



City Council

**Council Chambers, City Hall
6911 No. 3 Road**

**Monday, July 13, 2020
7:00 p.m.**

Pg. # ITEM

MINUTES

1. *Motion to:*

- | | |
|----------------------------------|--|
| CNCL-10 | (1) <i>adopt the minutes of the Regular Council meeting held on June 22, 2020; and</i> |
| CNCL-20
CNCL-32 | (2) <i>receive for information the Metro Vancouver ‘Board in Brief’ dated May 29, 2020 and July 3, 2020.</i> |



AGENDA ADDITIONS & DELETIONS

COMMITTEE OF THE WHOLE

- 2. *Motion to resolve into Committee of the Whole to hear delegations on agenda items.***



- 3. Delegations from the floor on Agenda items.**

PLEASE NOTE THAT FOR LEGAL REASONS, DELEGATIONS ARE NOT PERMITTED ON ZONING OR OCP AMENDMENT BYLAWS WHICH ARE TO BE ADOPTED OR ON DEVELOPMENT PERMITS/DEVELOPMENT VARIANCE PERMITS – ITEM NO. 16.

4. *Motion to rise and report.*

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RATIFICATION OF COMMITTEE ACTION

CONSENT AGENDA

PLEASE NOTE THAT ITEMS APPEARING ON THE CONSENT AGENDA WHICH PRESENT A CONFLICT OF INTEREST FOR COUNCIL MEMBERS MUST BE REMOVED FROM THE CONSENT AGENDA AND CONSIDERED SEPARATELY.

CONSENT AGENDA HIGHLIGHTS

- Receipt of Committee minutes
- TransLink Emergency Operating Funding
- Steveston Tram Feasibility Study
- Quadricycle Business – Proposed Vehicle for Hire Bylaw Amendment to Permit Permanent Operation
- Land use applications for first reading (to be further considered at the Public Hearing on September 8, 2020):
 - Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 AND 2170 - 8766 McKim Way – Temporary Commercial Use Permit (City Vancouver Academy Inc. – applicant)

5. *Motion to adopt Items No. 6 through No. 10 by general consent.*

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6. **COMMITTEE MINUTES**

CNCL-45

*That the minutes of the **General Purposes Committee** meeting held on July 6, 2020 be received for information.*

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Pg. # ITEM

Consent
Agenda
Item

7. **TRANSLINK EMERGENCY OPERATING FUNDING**
(File Ref. No.)

CNCL-58

[See Page CNCL-58 for full report](#)

GENERAL PURPOSES COMMITTEE RECOMMENDATION

That the City of Richmond calls upon the federal and provincial governments to provide emergency operating funds and to protect vital public transportation services. Letters to be written to the Parliamentary Secretary for TransLink; provincial Ministers of Transportation, Environment, and Finance; and federal Ministers of Transportation and Finance; with copies to Richmond MLAs and MPs.



Consent
Agenda
Item

8. **STEVESTON TRAM FEASIBILITY STUDY**
(File Ref. No. 11-7000-01) (REDMS No. 6474329)

CNCL-59

[See Page CNCL-59 for full report](#)

GENERAL PURPOSES COMMITTEE RECOMMENDATION

That Option 1: Maintain Current Tram Program as detailed in the report titled “Steveston Tram Feasibility Study”, dated May 29, 2020, from the Director, Arts, Culture & Heritage Services be endorsed.



Consent
Agenda
Item

9. **QUADRICYCLE BUSINESS – PROPOSED VEHICLE FOR HIRE BYLAW AMENDMENT TO PERMIT PERMANENT OPERATION**
(File Ref. No. 12-8275-06) (REDMS No. 6468151)

CNCL-73

[See Page CNCL-73 for full report](#)

GENERAL PURPOSES COMMITTEE RECOMMENDATION

- (1) *That the third reading of Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add regulations and requirements for the operation of a quadricycle, be rescinded; and*
- (2) *That Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add revised regulations and requirements for the operation of a quadricycle, be given third reading.*



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Consent
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10. **APPLICATION BY CITY VANCOUVER ACADEMY INC. FOR A TEMPORARY COMMERCIAL USE PERMIT FOR THE PROPERTY AT UNITS 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 AND 2170 - 8766 MCKIM WAY**

(File Ref. No. TU 20-890760) (REDMS No. 6486096)

CNCL-77

See Page CNCL-77 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

- (1) *That the application by City Vancouver Academy Inc. for a Temporary Commercial Use Permit (TCUP) for the property at Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 McKim Way to permit education use (limited to an independent school offering grades 10 to 12) be considered for one year from the date of issuance; and*
- (2) *That this application be forwarded to the September 8, 2020 Public Hearing at 7:00 p.m. in the Council Chambers of Richmond City Hall.*



CONSIDERATION OF MATTERS REMOVED FROM THE CONSENT AGENDA

NON-CONSENT AGENDA ITEMS

GENERAL PURPOSES COMMITTEE

Mayor Malcolm D. Brodie, Chair

11. **TILBURY PHASE 2 LNG EXPANSION PROJECT**

(File Ref. No. 10-6125-30-010) (REDMS No. 6432227 v. 10)

CNCL-94

See Page CNCL-94 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllr. Loo

- (1) *That Council states its opposition to the Tilbury Phase 2 LNG Expansion Project;*
- (2) *That if the project proceeds, the comments outlined in the staff report titled “Tilbury Phase 2 LNG Expansion Project”, dated June 1, 2020, from the Director, Sustainability and District Energy be endorsed and submitted to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to support the provincial and federal environmental assessments;*
- (3) *That meetings with the appropriate federal and provincial ministers be scheduled;*
- (4) *That copies of the comments and the staff report be sent to our local Members of Parliament and Members of Legislative Assembly; and*
- (5) *That copies of the comments and the staff report be sent to all Mayors of Metro Vancouver municipalities asking for their respective Council’s support.*



12. **SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 5800 NO. 7 ROAD (MAHAL)**
(File Ref. No. 12-8080-12-01) (REDMS No. 6471502 v. 12)

CNCL-102

See Page CNCL-102 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllr. Wolfe

- (1) *That the ‘Soil Use for the Placement of Fill’ application submitted by Paul Mahal (the “Applicant”) proposing to deposit soil on the property located at 5800 No. 7 Road to transition a former cranberry bog to allow for the growing of vegetables and ornamental trees be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City’s current reporting requirements, provided that the fill soil be sourced from Richmond and Delta; and*
- (2) *That the City recommend to the Agricultural Land Commission (ALC) that a further significant performance bond be required.*



13. **OPTIONS FOR A RESIDENTIAL BACKYARD CHICKEN PROGRAM**

(File Ref. No. 12-8000-01) (REDMS No. 6483312)

CNCL-244

See Page CNCL-244 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllrs. Day, Greene, Steves and Wolfe

That “Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²”, as outlined in the staff report titled “Options for a Residential Backyard Chicken Program” from the General Manager, Community Safety, dated June 22, 2020 and allowing the keeping of 2-8 chickens, be approved.



14. **APPLICATION BY IBI GROUP ARCHITECTS TO AMEND SCHEDULE 2.10 OF OFFICIAL COMMUNITY PLAN BYLAW 7100 (CITY CENTRE AREA PLAN) AND REZONE 5740, 5760, AND 5800 MINORU BOULEVARD FROM “INDUSTRIAL RETAIL (IR1)” TO “SCHOOL AND INSTITUTION USE (SI)” AND “HIGH DENSITY MIXED USE AND AFFORDABLE RENTAL HOUSING (ZMU46) – LANSLOWNE VILLAGE (CITY CENTRE)”**

(File Ref. No. RZ 18-807640) (REDMS No. 6401336)

CNCL-260

See Page CNCL-260 for full report

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllr. Greene

(1) *That Official Community Plan Bylaw 7100, Amendment Bylaw 10136, to amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to amend:*

(a) *Section 2.2 “Jobs and Business” and the “Specific Land Use Map: Lansdowne Village”, to encourage office development along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and*

(b) *Section 4.0 “Implementation & Phasing Strategies”, to clarify City Centre Area Plan density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit bonus density to be increased, on a site-specific basis, for rezoning applications that provide additional affordable housing to address community need,*

be introduced and given first reading.

(2) *That Official Community Plan Bylaw 7100, Amendment Bylaw 10137, for amending Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to facilitate the construction of a high-rise, high density, mixed use development, including the designation of a 7 m (23 ft.) wide strip of land along the north side of 5740 Minoru Boulevard as City “Park” and the remainder of 5740, 5760, and 5800 Minoru Boulevard as “Village Centre Bonus” area (to permit an additional 1.0 floor area ratio for office use only), be introduced and given first reading;*

(3) *That Bylaw 10136 and Bylaw 10137, having been considered in conjunction with:*

(a) *the City’s Financial Plan and Capital Program; and*

(b) *the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;*

are hereby found to be consistent with said program and plans, in accordance with Section 477(3)(a) of the Local Government Act;

(4) *That Bylaw 10136 and Bylaw 10137, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation; and*

(5) *That Richmond Zoning Bylaw 8500, Amendment Bylaw 10138, to create the “High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)” zone, and to rezone 5740, 5760, and 5800 Minoru Boulevard from “Industrial Retail (IR1)” to “School and Institution Use (SI)” and “High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)”, be introduced and given first reading.*



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15.	REPORT BACK ON TEMPORARY ROAD CHANGES IN STEVESTON VILLAGE FOR CANADA DAY (File Ref. No.)

CNCL-351

See Page **CNCL-351** for staff memorandum

GENERAL PURPOSES COMMITTEE RECOMMENDATION

Opposed: Cllrs. Greene and Wolfe

That staff continue to monitor pedestrian, cyclist and motorist operations in Steveston Village for crowding and when necessary, report back on the need for temporary road changes to add additional space.

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PUBLIC ANNOUNCEMENTS AND EVENTS

NEW BUSINESS

BYLAWS FOR ADOPTION

CNCL-353

Traffic Bylaw No. 5870 Amendment **Bylaw No. 10184**
Opposed at 1st/2nd/3rd Readings – None.

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CNCL-355

Municipal Ticket Information Authorization Bylaw No. 7321 Amendment
Bylaw No. 10185
Opposed at 1st/2nd/3rd Readings – None.

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- CNCL-356** Richmond Official Community Plan Bylaw 7100 and Bylaw 9000 Amendment **Bylaw No. 9892**
(6551 No. 3 Road, CP 16-752923)
Opposed at 1st Reading – Cllr. Day.
Opposed at 2nd/3rd Readings – Cllrs. Day, Greene and Wolfe.



DEVELOPMENT PERMIT PANEL

16. RECOMMENDATION

See DPP Plan Package (distributed separately) for full hardcopy plans

- CNCL-386** (1) *That the **minutes** of the Development Permit Panel meeting held on June 24, 2020, and the **Chair's report** for the Development Permit Panel meetings held on May 29, 2019, April 29, 2020 and June 24, 2020, be received for information;*
- CNCL-394** (2) *That the recommendations of the Panel to authorize the issuance of:*
 (a) *a Development Permit (DP 17-768248) for the property at 6551 No. 3 Road; and*
 (b) *a Development Permit (DP 19-876699) for the property at 6899 Pearson Way;*
be endorsed, and the Permits so issued; and
- (3) *That the recommendation of the Panel to authorize the approval of changes to the design of the Development Permit (DP 17-782793) issued for the property at 4331 Vanguard Road (formerly 4331 and 4431 Vanguard Road) be endorsed, and the changes be deemed to be in General Compliance with the Permit.*



ADJOURNMENT





Regular Council

Monday, June 22, 2020

Place: Council Chambers
Richmond City Hall

Present: Mayor Malcolm D. Brodie
Councillor Chak Au
Councillor Carol Day (attending via teleconference)
Councillor Kelly Greene (attending via teleconference)
Councillor Alexa Loo (attending via teleconference)
Councillor Bill McNulty (attending via teleconference)
Councillor Linda McPhail (attending via teleconference)
Councillor Harold Steves (attending via teleconference)
Councillor Michael Wolfe (attending via teleconference)

Corporate Officer – Claudia Jesson

Call to Order: Mayor Brodie called the meeting to order at 7:00 p.m.

RES NO. ITEM

MINUTES

R20/12-1 1. It was moved and seconded

That:

- (1) the minutes of the Regular Council meeting held on June 8, 2020, be adopted as circulated; and***
- (2) the minutes of the Special Council meeting held on June 15, 2020, be adopted as circulated.***

CARRIED



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AGENDA ADDITION

R20/12-2

It was moved and seconded

That Steveston Village Accessible Stalls be added to the Council Agenda as Item No. 14A.

CARRIED

Mayor Brodie noted that since no members of the public were present at the meeting, a motion to resolve into Committee of the Whole to hear delegations from the floor on Agenda items and to rise and report (Items No. 2 to 4) would not be necessary.

CONSENT AGENDA

R20/12-3

5. It was moved and seconded

That Items No. 6 through No. 12 be adopted by general consent.

CARRIED

Staff was requested to verify the recorded voting for Item No. 7 of the June 15, 2020 General Purposes Committee minutes.

6. **COMMITTEE MINUTES**

That the minutes of the General Purposes Committee meeting held on June 15, 2020 be received for information.

ADOPTED ON CONSENT



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7. A NEW COASTAL STRATEGY

(File Ref. No. 10-6150-11-03) (REDMS No. 6487379)

- (1) *That Richmond request the BC Government to develop and enact a Coastal Strategy and Law to leverage and coordinate the work of provincial ministries, First nations, local communities, and stakeholders groups to preserve coastal and ocean health, halt coastal habitat loss, accelerate the completion of a network of marine protected areas to benefit fisheries, biodiversity and the economy, set marine environmental quality objectives, and help communities adopt ecosystem –based approaches to manage risk from flooding due to extreme weather events, sea level rise, climate change and ocean acidification; and*
- (2) *That the City of Richmond write a letter of support and requesting action to the Union of British Columbia Municipalities, BC Minister of Environment, Minister of Agriculture, Minister of Indigenous Affairs and Reconciliation, and the Premier of British Columbia in support of a Coastal Protection Strategy.*

ADOPTED ON CONSENT

8. RICHMOND CULTURAL HARMONY PLAN – IMPLEMENTATION OF STRATEGIC DIRECTIONS

(File Ref. No. 08-4055-20-CHAR1) (REDMS No. 6487487)

- (1) *That staff be directed to propose by November 1, 2020 an implementation plan to include timelines, cost estimates, and cultural heritage value for the restoration of the First Nations Bunk House located at the Britannia Heritage Shipyards site being an opportunity pursuant to item #3 of Strategic Direction One of the Richmond Cultural Harmony Plan 2019-2029 report;*
- (2) *That staff be directed to implement item #5 of Strategic Direction Two of the Richmond Cultural Harmony Plan 2019-2029 to:*
 - (a) *pursue programs and funding opportunities provided by senior levels of government regarding cultural harmony initiatives; and*



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- (b) report progress back to General Purposes Committee in 12 months; and*
- (3) That staff be directed to implement item #4 of Strategic Direction Five of the Richmond Cultural Harmony Plan 2019-2029 to*
 - (a) strengthen relationships with various cultural and ethnic communities in order to integrate their arts, cultural and heritage practices into the City's programs and events; and*
 - (b) report progress back to General Purposes Committee in 12 months.*

ADOPTED ON CONSENT

9. **APPLICATION TO REQUEST A FOOD PRIMARY ENTERTAINMENT ENDORSEMENT FOR FOOD PRIMARY LIQUOR LICENCE # 303817 - WC HOTELS LLP (WESTIN WALL CENTRE, VANCOUVER AIRPORT) - 3099 CORVETTE WAY**
(File Ref. No. 12-8275-30-001) (REDMS No. 6463853; 6463875)

- (1) That the application from WC Hotels LLP (Westin Wall Centre, Vancouver Airport), doing business as, The Apron, operating at 3099 Corvette Way, requesting a Food-Primary Patron Participation Entertainment Endorsement to Food-Primary Liquor Licence No. 303817, to enable patrons to dance at the establishment, be supported with;*
 - (a) No change to person capacity currently in place; and*
 - (b) No change to service hours currently in place; and*
- (2) That a letter be sent to the Liquor and Cannabis Regulation Branch, which includes the information attached as Appendix A, advising that Council supports the amendment for a Patron Participation Entertainment Endorsement on Food-Primary Liquor Licence No. 303817 as this request has been determined, following public consultation, to be acceptable in the area and community.*

ADOPTED ON CONSENT



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**10. PROPOSED AMENDMENTS TO TRAFFIC BYLAW NO. 5870 -
ENGINE BRAKE AND CYCLIST CROSSWALK REGULATIONS**

(File Ref. No. 12-8060-20-010184/10185) (REDMS No. 6457707 v. 7; 6459576; 6459287)

- (1) *That Traffic Bylaw No. 5870, Amendment Bylaw No. 10184, to prohibit the use of engine brakes on municipal roads in Richmond and permit cyclists to ride in crosswalks with elephant's feet markings, be introduced and given first, second and third reading;*
- (2) *That Municipal Ticket Information Authorization No. 7321, Amendment Bylaw No. 10185, to assign a fine for the prohibited use of engine brakes on municipal roads in Richmond, be introduced and given first, second and third reading;*
- (3) *That staff be directed to send a letter to the British Columbia Trucking Association advising of the proposed bylaw amendments with respect to the prohibited use of engine brakes; and*
- (4) *That Traffic Bylaw No. 5870, Amendment Bylaw No. 10184 and Municipal Ticket Information Authorization No. 7321, Amendment Bylaw No. 10185 be reviewed in 12 months' time.*

ADOPTED ON CONSENT

11. PHOENIX NET LOFT PUBLIC CONSULTATION PROCESS

(File Ref. No. 11-7000-01; 06-2052-25-PNET1) (REDMS No. 6445923 v. 2)

- (1) *That staff be authorized to proceed with Phase One of the Phoenix Net Loft Public Consultation Process as described in the staff report titled "Phoenix Net Loft Public Consultation Process", dated May 22, 2020, from the Director, Arts, Culture and Heritage Services; and*
- (2) *That staff add the Steveston Community Society, Richmond School District No. 38, the Richmond Seniors Advisory Committee, the Richmond Centre for Disability, youth groups, and the Musqueam First Nation to the primary list of stakeholders in the consultation process.*

ADOPTED ON CONSENT



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12. PHOENIX NET LOFT DECONSTRUCTION AND SALVAGE

(File Ref. No. 06-2052-25-PNET1) (REDMS No. 6469794 v. 12)

That staff be authorized to proceed with the deconstruction and salvage of heritage elements of the Phoenix Net Loft as described under Option 1 on Page 3, in the staff report titled “Phoenix Net Loft Deconstruction and Salvage”, dated May 21, 2020, from the Director, Facilities and Project Development.

ADOPTED ON CONSENT

NON-CONSENT AGENDA ITEMS

GENERAL PURPOSES COMMITTEE

Mayor Malcolm D. Brodie, Chair

In accordance with Section 100 of the *Community Charter*, Cllr. Au declared to be in a conflict of interest as a family member is a potential buyer of a unit from the proposed development at 3399 Corvette Way and 3311 and 3331 No. 3 Road, and Cllr. Au left the meeting – 7:42 p.m.

13. APPLICATION BY YUANHENG SEASIDE DEVELOPMENTS LTD./YUANHENG SEAVIEW DEVELOPMENTS LTD. FOR A ZONING TEXT AMENDMENT TO THE “RESIDENTIAL/LIMITED COMMERCIAL AND COMMUNITY AMENITY (ZMU30) – CAPSTAN VILLAGE (CITY CENTRE)” ZONE AT 3399 CORVETTE WAY AND 3311 & 3331 NO. 3 ROAD

(File Ref. No. 12-8060-20-010189; ZT 19-872212) (REDMS No. 6466184 v. 3; 6473159)

R20/12-4

It was moved and seconded

- (1) *That Richmond Zoning Bylaw 8500, Amendment Bylaw 10189, for a Zoning Text Amendment to the “Residential/Limited Commercial and Community Amenity (ZMU30) – Capstan Village (City Centre)” zone, a site-specific zone applicable at 3399 Corvette Way and 3311 & 3331 No. 3 Road, to:*



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- (a) *increase the maximum number of permitted dwelling units from 850 to 941 (without any increase in total residential floor area); and*
 - (b) *relocate 964 m² (10,371 ft²) of permitted (unbuilt) floor area from the development's first phase at 3331 No. 3 Road to its second phase at 3311 No. 3 Road and third phase at 3399 Corvette Way;*
- be introduced and given first reading; and*
- (2) *That the terms of the voluntary developer community amenity contribution secured through the original rezoning of 3399 Corvette Way and 3311 & 3331 No. 3 Road (RZ 12-603040) be amended to permit the completion of the proposed City Centre North Community Centre, at 3311 No. 3 Road, be deferred from December 31, 2021 to December 31, 2023.*

The question on the motion was not called as in reply to queries from Council, staff noted that (i) there will be an increase in open space, (ii) the revised design of the proposed community centre allows for increased solar access to rooms, and (iii) an increased cash contribution will be provided by the developer to offset city costs for construction and offset costs for furniture, fixtures and equipment for the community centre.

The question on the motion was then called and it was **CARRIED** with Cllr. Wolfe opposed.

Cllr. Au returned to the meeting – 7:47 p.m.



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14. POTENTIAL TEMPORARY ROAD CHANGES IN STEVESTON VILLAGE

(File Ref. No. 10-6360-06-01) (REDMS No. 6475103)

R20/12-5

It was moved and seconded

That pedestrian, cyclist and motorist operations continue to be monitored in the Steveston Village for crowding and physical distancing issues and staff report back to Council on the need for any temporary measures to add additional space for pedestrians and cyclists, should the traffic volume of these modes consistently exceed the capacity of existing infrastructure.

The question on the motion was not called as in response to queries from Council, staff noted that (i) the speed limit on Bayview Street and Moncton Street is 30km/h, (ii) closing of streets is feasible at any time, (iii) more support was expressed for weekend closures from businesses in the Steveston Village area, (iv) implementation of a car-free day is feasible at Council direction, and (v) a staff memorandum will be provided to Council with regard to bus behaviour along Chatham Street.

Discussion took place on the benefits of closing streets in Steveston Village on July 1, 2020, such as Moncton Street and Bayview Street.

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

R20/12-6

It was moved and seconded

- (1) *That staff be directed to explore and implement a car-free day on July 1, 2020 from morning until evening, which would provide for closing of Moncton Street and one way access on Bayview Street;*
- (2) *That staff communicate any action to appropriate stakeholders; and*
- (3) *That staff report back at the General Purposes Committee meeting on July 6, 2020.*

CARRIED

Direction was provided to staff to examine and consider best routes to access parking lots in Steveston Village.



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The question on the main motion, as amended, which reads as follows:

- (1) *That pedestrian, cyclist and motorist operations continue to be monitored in the Steveston Village for crowding and physical distancing issues and staff report back to Council on the need for any temporary measures to add additional space for pedestrians and cyclists, should the traffic volume of these modes consistently exceed the capacity of existing infrastructure;*
- (2) *That staff be directed to explore and implement a car-free day on July 1, 2020 from morning until evening, which would provide for closing of Moncton Street and one way access on Bayview Street;*
- (3) *That staff communicate any action to appropriate stakeholders; and*
- (4) *That staff report back at the General Purposes Committee meeting on July 6, 2020.*

was then called and it was **CARRIED**.

14A. STEVESTON VILLAGE ACCESSIBLE STALLS

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

R20/12-7

It was moved and seconded

That staff be directed to review accessible street and city-owned parking spaces in Steveston Village and provide recommendations for improvement.

CARRIED

FINANCE COMMITTEE

Mayor Malcolm D. Brodie, Chair

15. 2019 CITY ANNUAL REPORT AND 2019 ANNUAL REPORT HIGHLIGHTS

(File Ref. No. 03-0905-01) (REDMS No. 6464975)

R20/12-8

It was moved and seconded

That the reports titled "2019 Annual Report and 2019 Annual Report – Highlights" be approved.

