canada’s Homelessness Strategy, infrastructure investments and public transit projects.

As the federal government is seeking aligned and complementary initiatives with provinces, territories and municipalities, the introduction of a BC Poverty Reduction Strategy, anticipated to follow the introduction of Provincial poverty reduction legislation later this year, will be significant for BC municipalities including Richmond. As the City has many poverty reduction initiatives underway (e.g., implementation of the new Affordable Housing Strategy, Child Care Needs Assessment and Strategy, Recreation Fee Subsidy Program, Youth and Seniors Service Plans,

August 28, 2018

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Community Wellness Strategy and an in-progress Homelessness Strategy Update), staff will be seeking opportunities to work closely with both federal and provincial entities as well as community agencies to support these and other actions, with the goal of measurable and significantly reduced poverty rates for Richmond individuals and families.

For further information, please call me at 604-276-4220.



Lesley Sherlock
Social Planner

Att. 2

pc: SMT
Ted Townsend, Director, Corporate Communication and Marketing
Kim Somerville, Manager, Community Social Development
Denise Tambellini, Manager, Inter-Governmental Relations and Protocol Unit
Barry Konkin, Manager, Policy Planning

EXECUTIVE SUMMARY

Canada is a prosperous country, yet in 2015 roughly one in eight Canadians lived in poverty. The vision of *Opportunity for All – Canada's First Poverty Reduction Strategy* is a Canada without poverty, because we all suffer when our fellow citizens are left behind. We are all in this together, from governments, to community organizations, to the private sector, to all Canadians who are working hard each and every day to provide for themselves and their families.

The Government is committed to poverty reduction and did not wait to release a poverty reduction strategy before taking action. For example, the new Canada Child Benefit gives more money to families who need it most to help with the cost of raising children; The increase to the Guaranteed Income Supplement ensures more seniors can retire in security and dignity. And, starting in 2019, the new Canada Workers Benefit will help Canadians take home more money while they work hard to join the middle class.

The Government has also made longer-term investments in areas such as housing, clean water, health, transportation, early learning and child care, and skills and employment, which will help address multiple dimensions of poverty.

Overall, *Opportunity for All* brings together new investments of \$22 billion that the Government has made since 2015 to support the social and economic well-being of all Canadians. These actions will help lift about 650,000 Canadians out of poverty by 2019, with more expected as the impacts of these investments are realized in the years to come.

Opportunity for All also sets the foundation for future government investments in poverty reduction. It is based on three pillars to focus Government actions to reduce poverty:

Dignity: Lifting Canadians out of poverty by ensuring basic needs—such as safe and affordable housing, healthy food and health care—are met;

Opportunity and Inclusion: Helping Canadians join the middle class by promoting full participation in society and equality of opportunity; and

Resilience and Security: Supporting the middle class by protecting Canadians from falling into poverty and by supporting income security and resilience.

Opportunity for All offers a bold vision for Canada as a world leader in the eradication of poverty, with progress validated in terms of its alignment with the United Nations Sustainable Development Goal of ending poverty.

For the first time in Canada's history, the Strategy sets an official measure of poverty: Canada's Official Poverty Line, based on the cost of a basket of goods and services that individuals and families require to meet their basic needs and achieve a modest standard of living in communities across the country.

Opportunity for All sets, for the first time, ambitious and **concrete poverty reduction targets**: a 20 percent reduction in poverty by 2020 and a 50 percent reduction in poverty by 2030, which, relative to 2015 levels, will **lead to the lowest poverty rate in Canada's history**.

Through *Opportunity for All*, we are putting in place a **National Advisory Council on Poverty** to advise the Minister of Families, Children and Social Development on poverty reduction and to publicly report, in each year, on the progress that has been made toward poverty reduction.

The Government also proposes to introduce the first **Poverty Reduction Act** in Parliament in Canada's history. This Act would entrench the targets, Canada's Official Poverty Line and the Advisory Council into legislation.

Opportunity for All is a whole-of-government Strategy that involves actions and investments that span across the federal government. However, the Government recognizes that to be successful, it cannot act alone. Partnerships will be important. The Government will work closely with provinces, territories and municipalities, and will forge strong bonds with Indigenous peoples, stakeholders, charities and community groups on the front lines of tackling poverty in communities across Canada, to ensure our programs and policies are aligned and complementary, as Canadians expect and deserve nothing less. And, finally, the Government will continue to reach out to all Canadians who all have a stake in *Opportunity for All*, particularly those who live in poverty.

The Government will continually track and make improvements to how poverty is measured. Progress will therefore be measured against, and future decisions will be informed by, evidence that is based on the highest statistical standards, building on the Prime Minister's leadership and the commitment G7 leaders made this year to measure growth that works for everyone.

The Government will advance the dialogue with Canadians from all corners of the country, so we can continue to build a Canada without poverty.