CARRIED



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DEVELOPMENT PERMIT PANEL

- R20/12-9 16. It was moved and seconded
- (1) *That the minutes of the Development Permit Panel meeting held on June 10, 2020 and the Chair's report for the Development Permit Panel meeting held on May 13, 2020, be received for information; and*
 - (2) *That the recommendation of the Panel to authorize the approval of changes to the design of the Development Permit (DP 16-740262) issued for the property at 5333 No. 3 Road (formerly 7960 Alderbridge Way and 5333 & 5411 No. 3 Road) be endorsed, and the changes be deemed to be in General Compliance with the Permit.*

CARRIED

ADJOURNMENT

- R20/12-10 It was moved and seconded
That the meeting adjourn (8:38 p.m.).

CARRIED

Certified a true and correct copy of the Minutes of the Regular meeting of the Council of the City of Richmond held on Monday, June 22, 2020.

Mayor (Malcolm D. Brodie)

Corporate Officer (Claudia Jesson)

For Metro Vancouver meetings on Friday, May 29, 2020

Please note these are not the official minutes. Board in Brief is an informal summary. Material relating to any of the following items is available on request from Metro Vancouver. For more information, please contact:

Greg.Valou@metrovancover.org.

Metro Vancouver Regional District**E 1.1 Updating the Regional Growth Strategy: A Proposed Response in Light of COVID-19 APPROVED**

This report presented a revised approach to Metro 2050 in light of the COVID-19 pandemic response that would include continuing technical aspects of the Metro 2040 Policy Reviews, leveraging the completed Long Range Growth and Transportation Scenarios to develop a resiliency lens, furthering integration with Transport 2050 and Climate 2050, and the redeployment of staff to support pandemic response efforts in terms of data and research.

Engagement with members and stakeholders and decisions on policy recommendations would be postponed until there is capacity to re-engage. Staff will check in monthly with member jurisdictions and other audiences to assess whether they are ready to re-engage. Some forms of information provision and online engagement directed at the public can continue.

The Board endorsed the process for updating Metro Vancouver 2040 as presented in the report.

E 1.2 Metro Vancouver 2040: Shaping our Future Amendment Request from the City of Delta – 9568 Burns Drive APPROVED

City of Delta Council has requested that the regional land use designation for the site at 9568 Burns Drive be amended from Agricultural to Rural in the regional growth strategy to permit the construction of a drive-through restaurant and a three-storey self-storage facility with office use.

The Board determined that the proposed amendment to the regional land use designation from Agricultural to Rural for the site at 9568 Burns Drive is not required and directed staff to notify the City of Delta that the rezoning does not require a Metro 2040 regional land use designation amendment or a Regional Context Statement amendment.

E 1.3 2020 Agriculture Awareness Grant Recommendations APPROVED

The Board awarded the annual Agriculture Awareness Grants for a total amount of \$45,000 to the following twelve organizations. In the event that grant recipients are unable to deliver their programs in 2020 due to restrictions related to COVID-19, they will be allowed to use the funding in 2021.

- BC Agriculture in the Classroom Foundation, for the “Take a Bite of BC” project in the amount of \$5,000
- BC Association of Farmers' Markets, for the “Metro Vancouver Expansion: BC Farmers Market Trail” in the amount of \$5,000
- BC Chicken Growers' Association, for the “Poultry in Motion Educational Mini Barn” project in the amount of \$4,000

- DRS Earthwise Society, for the “Tomato Festival” in the amount of \$2,500
- Fraser Valley Farm Direct Marketing Association, for “Revitalizing BC Farm Fresh for Today’s Farm-Direct Customers” in the amount of \$4,000
- Growing Chefs Society, for “Metro Vancouver Classroom Gardening and Cooking Program” in the amount of \$4,000
- Haney Farmers Market Society, for the “Two Bite Club” project in the amount of \$2,000
- Kwantlen Polytechnic University Foundation, for “Farm School Knowledge Mobilization with First Nations” for the amount of \$4,000
- Langley Environmental Partners Society, for the “Langley Eats Local” project in the amount of \$5,000
- North Shore Neighbourhood House, for “Edible Garden Seed Saving Project” in the amount of \$5,000
- Richmond Food Security Society, for the “Groundswell – Building Awareness” project in the amount of \$3,100
- The Renfrew-Collingwood Food Security Institute for the “Harvest, Cook, Connect: Linking Newcomer Farmers & Consumers” in the amount of \$1,400

E 1.4 Metro Vancouver 2040: Shaping our Future - 2019 Procedural Report**RECEIVED**

The Board received for information a report that documents the staffing and resources required to implement, administer and amend the regional growth strategy, and provides an annual procedural report on the operational performance of the Regional Planning Division.

E 1.5 Metro 2040 Implementation Policy Review: Scope of Work**RECEIVED**

The purpose of the Metro 2040 Implementation Policy Review is to explore and identify the challenges and opportunities to enhance the regional growth strategy, taking into account the knowledge and experience gained from administering, implementing, and amending Metro 2040 since its adoption in 2011, as well as policy research, best practices, and input from member jurisdictions. The identified enhancements will be brought forward as recommendations for the update of the regional growth strategy over the 2021-2022 period. The Board received the report for information.

E 1.6 Housing Agreement Implementation Workshop and Resource Guide**RECEIVED**

On January 30, 2020, Regional Planning hosted a Housing Agreement Implementation Workshop, as an opportunity for housing planners and other key stakeholders in the region to learn more about entering into, administering and enforcing Housing Agreements. The workshop offered an overview of a new Resource Guide developed by Metro Vancouver in partnership with BC Housing titled What Works: Securing Affordable and Special Needs Housing through Housing Agreements. A synopsis of the workshop and Resource Guide are included in this report. The Board received the report for information.

E 2.1 Audited 2019 Financial Statements**APPROVED**

Although there is unprecedented uncertainty due to COVID-19, the 2019 Audited Financial Statements illustrate that Metro Vancouver entered this period in a strong financial position with excellent liquidity and solid reserves following the Board policy. The statements have been prepared in accordance with Canadian Public Sector Accounting Standards and have received an unqualified audit opinion by the external auditors, BDO Canada LLP. As noted in the Auditors' Report, it is the Auditors' opinion that these Financial Statements present fairly the financial position of the Metro Vancouver Districts and the Metro Vancouver Housing Corporation as of December 31, 2019, and the results of their financial activities and changes in their financial position for the year then ended in accordance with Canadian public sector accounting standards.

The Board approved the Audited 2019 Consolidated Financial Statements for the Metro Vancouver Regional District.

E 2.2 2019 Financial Results Year-End**RECEIVED**

The Board received for information the third and final financial performance report for 2019, containing the results for the year as compared to the annual budget. The final overall operational results for 2019 for Metro Vancouver's functions is a net surplus of close to \$21.3 million on an approved budget of \$836.4 million or slightly more than 2.5% of the budget. The results were positive for most functions with surpluses used to avoid debt or fund other projects.

E 3.1 Tynehead Regional Park - Ministry of Transportation and Infrastructure Licence of Use Agreement**APPROVED**

The Ministry of Transportation and Infrastructure (MOTI) is interested in funding forest ecosystem restoration within Tynehead Regional Park as habitat compensation for one of their infrastructure projects and requires a licence agreement in order to implement. A Licence Agreement will allow MOTI to improve the ecological condition of 4.94 hectares of regional parkland by removing invasive plants and restoring with native vegetation. The agreement would be in place from August 1, 2020 until July 31, 2032, allowing two years for preparation and installation, and ten years of monitoring and maintenance.

The Board approved the Tynehead Regional Park Licence of Use Agreement between MVRD and MOTI for a 12-year term, commencing August 1, 2020 and authorized the Director, Properties on behalf of Metro Vancouver, to enter into, execute and deliver the agreement.

E 4.1 Greater Vancouver Regional Fund Annual Report as of December 31, 2019**RECEIVED**

TransLink has submitted an annual report containing historical information on active projects funded with federal gas tax funds through the Greater Vancouver Regional Fund (GVRF) as of December 31, 2019.

TransLink has successfully delivered the majority of the projects on or ahead of schedule with positive cost variances. Three projects are noted as experiencing delays exceeding three months. Approximately \$1.74 billion in GVRF funds is anticipated to contribute to the capital investments identified in the 2018 Phase

Two Investment Plan for the period 2018 to 2027. Assuming a renewal of the federal gas tax transfers in 2024, TransLink forecasts a GVRF balance of approximately \$255 million in 2027.

The Board received the report for information.

E 5.1 Low Carbon Economic Stimulus Funding in Response to COVID-19**APPROVED**

The Board resolved to write letters to the provincial Minister of Environment and Climate Change Strategy, the federal Minister of Environment and Climate Change, and other appropriate government agencies to call for economic stimulus funding to be directed to low carbon initiatives, and to forward copies of each letter to member jurisdictions for information.

G 1.1 Amendments to GVRD Air Quality Management Bylaw No. 1082, 2008**APPROVED**

This report brings forward housekeeping amendments to Metro Vancouver's main air quality management bylaw (Bylaw 1082), arising as a consequence of the Board's adoption of the Residential Indoor Wood Burning Emission Regulation Bylaw on March 27, 2020. The proposed amendments include changes to reflect the definitions included in the new residential wood burning bylaw, and a change to reference the more detailed requirements with respect to the control of emissions from residential indoor wood burning.

The Board gave first, second and third readings to the amending bylaw, then passed and finally adopted it.

I 1 Committee Information Items & Delegation Summaries**RECEIVED**

The Board received information items and a delegation summary from Standing Committees.

Regional Planning Committee – May 1, 2020

Information Items:

5.5 Social Equity in Regional Growth Management Phase 2 Study – Project Initiation

The Social Equity in Regional Growth Management study is a two-year project aimed at developing a better understanding of how social equity can and should be considered in Metro Vancouver's long-range regional growth management policy planning. In 2019, the study focused on understanding how other jurisdictions are considering this topic and the gaps in Metro Vancouver's policies. The second phase, which is set to commence in the spring of 2020, will focus on data gathering, stakeholder engagement, and the development of recommendations for the development of an equity lens for Metro 2050, the update to the regional growth strategy.

5.7 Metro 2040 Rural Policy Review – Scope of Work

This report outlines the scope of the Metro 2040 Rural Policy Review including the questions and process for receiving feedback on the Rural land use designation and policies in Strategy 1.3 of Metro 2040. Staff will be seeking input from members of the Regional Planning Advisory Committee regarding potential

changes to the policies of Strategy 1.3. A key issue to resolve is developing a common definition of “rural use”.

5.8 Metro 2040 Housing Policy Review – Discussion Paper

To support the development of Metro 2050, staff are reviewing the existing policies of Metro 2040 to identify opportunities to enhance the goals, strategies, and policy actions it contains. The key considerations from the Metro 2040 Housing Policy Review Discussion Paper, the completion of which is a key milestone in Phase 1 of the Policy Review, are summarized in this report. The Metro 2040 Housing Policy Review is one of several thematic policy reviews being undertaken to inform Metro 2050, the update to the regional growth strategy. The next steps in the Metro 2040 Housing Policy Review include a Housing Policy Forum, the inputs from which will be used to develop policy options for Regional Planning Committee members to consider in Phase 3 of the policy review process.

Performance and Audit Committee – May 6, 2020

Information Items:

5.1 Metro Vancouver Final Report

Under provincial legislation, an external audit must be undertaken annually for all Metro Vancouver Districts and the Housing Corporation. The attached report, prepared by Metro Vancouver’s external auditors, BDO Canada LLP Chartered Accountants, summarizes the results of the annual audit for fiscal year 2019.

5.6 Capital Program Expenditure Update as at December 31, 2019

In 2019 Metro Vancouver’s Capital expenditures were approximately 78.5% of budgeted and were underspent by \$201.3 million. The majority of the capital program relates to Liquid Waste, Solid Waste, and Water with the underspending due primarily to the timing of expenditures differing from expectations with delays experienced in projects in the early stages of completion. The underspending in the 2019 Capital Budget resulted in a realization of a surplus in capital funding of \$10.3 million. This surplus, per policy, will be used in future years to fund capital and avoid debt.

5.7 Investment Position and Returns – September 1, 2019 to March 31, 2020

The annualized return for Metro Vancouver’s investment portfolio for 2019 was 2.78% or (2.57% including cash) for Short-Term, 2.42% for Long-Term and 2.70% for the Cultural Reserve Fund. Total investment income for 2019 was \$21.5 million on an average portfolio balance of \$849.5 million. Investment performance has met expectations for the current period. Due to the delay in the committee meeting, results and balance information have been included through March 31, 2020. Going forward, the overall rate of return is expected to decline notably in the next several months due to the current low yield environment as a result of the COVID 19 pandemic, and a significant portion of the portfolio being placed in short-term products and held in cash for liquidity.

5.8 Tender/Contract Award Information – December 2019 to February 2020

During the period December 1, 2019 and February 29, 2020, the Purchasing and Risk Management Division issued seventeen new contracts, each with a value in excess of \$500,000 (exclusive of taxes). In addition, there were seven existing contracts requiring contract amendments which necessitate further reporting to the Performance and Audit Committee.

Staff have inserted Supplementation General Conditions into existing competitions which identify the present and future challenges resulting from COVID-19 and seek to obtain assurances from the bidding community of their commitment to completing projects on time and on budget under these challenges. Meanwhile, Purchasing and Risk Management continue to seek process improvements through the implementation of an e-bidding solution which will result in better compliance and significant reduction in award processing time.

Regional Parks Committee – May 13, 2020

Information Items:

5.2 Regional Parks 2019 Annual Report

This report provides an overview of Regional Parks visitor and facility use, programming, volunteering, and activities in 2019. The annual report will be used to support ongoing park planning by MVRD and local municipalities for capital planning, future facility development, program delivery, and resource management activities. In 2019, eleven regional parks and two regional greenways saw record levels of visitation, and total visitation increased to 11,935,000. More than 1,000 public programs, events and outreach activities inspired nearly 62,000 people, and close to 7,250 volunteers and park partners contributed over 22,000 hours to stewardship, education and interpretive programs. Over 80 hectares of new park land was added to the regional parks system.

Climate Action Committee – May 15, 2020

Delegation Summary:

3.1 Isaac Beevor and Katelyn Maki, Force of Nature Alliance

Information Items:

5.1 Adapting Air Quality and Climate Change Engagement During COVID-19

Metro Vancouver continues to assess work plans on a case by case basis to determine if the COVID-19 pandemic response requires adjustments to any work plans, including engagement components. For air quality and climate change programs and initiatives, this means continuing with work plans that protect human health and the environment, but adjusting the approach to engagement.

Metro Vancouver is continuing to seek feedback on a series of Clean Air Plan and Climate 2050 Discussion Papers. Goals and targets in Metro Vancouver's climate-related plans are science-based, and interim targets have a time horizon of less than ten years, so taking action now to avoid the worst impacts of climate change remains a priority. Staff are committed to meeting the timelines set out in the Committee's work plan for Climate 2050 roadmap development, but with revised engagement plans and methods, and recognition of the varied circumstances for different audiences. Metro Vancouver is also revising engagement plans for regulatory development and other initiatives to align with the COVID-19 pandemic response.

5.4 Clean Air Plan and Climate 2050 Discussion Paper on Agriculture

Metro Vancouver is developing the Clean Air Plan to identify actions to reduce emissions of air contaminants, including greenhouse gases, in our region over the next 10 years. Metro Vancouver is also implementing Climate 2050, a long-term strategy to achieve a carbon neutral and resilient region over the next 30 years. A series of issue area discussion papers are being developed to support an integrated

engagement process for the Clean Air Plan and Climate 2050. The draft discussion paper on the agriculture issue area has been prepared and identifies goals and example actions for this source of air contaminants and greenhouse gases in our region, as well as hazards, metrics, and example actions for climate adaptation. Feedback from the public, stakeholders, and other governments will support the development of the Clean Air Plan and the Climate 2050 Roadmaps.

5.5 Climate 2050 and Clean Air Plan Discussion Paper on Nature and Ecosystems

Metro Vancouver is implementing Climate 2050, a long-term strategy to achieve a carbon neutral and resilient region over the next 30 years. Metro Vancouver is also developing the Clean Air Plan to identify actions to reduce emissions of air contaminants, including greenhouse gases, in our region over the next 10 years. A series of issue area discussion papers are being developed, to support the engagement processes for Climate 2050, Metro 2050 and the Clean Air Plan.

The draft discussion paper presented here on the nature and ecosystems issue area identifies goals, hazards, and example targets and actions for climate change mitigation and adaptation. Feedback from the public, stakeholders, and other governments will support the development of the Climate 2050 Roadmaps, Metro 2050 and the Clean Air Plan.

Greater Vancouver Water District

E 1.1 Award of Detailed Design Services, Cape Horn Section Resulting from RFP No. 18-101: Coquitlam Main No. 4 – South and Cape Horn Sections – Detailed Design, Construction and Commissioning Consulting Services **APPROVED**

Coquitlam Main No. 4, consisting of the Central, South and Cape Horn Sections, will provide additional capacity from Coquitlam Lake and needs to be constructed and commissioned by 2026 to avoid impacting delivery of water to the southern and eastern areas of Metro Vancouver.

Detailed Design Services for the South Section was awarded to CH2M Hill Canada Limited (CH2M Hill) in September 2018. Metro Vancouver has been working with the Cities of Coquitlam and Port Coquitlam on finalizing the water main alignment, which has now been agreed to by both cities.

The Board approved the award of a contract for an amount of up to \$5,305,075 (exclusive of taxes) to CH2M Hill Canada Limited for Detailed Design for Coquitlam Main No. 4 – Cape Horn Section, subject to final review by the Commissioner; and authorized the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

E 1.2 Award of Phase C - Construction Engineering Services for the Annacis Water Supply Tunnel **APPROVED**

At its March 5, 2020 meeting, the Water Committee considered the report titled “Award of Phase C - Construction Engineering Services for the Annacis Water Supply Tunnel” dated February 26, 2020 and approved the report’s recommendation. The report was scheduled to be presented to the GVWD Board at

its March 27, 2020 meeting, but was withdrawn due to uncertainty about proceeding with large capital projects during the COVID-19 pandemic. Staff brought the report back through the Water Committee and Board.

The Board approved the award of Phase C, Construction Engineering Services in the amount up to \$17,881,271 (exclusive of taxes) to the Phase A and B project consultant, Hatch Corporation, for the Annacis Water Supply Tunnel (Request for Proposal No. 15-127), subject to final review by the Commissioner; and authorize the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

E 2.1 Audited 2019 Financial Statements

APPROVED

Although there is unprecedented uncertainty due to COVID-19, the 2019 Audited Financial Statements illustrate that Metro Vancouver entered this period in strong financial position with excellent liquidity and solid reserves following the Board policy. The statements have been prepared in accordance with Canadian Public Sector Accounting Standards and have received an unqualified audit opinion by the external auditors, BDO Canada LLP. As noted in the Auditors' Report, it is the Auditors' opinion that these Financial Statements present fairly the financial position of the Metro Vancouver Districts and the Metro Vancouver Housing Corporation as of December 31, 2019, and the results of their financial activities and changes in their financial position for the year then ended in accordance with Canadian public sector accounting standards. The Board approved the Audited 2019 Financial Statements for the Greater Vancouver Water District.

E 1.1 Committee Information Items

RECEIVED

The Board received information items from the Water Committee.

Water Committee – April 30, 2020

Information Items:

5.1 GVWD 2019 Water Quality Annual Report

For 2019, the Capilano, Seymour, and Coquitlam reservoirs were continually in service and provided excellent quality source water. Performance at the Seymour Capilano Filtration Plant and Coquitlam Water Treatment Plant was excellent with no primary disinfection interruptions. Bacteriological water quality was excellent in the GVWD transmission mains and in system reservoirs with secondary disinfection stations boosting chlorine as required. No E. coli was detected and disinfection by-products were below allowable concentrations. Both plants met or exceeded all Operating Permit criteria and water quality throughout the GVWD system met or exceeded the Guidelines for Canadian Drinking Water Quality requirements.

5.2 Water Supply Forecast and Water Consumption Update for Summer 2020

This report summarizes the current state of source water supply and trends in water use and reflects current plans for operating the source reservoirs and water system this summer and fall. The existing snowpack, overall precipitation in the form of rainfall, and expected full source lake storage will be sufficient to ensure adequate water supply for the 2020 summer season. Peak day and winter water use continue to decrease while average day water use is starting to stabilize, indicating the importance of continued conservation

initiatives. Recent system improvements have increased the capacity of the transmission system to meet peak summer demands.

5.3 Water Services Capital Program Expenditure Update to December 31, 2019

The capital expenditure reporting process as approved by the Board provides for regular status reports on capital expenditures 3 times per year. This is the year-end report for 2019 which includes both the overall capital program for Water Services with a multi-year view of capital projects and the actual capital spending for the 2019 fiscal year in comparison to the annual budget. In 2019, annual capital expenditures for Water Services were \$243.5 million compared to a capital budget of \$231.4 million. This difference has been funded through the application of accumulated surplus from capital underspends from prior years. Forecasted expenditures for the current Water Services capital program remain within the approved budgets through to completion.

5.5 2020 Water Regulations Communications and Regional Water Conservation Campaign

Metro Vancouver undertakes several communications initiatives to support water conservation. Metro Vancouver communicated the May 1 watering regulations activation date via advertising and social media engagement across the region, and through a range of promotions and items distributed to members for public education and enforcement throughout the irrigation season. The 'We Love Water' regional water conservation campaign began May 19, with a mix of television, radio, outdoor, and digital advertising, and emphasizes water resource education as well as conservation messaging in the warmer and drier summer months. Creative materials and collateral were shared with members so they can support the campaign through their own communications channels.

Greater Vancouver Sewage and Drainage District

E 1.1 Audited 2019 Financial Statements

APPROVED

Although there is unprecedented uncertainty due to COVID-19, the 2019 Audited Financial Statements illustrate that Metro Vancouver entered this period in a strong financial position with excellent liquidity and solid reserves following the Board policy. The statements have been prepared in accordance with Canadian Public Sector Accounting Standards and have received an unqualified audit opinion by the external auditors, BDO Canada LLP. As noted in the Auditors' Report, it is the Auditors' opinion that these Financial Statements present fairly the financial position of the Metro Vancouver Districts and the Metro Vancouver Housing Corporation as of December 31, 2019, and the results of their financial activities and changes in their financial position for the year then ended in accordance with Canadian public sector accounting standards.

The Board approved the Audited 2019 Financial Statements for the Greater Vancouver Sewerage and Drainage District.

E 2.1 Liquid Waste Services Capital Program Expenditure Update as at December 31, 2019

RECEIVED

This report is the final of three capital expenditure progress reports for 2019. Liquid Waste Services underspent its annual Capital Budget by \$147.2 million. The variance is primarily due to delays to construction of two major projects and obtaining third party approvals in a timely manner. Although the

2019 Liquid Waste Services Capital Budget shows a year-end underspend, the variance is a result of cash flow timing. It is projected that in aggregate, ongoing capital projects will be close to or less than the overall budget for that project. Any surplus resulting from a 2019 underspend is used to directly fund capital in 2020 and avoid future borrowing. The Board received the report for information.

E 3.1 COVID–19 Update: Solid Waste Services

RECEIVED

Solid Waste Services is monitoring and responding to COVID-19 developments and impacts on the regional solid waste system and Metro Vancouver's solid waste facilities. Currently, the regional system is operating at near full-service levels with minor adjustments. April waste disposal tonnage was approximately 10% less than April 2019. Total solid waste facility visits are up approximately 10% as a result of increased small vehicle traffic. Metro Vancouver is engaging with member municipalities and other waste and recycling stakeholders on operational updates, communications to the public, and contingency plans resulting from the COVID-19 pandemic. A number of these initiatives have been undertaken.

G 1.1 Greater Vancouver Sewerage and Drainage District Development Cost Charge Reserve Fund Expenditure Bylaw No. 339, 2020

APPROVED

Utilization of Development Cost Charge's are required to be approved by the GVS&DD Board by bylaw.

The Board gave first, second and third readings to Greater Vancouver Sewerage and Drainage District Development Cost Charge Reserve Fund Expenditure Bylaw No. 339, 2020, then passed and finally adopted said bylaw.

I 1.1 Committee Information Items

RECEIVED

The Board received information items from Standing Committees.

Performance and Audit Committee – May 6, 2020

Information Items:

5.4 Semi-Annual Report on GVS&DD Development Cost Charges

In 2019, Metro Vancouver collected a total of \$60.2 million in GVS&DD Development Cost Charges (DCCs), up from \$32.1 million in 2018. This is due primarily to the rate increase which came fully into effect in May of 2019. Affordable housing development DCC waivers were approved in 2019 for a total of 946 units representing \$1.5 million in forgone revenue. Total DCCs held in reserve at December 31, 2019 was \$227.5 million.

Liquid Waste Committee – May 14, 2020

Information Items:

5.3 2020 Regional Unflushables Campaign – Update

The COVID-19 health restrictions have necessitated a rethinking of campaign approaches and timing. The campaign was originally planned to start in May, but the current increased purchasing of wipes and likely flushing of wipes and other items means that campaign messaging will be most effective now. While planned out-of-home elements (cinema, events, posters in washrooms and other locations, etc.) are currently less suitable options, there is an increased opportunity to reach people in their homes. Moving up the campaign's start date, focusing on TV/digital channels and highlighting wipes messaging allows the campaign to better reach residents and respond to current needs.

Zero Waste Committee – May 15, 2020

Information Items:

5.2 Solid Waste Services Capital Program Expenditure Update as of December 31, 2019

This is the third in a series of three capital expenditure progress reports for 2019. Solid Waste Services is underspent in its annual Capital Budget by \$57.6 million. The variance is primarily due to timing of construction expenditures for projects in progress. Although the 2019 Solid Waste Services Capital Budget shows a year-end underspend, the variance is a result of cash flow timing. It is projected that in aggregate, ongoing capital projects are monitored to ensure they remain within total project budgets. Any surplus resulting from a 2019 underspend is used to directly fund capital in 2020 and avoid future borrowing.

5.3 2019 and 2020 Food Scraps Recycling Campaign Results

The 2019 and 2020 "Food Scraps Aren't Garbage" campaigns performed strongly, contributing to an increase in reported green bin use among residents in the region (now at 91%). While adoption of the program is high, updates were made to the well-known googly-eyed food face characters based on research findings that found some confusion around what is avoidable food waste as opposed to food scraps. New tactics were added and the website was updated, including information to help people better understand why we compost, alleviating confusion and providing the more specific info that residents seek. Analyzing social media data (e.g. from the "Green Bin Q&A") illustrated what the pain points are for residents. These learnings, among others, will inform future iterations of the FSR campaign. The food scraps recycling campaign continued in fall 2019 and winter 2020. The media strategy included both broad reach and targeted digital tactics, and delivered over 75 million impressions. Overall, 91% of residents now say they typically dispose of organic waste into the green bin. 30% of residents recall seeing or hearing the campaign advertising, which is the highest awareness level achieved since 2014. 36% of residents who saw the advertising message shared it with others.

Metro Vancouver Housing Corporation

1.1 Audited 2019 Financial Statements

APPROVED

Although there is unprecedented uncertainty due to COVID-19, the 2019 Audited Financial Statements illustrate that Metro Vancouver entered this period in a strong financial position with excellent liquidity and solid reserves following the Board policy. The statements have been prepared in accordance with Canadian Public Sector Accounting Standards and have received an unqualified audit opinion by the external auditors, BDO Canada LLP. As noted in the Auditors' Report, it is the Auditors' opinion that these Financial Statements present fairly the financial position of the Metro Vancouver Districts and the Metro Vancouver Housing

Corporation as of December 31, 2019, and the results of their financial activities and changes in their financial position for the year then ended in accordance with Canadian public sector accounting standards.

The Board approved the Audited 2019 Financial Statements for the Metro Vancouver Housing Corporation.

For Metro Vancouver meetings on Friday, July 3, 2020

Please note these are not the official minutes. Board in Brief is an informal summary. Material relating to any of the following items is available on request from Metro Vancouver. For more information, please contact:

Don.Bradley@metrovancouver.org.

Metro Vancouver Regional District**E 1.1 Electoral Area A Reserve Funds – Use of Discretionary Reserves****RECEIVED**

This report explores the possibility of using the Electoral Area A Discretionary Reserves, which stand at \$1.8 million, as additional revenue sources to reduce the need for revenue from tax requisition. In addition to continuing to provide funding for one-time projects, these reserves can be used to smooth future increases to the Electoral Area A property tax levy, and to act as a buffer in the event of future governance changes at the UEL or UBC, which could result in a substantial loss of the Electoral Area's tax base. Maintaining sufficient Discretionary Reserves would allow time to transition the Electoral Area Services function to a smaller tax base if this were to occur.

The Board received the report for information and directed staff to consider maintaining sufficient Electoral Area A Discretionary Reserves to fund the Electoral Area Services function for a minimum of three years as part of the preparation of the Electoral Area Services five-year financial plan.

E 2.1 Metro Vancouver Regional Industrial Lands Strategy – Revised for Approval**APPROVED**

The Regional Industrial Lands Strategy has been revised to add further reference that solutions to the shortage of industrial lands do not include encroachment onto agricultural lands, and to remove reference to the exploration of a provincial industrial land reserve. Additional minor and non-substantive edits were made for clarity.

The Board approved the revised Metro Vancouver Regional Industrial Lands Strategy as presented and will forward it to member jurisdictions and non-voting Industrial Lands Strategy Task Force member agencies, as well as Squamish-Lillooet Regional District, Fraser Valley Regional District, Vancouver Airport Authority, and Commercial Real Estate Development Association, requesting endorsement and seeking implementation collaboration opportunities.

Additionally, the Board passed a motion directing staff to continue to explore the feasibility of an Industrial Land Reserve and other potential policy measures and initiatives, and report back the findings to a future board meeting.

E 3.1 Food Flows in Metro Vancouver: Study Results**RECEIVED**

This report summarizes a recent study describing the food commodities that are transported across regional district boundaries. The study looks at international imports and exports through the Port of Vancouver, U.S. border and YVR air cargo, as well as interprovincial food flows and the overall BC food supply.

Metro Vancouver is a food distribution hub for the province with approximately 78% of the total provincial food supply crossing regional boundaries. While 40% percent of the BC food supply is from international imports, it was estimated that 35% is sourced from within the province and only 14% of the Metro Vancouver food supply is sourced within the region. This study will inform other work related to food distribution, regional planning and emergency management.

The Board received the report for information.

E 3.2 Update on TransLink's Land Value Capture Study and Opportunities for Transit-Oriented Affordable Housing

APPROVED

The Board resolved to send a letter to the TransLink Board expressing support for the Land Value Capture Study's recommendation that TransLink prepare a statement of objectives for affordable housing that considers an increased role in supporting transit-oriented affordable housing.

E 4.1 2019 Statement of Financial Information

APPROVED

The Financial Information Act is provincial legislation that requires local governments to annually prepare and submit to the Board for approval a report called the Statement of Financial Information (SOFI). It consists of statements and schedules, three of which were included in the 2019 annual audited financial statements and approved by the Board on May 29, 2020. Seven additional 2019 SOFI schedules were included in the report, outlining payments of remuneration and expenses for elected officials and employees, as well as payments made to suppliers for goods and services.

The Board approved the Statement of Financial Information for the year ended December 31, 2019.

E 5.1 Campbell Valley Regional Park – Draft Management Plan and Public Engagement Process

APPROVED

In 2019, work commenced to update the Campbell Valley Regional Park Management Plan. The draft management plan expresses a long term vision to guide the park over a 20-year horizon. The Campbell Valley Regional Park Draft Management Plan is based on the existing park program and uses.

Phase one engagement brought forward public support for ecosystem protection, trails, and a desire to retain the park's character. The draft plan addresses this by providing strategies to enhance the park's cultural and natural heritage and protect ecosystems. The concept plan includes a robust trail system that links to new activity and staging areas.

Phase two public engagement will include alternate and tailored engagement methods to account for the COVID-19 pandemic.

The Board approved the scope of the proposed Campbell Valley Regional Park Draft Management Plan and authorized staff to proceed with the engagement process as presented.

E 6.1 Annual Reporting of Greenhouse Gas Emissions for the Metro Vancouver Region**RECEIVED**

Metro Vancouver is developing annual reporting of greenhouse gas emissions as part of Climate 2050. At its May 2020 meeting, the Climate Action Committee received a request from a delegation that Metro Vancouver institute a regional annual measuring and reporting system for greenhouse gas emissions.

The Board received the report for information and directed staff to work with member jurisdictions, the Province and other relevant agencies to implement annual greenhouse gas reporting in an incremental fashion, beginning with the most significant sources of greenhouse gas emissions.

E 6.2 Ecological Health Framework 2019 Progress Report**RECEIVED**

In 2018, the MVRD Board adopted the Ecological Health Framework to highlight Metro Vancouver's role in protecting and enhancing ecological health as it relates to its services and functions. This report introduces the Framework's inaugural progress report, which describes over 100 corporate initiatives that advanced ecological health across the region in 2019.

Metro Vancouver undertook projects to improve environmental performance in our services and functions, collected and analyzed regional environmental data to inform decision making, designed new facilities to reduce impacts and support ecosystem function, advanced habitat conservation for species and ecosystems, and enhanced green spaces within communities. This report will be posted on metrovancouver.org and several initiatives will be profiled.

The Board received the report for information.

E 6.3 Best Management Practices for Invasive Species: Purple Loosestrife, Reed Canarygrass, Wild Chervil, and Yellow Flag Iris**RECEIVED**

Building on an existing library of technical guidance for eleven priority invasive species, Metro Vancouver has again worked with the Invasive Species Council of Metro Vancouver, member jurisdictions and other local experts to produce a set of best management practices for purple loosestrife, reed canarygrass, wild chervil, and yellow flag iris. These documents provide information about how to identify, track, report, dispose, prevent further spread and effectively control these species, as well as regulatory requirements, monitoring and restoration tips, references and additional resources. New this year, each best management practice guide also describes how each of these invasive species may adapt to climate change.

The Board received the report for information and directed staff to forward the Best Management Practices to member jurisdictions for information.

E 6.4 Board Appointment of Enforcement Officer**APPROVED**

The Board appointed an Enforcement Officer under the GVRD Air Quality Management Bylaw 1082, 2008. Metro Vancouver employee Ana Nic Lochlainn was appointed as an officer and for the purpose of serving summons under section 28 of the Offence Act for alleged violations under said bylaw.

E 7.1 Metro Vancouver External Agency Activities Status Report – May 2020**RECEIVED**

The Board received for information the following reports from Metro Vancouver representatives to external organizations:

- External Agency Status Report for the Delta Heritage Airpark Management Committee
- External Agency Status Report for Fraser Valley Regional Library (FVRL) Board
- Status Report on the Lower Mainland Flood Management Strategy Leadership Committee
- External Agency Status Report for LMLGA
- External Agency Status Report for Municipal Finance Authority of BC
- External Agency Status Report for the Pacific Parklands Foundation - Update from September 30, 2019 to May 1, 2020
- External Agency Status Report for Sasamat Volunteer Fire Department Board of Trustees
- External Agency Status Report for UBCM
- External Agency Status Report for Western Transportation Advisory Council (WESTAC)

G 1.1 Affordable Housing Development Reserve Fund Bylaw No. 1309, 2020**APPROVED**

During the preparation of the 2020 budget, the Board included in the Affordable Housing budget a \$4.0M tax requisition for the purposes of dedicated funding for new Metro Vancouver Housing (MVH) affordable housing development projects on lands owned by MVRD or by member jurisdictions. The current Affordable Housing Reserve is focused on redevelopment of aging MVHC housing stock, whereas, the proposed Affordable Housing Development Reserve Fund will be focused on construction of new MVHC housing on member owned leased to MVHC or MVRD owned land.

The Board established a new statutory reserve for the Affordable Housing function to receive, hold and provide funds for new affordable housing development, then gave first, second, and third readings to the Affordable Housing Development Reserve Fund Bylaw No. 1309, 2020, before passing and finally adopting said bylaw.

I 1 Committee Information Items and Delegation Summaries**RECEIVED**

The Board received information items from Standing Committees.

Indigenous Relations Committee – May 28, 2020

Information Items:

5.1 TransMountain Pipeline: Federal Court of Appeal Decision

The Federal Court of Appeal issued a decision on February 4, 2020, regarding the TransMountain Pipeline Expansion Project. This was a judicial review of the federal government's second approval of the Project. Permission to appeal to the Court had been granted on the ground of whether the federal government had adequately fulfilled its duty to consult with Indigenous peoples. The Court reviewed whether the approval of the Project for the second time was reasonable and held that the Governor in Council's determination that the renewed Indigenous consultations carried out by the federal government to address the flaws previously identified by the Court in an earlier 2018 decision were adequate to meet the Crown's duty to consult, was reasonable. The Court upheld the 2019 approval of the project.

5.2 Quarterly Report on Reconciliation Activities

This report provides a summary of reconciliation events and activities undertaken by Metro Vancouver over the past three months. Some of the highlights include: Belcarra Agreement Signing Ceremony with Tsleil-Waututh Nation on February 18, 2020; Metro Vancouver Board Chair and Chief Administrative Officer meeting with Kwikwetlem First Nation Chief and Council and Chief Administrative Officer on April 20, 2020; and Metro Vancouver staff meeting on March 3, 2020, with Katzie First Nation Chief, Council and staff to discuss Widgeon Marsh Regional Park. This report also includes information on upcoming events and activities over the next three months.

Electoral Area Committee – June 10, 2020

Information Items:

5.1 Electoral Area A COVID-19 Impacts and Responses

Like other communities in the region, Electoral Area A is being impacted by the COVID-19 pandemic. Regarding service provision, Metro Vancouver has continued to provide regular local government services, including building inspection, throughout the pandemic, and staff will be resuming virtual public consultation on the review of the Electoral Area A Zoning Bylaw this summer. In rural communities, the main impact has been on Barnston Island with the temporary closure of Barnston Island Regional Park in response to concerns regarding the increased number of visitors and their impact on residents and the ferry crew. At UBC and the University Endowment Lands, the Electoral Area Director held two virtual town halls to allow residents to ask questions of community leaders about COVID-19 and to discuss how residents can support each other.

Regional Planning Committee – June 12, 2020

Information Items:

5.5 Metro 2050 Q2 2020 Status Update

Staff provide quarterly updates to the Regional Planning Committee on the progress of Metro 2050. At the May 1st 2020 Regional Planning Committee meeting, Committee members requested additional detail on what was meant by the “technical work” being done as part of the Policy Reviews. As a result, this second quarter progress includes: a summary of the engagement activity to date; a summary of each audience group’s capacity to engage; and a summary of the technical work underway. Staff will continue to provide monthly and quarterly updates to the Regional Planning Committee to help determine whether it is appropriate to engage with particular audiences at this time on interim Policy Review work and will continue to postpone engagement on any policy review recommendations until the Committee provides direction.

5.6 Developing a Shared Resiliency Framework for Metro 2050 and Transport 2050

As a result of direction from the Regional Planning Committee and in light of the COVID-19 pandemic, Regional Planning staff are working closely with TransLink staff to develop a shared COVID-informed resiliency framework for Metro 2050 and Transport 2050. These two long-range regional plans were in mid-development when the global pandemic began. This report summarizes three actions staff have taken to further the objective of developing a resiliency lens: assessing COVID impact on Metro 2040 policies; assessing COVID impact on regional population projections; and establishing a working group to develop a Resiliency Framework.

5.7 Metro 2040 Complete Communities Policy Review – Scope of Work

To inform the update to the regional growth strategy, Metro Vancouver is undertaking a Complete Communities Policy Review. Between now and late 2020, the Policy Review will engage member jurisdictions and other stakeholders on the topics of services and amenities that are currently contained within Strategy 4.2 of Metro 2040. It will consider new or emerging policy issues (such as access to child care, green spaces, diverse and affordable housing), evaluate the Metro 2040 Local Centres map, and consider removing any language that is no longer necessary, redundant, dated or ineffective. This policy review has been scoped narrowly as it is a relatively small component of the regional growth strategy and the majority of the policies are seen to be effective and not requiring significant change.

5.8 Climate 2050 and Clean Air Plan Discussion Papers

In October 2019, the Board directed staff to begin an engagement process for the Climate 2050 Roadmaps and the Clean Air Plan, using a series of issue area discussion papers. Staff have completed five Discussion Papers to date (Buildings, Industry, Transportation, Agriculture and Nature and Ecosystems).

Each Discussion Paper includes information on the greenhouse gas reduction, climate adaptation and air quality issues related to that issue area. The Discussion Papers will support public, stakeholder and government engagement for Climate 2050, the Clean Air Plan, Metro 2050 and other associated management plans in 2020 and 2021.

Regional Parks Committee – June 17, 2020

Information Items:

5.2 Climate 2050 and Clean Air Plan Discussion Paper on Nature and Ecosystems

In October 2019, the MVRD Board directed staff to begin an engagement process for Climate 2050 and the Clean Air Plan, using a series of issue area discussion papers. Staff have developed a draft Nature and Ecosystems discussion paper, with linkages to climate change and air quality, including how the health of our region's ecosystems are vulnerable to further degradation, especially with a changing climate.

The nature and ecosystems discussion paper is being presented to the Regional Parks Committee for information, and feedback provided will inform Climate 2050, Metro 2050 and the Clean Air Plan.

Climate Action Committee – June 19, 2020

Information Items:

5.1 Caring for the Air 2020 Report

Caring for the Air is Metro Vancouver's plain language report on regional projects that promote climate action and improve and protect air quality. Published annually, the 2020 edition describes how Metro Vancouver's air quality has continued to improve over time, and focuses on Metro Vancouver's climate leadership and implementation of Climate 2050.

The 2019 edition was promoted using traditional and social media, and at public facilities and community events. Recognizing the current situation with COVID-19, outreach for the 2020 edition will be adjusted, with an initial focus on Metro Vancouver's social media channels.

5.4 Climate 2050 and Clean Air Plan Discussion Paper on Waste Management

In October 2019, the MVRD Board directed staff to begin an engagement process for Climate 2050 and the Clean Air Plan, using a series of issue area discussion papers. Staff have developed a draft Waste Management discussion paper, with linkages to climate change and air quality. The discussion paper will support public, stakeholder and government engagement for Climate 2050 and the Clean Air Plan in 2020. The draft discussion paper is being presented to the Climate Action Committee for information, and feedback provided will be incorporated into the final paper and associated engagement process.

5.5 2020 Update on Liquid Waste Sustainability Innovation Fund Projects

Annually, the Climate Action Committee receives an update on all projects funded under the Sustainability Innovation Funds. This report provides an update on ten projects that were approved for funding from 2016 to 2019 and are in various stages of completion, some with their progress slowed due to COVID-19 related shut-downs of laboratories. Of the ten projects, two are highlighted: The Smart Sewer Wireless Sensor and the Hydrothermal Processing - Biofuel Demonstration Facility.

Greater Vancouver Water District

E 1.1 Award of Contract Resulting from Tender No. 20-021: Construction of Kennedy Newton Main 72nd to 63rd Avenue

APPROVED

The Kennedy Newton Main project is a growth project in Metro Vancouver's Capital Long Range Plan and is being constructed in three phases. The 72nd to 63rd Avenue section is the second phase of the project and consists of approximately 2.7 km of 1,800 mm (72-inch) diameter welded steel water main.

The Board approved the award of a contract in the amount of \$18,860,000 (exclusive of taxes) to Pedre Contractors Ltd. resulting from Tender No. 20-021 and authorized the Commissioner and the Corporate Officer to execute the required documentation once the Commissioner is satisfied that the award should proceed.

I 1 Committee Information Items and Delegation Summaries

RECEIVED

The Board received information items from Standing Committee.

Water Committee – June 18, 2020

Information Items:

5.1 2019 GVWD Dam Safety Program Annual Update

GVWD owns and operates five drinking water supply dams that are regulated by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development Dam Safety Branch. The Water Services Dam Safety Program is fully compliant with the requirements outlined in the Provincial Dam Safety Regulation (BC Reg. 40/2016) as required for all dam owners in British Columbia. There were no significant concerns identified from the 2019 routine surveillance, monitoring, or formal dam inspections.

5.2 GVWD Watershed Wildfire Preparedness Update

Metro Vancouver provides clean, safe drinking water to 2.7 million residents. An integral component of this service is management of the forested lands surrounding Capilano, Seymour and Coquitlam Reservoirs. These water supply lands are closed to the public for protection from pollution and fire, and to ensure they are solely used for drinking water supply.

The watersheds have a low incidence of fire due in large part to these restrictions. Consequently, the primary cause of fire is from lightning strikes during periods of high fire danger. Most fires are extinguished quickly and without incident due to rapid discovery made possible by real-time lightning detection, staff patrols, local air traffic, and public reports. The Water Services Protection Program has staff with expertise in wildfire management, equipment available for strategic deployment, resource sharing agreements, and monitoring stations ready for the 2020 fire season.

Greater Vancouver Sewage and Drainage District

E 1.1 Board Appointments and Rescindments of Bylaw Enforcement Officers

APPROVED

Due to staffing changes, the Board made changes to Bylaw Enforcement Officers under the GVS&DD Sewer Use Bylaw No. 299, 2007.

- The appointment of former City of Vancouver employee Ana Nic Lochlainn as municipal sewage control officer, for the purposes of serving summons for alleged violations under the aforementioned bylaw, was rescinded.
- The appointment of former City of Vancouver employee Mark Schwark as sewage control manager was rescinded.
- Metro Vancouver employee Ana Nic Lochlainn was appointed as a municipal sewage control officer and for the purposes of serving summons for alleged violations under the aforementioned bylaw.
- City of Vancouver employee Upkar Matharu was appointed as a sewage control manager.
- City of Vancouver employee Sarah Wells was appointed as a deputy sewage control manager.

E 1.2 Change in Greater Vancouver Sewerage and Drainage District Membership

RECEIVED

On June 1, 2020 the Lieutenant Governor of British Columbia signed an Order-in-Council granting the Village of Anmore membership in the Greater Vancouver Sewerage and Drainage District effective June 4, 2020, in response to a request by Anmore for membership in the GVS&DD in order to provide regional sewerage services to select local properties. The Board previously resolved to support Anmore's membership request to the Province. As a member of the GVS&DD, Anmore is entitled to representation on the GVS&DD Board. Director John McEwen, being the current Director appointed to serve on the MVRD Board, will serve as the GVS&DD Board member for Anmore and will have one vote. The Board received the report for information.

E 1.3 Award of Contract Resulting from Standing Request for Expression of Interest

APPROVED

SRFEOI No. 19-283: Biosolids Management

The Board authorized award of a contract in the amount of up to \$8,676,000 (exclusive of taxes) to Arrow Transportation Systems Inc. for biosolids management at Blackwell, resulting from Standing Request for Expressions of Interest No. 19-283: Biosolids Management, subject to final review by the Commissioner.

E 1.4 Award of Engineering Construction Services – Burnaby Lake North Interceptor No. 2 – Winston Street Section – Open Cut Resulting from RFP No. 14-163

APPROVED

The Board authorized award of Phase C1, Engineering Construction Services, for an amount of up to \$1,596,888 (exclusive of taxes) to the Phase A and B consultant, AECOM Canada Ltd, for the Installation of Burnaby Lake North Interceptor No. 2 – Winston Street Section – Open Cut, subject to final review by the Commissioner.

E 2.1 2019 Integrated Solid Waste & Resource Management Plan Biennial Report**RECEIVED**

The Board received for information the 2019 Biennial Report on the implementation of the Integrated Solid Waste and Resource Management Plan, and the region's recycling and waste reduction performance. The Biennial Report was shared with First Nations with interests in the Metro Vancouver region and solid waste stakeholders. Comments were received from four organizations and individuals and Metro Vancouver staff met with Matsqui First Nation upon request. Comments expressed a desire for increased waste reduction and recycling, and concerns regarding waste-to-energy/fuels, plastic waste, materials tracking, and sustainable governance. All feedback is included in the attachment and will be submitted to the Ministry of Environment and Climate Change Strategy.