Opportunity for All will help reduce poverty, support Canadians working hard to join the middle class and build a diverse, prosperous and truly inclusive country where everyone benefits from economic growth—a country where all Canadians can realize their full potential.

Poverty is:

The condition of a person who is deprived of the resources, means, choices and power necessary to acquire and maintain a basic level of living standards and to facilitate integration and participation in society.

**Key New Investments to Help Lift Canadians out of Poverty and Support the Middle Class,
Budget 2016, Budget 2017, and Budget 2018**

Initiative	Projected New Investment
Canada Child Benefit	Budget 2016 Introduced the Canada Child Benefit, which represents new Investments of over \$25 billion over five years, including the value of Indexing the benefit beginning in 2018–19.
Guaranteed Income Supplement	Budget 2016 Increased the Guaranteed Income Supplement top-up for single seniors with new Investments of over \$7 billion over ten years.
National Housing Strategy	Budget 2017 Introduced a National Housing Strategy. The 10-year, \$40-billion plan will give more Canadians a place to call home and includes \$16.1 billion in federal Investments in provincial and territorial housing programs, including \$2.1 billion for Reaching Home: Canada's Homelessness Strategy.
Indigenous Housing	Through Investments made in Budget 2017 and Budget 2018, the Government announced dedicated funding of over \$1.7 billion for Indigenous housing, including: • \$600 million over three years to support housing on reserve as part of a 10-year First Nations Housing Strategy; • \$240 million over 10 years as announced in Budget 2017 to support housing in Nunavut; • \$400 million over 10 years to support an Inuit-led housing plan in the Inuit regions of Nunavut, Nunatsiavut and Inuvialuit; and • \$500 million over 10 years to support the Métis Nation's housing strategy.
Public Transit Infrastructure	Budget 2016 announced \$3.4 billion over three years to upgrade and improve public transit systems across Canada. Budget 2017 announced an additional \$20.1 billion over 11 years in public transit infrastructure to transform the way that Canadians live, move and work. A further \$5.0 billion was announced in Budget 2017 for public transit projects that will be funded through the Canada Infrastructure Bank.
Early Learning and Child Care	Budgets 2016 and 2017 announced combined Investments of \$7.5 billion over 11 years to improve the affordability, quality and accessibility of Early Learning and Child Care, including for Indigenous Early Learning and Child Care.
Labour Market Transfer Agreements	Budget 2017 provided additional Investments of \$2.7 billion over six years through agreements with provinces and territories to help Canadians prepare for, find, advance in and keep good jobs.
Indigenous Skills and Employment Training Program	Budget 2018 Introduced the new Indigenous Skills and Employment Training Program to replace the Aboriginal Skills and Employment Training Strategy with an incremental investment of almost \$450 million over five years and nearly \$100 million per year ongoing.
Canada Workers Benefit	Budget 2018 Introduced the new Canada Workers Benefit to strengthen and replace the Working Income Tax Benefit with new Investments of \$3 billion over five years, which includes measures to improve access to the benefit.
Home Care and Mental Health	Budget 2017 provided \$11 billion over 10 years to support better home care mental health initiatives through agreements with provinces and territories.



City of
Richmond

June 6, 2016

08-400 ATTACHMENT 5
X2: 01-0150-20-0 PRE1

Malcolm D. Brodie
Mayor

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www.richmond.ca

The Honourable Christy Clark
Premier of British Columbia
Office of the Premier
PO Box 9041 STN PROV GOVT
Victoria BC V8W 9E1

Dear Premier Clark:

Re: BC POVERTY REDUCTION COALITION

At the Regular City Council meeting held on May 24, 2016, Richmond Council heard a delegation from the Richmond Poverty Response Committee (BC PRC) concerning the above matter. At the meeting, Council adopted the following motion:

Whereas:

- (1) *The poverty rate in British Columbia continues to be among the highest in Canada at approximately 1 in 10 using the most conservative estimate (low Income Cut-Off – After Tax), and child poverty rates in BC are still 1 in 5;*
- (2) *Many impacts of poverty are experienced at the local level, and local residents pay for poverty in increased health care costs, higher crime, higher demand for community, social and charitable services, lack of school readiness, reduced school success, and lower economic productivity;*
- (3) *78% of British Columbians want the provincial government to implement a poverty reduction plan;*
- (4) *BC is the last province in Canada to have a commitment to a poverty reduction plan.*

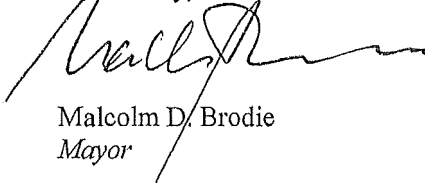
Therefore be it resolved:

- (1) That the City of Richmond advocate to the Provincial government to develop and implement a provincial poverty reduction strategy to reduce the number of people living in poverty in BC by setting concrete targets and timelines to reduce poverty.*
- (2) That the City of Richmond urge the Government of BC to adopt a comprehensive and accountable provincial poverty reduction strategy to reduce the number of people living in poverty in BC by setting concrete targets and timelines to reduce poverty; and*
- (3) That these resolutions be forwarded to the Union of BC Municipalities (UBCM).*

The BC PRC is requesting that the Government of British Columbia set legislated targets and timelines as well as specific policy measures and concrete actions as a poverty reduction plan. The Province has a responsibility to provide adequate and accessible support and services to those in poverty as well as remove policy barriers. Richmond City Council endorses the recommendations set forward by the BC PRC on poverty reductions, as indicated in the above resolution.