**E 2.2 Solid Waste Management Plan Independent Consultation and Engagement Panel:
Terms of Reference****RECEIVED**

A comprehensive consultation and engagement program is a critical element in the development of an updated solid waste management plan. To support a robust consultation and engagement process an independent consultation and engagement panel will be formed to advise staff and the Board on consultation and engagement on the development of a new solid waste management plan. A Consultation and Engagement Panel, consisting of three to five members, will be selected by the Board Chair in consultation with the Zero Waste Committee Chair. The Consultation and Engagement Panel will report to the Board throughout its approximately two to three-year term, until a new solid waste management plan is approved. The Board received the report for information.

E 2.3 Board Appointment of Solid Waste Bylaw Enforcement Officer**APPROVED**

The Board, pursuant to the GVS&DD Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996 and the Environmental Management Act appointed Metro Vancouver employee Ana Nic Lochlainn as an officer and for the purpose of serving summons under Section 28 of the Offence Act for alleged violations under the aforementioned bylaw.

**G 1.1 Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas
Boundaries Amending Bylaw No. 338, 2020 – Fraser Sewerage Area – Village of
Anmore****APPROVED**

On March 29, 2019, the Board resolved to accept a revised Regional Context Statement from the Village of Anmore which rezoned a strata property known as Anmore Green Estates from “Rural” to “General Urban” land use. As all properties must be within an established sewerage area in order to receive regional sewer services, Anmore Council requested that Fraser Sewerage Area be amended to include building footprints for the Estates along with the Eagle Mountain Middle School property. All new connection costs would be borne by Anmore.

The Board gave first, second and third readings to the Greater Vancouver Sewerage and Drainage District Sewerage and Drainage Areas Boundaries Amending Bylaw No. 338, 2020; then passed, and finally adopted said bylaw.

G 1.2 Proposed Amendments to Greater Vancouver Sewerage and Drainage District Cost Apportionment Bylaw No. 283, 2014 – Village of Anmore **APPROVED**

The Board rescinded third reading of the Greater Vancouver Sewerage and Drainage District Bylaw No. 332, 2019 given on November 1, 2019 and amended said bylaw as outlined in Attachment 2 of this report, then gave third reading to the amended bylaw, before passing and finally adopting it.

E 1.1 Committee Information Items and Delegation Summaries **RECEIVED**

The Board received a delegation summary and information items from Standing Committees.

Liquid Waste Committee – June 18, 2020

Information Items:

5.6 Development of a Review Strategy for the Integrated Liquid Waste and Resource Management Plan

The regional Integrated Liquid Waste and Resource Management Plan is due for review and update. Metro Vancouver is required to submit a review strategy to the Ministry of Environment and Climate Change Strategy by October 30, 2020. Staff are currently developing a review strategy and will seek the Liquid Waste Committee’s direction prior to requesting GVS&DD Board approval to submit the review strategy to the Province. It is currently anticipated that the formal plan review and development process, including extensive community engagement, will be initiated in early 2021, subject to the timing and conditions of approval as determined by the Province. Staff estimate that the process will be completed in two to three years.

Zero Waste Committee – June 19, 2020

Delegation Summary:

3.1 Stuart Lilley, Founder/CVO, ReFeed Canada

Information Items:

5.3 Solid Waste Services Innovations Update

Metro Vancouver implemented a number of innovation projects in 2019 and early 2020 to improve solid waste system service, reliability and resilience and reduce costs, including:

- installation of an Encorp Return-It Express & GO beverage container drop-off at the North Shore Transfer Station in April 2020;
- an agreement with RecycleBC to provide funding for the collection of packaging and paper at the Coquitlam Transfer Station;
- implementation of a paperless disposal ban surcharge program;
- a partnership with the Recycling Council of British Columbia (RCBC) to integrate RCBC's database of recycling options in the region into the Metro Vancouver website; and
- installation of web cameras at the transfer stations and the Waste-to-Energy Facility so customers can view current lineups.

5.4 2019 Commercial/Institutional Waste Composition Study

Metro Vancouver monitors the composition of the region's municipal solid waste stream on an annual basis. The 2019 Commercial/Institutional Waste Composition Study focused on commercial/institutional waste as represented by the retail trade, food service & accommodation, manufacturing and business & commercial services industries. The results of the study are presented as a range of probable values to demonstrate the variability of the data. The results indicate that the percentage of organics in business & commercial service establishments has decreased since the Organics Disposal Ban was implemented in 2015. Single-use items, in particular cups and takeout containers, are highest in the food service & accommodation sector. The study is available on Metro Vancouver's website and will help inform future programs and policies for the commercial/institutional sector.

5.5 2019 Disposal Ban Program Update

Garbage loads received at Metro Vancouver and City of Vancouver solid waste facilities are visually inspected for banned materials and surcharges are applied if banned materials are observed in loads. In July 2019, Metro Vancouver implemented a new paperless disposal ban inspection and surcharge process to increase transparency and efficiency. In 2019, a total of 202,521 garbage loads were inspected (28% inspection rate) and 4,294 surcharge notices were issued, representing a surcharge rate of 2.1%. An additional 16,578 loads were found to contain banned materials but were not surcharged, as inspectors were able to give customers the opportunity to safely remove the items and provide alternative recycling options. Electronic waste, corrugated cardboard and mattresses remain the top three banned materials identified in garbage loads. Surcharge revenues totalled \$463,830 and program expenditures totalled \$719,394.

5.7 Update on Metro Vancouver's Engagement with the Love Food Hate Waste Canada Campaign

Food waste is an urgent, but solvable, global challenge. One third of all food produced globally is wasted. Love Food Hate Waste Canada, an initiative of the National Zero Waste Council, engages 10 partners across the country, including two provincial agencies, six local governments (including Metro Vancouver), and two major grocery chains (Walmart and Sobeys).

The combination of national grocers partnered with local and provincial governments, provides a unique opportunity to amplify the issue of food waste with common messaging to inspire and empower people to make food go further and waste less. As a founding partner, Metro Vancouver realizes several benefits, including campaign materials and messaging, access to influencers and celebrity chefs and national media

buys. To date, results of the national campaign include over 7 million impressions and over 281,000 website page views. Metro Vancouver amplifies the campaign regionally through outreach events and a targeted media buy.

Metro Vancouver Housing Corporation

No open agenda items.



General Purposes Committee

Date: Monday, July 6, 2020

Place: Anderson Room
Richmond City Hall

Present: Mayor Malcolm D. Brodie, Chair
Councillor Chak Au
Councillor Carol Day (attending via teleconference)
Councillor Kelly Greene (attending via teleconference)
Councillor Alexa Loo (attending via teleconference)
Councillor Bill McNulty (attending via teleconference)
Councillor Linda McPhail (attending via teleconference)
Councillor Harold Steves (entered the meeting at 4:10 p.m. – attending via teleconference)
Councillor Michael Wolfe (attending via teleconference)

Call to Order: The Chair called the meeting to order at 4:02 p.m.

MINUTES

It was moved and seconded

That the minutes of the meeting of the General Purposes Committee held on June 15, 2020, be adopted as circulated.

CARRIED

COUNCILLOR KELLY GREENE

1. **TRANSLINK EMERGENCY OPERATING FUNDING**

(File Ref. No.)

Discussion took place on the need for funding for TransLink to ensure adequate travel options for frontline and essential workers.

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

It was moved and seconded

That the City of Richmond calls upon the federal and provincial governments to provide emergency operating funds and to protect vital public transportation services. Letters to be written to the Parliamentary Secretary for TransLink; provincial Ministers of Transportation, Environment, and Finance; and federal Ministers of Transportation and Finance; with copies to Richmond MLAs and MPs.

Councillor Harold Steves entered the meeting (4:10 p.m.).

The question on the motion was not called as discussion further took place on (i) TransLink proactively working to obtain funding from the Provincial and Federal Governments, (ii) ridership during the pandemic, and (iii) physical distancing on the skytrain and buses.

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

FINANCE AND CORPORATE SERVICES DIVISION

2. **UPDATE ON CITY OF RICHMOND COVID-19 ECONOMIC RESPONSE AND RECOVERY MEASURES**

(File Ref. No. 08-4150-01) (REDMS No. 6477062)

In reply to queries from Committee, staff noted that (i) there has been a significant increase in engagement in the Economic Development Program, (ii) the City has issued 6 temporary patio licences, (iii) information and photos about the temporary patio program is recirculated often through the City's social media channels, (iv) any programs that fits criteria announced through the Infrastructure Ministry or any other ministries are being closely monitored, (v) small businesses are adopting a larger e-commerce presence, (vi) with the CERB program businesses are having difficulties finding employees; however, the most important thing is to implement approved COVID-19 safety plans, (vi) the City and public health agencies are making health and safety of the consumers a priority, (vii) every effort is being made to ensure timely issuance of permits and licences, (ix) the Richmond Business Resilience Program was launched in mid-June and is a one-year program, and (x) the City has an active business licence directory that lists all operational business licences.

Staff were directed to provide a categorized list of the businesses in Richmond.

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It was moved and seconded

That the staff report titled "Update on City of Richmond COVID-19 Economic Response and Recovery Measures", dated June 26, 2020, be received for information.

CARRIED

ENGINEERING AND PUBLIC WORKS DIVISION

3. **TILBURY PHASE 2 LNG EXPANSION PROJECT**

(File Ref. No. 10-6125-30-010) (REDMS No. 6432227 v. 10)

In reply to queries from Committee, staff noted that this is the opportunity to provide any additional request or comments. Staff clarified that both small and large tankers can be used, with some additional dredging of the Fraser River.

Discussion took place on the appropriateness of this location for this expansion and concerns regarding the proximity to residential and industrial areas.

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

It was moved and seconded

- (1) *That Council states its opposition to the Tilbury Phase 2 LNG Expansion Project;*
- (2) *That if the project proceeds, the comments outlined in the staff report titled "Tilbury Phase 2 LNG Expansion Project", dated June 1, 2020, from the Director, Sustainability and District Energy be endorsed and submitted to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to support the provincial and federal environmental assessments;*
- (3) *That meetings with the appropriate federal and provincial ministers be scheduled;*
- (4) *That copies of the comments and the staff report be sent to our local Members of Parliament and Members of Legislative Assembly; and*
- (5) *That copies of the comments and the staff report be sent to all Mayors of Metro Vancouver municipalities asking for their respective Council's support.*

The question on the motion was not called as discussion took place on receiving comments from various interested groups and organizations regarding the project.

3.

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Direction was provided to staff to send out a media release to ensure the community and organizations, such as the Fraser River Estuary Management Group, have an opportunity to provide input on the project.

Staff was requested to provide a memorandum on an LNG project being planned in Boston.

The question on the motion was then called and it was **CARRIED** with Cllr. Loo opposed.

COMMUNITY SAFETY DIVISION

4. **SOIL USE FOR THE PLACEMENT OF FILL APPLICATION FOR THE PROPERTY LOCATED AT 5800 NO. 7 ROAD (MAHAL)**

(File Ref. No. 12-8080-12-01) (REDMS No. 6471502 v. 12)

Staff provided an overview of the application noting that (i) the applicant wants to convert a cranberry farm into a vegetable and ornamental tree farm, (ii) the top soil will be removed and soil that is appropriate for vegetable and ornamental tree farming will be brought in, (iii) the applicant is providing a significant performance bond to the City to guarantee the farming aspect of the project.

In reply to a query from Committee, Paul Mahal, Owner, 5800 No. 7 Road, advised that the family will be farming the land.

In reply to further queries from Committee, staff noted that the applicant has guaranteed they will use Richmond soil wherever they are able and Richmond can only obtain a maximum of \$15,000 in performance bonds as per the city's bylaws.

In response to queries from Committee, Jessica Stewart, Agrologist, and Tom Elliot, Agrologist, Madrone Environmental Services Ltd., provided details on (i) soil composition, (ii) high water table on the property, (iii) removal of the top soil, (iv) the high cost of hiring outside labourers to farm the land, (v) the surrounding ditches and berms of the property, (vi) high cost and reliability of a pump system all year round, and (vii) artificially suppressing the water table.

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It was moved and seconded

- (1) *That the 'Soil Use for the Placement of Fill' application submitted by Paul Mahal (the "Applicant") proposing to deposit soil on the property located at 5800 No. 7 Road to transition a former cranberry bog to allow for the growing of vegetables and ornamental trees be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements, provided that the fill soil be sourced from Richmond and Delta; and*
- (2) *That the City recommend to the Agricultural Land Commission (ALC) that a further significant performance bond be required.*

The question on the motion was not called as in reply to a query from Committee, staff advised that application meets city requirements and has been reviewed by various departments.

The question on the motion was then called and it was **CARRIED** with Cllr. Wolfe opposed.

Discussion then took place on examining increasing the size of the City bonds required for soil fill applications.

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

It was moved and seconded

That staff examine the potential size of bonds in relation to soil fill applications.

CARRIED

5. **OPTIONS FOR A RESIDENTIAL BACKYARD CHICKEN PROGRAM**

(File Ref. No. 12-8000-01) (REDMS No. 6483312)

In response to a query from Committee, staff noted that regulations of the program will not be strictly enforced unless complaints are received and variances are not permitted on density.

It was moved and seconded

That "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²" as outlined in the staff report titled "Options for a Residential Backyard Chicken Program" from the General Manager, Community Safety, dated June 22, 2020, be approved.

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The question on the motion was not called as in reply to queries from Committee, staff advised that Canada has a low risk of contracting avian flu and the proposed licencing fee for backyard chickens is similar to dog licencing fees.

Discussion took place on (i) the need for comprehensive backyard chicken regulations, (ii) endorsing option 3 as outlined in the staff report with some amendments, and (iii) setting a minimum and maximum number of chickens.

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

It was moved and seconded

That option two be amended to allow the keeping of 2 to 8 chickens.

The question on the amendment motion was not called as in response to queries from Committee, staff advised that regulations are enforced on a complaint basis and chicken coops need to be kept clean and sanitized.

The question on the amendment motion was then called and it was **CARRIED** with Cllrs. Day, Greene, Steves and Wolfe opposed.

In reply to further queries from Committee, staff noted that backyard chickens require daily maintenance and owners are responsible for the care of the chickens.

The question on the main motion, as amended, which reads as follows:

That "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²", as outlined in the staff report titled "Options for a Residential Backyard Chicken Program" from the General Manager, Community Safety, dated June 22, 2020 and allowing the keeping of 2-8 chickens, be approved.

was then called and it was **CARRIED** with Cllrs. Day, Greene, Steves and Wolfe opposed.

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COMMUNITY SERVICES DIVISION

6. STEVESTON TRAM FEASIBILITY STUDY

(File Ref. No. 11-7000-01) (REDMS No. 6474329)

It was moved and seconded

That Option 1: Maintain Current Tram Program as detailed in the report titled "Steveston Tram Feasibility Study", dated May 29, 2020, from the Director, Arts, Culture & Heritage Services be endorsed.

The question on the motion was not called as discussion took place on (i) potentially duplicating the tram while maintaining the spirit of the tram, (ii) a trackless tram system, and (iii) an automatic or battery powered tram system.

Staff was requested to flag the Steveston Tram matter for future discussions and not lose sight of the potential for the project.

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

PLANNING AND DEVELOPMENT DIVISION

**7. QUADRICYCLE BUSINESS – PROPOSED VEHICLE FOR HIRE
BYLAW AMENDMENT TO PERMIT PERMANENT OPERATION**

(File Ref. No. 12-8275-06) (REDMS No. 6468151)

It was moved and seconded

(1) *That the third reading of Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add regulations and requirements for the operation of a quadricycle, be rescinded.*

(2) *That Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add revised regulations and requirements for the operation of a quadricycle, be given third reading.*

CARRIED

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8. **APPLICATION BY CITY VANCOUVER ACADEMY INC. FOR A TEMPORARY COMMERCIAL USE PERMIT FOR THE PROPERTY AT UNITS 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 AND 2170 - 8766 MCKIM WAY**

(File Ref. No. TU 20-890760) (REDMS No. 6486096)

It was moved and seconded

- (1) *That the application by City Vancouver Academy Inc. for a Temporary Commercial Use Permit (TCUP) for the property at Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 McKim Way to permit education use (limited to an independent school offering grades 10 to 12) be considered for one year from the date of issuance; and*
- (2) *That this application be forwarded to the September 8, 2020 Public Hearing at 7:00 p.m. in the Council Chambers of Richmond City Hall.*

The question on the motion was not called as in reply to queries from Committee, staff noted that (i) education commercial allows for tutoring; however, does not permit K-12 instruction, (ii) the applicant is aware of the zoning issue and is requesting the temporary allowance while they search for a permanent location, and (iii) should the applicant require an extension, they would require Council approval.

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

9. **APPLICATION BY IBI GROUP ARCHITECTS TO AMEND SCHEDULE 2.10 OF OFFICIAL COMMUNITY PLAN BYLAW 7100 (CITY CENTRE AREA PLAN) AND REZONE 5740, 5760, AND 5800 MINORU BOULEVARD FROM “INDUSTRIAL RETAIL (IR1)” TO “SCHOOL AND INSTITUTION USE (SI)” AND “HIGH DENSITY MIXED USE AND AFFORDABLE RENTAL HOUSING (ZMU46) – LANSDOWNE VILLAGE (CITY CENTRE)”**

(File Ref. No. RZ 18-807640) (REDMS No. 6401336)

Staff provided an overview of the application and highlighted that (i) all commercial tenants have been relocated, (ii) the two social service agencies will have first right of refusal when the building is complete, (iii) a non-profit housing operator has been secured, (iv) keeping all the affordable housing units in one area is preferable for operational efficiencies, (v) the affordable housing units will be increased from 47 units to 88 units, (vi) the City Centre Area Plan will be amended to grant additional affordable housing density bonus, and (vii) residents of the affordable housing units will have access to the outdoor amenity spaces and an indoor amenity space.

General Purposes Committee

Monday, July 6, 2020

It was moved and seconded

(1) *That Official Community Plan Bylaw 7100, Amendment Bylaw 10136, to amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to amend:*

(a) *Section 2.2 “Jobs and Business” and the “Specific Land Use Map: Lansdowne Village”, to encourage office development along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and*

(b) *Section 4.0 “Implementation & Phasing Strategies”, to clarify City Centre Area Plan density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit bonus density to be increased, on a site-specific basis, for rezoning applications that provide additional affordable housing to address community need,*

be introduced and given first reading.

(2) *That Official Community Plan Bylaw 7100, Amendment Bylaw 10137, for amending Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to facilitate the construction of a high-rise, high density, mixed use development, including the designation of a 7 m (23 ft.) wide strip of land along the north side of 5740 Minoru Boulevard as City “Park” and the remainder of 5740, 5760, and 5800 Minoru Boulevard as “Village Centre Bonus” area (to permit an additional 1.0 floor area ratio for office use only), be introduced and given first reading.*

(3) *That Bylaw 10136 and Bylaw 10137, having been considered in conjunction with:*

(a) *the City’s Financial Plan and Capital Program; and*

(b) *the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;*

are hereby found to be consistent with said program and plans, in accordance with Section 477(3)(a) of the Local Government Act.

(4) *That Bylaw 10136 and Bylaw 10137, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation.*

(5) *That Richmond Zoning Bylaw 8500, Amendment Bylaw 10138, to create the “High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)” zone, and to rezone*

9.

General Purposes Committee

Monday, July 6, 2020

5740, 5760, and 5800 Minoru Boulevard from "Industrial Retail (IRI)" to "School and Institution Use (SI)" and "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)", be introduced and given first reading.

The question on the motion was not called as in reply to queries from Committee, staff noted that the design of the green space will be refined through the Development Permit process and all affordable housing units, non-profit organization offices and amenity space will be consolidated into one building.

The question on the motion was then called and it was **CARRIED** with Cllr. Greene opposed.

10. **REPORT BACK ON TEMPORARY ROAD CHANGES IN STEVESTON VILLAGE FOR CANADA DAY**

(File Ref. No.)

It was moved and seconded

That staff continue to monitor pedestrian, cyclist and motorist operations in Steveston Village for crowding and when necessary, report back on the need for temporary road changes to add additional space.

The question on the motion was not called as a staff memorandum dated July 6, 2020 was referenced (attached to and forming part of these Minutes as Schedule 1) and in reply to a query from Committee, staff noted that if the same configuration as Canada Day was done on a Friday to Sunday basis, the estimated cost would be about 15% more than option two as outlined in the memorandum.

The question on the motion was then called and it was **CARRIED** with Cllrs. Greene and Wolfe opposed.

ADJOURNMENT

It was moved and seconded

That the meeting adjourn (6:48 p.m.).

CARRIED

General Purposes Committee
Monday, July 6, 2020

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, July 6, 2020.

Mayor Malcolm D. Brodie
Chair

Sarah Goddard
Legislative Services Associate

ON TABLE ITEM

Date: July 6, 2020
Meeting: General Purposes
Item: 10



City of
Richmond

TO: MAYOR & EACH
COUNCILLOR
FROM: CITY CLERK'S OFFICE

Memorandum

Planning and Development Division
Transportation

To: Mayor and Councillors
From: Lloyd Bie, P.Eng.
Director, Transportation

Date: July 6, 2020
File: 10-6360-06-01/2020-Vol 01

Re: **Report Back on Temporary Road Changes in Steveston Village for Canada Day**

As directed at the June 22, 2020 Council meeting, this memorandum summarizes staff observations and merchant feedback regarding the temporary road changes in Steveston Village implemented on July 1st for Canada Day.

Staff Observations

Staff were on site throughout the day to observe attendance, business operations, and the impacts of the temporary road changes on pedestrian, cyclist and motorist circulation through Steveston Village. Overall, the cool and overcast weather with afternoon showers contributed to a smaller number of visitors compared to recent weekends.

The temporary road changes were implemented without incident and vehicle traffic generally flowed well with the presence of traffic control personnel. Occasional minor but typical delays were observed on Third Avenue between Moncton Street and Chatham Street for northbound motorists at Chatham Street due to left turning vehicles. Sufficient on- and off-street parking was available with ample space available north of Moncton Street. With the one-way system on Bayview Street, the widened temporary pathway better accommodated two-way pedestrian and cyclist traffic. Cyclists typically transited through the area and did not stop; as a result, there was sufficient bike parking.

Feedback from Steveston Businesses

The notice distributed to businesses on June 25, 2020 encouraged merchants to provide post-implementation feedback by noon on July 3rd. A total of five responses were received from businesses, including one sent prior to the implementation of the road changes. One business (located on Moncton Street) was supportive of road closures during weekends and busy times for the summer months while the other four businesses (two on Moncton Street and two on First Avenue) were opposed to any further or extended closures, citing on-street parking loss and increased vehicle circulation due to the one-way operation on Bayview Street.



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Next Steps

While pedestrian and cyclist volumes on Canada Day were lower than typical, staff anticipate increased crowds in Steveston Village as the warmer summer season and re-opening measures progress. Table 1 identifies three options for Council's consideration to address the potential that pedestrian and cyclist volumes will consistently exceed the capacity of existing infrastructure and additional space will be needed to maintain physical distancing guidelines.

Table 1: Options to Maintain Physical Distancing in Steveston Village

Option	Scope
1 Monitor	<ul style="list-style-type: none"> Staff continue to monitor pedestrian, cyclist and motorist operations for crowding When necessary, report back on the need for temporary road changes to add additional space
2 One-Way Moncton St & Bayview St	<ul style="list-style-type: none"> Implement one-way systems on Moncton St and Bayview St on weekends only One-way system on Moncton St will preserve some on-street parking Implementation could be weather-dependent (only when fair weather forecast) Estimated cost per day: \$12,000
3 One-Way Bayview St	<ul style="list-style-type: none"> Implement one-way system on Bayview St on weekends only One-way system on Bayview St only will preserve two-way vehicle movements and all on-street parking on Moncton St Implementation could be weather-dependent (only when fair weather forecast) Estimated cost per day: \$6,000

Staff will be available to discuss the options at the General Purposes Committee to be held July 6, 2020. In the interim, if you have any questions, please contact me at 604-516-9934.



Lloyd Bie, P.Eng.
Director, Transportation

LB:jc

cc: SMT

Motion: That the City of Richmond calls upon the federal and provincial governments to provide emergency operating funds to protect vital public transportation services. Letters to be written to the Parliamentary Secretary for TransLink; provincial Ministers of Transportation, Environment, and Finance; and federal Ministers of Transportation and Finance; with copies to Richmond MLAs and MPs.

Rationale: Access to public transportation is necessary to support essential and front-line workers and a recovering economy. Public transportation also makes our communities more livable and fights climate change. TransLink is losing \$75M per month during the pandemic and necessary physical distancing measures are stressing the ability to provide reliable service.

For additional reading please see: <https://dailyhive.com/vancouver/translink-emergency-operating-funding>



City of Richmond

Report to Committee

To: General Purposes Committee
From: Marie Fenwick
Director, Arts, Culture & Heritage Services
Re: **Steveston Tram Feasibility Study**

Date: May 29, 2020
File: 11-7000-01/2019-Vol
01

Staff Recommendation

That Option 1: Maintain Current Tram Program as detailed in the report titled "Steveston Tram Feasibility Study", dated May 29, 2020, from the Director, Arts, Culture & Heritage Services be endorsed.

CM Fenwick

Marie Fenwick
Director, Arts, Culture & Heritage Services
(604-276-4288)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGE
Arts, Culture & Heritage	<input checked="" type="checkbox"/>	<i>Sevens</i>
Policy Planning	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
Parks	<input checked="" type="checkbox"/>	
Transportation	<input checked="" type="checkbox"/>	
SENIOR STAFF REPORT REVIEW	INITIALS: <i>W</i>	APPROVED BY CAO <i>[Signature]</i>

Staff Report

Origin

At the City Council meeting on September 11, 2017, Council endorsed the staff report titled *Feasibility of Running the Steveston Interurban Tram* to undertake a feasibility study. The following staff recommendation was adopted on consent:

That \$50,000 be allocated from Council Contingency to undertake a feasibility study that includes a business case analysis (including cost vs. benefits) and transportation and engineering analysis of the operation of the Tram running between the existing Tram building at No.1 Road and Moncton Street and the Gulf of Georgia Cannery, as well as further work including determining the capital and operating costs required for the Tram itself.

This report supports Council's Strategic Plan 2018-2022 Strategy #3 One Community Together:

Vibrant and diverse arts and cultural activities and opportunities for community engagement and connection.

3.2 Enhance arts and cultural programs and activities.

3.4 Celebrate Richmond's unique and diverse history and heritage.

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

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

6.4 Recognize Richmond's history and heritage through preservation, protection and interpretation.

Analysis

Heritage Context and the Steveston Area Conservation Strategy

Tram Car 1220, the City's largest artefact, represents an important part of Richmond's history as it symbolizes the transportation connection between Steveston and Vancouver that supported the development of Richmond. Its presentation to the public plays an important role in sharing the history of Richmond.

During its operation, the Tram ran from Eburne Junction at the north end of Lulu Island to Steveston. Its last passenger stop at the southern end was located at No. 1 Rd. and Moncton Street where the Steveston Tram Building is located today. The line continued down what is now Bayview Street to the Gulf of Georgia Cannery to pick up freight. The line did not go down Moncton Street. A section of the original track remains in Steveston Park running north from the Steveston Tram Building. This track is listed on the City of Richmond's heritage register.

Figure 1: Richmond Tram Stops, 1956



The Steveston Area Conservation Strategy, created in 2009, was put in place to conserve the heritage character of Steveston Village. Bylaws, guidelines and incentives help conserve the original heritage character of the exterior of identified heritage buildings and streetscapes. The Steveston Village Conservation Strategy identifies the core themes for preserving the heritage character. This includes elements typical to a small frontier town such as, “street and lane patterns and building design which all show characteristics in common with most burgeoning small settlements in the West”. Additionally it states that “Steveston is valued for the extent of its historic character and intrinsic heritage values, seen less in individual buildings than

in the cumulative effect its physical and intangible elements have had on its heritage significance since 1880”.

Moncton Street played a central role in the history of Steveston and continues to be a hub for the village today. As described in the Steveston Village Conservation Strategy, “Moncton Street in particular is a testament to the importance of the commercial core of small-town British Columbia; it continues to evolve as the economic and social heart of the village and the primary local source for goods and services, much as it was historically”.

Current Tram Program

In order to preserve the Tram, and make it accessible to the public, the Steveston Tram Building was constructed and opened to visitors in 2013. It immediately became a popular destination for community members and tourists, with over 55,000 visits annually, including over 18,000 visits from Richmond residents. Visitors report a high level of satisfaction with their experience of Tram Car 1220, with 94% of people ranking their visit Very Good or Excellent.

A full restoration of Tram Car 1220 was completed in 2019. A restoration team made up of volunteers, conservators, curators, specialized contractors and City trades worked diligently to preserve original materials and return the car to its appearance from 1912 to 1958. Volunteers contributed over 800 hours of their time to help restore the Tram. Visitors also watched and participated in the restoration process.

The completion of restoration has created the opportunity for additional programs in the Steveston Tram Building, which offer visitors the opportunity to experience the Tram in-person and learn about its history and importance to Richmond.

There are many programs and events offered throughout the year including;

- Living History: Historical Interpreters and Heritage Ambassadors (volunteers) offer an immersive experience for visitors as they tell the story of Richmond’s transportation history in historic costume. Stories include, going to the races, the mechanics of the Tram, moving agricultural goods through the Interurban system and a typical workday of a Motorman.
- Winter Tram: Visitors listen to festive music; sit with Santa on the Tram Car while stories all about winter celebrations, trains and trams are told.
- Tourism Passport Challenge: The Tram Building participates in the Tourism Passport Challenge, which welcomed 13,356 tourism professionals in 2019. This program has a significant impact on promoting the site.
- School Programs: Students from kindergarten through grade six participate in two programs, *All Aboard Tram Car 1220* and *Rails Across Richmond*, aimed at teaching them about how the Tram brought community together.

- Canada Day: The Tram is winched out on Canada Day and visitors are encouraged to board the car and explore hands on activities and entertainment in the Tram Building. 3,400 visitors experienced the Tram as part of the 2019 Steveston Salmon Festival.
- Citywide Events: The Tram is part of Culture Days, Doors Open and Family Day. Visitors board the Tram Car and explore the car's history through an interactive discovery centre. Over 1,600 visitors attended these special events in 2019.

While public access and programming at the Tram has been temporarily suspended as a result of COVID-19, it will resume as outlined in the Council-approved restoration of services plan. Access to the Tram Car itself will likely be later in the restoration of services continuum as the cleaning that would be required to disinfect high-touch surfaces would be damaging to the Tram car, the City's largest artefact.

Tram Feasibility Study

A consulting team from Davies Transportation Consulting Inc., WavePoint Consulting Ltd., Hooper Engineering and Morch Engineering Inc. was retained to conduct a feasibility study.

The findings of the feasibility study are detailed in this report and address the following:

1. Tram Car Operations Best Practices Review;
2. Tram Car Assessment;
3. Tram Routing Options;
4. Business Case;
5. Safety Issues;
6. Regulatory and Operational Considerations; and
7. Steveston Streetscape Study Impacts.

Tram Car Operations Best Practices Review

The consulting team analyzed active heritage tram operations in nine other cities to identify characteristics of successful examples.

Their findings include:

- Many services operate from a historical urban location and are marketed primarily toward heritage tourism, family or cultural experiences rather than as practical passenger transportation.
- Services that run in urban areas are usually built on original track and operate as part of a larger transit system. This is the case in New Orleans and Dallas where heritage streetcars are part of the transit system and used to showcase the community's heritage for both residents and tourists. Several connect to major urban experiences that are a destination such as convention centres or sports stadiums.

- Other services operate in rural or industrial landscapes where there is limited interaction with pedestrians and other vehicles. These include the Fraser Valley Heritage Railway in Surrey and Riverfront Trolley in Astoria, Oregon.
- The majority of services operate on a seasonal basis, typically from May to September.
- The length of the tram line services varies from between 1.9km to 7.4km.
- In almost all cases, heritage streetcars operate over existing right-of-way, including active or abandoned freight railway tracks (Astoria) and/or active public transit routes (New Orleans).
- Heritage cars are prone to breakdown and parts and service can be difficult to procure. Some operate more than one vehicle to improve reliability.
- All services depend on some level of government funding or grants to finance operations and/or equipment and infrastructure maintenance and repair.
- Most services have a volunteer component.
- Fares tend to be low, approximately \$5 CDN on average, for round trips that while relatively short, are longer than the route options considered in this report. The Fraser Valley Heritage Railway Society costs range from \$10 to \$20 per person for a 55 minute ride.
- Some museums and heritage destinations use train, street and tram cars as part of a static interpretive experience, such as Engine 374 at Yaletown Roundhouse and Street Car 153 planned in the new North Vancouver Museum, scheduled to open in 2020. Other cars are primarily static, but do have the ability to move by winch, such as the 1223 at Burnaby Village Museum.
- Tram services cease operation for a variety of reasons. For example, The Vancouver Downtown Historic Railway operated from 1998 to 2011 between Granville Island and Olympic Village Station. It ran on weekends and holidays from May to mid October. The cars and line was owned and maintained by the City of Vancouver and operated by volunteers from the Transit Museum Society. Operations closed because it offered a limited tourism experience, the operational costs were considered high, and there were significant safety concerns.

Tram Car Assessment

Richmond's Tram Car 1220 has been restored on an aesthetic and structural level for static exhibition purposes. To operate the Tram, beyond the current ability to move it outside the building, extensive work would be required including hazardous material removal, structural and safety work, mechanical and electrical assessments, and further rebuilding and restoration of additional Tram components.

To rebuild and restore these components of the Tram would require specialists in restoration and knowledge and skill in rehabilitating the mechanical and electrical systems. The work would entail removing the framework that supports the car body and contains the wheel sets "trucks". To complete an assessment and rebuild, the trucks would then need to be disassembled and reassemble at an offsite location. The rebuild would include the replacement or repair of existing components.

The electrical systems of the car would need to be upgraded to connect to the braking system and traction motors. Any existing high voltage wiring would be removed from the undercarriage. The

brake system would also need to be inspected and potentially replaced. This would include but not be limited to the compressor, the emergency hand brake control and brake piping.

Structural components would need to be considered as well. The structure of the car would require careful assessment to ensure that all interior components are secure when in motion.

In order to complete the work to make the Tram operational, newly restored components will need to be removed and rebuilt.

The current Tram does not meet the standard universal design for accessibility. Altering the Tram to accommodate passengers with mobility challenges would result in additional costs and loss of heritage integrity. It is possible to purchase a replica streetcar of a similar but not identical design, complete with modern systems that would meet accessibility standards.

There are three options for powering the Tram. An overhead catenary, a towed generator or an onboard power cell or battery system. Each option has operational considerations that impact resources, maintenance and streetscape design. Further assessment and investigation would be required.

Once operational, regular maintenance would be required to maintain safety standards and ensure that the Tram is preserved. If any part of the Tram breaks, parts are rare and not easily attainable and skilled tradespeople to complete the work may be challenging to find. This could result in a disruption of service.

The estimated cost to make the Tram operational is \$2 to \$4 million dollars. Further analysis would be required to make recommendations on the options noted above and the estimates could be refined accordingly

An additional option for consideration is the purchase of a replica tram car. Opting for a replica car would provide opportunities to install onboard power, meet accessibility needs and provide modern conveniences such as air conditioning. The estimated cost of this option is \$2.5 million to \$3.5 million. These costs do not include a structure to house the replica for storage, maintenance and repair.

Tram Routing Options

The consulting team reviewed three routing options for Council's consideration. Each option was assessed to determine the costs, transportation and engineering considerations related to routing and road impacts and safety.

Figure 2: Tram Routing Options



Table 1: Tram Routing Options and Estimated Order of Magnitude Capital Costs

Route Option	Tram Car Restoration Cost	Track Infrastructure Capital Cost	Total Cost
Option 1: Moncton Street	\$2M to \$4M	\$1.6M to \$6M	\$3.6M to \$10M
Option 2: Off Street: in Park	\$2M to \$4M	\$1.1M	\$3.1M to \$5.1M
Option 3: On Street: track – Moncton St., Third Ave., Bayview St., No. 1 Road	\$2M to \$4M	\$4M to \$8M	\$6M to \$12M

Exiting the Building

The consulting team confirmed that the Tram will have to exit from the north side of the Tram Building due to the physical constraints of the existing structure and the physical space available in the road right-of-way to negotiate a right turn onto Moncton Street. Therefore, all routing options include the provision for the start and end of the trip via the north side of the building.

Considerations for all options include:

- Relocation and construction of new pathway in park;
- Potential conflict with other park uses. Due to the adjacency to the playground, a fence or safety barrier would need to be installed.
- If powered by catenary wires (overhead wires) would likely conflict with trees in the park and on Moncton Street;
- Negative impact to the heritage value of the Steveston Conservation Area; and
- Potential disruption to the experience of the Nikkei Memorial.

Option 1: Moncton Street

The option of the Tram running back and forth on Moncton Street between the Tram Building and the Gulf of Georgia Cannery was reviewed to address the specific route identified in the referral.

Option 1A: Single Track

This option envisions a single track set on Moncton Street to allow the Tram car to operate in both directions back and forth from the Tram Building to the Gulf of Georgia Cannery.

The primary advantage of this option is:

- Reduced safety risks compared to the other options, as the roadway would be completely closed to vehicle traffic and parking during Tram operation.

The challenges of this option include:

- Street closed to vehicle traffic;
- Coordination and scheduling impacts with adjacent business deliveries and environmental services;
- Approximately 25 parking stalls are lost during Tram operation; and
- Depending on the location of the track, boarding would have to be accommodated on the sidewalk or in the street.

Option 1B: Double Track

A double track option on Moncton Street envisions track inlaid in each traffic lane in both directions with switches at either end to allow for Tram car turnaround.

The primary advantage of this option is:

- As the Tram would run in the same direction as traffic, traffic flow could be maintained.

The challenges of this option include:

- Significant permanent alterations to road infrastructure and operations;
- Adjacent curbside parking would be unavailable during Tram operation;
- Turn movements from the north-south streets and lanes would need to be restricted; and
- There would need to be a switch west of No. 1 Road and another at Third Avenue. The switch would allow the Tram to reposition itself into the proper lane. This would require traffic personnel at each end to manage the switch, disrupt movements of other road users, and create delay in Tram service reducing the possible number of trips per day.

Option 2: Track extension north of Tram Building

This option utilizes the existing Tram right-of-way north of the Tram Building. A short 500 metre section of track could be installed for a limited two-way operation of the Tram within the park. Rehabilitation and extension of the existing 130 metre of track along the original interurban line would create a completely off-street route thereby eliminating conflict with other road users. Although this option would not provide travel to other destinations for passengers, it would serve to provide a demonstration of an operational Tram.

The advantages of this option include:

- The grade and asphalt are able to support Tram load;
- The track can be above ground with wooden ties similar to the existing section of track;
- Reflective of the original Tram route; and
- No impact on other street users.

The challenges with this option include:

- The line will not have any destination which would limit its appeal to visitors; and
- Impact on park users.

Option 3: Moncton and Bayview Streets

This option would have a 1.1 kilometre inlaid street track with the Tram running in a counter clock-wise direction along Moncton Street, Third Avenue, Bayview Street and No. 1 Road. The Tram would run in the travel lane. This route will serve the Tram building, the Cannery and the waterfront.

The advantages of this option include:

- The route serves the Gulf of Georgia Cannery and waterfront areas;
- The existing road base is sufficient to support tracks and Tram load; and
- Tram would run in the travel lane.

The challenges with this option include:

- High cost of construction related to installation of track and additional reconstruction work due to Tram routing from the Tram Building through the No. 1 Road and Moncton street intersection;
- Extensive manual or automated traffic control required at major intersections and pedestrian crossings, including No. 1 Road and Moncton Street;
- Loss of parking on the outside lane;
- Delays to other road users during Tram operation; and
- Impact to dike alignment and potential future raising of the road. This work would result in greater elevation differences, disruption of service and could complicate raising initiative.

Safety Issues

The study identifies several safety considerations associated with operating the Tram. Safety considerations that impact all three route options include;

- Due to the proximity of the tracks to the playground, a fence or barrier would be required to protect the park users and pedestrians; and
- The movement of the Tram Car could result in cyclists and pedestrian conflicts.

Safety concerns related to any on street routing options include;

- Cyclists could fall on slippery rails during wet weather. Cyclist's tires could also become trapped in the rail. Mitigation measures that would require further consideration include dedicated bike lanes to separate cyclists from the travel lane or prohibiting cyclists on the roads and intersections used for the Tram route.
- Operational and safety challenges for motorists, cyclists and buses. Potential mitigation measures for safe Tram integration to the street system may include traffic signal modifications, the dismounting of cyclists, removal of street parking, introduction of traffic control personnel, re-arrangement of traffic flow and turning movement conditions.

Regulatory and Operational Considerations

Technical Safety BC would require that the City of Richmond secure an operating certificate based on the regulations to run a rail service. The following additional resources would be required:

- Full time staff or contractor expertise;
- Safety management plan;
- Communication plan;
- Electrical safety plan;
- Medical clearance, training and qualification of crew and maintenance personnel; and
- Insurance.

Business Case

A high-level business case based on the estimated costs and anticipated revenue for Tram routing options 1, 2 and 3 was developed. The results indicate that the capital and ongoing operating costs for all options significantly exceed the anticipated revenue of running a seasonal Tram.

A revenue estimate based on seasonal operation is detailed in Table 3 below.

Table 2: Tram Routing Options and Estimated Annual Revenue and Operational Costs

Route Option	Estimated Annual Revenue	Estimated Annual Operational Costs*	Annual Subsidy
Option 1: Moncton Street	\$57,600	\$500,000 to \$1M**	\$442,400 to \$942,400
Option 2: Off Street: in Park	\$28,000	\$500,000	\$472,000
Option 3: On Street: track – Moncton St., Third Ave., Bayview St., No. 1 Road	\$86,000	\$500,000 to \$1M**	\$414,00 to \$914,000

**Annual operational costs include Tram maintenance, track and infrastructure maintenance, insurance and some personnel. The operational costs do not include all provisions for additional staff costs related to maintenance, operations and traffic control.*

*** Operating Budget Impacts due to removal and replacement of rails and power for completing road and utility infrastructure works have not been included.*

A survey of other tram services indicates fares average \$5.00 fare for tourism-oriented use. As the assessed routes are relatively short, the average fare for Option 2 was estimated at \$1.00 and \$3.00 for Options 1 and 3.

The business case analysis includes the use of volunteers to assist with program delivery including greeting visitors, narrating tours and assisting with events. While this helps to achieve cost savings, many of the positions related to tram operation require specialized skills and would therefore require trained staff to ensure safety and reliability of service. If staff were required for these potential volunteer positions, the annual subsidy required would be greater.

Steveston Streetscape Impacts

At the November 21, 2017, Planning Committee a report from the Director, Transportation and the Manager, Policy Planning, titled “Update: Proposed Steveston Area Plan Village Conservation Changes and Long Term Streetscape Visions for Bayview, Moncton and Chatham Streets” was presented. The following referral was made regarding the streetscape options:

That the recommended long-term Bayview, Moncton and Chatham Street Streetscape visions be referred back to staff for further investigation and future reporting on issues related to details of the streetscape elements, the Steveston interurban Tram and an upgraded Steveston bus exchange.

The findings conclude that none of the options presented in the staff report preclude a future operating Tram. The Tram can be accommodated in a single travel lane on both Bayview and Moncton Street under the existing and proposed future conditions. Locations of any stops along these streets will require re-allocating the placement or the elimination of some street elements, such as enhanced boulevards, bike lanes, street furniture and on street parking.

The recommended long-term streetscape for Bayview Street comprises shifting both the north and south curbs to create a wider pedestrian realm on the south side of the street combined with removal of the on street parking on the south side for provision of a two-way protected cycling facility on the south side, or a bi-directional cycling lane.

The Tram can operate in the south travel lane on Bayview Street in the eastbound direction. The preferred streetscape option for Bayview Street would not preclude the operation of the Tram. If the Tram was to operate ahead of the streetscape upgrades, there would be costs incurred for the removal and relocation of the rails to facilitate the recommended ultimate streetscape vision for Bayview Street in the future.

The recommended streetscape option for Moncton Street with slopes asphalt curb extensions to replace the existing concrete curb extensions at the intersections, will also be compatible with the route proposed along the westbound travel lane. At the intersection of No. 1 Road and Third Avenue where the Tram will turn, there will be impact to the road geometry and the curb extensions at some of the corners of the intersection.

Staff analysis has confirmed that operating the Tram car will be compatible with the proposed changes to the streetscape upgrades for Bayview and Moncton Streets and the streetscape options do not preclude operating the Tram car in Steveston Village in the future.

Steveston Tram Options

Based on the information provided by the consultants, the following options are presented for Council's consideration.

Option 1 – Maintain the Current Tram Program (Recommended)

With over 55,000 visitors annually and a high degree of visitor satisfaction, the current program offer at the Tram contributes to the rich offer of interpretive opportunities in Steveston. Making the Tram operational comes with considerable risks and challenges including risks to Tram Car 1220, the City's largest artefact, potential conflicts with other road users, including pedestrians and cyclists, and negative impacts to other valued community assets including the Steveston Nikkei Memorial. The proposed routing options are too short to offer a significant tourist experience and would require an operating subsidy.

Option 2 – Public Consultation

All options outlined in this report are technically feasible. Should Council wish to proceed beyond this feasibility review to advance the design to a functional plan, staff recommend engaging in a stakeholder and public consultation process that will include the Richmond Heritage Commission. This would provide an opportunity to assess the community's response to both the potential to make the Tram operational and to the routing options.

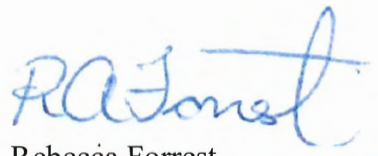
Staff would report back with these findings and recommendations. Should Council wish to advance planning after this initial public consultation process, additional funding would be required to complete a functional plan. This functional plan would provide more detailed information on regulatory and operational considerations, impacts for all road users, and provide cost estimates to a level required for a capital submission.

Financial Impact

None.

Conclusion

Staff recommend that the current program plan to interpret and preserve Tram Car 1220 is maintained. While the feasibility study shows that all options are technically feasible, there are considerable risks and safety implications when operating the Tram car in Steveston for cyclists, pedestrians, vehicles and the Tram itself.



Rebecca Forrest
Project Leader
(604-247-4674)



City of Richmond

Report to Committee

To: General Purposes Committee **Date:** June 3, 2020
From: Lloyd Bie, P.Eng. **File:** 12-8275-06/2020-Vol
Director, Transportation 01
Re: Quadricycle Business – Proposed Vehicle for Hire Bylaw Amendment to
Permit Permanent Operation

Staff Recommendation

1. That the third reading of Vehicle For Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add regulations and requirements for the operation of a quadricycle, be rescinded.
2. That Vehicle For Hire Bylaw No. 6900, Amendment Bylaw No. 10128, to add revised regulations and requirements for the operation of a quadricycle, be given third reading.

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

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

Staff Report

Origin

At its March 23, 2020 meeting, Council approved the first, second and third readings of amendments to the following three bylaws to allow the on-going operation of a quadricycle service year-round in the Steveston Village area:

- Business Licence Bylaw No. 7360: to add a definition of a quadricycle operation;
- Vehicle For Hire Bylaw No. 6900: to add the regulations and requirements for the operation of a quadricycle; and
- Consolidated Fees Bylaw No. 8636: to add the vehicle for hire business fee for a quadricycle operation.

At the April 27, 2020 Council meeting, the amendments to the Consolidated Fees Bylaw No. 8636 and the Business Licence Bylaw No. 7360 were adopted. With respect to the proposed amendments to the Vehicle For Hire Bylaw, the following referral was carried:

That Vehicle for Hire Bylaw No. 6900, Amendment Bylaw No. 10128 be referred back to staff to include a requirement for individuals under the age of 19 to wear a helmet while on the quadricycle.

This report responds to the referral.

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

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

7.3 Attract businesses to locate in Richmond and support employment and training opportunities in Richmond as we grow.

Analysis

Proposed Bylaw Amendment

The quadricycle requirements defined in the proposed amendment to Vehicle For Hire Bylaw No. 6900 have been revised to state that helmets are mandatory for passengers who are younger than 19 years and optional for passengers 19 years and older.

In addition, for greater clarity, the minimum number of sets of pedals on a quadricycle has been revised from two sets to six sets in order to equal the minimum required number of six pedalling passengers at any time while in operation.