The City continues to encourage the Province to adopt a strong approach for implementing a comprehensive poverty reduction strategy for British Columbia and urges the Government of British Columbia to implement a plan consistent with the recommendations set forth by the BC Poverty Reduction Coalition.

Yours truly,



Malcolm D. Brodie
Mayor

pc: The Honourable Rich Coleman, Deputy Premier, Minister of Natural Gas Development, Minister Responsible for Housing and Member of the Legislative Assembly
The Honourable Michelle Stilwell, Minister of Social Development and Social Innovation and Member of the Legislative Assembly
The Honourable Linda Reid, Member of the Legislative Assembly for Richmond East and Speaker of the Legislature
The Honourable Teresa Wat, Member of the Legislative Assembly for Richmond Centre and Minister for International Trade and Minister Responsible for the Asia Pacific Strategy and Multiculturalism
Mr. John Yap, Member of the Legislative Assembly for Richmond-Steveston and Parliamentary Secretary for Liquor Reform Policy to the Minister of Small Business, Red Tape Reduction and Minister Responsible for the Liquor Distribution Branch

0150-20-UPR-1



City of
Richmond

Malcolm D. Brodie
Mayor

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February 28, 2017

The Honourable Christy Clark
Premier of British Columbia
PO BOX 9041 STN PROV GOVT
Victoria, BC V8W 9E1

Dear Premier Clark:

Re: Richmond Community Services Advisory Committee Report On "Municipal Responses To Child And Youth Poverty"

At its Regular Council meeting held on Monday, February 27, 2017, Richmond City Council considered the above matter and adopted the following resolution:

That the Richmond Community Services Advisory Committee (RCSAC) Report on "Municipal Responses to Child and Youth Poverty", identified in Attachment 1 of the staff report titled "RCSAC Municipal Responses to Child and Youth Poverty Report", dated January 30, 2017, from the General Manager, Community Services, be sent to the Premier, Leader of the Opposition, Richmond Members of Parliament, Richmond Members of the Legislative Assembly, and Richmond Members of the Legislative Assembly candidates.

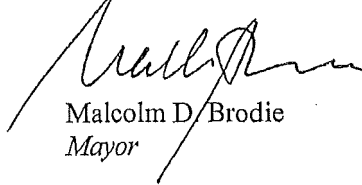
The Richmond Community Services Advisory Committee (RCSAC) report, "Municipal Responses to Child and Youth Poverty", as well as the associated City staff cover report, has been attached for your reference. The RCSAC report provides a valuable scan of municipal actions to address poverty, including those undertaken by the City of Richmond which the RCSAC notes as comparing favourably with other municipalities.

As identified in the enclosed reports, the City of Richmond is devoting considerable resources to initiatives within its mandate that address challenges faced by low-income residents. For example, in 2017 the City is updating its Affordable Housing Strategy, Child Care Needs Assessment and Strategy, Recreation Fee Subsidy Program and Homelessness Strategy. However, only senior governments can substantively address poverty reduction. On May 24, 2016, Richmond City Council endorsed a resolution for submission to the UBCM calling on the Provincial Government to develop a BC Poverty Reduction Strategy, with UBCM endorsing a similar resolution at their 2016 Convention. In spite of repeated UBCM resolutions over the years to this effect, the Province remains the only province or territory in Canada without a poverty reduction strategy.

Given the critical need to improve the living conditions of children, youth and their families struggling to meet basic needs in Richmond as well as throughout the Province, Council respectfully requests that consideration be given to the need for a BC Poverty Reduction Plan as previously resolved by Richmond City Council, repeatedly requested by the UBCM and also recommended by the RCSAC in the enclosed report.

Thank you in advance for your review and consideration of the above City of Richmond requests. Should you have any questions, please contact Lesley Sherlock, Social Planner, at 604-276-4220.

Yours truly,



Malcolm D. Brodie
Mayor

pc: John Horgan, Leader of the Opposition
Alice Wong, Member of Parliament – Richmond Centre
Joë Peschisolido, Member of Parliament – Steveston-Richmond
Linda Reid, MLA
John Yap, MLA
Teresa Wat, MLA
Chak Au, NDP Candidate
Lyren Chiu, NDP Candidate
Kelly Greene, NDP Candidate
Jas Johal, Liberal Candidate