Financial Impact

None.

June 3, 2020

- 3 -

Conclusion

The proposed bylaw amendments will allow the on-going year-round operation of a multi-person quadricycle service in the Steveston Village area that offers an interactive and environmentally friendly means of touring and learning about the history, culture and heritage of Steveston.



Joan Caravan
Transportation Planner
(604-276-4035)



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

JC:jc



City of
Richmond

Bylaw 10128

Vehicle For Hire Regulation Bylaw No. 6900 Amendment Bylaw No. 10128

The Council of the City of Richmond enacts as follows:

1. **Vehicle For Hire Regulation Bylaw No. 6900**, as amended, is further amended by deleting the heading PART THREE A: PEDICABS and replacing it with the following:

PART THREE A: PEDICABS (CLASS P)

2. **Vehicle For Hire Regulation Bylaw No. 6900**, as amended, is further amended by adding a new Part Three B as follows:

PART THREE B: QUADRICYCLE (CLASS Q)

3B.1 Quadricycle Requirements

3B.1.1 A quadricycle must:

- (a) have a track width of not less than 1 metre;
- (b) have a rear track width that is greater than the height of the seat frame as measured from level ground to the seat frame;
- (c) have a minimum of 6 pedalling passengers and maximum of 15 passengers, plus the operator at any time while in operation;
- (d) have helmets available for all passengers, which are mandatory for passengers who are younger than 19 years and optional for passengers 19 years and older.

3B.1.2 A quadricycle must at all times be equipped with:

- (a) at least 6 sets of pedals for passengers for motive power;
- (b) disc or drum brakes;
- (c) front headlight and rear tail lights;
- (d) rear brake lights;
- (e) operational turn signal lights and four-way flashers;
- (f) reflectors on sides and rear of the **quadricycle**;

- (g) a standard bell or horn;
- (h) a fire extinguisher;
- (i) a first aid kit;
- (j) a repair kit; and
- (k) a slow moving vehicle sign.

3B.1.3 In addition to the requirements of Subsection 3B1.1 and 3B1.2, each **quadricycle** operator must:

- (a) not permit any alcohol consumption on the **quadricycle**;
- (b) not permit any cannabis consumption on the **quadricycle**;
- (c) not permit any smoking or vaping on the **quadricycle**;
- (d) meet any additional conditions as set forth in the *Motor Vehicle Act* and its Regulations, and any regulations established by the Insurance Corporation of British Columbia.

3B.2 Licence and Vehicle For Hire Plate

- 3B.2.1 A person must not operate a business using a **quadricycle** unless that person holds a valid business licence issued under the provisions of this bylaw and the **Business Licence Bylaw No. 7360**, as amended, and has paid the annual licence fee prescribed in the **Consolidated Fees Bylaw No. 8636**, as amended.
- 3B.2.2 Maintain a **vehicle for hire business office** in the **City**, except that the office may be that of another **licencee**;
- 3B.2.3 Not more than 2 **quadricycles** may be used at any one time on the same route as approved by the Director of Transportation.
- 3B.2.4 The **vehicle for hire plate** issued under the provisions of this bylaw must be attached to the rear of the **quadricycle** frame or bumper.

3B.3 Area of Operation

- 3B.3.1 An operator must not operate a **quadricycle** except on the route(s) established in Schedule 3 to this bylaw, and in accordance with any conditions and restrictions required by the Director of Transportation.
- 3B.3.2 An operator may not deviate from the approved routes or stop-over locations unless approved in writing by the Director of Transportation or added to Schedule 3 to this bylaw.

3B.4 Hours of Operation

3B.4.1 A **quadricycle** operator may only permit a **quadricycle** to operate during the following hours each day:

- (a) Month of January, from 9:00 a.m. to 6:00 p.m.;
- (b) Month of February, from 9:00 a.m. to 6:00 p.m.;
- (c) Month of March, from 9:00 a.m. to 6:00 p.m.;
- (d) Month of April, from 9:00 a.m. to 7:00 p.m.;
- (e) Month of May, from 9:00 a.m. to 8:00 p.m.;
- (f) Month of June, from 9:00 a.m. to 9:00 p.m.;
- (g) Month of July, from 9:00 a.m. to 9:00 p.m.;
- (h) Month of August, from 9:00 a.m. to 8:00 p.m.;
- (i) Month of September, from 9:00 a.m. to 7:00 p.m.;
- (j) Month of October, from 9:00 a.m. to 6:00 p.m.;
- (k) Month of November, from 9:00 a.m. to 6:00 p.m.;
- (l) Month of December, from 9:00 a.m. to 6:00 p.m.

3B.4.3 A **quadricycle** operator may not operate the **quadricycle** on July 1.

3B.5 Traffic and Parking

3A.5.1. A **quadricycle** operator must comply with this bylaw, the **City's Traffic Control and Regulation Bylaw No. 5870**, the British Columbia *Motor Vehicle Act* and its Regulations, and any other applicable enactment, all as amended or replaced, and without limiting the foregoing, must not use:

- (a) transit or taxi/tour bus stops;
- (b) loading zones/bays;
- (c) vehicle, motorcycle or accessible parking spaces.

3B.6 Operator Requirements

3A.6.1 An **operator** must not operate, permit or allow a **quadricycle** to be operated unless:

- (a) the operator is 19 years of age or older;
 - (b) the operator holds a valid, current British Columbia Driver's Licence;
 - (c) the operator must stay with the quadricycle at all times;
 - (d) the operator has provided the City with a copy of \$10 million liability insurance with the City of Richmond named as an Additional Insured.
3. **Vehicle For Hire Regulation Bylaw No. 6900**, as amended, is further amended at Section 10.1 by deleting the definition of a pedicab and replacing it with the following within Subsection Vehicle For Hire in alphabetical order:

CLASS P - PEDICAB means a 3-wheeled cycle propelled by the foot power of the operator equipped with a carriage capable of carrying no more than 2 passengers plus the operator and without limitation, includes a 3-wheeled cycle that is propelled by the foot power of the operator and has motor assist capability.

4. **Vehicle For Hire Regulation Bylaw No. 6900**, as amended, is further amended at Section 10.1, Subsection Vehicle For Hire by adding the following definition of a quadricycle in alphabetical order:

CLASS Q - QUADRICYCLE means a 4-wheeled cycle equipped with a carriage capable of carrying no more than 15 passengers plus the operator, and is propelled by the foot power of the operator and a minimum of 6 passengers.

5. **Vehicle For Hire Regulation Bylaw No. 6900**, as amended, is further amended by adding Schedule A attached hereto as the new Schedule 3 to Bylaw No. 6900.
6. This Bylaw is cited as "**Vehicle For Hire Regulation Bylaw No. 6900, Amendment Bylaw No. 10128.**"

FIRST READING

SECOND READING

THIRD READING

ADOPTED

MAYOR

CORPORATE OFFICER

CITY OF
RICHMOND

APPROVED
DS
03

APPROVED
for legality
DS
LB

SCHEDULE A to AMENDMENT BYLAW NO. 10128

SCHEDULE 3 to BYLAW NO. 6900





City of Richmond

Report to Committee

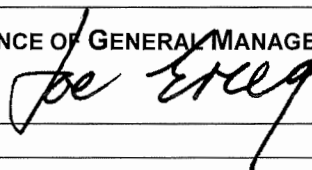
To: General Purposes Committee
From: Wayne Craig
Director, Development
Date: June 19, 2020
File: TU 20-890760
Re: **Application by City Vancouver Academy Inc. for a Temporary Commercial Use Permit for the Property at Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 McKim Way**

Staff Recommendation

1. That the application by City Vancouver Academy Inc. for a Temporary Commercial Use Permit (TCUP) for the property at Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 McKim Way to permit education use (limited to an independent school offering grades 10 to 12) be considered for one year from the date of issuance; and
2. That this application be forwarded to the September 8, 2020 Public Hearing at 7:00 p.m. in the Council Chambers of Richmond City Hall.

Wayne Craig
Director, Development
(604-247-4625)

WC:na
Att. 5

REPORT CONCURRENCE
CONCURRENCE OF GENERAL MANAGER 

Staff Report

Origin

City Vancouver Academy Inc. has applied to the City of Richmond for a Temporary Commercial Use Permit (TCUP) to allow “Education” as a temporary use in nine units at 8766 McKim Way on a sited zoned “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)”. This would permit an education facility to operate on site for a limited time until a permanent location is found (Attachment 1). City Vancouver Academy Inc. is an independent high school that offers courses for students in grades 10 to 12. This type of use falls under Richmond Zoning Bylaw 8500’s definition of “Education”.

Background

Richmond Zoning Bylaw 8500 permits “Education” use, including accredited secondary schools, in specific zones (e.g., SI, CDT1, and ASY). The “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)” zone permits “Education, Commercial” use which is defined as “a private enterprise specializing in technical or vocational certification studies”.

A business license for a tutoring centre was issued to the Bauhinia Learning Centre at 8766 McKim Way in 2011. The City Vancouver Academy Inc. A bylaw inspection of the premises in 2019 found the Academy to be non-compliant with the Zoning.

In January, 2020, the Ministry of Education performed its annual inspection of accredited facilities to ensure the school is compliant with all Municipal and Provincial standards before renewing their licence. The Ministry’s report to the Academy required documentation from the City of Richmond that they were working towards compliance with land use regulations. The school submitted a TCUP application for the site for one year to provide time to secure a permanent location that permits the “Education” use.

If approved, the TCUP would be valid for one year from the date of issuance. An application for an extension of the Permit for up to three additional years may be made. Only one extension is permitted per application.

Findings of Fact

A Development Application Data Sheet providing details about the proposal is provided as Attachment 2.

Surrounding Development

The subject site is located in the City Centre planning area. Development immediately surrounding the subject site is as follows:

- To the North: Across McKim Way, commercial office complex on a property zoned “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)”.
- To the South: Property zoned “Industrial Business Park and Religious Assembly (ZI5) – Aberdeen Village (City Centre)” for a place of worship and “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)” for a light industrial, retail trade and services building.
- To the East: Office and commercial units on a property zoned “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)”.
- To the West: Office and commercial units on a property zoned “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)”.

Related Policies & StudiesOfficial Community Plan/Aberdeen Village

The Official Community Plan (OCP) land use designation for the subject site is “Mixed Employment”. The Aberdeen Village (2031) Specific Land Use Map within the City Centre Area Plan designates the subject site as “General Urban T4 (25 m),” which allows for low to medium density of light industrial, office, and retail services. The OCP allows commercial educational uses (i.e., tutoring schools) but specifically discourages schools offering Kindergarten to grade 12 (K-12) curriculums due to the fact that K-12 programs are aircraft noise sensitive uses.

The OCP allows TCUPs in areas designated “Industrial”, “Mixed Employment”, “Commercial”, “Neighbourhood Service Centre”, “Mixed Use”, “Limited Mixed Use”, and “Agricultural” (outside of the Agricultural Land Reserve), where deemed appropriate by Council and subject to conditions suitable to the proposed use and surrounding area.

The proposed temporary Commercial use is consistent with the land use designations and applicable policies in the OCP.

Aircraft Sensitive Noise Development (ASND) Policy

The subject site is located within “Area 1A – Restricted Area” of the Aircraft Noise Sensitive Development (ANSND) Policy, where new aircraft noise sensitive land uses are prohibited, including K-12 schools. This Policy exists to prevent exposure to aircraft noise throughout the range of typical activities offered in K-12 schools, such as outdoor play. While the proposed use is temporary, the school’s activities on the site will be exclusively indoors. Further information regarding how outdoor play will be accommodated is addressed in the outdoor play space and physical education section of this report.

The applicant has submitted a Building Permit application (BP 20-890506) to address Building Code, increased occupant load, and other school related requirements for the subject site and associated units. The applicant has committed to completing an acoustical report performed by a professional engineer prior to the issuance of the Temporary Permit, to indicate that the measured indoor sound levels meet the noise criteria set out in the OCP for “living, dining, and recreation rooms”. Any required upgrades outlined in the Building Permit should also be completed to obtain their Business Licence and secure their accreditation as a school.

Local Government Act

The *Local Government Act* states that TCUPs are valid until the date the Permit expires or three years after issuance, whichever is earlier, and that an application for one extension to the Permit may be made and issued. A new TCUP application is required after one extension, which would be subject to Council approval. Staff recommend the permit be issued for one year as this is a temporary accommodation while the applicant searches for an appropriately zoned site.

Public Consultation

A sign has been installed on the site to advise of the proposal. Should Council endorse the staff recommendation, the application will be forwarded to a Public Hearing on September 8, 2020, where any area resident or interested party will have an opportunity to comment. Public notification for the Public Hearing will be provided as per the *Local Government Act*.

Richmond School District No. 38 has been made aware of the Temporary Use Permit application at the subject site. No comments or concerns have been communicated back to staff.

Analysis

The subject units at 8766 McKim Way are located in the eastern building (Attachment 3). The nine units have been occupied by City Vancouver Academy Inc. since September, 2014.

City Vancouver Academy Inc. obtained a Business Licence at the current McKim Way location in 2014 for a tutoring centre. A Business Licence was issued based on the information provided for the “Education, Commercial” use, which is a permitted use in the “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)” zone.

The education and tutoring services that the City Vancouver Academy Inc. provided at the time, complied with “Education, Commercial”. However, through expansion and growth of the program, re-classification of the business as a private secondary school was not made. Therefore, the applicant is requesting a TCUP to allow “Education” use and the existing school to continue to operate while securing a new permanent site. The applicant advises that they have been actively searching for a new location for the school and is committed to finding another facility within one year of the date of issuance. The applicant has provided a letter indicating the intent to find another location (Attachment 4). Negotiations are currently underway with a potential new location.

Outdoor Play Space and Physical Education

BC Ministry of Education does not have an outdoor play space requirement and there is no such requirement in the *Independent School Act*. However, all BC students are required to take a Physical Education course in grade 10. As the school does not have play space or a gymnasium, the applicant has indicated that arrangements are made to conduct the school’s physical education requirements at multiple off-site locations including the nearby King George Park at No. 5 Road and Cambie Road, the Olympic Oval, and the Richmond Pro Badminton Center at 5800 Minoru Boulevard. All off-site Physical Education activities organized by the school would have staff supervision.

Parking

Vehicle parking for the “Education” use for secondary schools is required at a rate of one parking space per staff member, plus one parking space for every ten students. As per Richmond Zoning Bylaw 8500, the proposed use would require 11 vehicle parking stalls for 6 staff members and 50 students. 11 vehicle parking stalls are assigned on site to the school, resulting in compliance with the vehicle parking regulation. Required parking stalls will be secured for use by the school. A letter of support from the strata has also been provided (Attachment 5).

Two Class 1 bicycle parking spaces are required (one space for every three staff members), and 15 Class 2 bicycle parking spaces are required (three spaces for every ten students). A total of 18 Class 1 bicycle parking spaces are proposed to satisfy the Class 1 and Class 2 requirements. Transportation staff support the proposed plan. The applicant has indicated that all bicycle parking spaces will be provided at 8766 McKim Way in a secured room dedicated to the school at the south end of the east building on the subject site.

Financial Impact

None.

Conclusion

City Vancouver Academy Inc. has applied to the City of Richmond for a Temporary Commercial Use Permit to allow “Education” use in units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 – 8766 McKim Way, zoned “Industrial Limited Retail (ZI2) – Aberdeen Village (City Centre)”, to permit an education facility (limited to an independent school offering grades 10 to 12) on-site for one year from the date of issuance.

The proposed use at the subject property is acceptable to staff on the basis that it is temporary in nature and does not negatively impact current business operations at 8766 McKim Way. Staff recommend that the attached Temporary Commercial Use Permit be issued to the applicant to allow "Education" use at 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 – 8766 McKim Way for one year from the date of issuance.

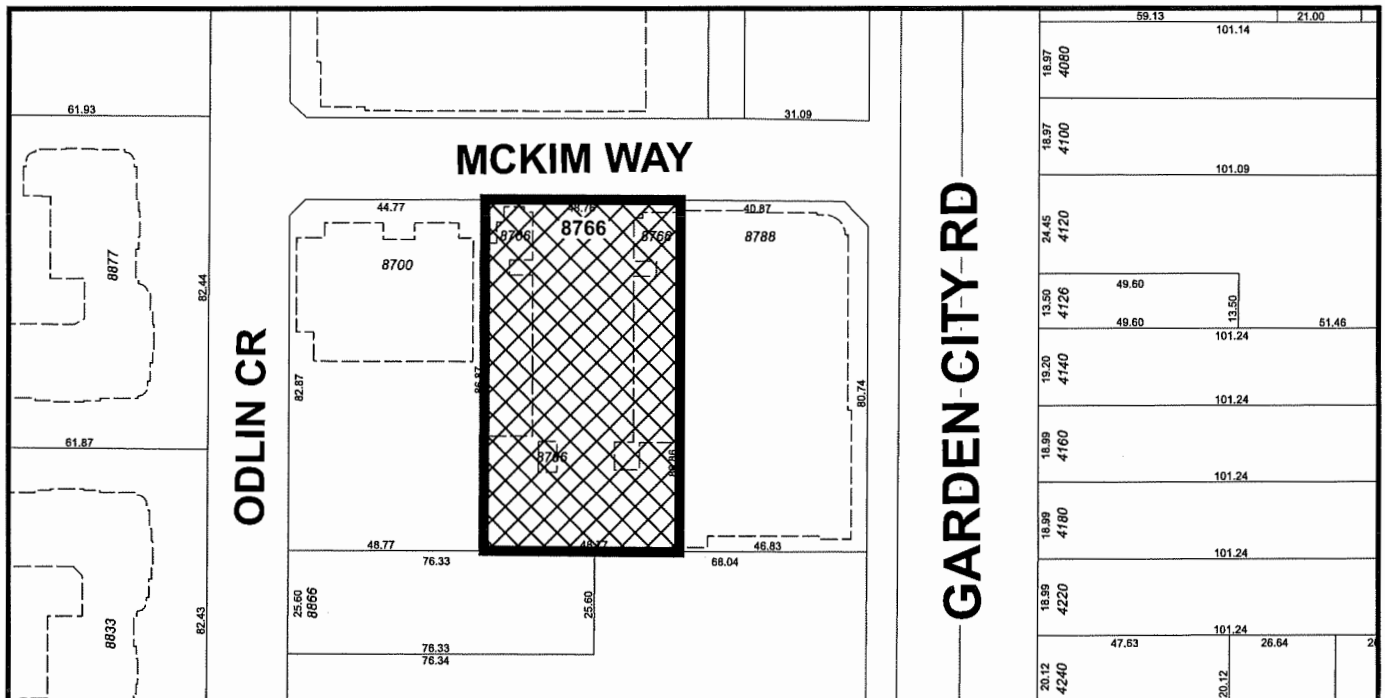


Nathan Andrews
Planning Technician
(604-247-4911)

NA:blg

Attachments:

- Attachment 1: Location Map and Aerial Photo
- Attachment 2: Development Application Data Sheet
- Attachment 3: Site Plan and Parking Plan
- Attachment 4: Letter from the Applicant
- Attachment 5: Letter from Strata Management Company



TU 20-890760
(Unit 2165) main office

Note: Dimensions are in METRES

CNCL - 83

Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165, 2170 - 8766 McKim Way



City of Richmond



TU 20-890760
(Unit 2165) main office

Original Date: 01/17/20

Revision Date:

Note: Dimensions are in METRES

CNCL - 84

Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165, 2170 - 8766 McKim Way



TU 20-890760

Attachment 2

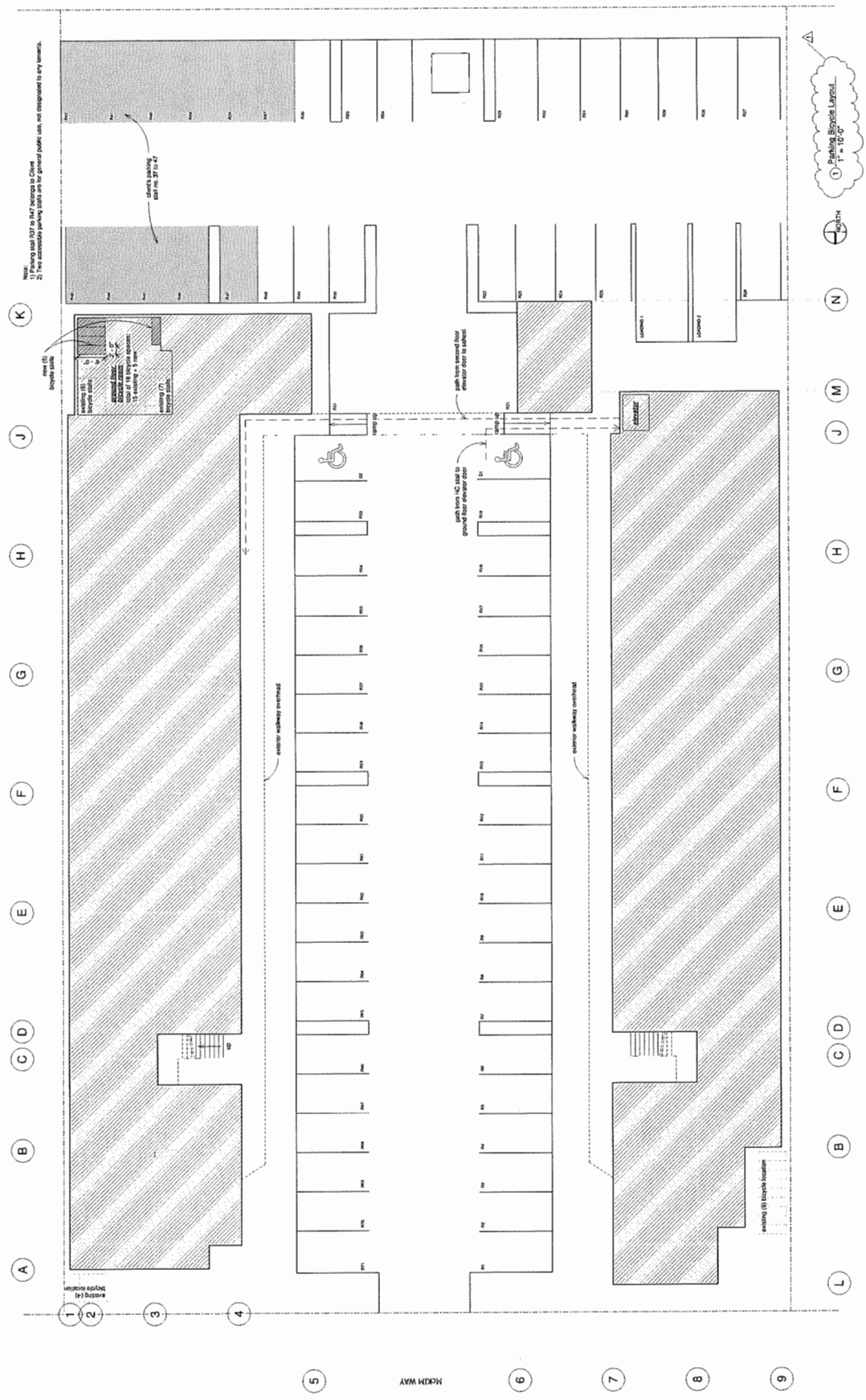
Address: Units 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165, and 2170 – 8766 McKim Way

Applicant: City Vancouver Academy Inc.

Planning Area(s): City Centre – Aberdeen Village

	Existing	Proposed
Owner:	Bauhinia Learning Centre Ltd.	No change
Combined Unit Size (m²):	348.5 m ²	No change
Land Uses:	Education, Commercial	Education
OCP Designation:	Mixed Employment	No change
CCAP Designation:	General Urban T4 (25m)	No change
Zoning:	Industrial Limited Retail (Z12) – Aberdeen Village (City Centre)	No change

On Development Site	Bylaw Requirement	Proposed	Variance
On-site Vehicle Parking:	11	11	None
On-site Bicycle Parking:	Class 1: 2 Class 2: 15	Class 1: 18 Class 2: 0	None





CITY VANCOUVER ACADEMY
move the world

2165-8766 McKim Way,
Richmond B.C. Canada V6X 4G4
404.273.6611

January 10th, 2020

Dear City of Richmond,

City Vancouver Academy, Inc. seeks to apply for a **Temporary Use Permit (TPU)** for 2165 – 8766 McKim Way, Richmond.

City Vancouver Academy is an BC Ministry of Education-certified independent high school that was established in September of 2014. We have been running grade 10 to 12 classes since that time.

On October 31, 2019, now-Property Use Inspector *Amen Sharma* informed us that our current premises did not meet municipal compliance. According to Richmond bylaw, secondary schools can only operate in specific zones (such as SI, CDT1, and ASY), which has **education** listed as one of the permitted uses. Our current zone (Z12) allows for **education, commercial**. Due to various management team changes early in our inception, our current team was not aware of such issues until informed by Mr. Sharma. We have worked tirelessly for the past three months to meet compliance.

Our primary plan is to relocate but because of unforeseen hurdles, we believe that relocation will take an additional number of months. Although the City and the Ministry have generously given us time to transition, we wish to be proactive in rectifying these issues. As such, we recognize that our pursuit for a Temporary Use Permit (TPU) is meant to be a short-term solution that will allow us to be fully compliant during this period as we finalize our lease and our move to an appropriately zoned location.

The owners of City Vancouver Academy, Inc. also own all the units in which City Vancouver Academy operates. We currently utilize 9 units on the second floor of Excel Centre. 7 of the units are currently used as classroom space, while the remaining 2 are office space for administrative staff.

To meet compliance, we propose that the **Education** is added as one of the permitted use for this zone.

Thank you for your consideration.

City Vancouver Academy Inc.
2165-8766 McKim Way,
Richmond, B.C. V6X4G4



STRATA APPROVAL LETTER (LMS4572)

June 19th, 2020

Dear Sirs / Madam,

RE: TU 20-890760, A Temporary Use Permit application from tenant City Vancouver Academy Inc.

We acknowledge that current tenant of Unit 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 and 2170 - 8766 Mckim Way, Richmond, BC V6X 4G4 is applying for a temporary commercial use permit to allow "Education" as a permitted use on a ZI2 zoned site. A signage has been set up by the tenant.

The owner of above units is Bauhinia Learning Centre Ltd. The tenant's main contact person regarding this matter is Mr. Leo Wang, leo.wang@cityvanacademy.ca, 604-278-6811.

The Strata reviewed a Blue Print #5743191 made by ARCHITECT 57 INC., on behalf of the owner and the tenant., regarding use of property (B.C. high school), proposed occupant load (Upon approval), use of parking lot (reserved parking space #37 – 47), use of bicycle storage (secured storage room owned by the owner) and use of public washrooms.

The Strata has NO particular concern or comment on this proposed Blue Print and this Temporary Use Permit application.

Please feel free to contact me if you have any questions or concern.

Yours truly,

Eric Chung
Property Manager

CITYBASE MANAGEMENT LTD

#400 - 1200 W 73rd Avenue, Vancouver, BC V6P 6G5

Tel: 604-708-8998 Fax: 604-708-9982

Website: www.citybase.ca Email: ericchung@citybase.ca



City of Richmond

Temporary Commercial Use Permit

No. TU 20-890760

To the Holder: CITY VANCOUVER ACADEMY INC.

Property Address: UNITS 2110, 2115, 2120, 2125, 2150, 2155, 2160, 2165 AND
2170 – 8766 MCKIM WAY

Address: C/O LEO WANG
CITY VANCOUVER ACADEMY INC.
2115 – 8766 MCKIM WAY
RICHMOND, BC V6X 4G4

1. This Temporary Commercial Use Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied or supplemented by this Permit.
2. This Temporary Commercial Use Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and to the portion of the building shown cross-hatched on the attached Schedule "B".
3. The subject property may be used for the following temporary Commercial uses:

Education (limited to an independent school offering grades 10 to 12)
4. As a condition of the issuance of this Permit, the City must receive an acoustical report performed by an acoustical engineering stating that the interior of the subject units will achieve the 40 dB level.
5. This Permit is valid for one year from the date of issuance.

AUTHORIZING RESOLUTION NO.
DAY OF , .

ISSUED BY THE COUNCIL THE

DELIVERED THIS DAY OF , .

MAYOR

CORPORATE OFFICER

GENERAL NOTES

ALL WORK TO BE DONE IN ACCORDANCE WITH THE 2018 EDITION OF THE B.C. BUILDING CODE AND ALL APPLICABLE MUNICIPAL COMPENSATION BOARD OF BRITISH COLUMBIA.

GENERAL CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND ELEVATION DATUM PRIOR TO STARTING WORK. ANY DISCREPANCIES ARE TO BE REPORTED TO ARCHITECT 72 HRS. FOR CLARIFICATION.

GENERAL CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO STARTING WORK. ALL WORK SHALL BE APPROVED BY THE CONSULTANT PRIOR TO THE EXECUTION OF THE WORK. EXECUTION OF CHANGED WORK WITHOUT THE APPROVED BY THE CONSULTANT PRIOR TO THE EXECUTION OF THE WORK. EXECUTION OF CHANGED WORK WITHOUT THE APPROVED BY THE CONSULTANT PRIOR TO THE EXECUTION OF THE WORK.

GENERAL CONTRACTOR TO MAINTAIN ON SITE A COPY OF APPROVED BUILDING PERMIT DRAWINGS AS WELL AS USED FOR CONSTRUCTION DRAWINGS AND PERMITS. REPORTS FROM THE AUTHORITY SHALL BE MAINTAINED ON SITE AND MADE AVAILABLE TO THE CONSULTANT AND ARCHITECT UPON REQUEST.

ALL INTERIOR PARTITIONS ARE DIMENSIONED TO THE CENTRELINE OF THE PARTITION UNLESS OTHERWISE NOTED ON THE DRAWINGS.

DO NOT SCALE. DIMENSIONS, LARGER SCALE DRAWINGS PRECEDE OVER SMALLER SCALE DRAWINGS.

ALL MATERIALS AND PREPARED COMPONENTS SHALL BE INSTALLED OR USED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUBTRADE PERMITS AND FEES, INSPECTIONS, TENANT SHALL APPLY FOR BUILDING PERMIT.

ALL MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER WORK BY GENERAL CONTRACTORS DESIGN BUILD SUBMITTALS.

GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL SUBTRADE PERMIT FEES, INSPECTIONS AND PERMITS.

FINISHES

ALL SYSTEM WALL BOARD TO BE TYPE F, FILLER AND SANDER SMOOTH PRIOR TO APPLICATION OF FINISHES.

ALL FINISHED SURFACES ARE TO BE PRIMED AND PAINTED WITH 3 COMPLETE COATS OF PAINT.

BUILDING CODE ANALYSIS

REFERENCE DOCUMENTS

2018 EDITION OF THE B.C. BUILDING CODE

2018 EDITION OF THE B.C. BUILDING CODE

2018 EDITION OF THE B.C. BUILDING CODE

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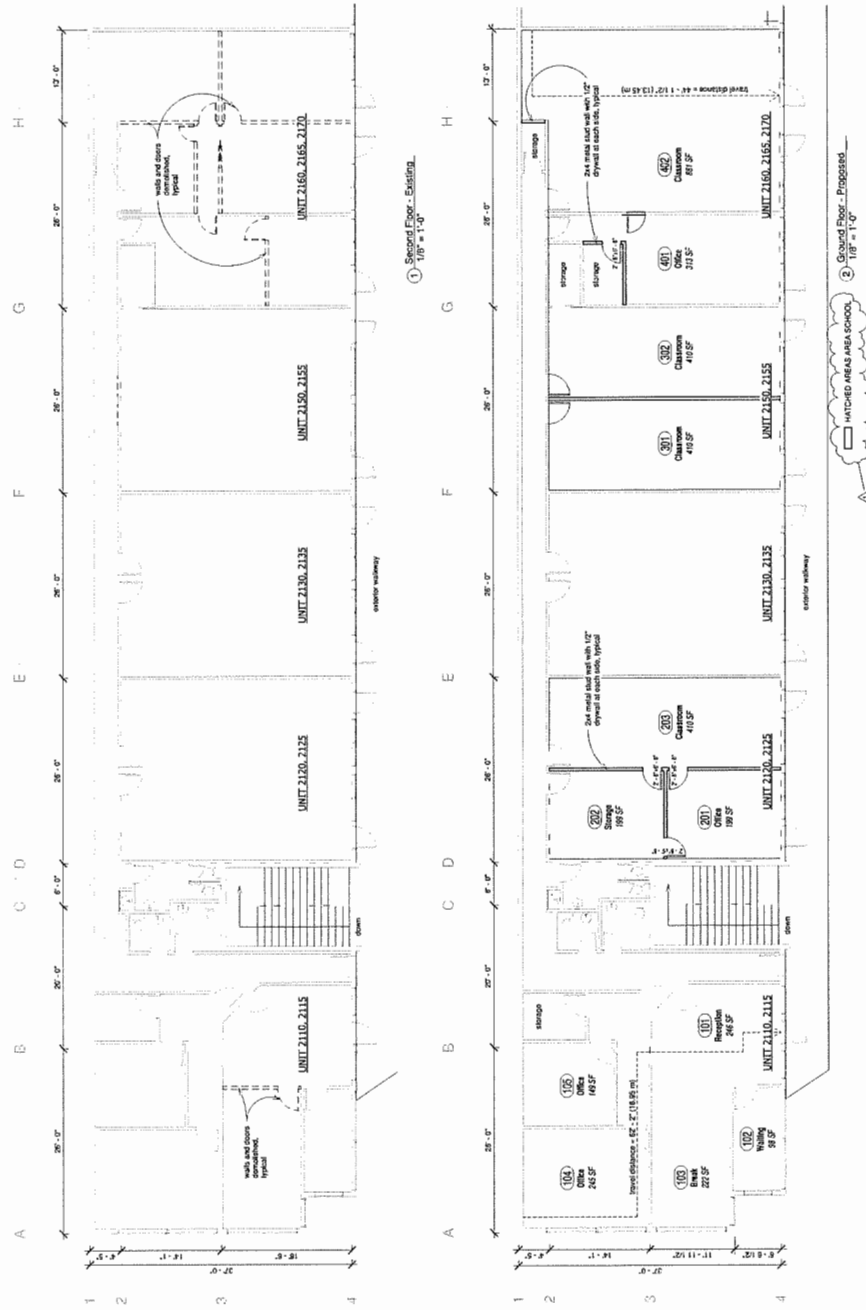
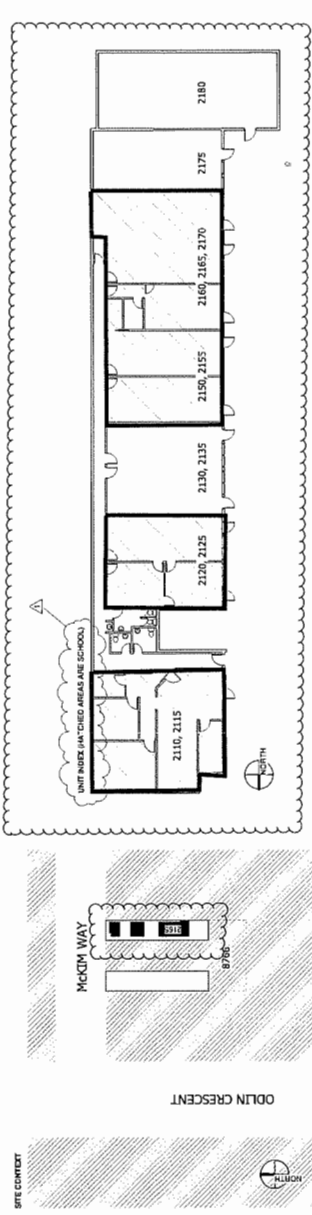
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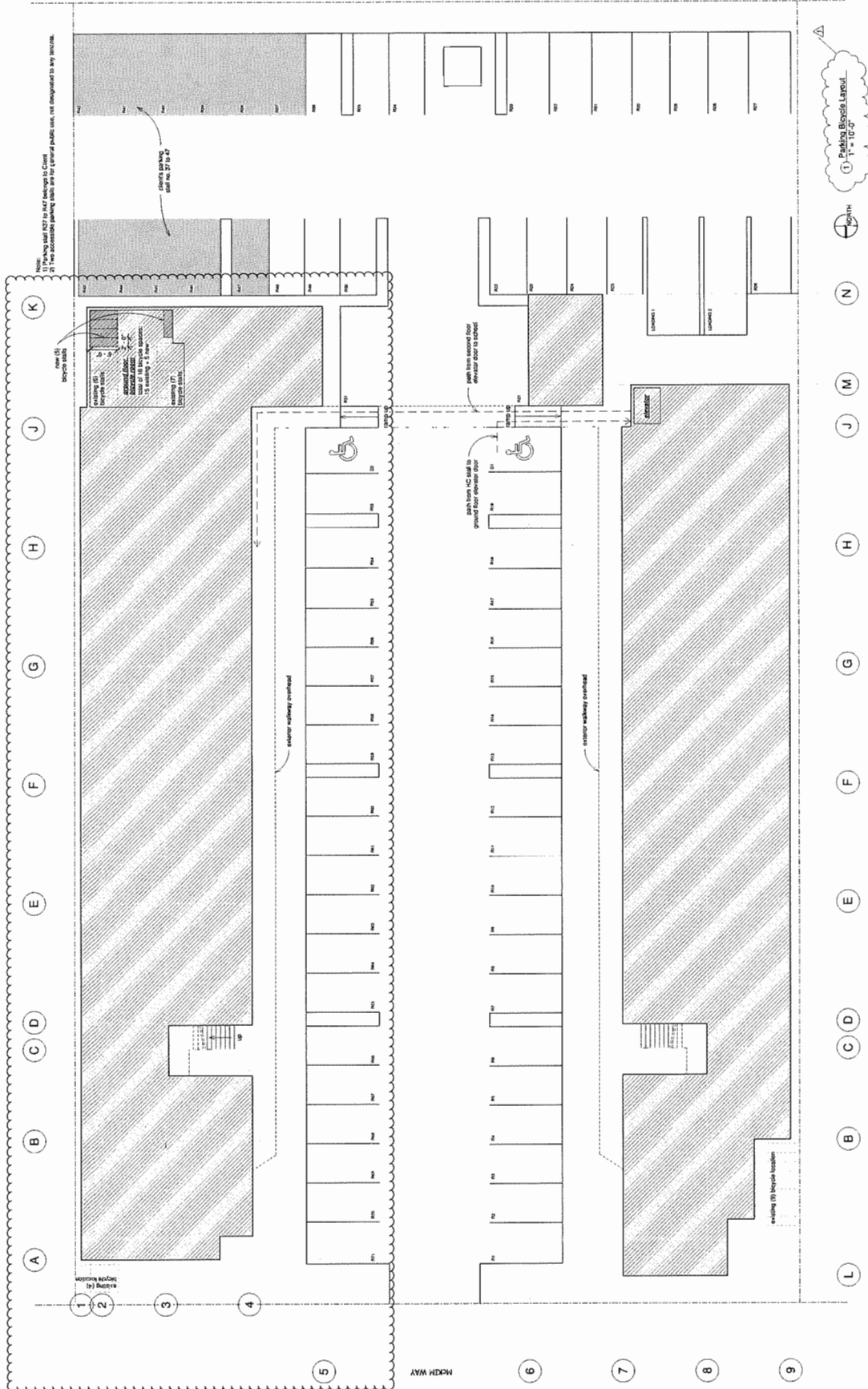
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2018 EDITION OF THE B.C. BUILDING CODE



SCHEDULE "B"



project no.
5743191
sheet no.
A102

drawing title
PARKING AND BICYCLE LAYOUT
drawing scale
1" = 10'-0"

project site
ARCHITECT 57 INC. 2165-8766 MCKIM FLOOR PLAN
UPDATE AND OCCUPANT LOAD

client: BARBARA LEARNING CENTRE
address: 2165-8766 MCKIM WAY, EDMONTON, A.C.

consultant
logo & description

date
2015.12.10

issued for
description
1. Loading permit

date
2015.12.10

revisions
description
1. Occupant load and permit

date
2015.12.10

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City of Richmond

Report to Committee

To: General Purposes Committee
From: Peter Russell, RPP
Director, Sustainability and District Energy
Re: Tilbury Phase 2 LNG Expansion Project

Date: June 1, 2020
File: 10-6125-30-010/Vol 01

Staff Recommendation

That the comments outlined in the staff report titled "Tilbury Phase 2 LNG Expansion Project", dated June 1, 2020, from the Director, Sustainability and District Energy be endorsed and submitted to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to support the provincial and federal environmental assessments.

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

Att. 3

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

Staff Report

Origin

This report introduces the FortisBC, Tilbury Phase 2 Liquefied Natural Gas (LNG) Expansion Project and summarizes the provincial and federal environmental assessment processes currently underway. This report also recommends that comments regarding this project be endorsed and submitted to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada to support the provincial and federal environmental assessment phases.

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

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

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

Analysis

FortisBC (Fortis) is proposing the second and final expansion of its existing LNG facility located on Tilbury Island, in the City of Delta (Attachment 1). The proposed upgrades (the Project) will include a new LNG storage tank (and related infrastructure) to increase LNG storage capacity at the site to 163,000 m³ and LNG production capacity by more than 50%. Fortis is planning to begin construction within two years and intends to commission a marine jetty, also currently pursuing an environmental assessment to access offshore LNG markets by 2028. Fortis notes that it does not anticipate future expansion at this site beyond this Project. Fortis operates and maintains a network of LNG transmission lines throughout Metro Vancouver, including a transmission line in Richmond that crosses the Fraser River, west of Nelson Road. No alterations or upgrades are proposed for this transmission line or within the City's limits.

The Project's storage and liquefaction capacity triggers a review under BC's *Environmental Assessment Act* and the federal *Impact Assessment Act* to determine if environmental certificates are required. Fortis prepared an Initial Project Description that was accepted by the BC Environmental Assessment Office and Impact Assessment Agency of Canada in February 2020 to initiate the provincial Early Engagement phase and federal Planning phase of the environmental assessment processes. The purpose of these early phases is to identify key issues and concerns early in the processes to better inform a plan for resolution during the assessments. Illustrations of the provincial and federal environmental assessment timelines are included in Attachment 2. The timelines for these preliminary assessment phases have been extended in consideration of COVID-19 and continue to be assessed by the agencies to support meaningful consultation.

Liquefied Natural Gas Expansion on Tilbury Island

The LNG facility on Tilbury Island has been operational since 1971. The original facility included a single storage tank (still in place), related infrastructure and a truck loading bay. The original facility was capable of producing 60 tonnes of LNG daily and had a LNG storage capacity of 28,000 m³. Phase 1 (A and B) facility upgrades began in 2014. Phase 1A improvements, completed in 2018, included the construction of a new storage tank and truck loading facilities to increase LNG storage and production. Fortis is currently working on Phase 1B improvements which include commissioning the new storage tank and new transmission lines between Tilbury Gate Station and the Tilbury LNG facility. Phase 1B upgrades are expected to be operational by 2022. Phase 2 upgrades include decommissioning the facility's original storage tank and constructing a new tank. The final configuration will include two final storage tanks if approved. Phase 1 improvements were authorized by the provincial government in 2013, under the *Utilities Commissions Act*, and did not trigger provincial or federal environmental assessments under the *BC Environmental Assessment Act* or the federal *Canadian Environmental Assessment Act* at that time.

Wespac Midstream – Vancouver LLC (WesPac) is also pursuing federal and provincial Environmental Assessment Certificates to construct a marine jetty (and related infrastructure), adjacent to the Fortis site that will facilitate the shipment of LNG to offshore markets. Staff have been engaged on this project since 2015 as a Working Group member. This project is currently in the Application Review stage and staff are working with the Province to address concerns related to climate change, security and the protection of the community's dike infrastructure. The BC Environmental Assessment Office has deliberated on the technical information presented by Wespac during the assessment and is preparing a draft referral package to inform provincial and federal decisions. Staff will keep Council informed on the status of this project.

Local Government Consultation and Staff Comments

The BC Environmental Assessment Office and the federal Impact Assessment Agency are leading a coordinated approach to obtain comments from the public (and stakeholders) regarding the Project. A 45 day public comment period will be held between June 1, 2020 and July 16, 2020. Two virtual Open Houses are also planned on June 18 and 23, 2020 that will include presentations from each agency and Fortis. Staff will attend the virtual Open Houses. The City has also been invited to provide general comments, concerns and issues related to the project. Comments and concerns will not be limited to these events, the City will have ample opportunity to submit future concerns or comments if needed.

Staff have reviewed Fortis' Initial Project Description and are seeking Council's endorsement for the following comments to be forwarded to the BC Environmental Assessment Office and the Impact Assessment Agency of Canada:

- The City is concerned with the proposed volumes of LNG that will be stored at the facility should the Project be approved. The volatile material poses a risk to the community and Fraser River in terms of spills, accidents, malfunctions and potential security breaches.

- The Project represents another industrial upgrade that is further contributing to the industrialization of the Fraser River estuary and its sensitive ecosystems. There are currently a number of major projects (proposed and/or approved), at or near the Fraser River estuary including the Robert's Bank Terminal 2 Project, the Delta Grinding Facility Project, the Vancouver Airport Fuel Delivery Project and the George Massey Tunnel Replacement Project (Attachment 3). The City relies on the ecosystem functions of the Fraser River estuary to reduce the impacts of flooding and improve the community's quality of life. Recent updates under BC's *Environmental Assessment Act* and federal *Impact Assessment Act* have not been tested and have the potential to not adequately mitigate the long-term cumulative effects of climate change caused by the Project and others.
- The Project does not align with Metro Vancouver's regional air quality objectives. Richmond is concerned that the Project will impact the region's air quality during construction and operation as volumes of contaminants (nitrogen oxides, carbon dioxide, sulfur dioxide, hydrocarbons, and particulate matter) are expected to be released from the Project's related infrastructure.
- Fortis is proposing to increase LNG production and storage capacity, and is preparing their operations to include marine shipping to offshore markets. Staff have concerns with the potential impacts that increased noise, light and atmospheric pollution will have on local wildlife and the community.
- It is unclear if the City's road network will be impacted from increased LNG truck movements as a result of the Project. Fortis states that up to 500 temporary workers will be required to access the site during construction. A Traffic Impact Assessment is required to determine whether or not the Project should proceed until the long-term improvements to the George Massey Crossing, as well as the Steveston Highway and Highway 17A interchanges, are complete.
- The site is currently located on land in the City of Delta that is designated for industrial uses. Fortis will be required to occupy additional land outside of the proposed project footprint for temporary construction laydown and staging areas. Land within the provincial Agricultural Land Reserve should not be developed to support these areas during construction.
- This project does not align with local, provincial national strategies to reduce greenhouse gas emissions and reduce BC's economic reliance on fossil fuels. Fortis should be directed to develop alternative and renewable fuel sources that have less socio-economic and environmental impacts than drilling, processing and transporting LNG.
- Fortis states that additional work will be required to commission the marine jetty, should that project be approved (under separate environmental assessment). The City expects that this additional work be detailed as part of this Project so potential, related issues can be fully assessed.

Next Steps

If endorsed, the comments above will be submitted to the BC Environmental Assessment Office and the federal Impact Assessment Agency to inform the early phases of the environmental assessment processes. The BC Environmental Assessment Office and federal Impact Assessment Agency will produce a joint report following the public comment period to summarize key

concerns following the public consultation period. Fortis then has up to one year to consider these concerns and prepare a Detailed Project Description to inform a regulatory readiness decision. The agencies will have numerous options at that time including requesting revisions to the Detailed Project Description, terminating the project from the assessment process, issuing an exemption, and proceeding with environmental assessments. Notice of a future decision will be posted publicly. Staff will provide updates accordingly.

Financial Impact

None.

Conclusion

FortisBC has been executing Phase 1 (A and B) upgrades at its LNG facility on Tilbury Island since 2014 to increase storage and production capacity. Fortis is now proposing Phase 2 construction to commission the Phase 1 improvements and prepare to ship LNG to offshore markets, with connection to a marine jetty.

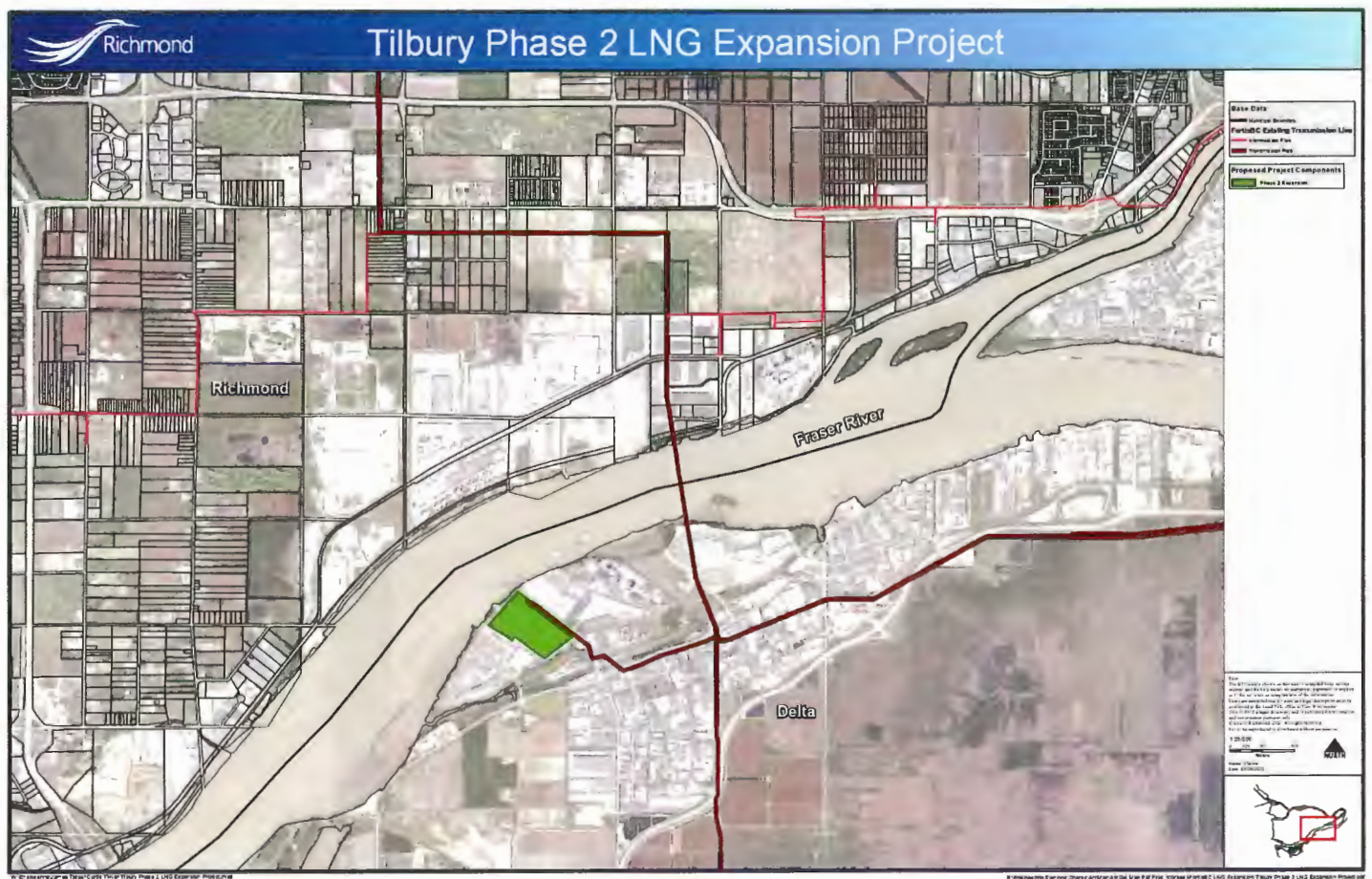
Staff are seeking Council's endorsement of the comments detailed in this report, in response to Fortis' Initial Project Description. Staff will remain engaged during these early stages and will participate on the Technical Advisory Committee, should the Project proceed to provincial and federal environmental assessments.



Chad Paulin, M.Sc., P.Ag
Manager, Environment
(604-247-4672)

- Att. 1: Tilbury Phase 2 LNG Expansion Project Site Location
2: Provincial and Federal Environmental Assessment Timelines
3: Locations of Projects and Transportation Corridors

Attachment 1: Project Site Location



Environmental Assessment (2018) Timeline

Timeline

- EAO Time
- Proponent Time
- Public Engagement & comment Period

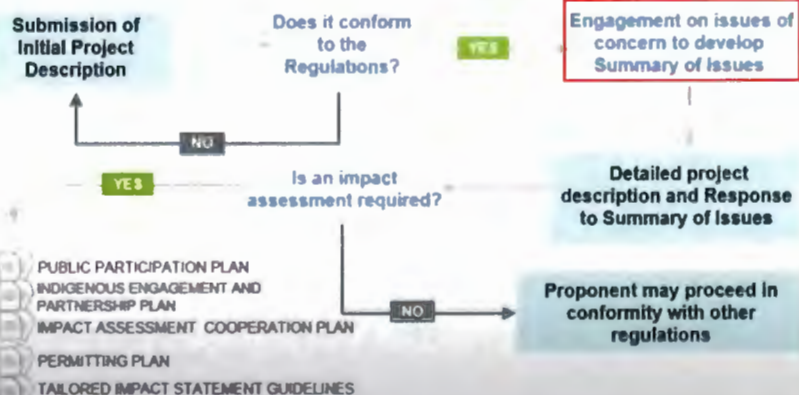


We Are Here



Phase 1: Planning

TIMEFRAME: 180 DAYS



We Are Here

Attachment 3 - Locations of Projects and Transportation Corridors





City of Richmond

Report to Committee

To: General Purposes Committee **Date:** June 9, 2020
From: Cecilia Achiam **File:** 12-8080-12-01/Vol 01
General Manager, Community Safety
Re: **Soil Use for the Placement of Fill Application for the Property Located at 5800 No. 7 Road (Mahal)**

Staff Recommendation

That the 'Soil Use for the Placement of Fill' application submitted by Paul Mahal (the "Applicant") proposing to deposit soil on the property located at 5800 No. 7 Road to transition a former cranberry bog to allow for the growing of vegetables and ornamental trees be authorized for referral to the Agricultural Land Commission (ALC) for the ALC to review and determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.

Cecilia Achiam
General Manager, Community Safety
(604-276-4122)

Att. 6

REPORT CONCURRENCE	
ROUTED TO:	CONCURRENCE
Engineering	<input checked="" type="checkbox"/>
Policy Planning	<input checked="" type="checkbox"/>
Sustainability	<input checked="" type="checkbox"/>
Transportation	<input checked="" type="checkbox"/>
SENIOR STAFF REPORT REVIEW	INITIALS:
APPROVED BY CAO 	

Staff Report

Origin

The City of Richmond is in receipt of a ‘Soil Use for the Placement of Fill’ application for the property located at 5800 No. 7 Road (the “Property”). The intent of the application is to deposit soil for the purpose of transitioning a former cranberry bog, which the Applicant’s agrologist-of-record has advised is agriculturally limited due to “soil wetness [...], undesirable soil structure [...], and fertility limitations due to high acidic soils and nutrient deficiencies.” The Applicant intends to grow vegetables and ornamental trees following completion of the project.

The Property is situated within the Agricultural Land Reserve (ALR) and is subject to provisions of the *Agricultural Land Commission Act* and its regulations (the “Regulations”), and the City’s *Soil Removal and Fill Deposit Regulation Bylaw No. 8094* (the “Soil Bylaw”).

Pursuant to applicable Provincial regulations, a ‘Soil Use for the Placement of Fill’ application requires authorization from local government in order to be referred to the Agricultural Land Commission (ALC) for their review and approval. As such, this 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 City’s requirements outlined in the Soil Bylaw before a soil deposit permit would be issued by the City.

The Applicant has satisfied all of the City’s referral requirements for submission to the ALC.

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

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

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

2.3 Increase emphasis on local food systems, urban agriculture and organic farming.

Analysis

The Property is zoned AG1 (Agriculture). The Property contains an Environmentally Sensitive Area (ESA); however, the Applicant’s proposal will not disturb the ESA. The current zoning permits a wide range of farming and compatible uses consistent with the provisions of the *ALC Act* and *Regulations* and the City’s *Official Community Plan* and *Zoning Bylaw*. The Applicant is proposing to deposit 110,000 cubic metres of soil over approximately 9.0 ha of the 29.16 ha Property at an average depth of 1.3m.

Uses on Adjacent Lots

- To the North: ALR – Golf Course
- To the East: ALR – Residential
- To the South: ALR – Land is in agricultural production
- To the West: ALR – Land is in agricultural production

Table 1: Existing Information and Proposed Changes for the Property

Item	Existing
Owner(s)	Mahal Farms Ltd. (Paul Mahal; Nick Mahal; Kalvinder Mahal; and Satwant Grewal)
Lot Size	29.16 ha (72.05 acres)
Applicant	Paul Mahal
Authorized Agent	Carly Wilson, Hexcel Construction Ltd. (the “Agent”)
Authorized Consultant	Jessica Stewart, P. Ag., GIT (Madrone Environmental Services Ltd.)
Current Land Uses	A portion of the Property is currently under production (nursery and vegetable crops)
Proposed Land Uses	Transition former cranberry field to vegetable farm and to grow ornamental trees
Official Community Plan Designation	Agriculture
ALR Designation	Property is within the ALR
Zoning	AG1
Riparian Management Area (RMA)	Yes – No disturbance proposed
Environmental Sensitive Area (ESA)	Yes – No disturbance proposed

Project Overview

The Applicant’s family has farmed the Property since 1949 and is applying to deposit 110,000 cubic metres of soil over approximately 9.0 ha of the 29.16 ha Property at an average depth of 1.3m. The objective is to improve the agricultural capability to transition a field formerly used to grow cranberries to soil-based vegetable farming and ornamental trees. This would expand the farming operations on the Property which currently includes a nursery and vegetables crops.

The Applicant has provided a Farm Plan (the “Farm Plan”) and a Soil Placement Plan (the “Placement Plan”) developed by a qualified agrologist, Jessica Stewart, P. Ag., GIT, Madrone Environmental Services Ltd. (the “Agrologist”).

The Farm Plan (Attachment 1) summarizes the following:

- Property assessment (ie. current soil and agricultural conditions);

- Soil importation and land preparation; and
- Proposed crops and reason(s) for diversification.

The Placement Plan (Attachment 2) summarizes the following:

- Site description and current land use;
- Land capability assessment (ie. current soil conditions);
- Agrologist recommendations regarding soil placement and management of the native topsoil which includes the stockpiling and re-use of the native topsoil;
- Current hydrology;
- Post-fill agricultural capability;
- Recommendations to ensure the project is satisfactorily completed; and
- Summary of the Agrologist's recommendations.

The proposed soil deposit area has remained fallow for the past three to four years. The Agrologist has advised that the current conditions in the proposed soil deposit area are considered to be excessively wet with the soil deemed to be highly acidic and nutrient poor. The Farm Plan states that should the project receive approval and the appropriate soil be imported/deposited as proposed, the addition of the soil will improve the agricultural capability from 4W limitation to a Class 2WF. As per the Agrologist, Class 2WF corresponds to minor limitations due to excess wetness and fertility. The fertility limitations can be further improved, as is proposed and noted in the reports, with soil amendments and careful soil testing.

The Applicant has advised that the project will take two years to complete. The timeline for completion is heavily dependent on ensuring the appropriate soil – as recommended by the Agrologist – is sourced to complete the project. Soil sourcing has not commenced at this time due to the considerable period of time involved with respect to the soil deposit application process and seeking approval from the City and ALC.

While there is no requirement in City bylaws, the Applicant and his Agent, Hexcel Construction, have offered an additional \$100,000 security bond (Attachment 3) to be retained by the City until the Farm Plan has been implemented. The City will not return the bond until such time as the Agrologist has provided a report to the City confirming implementation of the Farm Plan.

Staff Comments

The proposal aligns with a number of Council endorsed strategies and direction including concerns about the use of Richmond soil. Other objectives satisfied by the project are described as follows:

- The Applicant's desire to utilize Richmond soil where possible provides for a reduction in carbon emissions as there will be a considerable decrease in mileage as trucks will not be traveling back and forth from City approved development projects to the Fraser Valley as is common practice;
- Following completion of the project, the Applicant's Farm Plan will include expansion of current vegetable growing operations in Richmond by up to 22 acres;

- The proposal to raise the Property to improve the agricultural viability is consistent with the City's current Flood Protection Management Strategy which identifies raising land levels within all areas of the City as a key overall long-term objective. At the January 27, 2020 Regular Council Meeting, Council made a referral for staff to review the FPMS and provide comments with regard to the raising of land, specifically as it relates to agricultural land and agricultural viability. Staff are preparing a response to this referral;
- The Applicant will be stockpiling and utilizing native topsoil to complete the project; and
- The Applicant will not be impacting the large portion of the Property designated as an Environmentally Sensitive Area

Richmond Food Security and Agricultural Advisory Committee (FSAAC) Consultation

The Applicant presented the proposal to the FSAAC on May 21, 2020. The FSAAC unanimously supported the proposal and passed the following motion:

That the Food Security and Agricultural Advisory Committee support the Soil Use for Placement of Fill Application at 5800 No. 7 Road subject to the applicant providing a performance bond equal to the revenue from tipping fees minus the cost to implement the farm plan.

Agricultural Considerations

The City has been advised that cranberry production ceased on the Property in 2016 as the Owner was no longer able to sell his crop. The owners have since determined that they want to move away from cranberry farming and diversify operations. As an alternative to cranberries, the owners wish to expand the farm and grow vegetable crops and ornamental trees.

The Farm Plan identifies that the top 30 cm of native topsoil will be stripped and stockpiled to be used to cap the imported soil. The stripping and stockpiling would be completed prior to importation of soil to the site. This practice would be similar in nature to the Council endorsed project currently underway at 14791 Westminster Highway (Sixwest Holdings). Soil deposit permit (the "Permit") requirements would dictate that the Agrologist oversee the stripping and stockpiling to ensure the existing topsoil is not degraded.

Following completion of the proposed soil deposition, the Agrologist has noted that manure or compost in addition to lime may be required to improve and amend the pre-existing soil due to deficiencies in nutrients and soil acidity from the previously noted cranberry farming. Following project completion, the improvements to the Property will provide for a more diversified farm with more crop types to be sold locally on the Property.

In addition, the Applicant has submitted a Technical Memorandum (the "Soil Memo") regarding soil source sites (Attachment 4). The Soil Memo highlights that the objective is to utilize available Richmond soil to complete the project and outlines the benefits to using Richmond soil. As per the Soil Memo, "[o]btaining soils from more distant sources comes with significant environmental and social costs, such as increased vehicle emissions due to extensive travel..." It also provides additional information on soil types suitable to complete the project as well as the types of soil that should not be imported and source sites that should be avoided.

Bruce McTavish (MSc, MBA, PAg, RPBio) has reviewed the proposal from an agricultural perspective on behalf of the City and has no concerns regarding the soil assessment as it relates to the current conditions of the Property. In addition, Mr. McTavish has confirmed that the proposal meets all requirements of *ALC Policy P-10 - Criteria for Agricultural Capability Assessments*.

Drainage & Geotechnical Considerations

The Applicant has provided a Technical Memorandum (Drainage and Suitability of Excess Water Management Options) outlining water management options for the Property. The memorandum outlines current drainage issues for the Property and water management options for the Property.

As per the memorandum (Attachment 5):

“Seasonal high water table at, near or above ground surface would restrict land application of nutrient sources both during times of water table being above ground surface, but also during periods of generally high water table whereby precipitation /infiltration/ dispersion would result in direct transmission of nutrients to groundwater/nearby watercourse.”

In the opinion of the author of the memorandum (Thomas R. Elliot, PhD, P. Ag., P. Geo – Madrone Environmental Services Ltd), soil placement offers the best opportunity to improve the Property and current soil conditions. In addition, the City’s current Flood Protection Management Strategy identifies raising land levels within all areas of the City as a key overall long-term objective, especially where such raising meets other objectives, such as agricultural viability. City Engineering staff have reviewed and are satisfied with the Placement Plan. Staff do not anticipate any negative impacts to City infrastructure or neighbouring properties following completion of the project.

A geotechnical report has not been required by the City as the soil deposition area will have a substantial setback of 6+ metres from property lines. Permit conditions will provide staff the latitude to request a geotechnical report at any time should the City consider it necessary.

Environmental Considerations

The proposed soil deposition area is outside of the Riparian Management Area located along No. 7 Road. There is no RMA within proximity to the proposed access point on Westminster Highway. Soil placement is not proposed to occur within an ESA located east of the soil deposition area (see Figure 3 within the Placement Plan). In addition, no trees will be impacted due to soil deposit operations.

As per Permit conditions, all work undertaken in or around a watercourse, must be completed in compliance with the *Water Sustainability Act*, under the guidance of a Qualified Environmental Professional (QEP). The City will require that erosion and sediment control measures (ESC) be installed and inspected by a QEP, if deemed necessary by staff.

Financial Costs and Considerations for the Applicant

Due to ongoing development within the City of Richmond and the Lower Mainland, developers and contractors must find a location (the “End Site”) that will accept soil that needs to be excavated and removed off-site to facilitate development. Due to such demand, a market has been created in which End Site owners can generate income via tipping fees. Such fees are variable depending on the location, type and volume of soil, and season. Contractors are willing to pay a premium based on the location (the “Source Site”) of the soil to the End Site in order to reduce considerable trucking costs.

Although End Site owners derive income due to such tipping fees, soil deposit projects are not without significant costs to the Permit holder. It is anticipated that this project may generate approximately \$1.3 million in tipping fees. However, the income derived through tipping fees may be offset by costs estimated to be in excess of \$940,000 due to upfront reporting expenditures, site preparation, project management (ie. soil monitoring), daily personnel and equipment costs, drainage upgrades, and final reporting expenses. An estimate of these costs has been provided by the Applicant and is provided in Attachment 6.

Following FSAAC’s motion to support the proposal with the condition that the Applicant provide a bond in an amount estimated to be the potential in profit via tipping fees, the Agent has agreed to provide an additional \$100,000 security bond. This bond will be held by the City until the Farm Plan is implemented. Staff have concluded that the \$100,000 bond, while not the sum requested by FSAAC (estimated to be \$400,000), is appropriate given that the Applicant will be expected to provide a significant performance bond to the ALC (see Security Bonds section). In addition, the estimated difference between cost and profit are volatile as tipping fees and project costs could vary due to unforeseen circumstances, especially due to the long duration of the project. This bond is not a requirement of the City’s Bylaws but rather a submission from the Applicant that recognizes their commitment to the project and to farming this portion of Property.

Road and Traffic Considerations

A Traffic Management Plan (TMP) has been submitted to and reviewed by Transportation staff. Staff are satisfied with the TMP.

Soil Deposit Permit Requirements and City Inspection and Project Oversight Protocols

Should the proposal receive ALC and City approval, City staff will prepare a comprehensive Permit that sets out a number of conditions, including but not limited to:

- Oversight by a professional agrologist;
- Source site inspection requirements;
- On-site monitoring and reporting requirements;
- Requirements for protection of the RMA along the western property line;
- Measures needed to eliminate impacts, including drainage, to neighbouring properties and City infrastructure;
- Permitted hours/days of operation;

- An approved Traffic Management Plan; and
- Security deposits (further explained below).

Site monitoring, source site inspection and Qualified Professional reporting requirements are intended to be similar to the requirements for the Sixwest Holdings project. This will include an on-site monitor inspecting each load of soil prior to deposition on the Property. The Agrologist will be required to inspect and approve all source sites and maintain an accurate daily log of trucks depositing soil on the site. At the sole discretion of the City, alternate measures may be required (i.e. survey) in order to determine the volume of soil deposited on the Property.

In addition to the expected reporting requirements of an agrologist or other qualified professionals to the City and ALC, City staff will maintain proactive inspection and enforcement on the Property that will include the following:

- multiple site inspections per week of the Property at the onset of the project to ensure conditions of the Permit are being maintained;
- weekly site assessments to continue to be undertaken when soil importation is underway to ensure the Permit conditions are respected;
- meet on-site with the site supervisor a minimum of two times per month;
- maintain communication with the Agrologist and Agent on a regular basis;
- review reports to ensure conditions of the Permit are being satisfied; and
- advise the ALC of concerns relative to the project and request that ALC staff undertake inspections to ensure compliance with the approval conditions when deemed necessary by City staff.

Security Bonds

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

- \$5,000 pursuant to s. 8(d) of the current *Boulevard and Roadway Protection Regulation Bylaw No. 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;
- \$10,000 pursuant to s. 4.2.1 of the current *Soil Removal and Fill Deposit Regulation Bylaw No. 8094* to ensure full and proper compliance with the provisions of this Bylaw and all other terms and conditions of the Permit; and
- In addition to the security bonds detailed above, the Applicant has also proposed a \$100,000 bond to the City for implementation of the Farm Plan. Beyond completion of the soil project, this bond will provide security that the Farm Plan will be implemented.

In addition to the security bonds provided to the City, the ALC has the authority to require a performance bond to ensure that all required mitigation and monitoring measures are completed. The bond required by the ALC is also intended ensure the rehabilitation of the Property in the event the project is not completed. ALC performance bonds and the approved volumes from four previous approvals for projects within the City are as follows:

- \$70,000 – 17,500m³ (Athwal - approved May 2020)
- \$160,000 – 48,000m³ (City of Richmond - approved June 2017)
- \$290,000 – 140,000m³ (Sixwest Holdings - approved January 2017)
- \$500,000 – 102,080m³ (Sunshine Cranberry Farms Ltd. - approved January 2014)

As per the Permit conditions, security deposits will not be returned until all conditions as stated in the Permit and the ALC approval are satisfied in their entirety, to the satisfaction of the City. This will include confirmation that the Farm Plan has been completed as per a final report from the owner's agrologist-of-record. City staff is to conduct a final inspection and receive confirmation from the ALC that the project has been completed as per ALC approval prior to closing the file.

Alternatives to Council Approval

Should Council not authorize staff to refer the proposal to the ALC for their review and decision; the application will be considered to be rejected. Council may add additional recommendations for ALC consideration and/or conditions within a referral to the ALC, similar to conditions already provided within this report.

Financial Impact

None.

Conclusion

Staff is recommending that the 'Soil Use for the Placement of Fill' application for the Property located at 5800 No. 7 Road be endorsed and referred to the ALC to determine the merits of the proposal from an agricultural perspective as the Applicant has satisfied all of the City's current reporting requirements.



Mike Morin
Soil Bylaw Officer, Community Bylaws
(8625)



Carli Williams, P.Eng.
Manager, Business Licence and Bylaws
(4136)

- Att. 1: Farm Plan (27 May 2020)
2: Soil Placement Plan (18 Mar 2019)
3: Letter of Commitment re. Farm Plan security bond (03 Jun 2020)
4: Technical Memorandum re. Soil Source Sites (07 Jan 2020)
5: Drainage & Suitability of Excess Water Management Options Technical Memorandum (27 Jan 2020)
6: Project Cost Table (Feb 2020)



FARM PLAN

**5800 No. 7 Road
Richmond, BC**

FOR:

**Mr. Paul Mahal
Mahal Farms Ltd.
5800 No. 7 Road, Richmond B.C.**

BY:

Jessica Stewart, P.Ag., P.Geo.

Madrone Environmental Services Ltd.

March 18, 2019

Revised: May 27, 2020

MADRONE ENVIRONMENTAL SERVICES LTD.

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FARM PLAN

5800 No. 7 Road Richmond, BC

1 Introduction

Madrone Environmental Services Ltd. (Madrone) was retained by Mr. Paul Mahal of Mahal Farms Ltd. (Mahal Farms) to prepare a Farm Plan for his property located at 5800 No. 7 Road in Richmond, BC (PID: 007-436-815). The Farm Plan will be submitted to the City of Richmond and the Agricultural Land Commission (ALC) as part of a Soil Deposit Permit Application.

The proposed vegetable farm will be established in approximately 9.0 ha of land in the northwest corner of the 29.5 ha property following improvement through proposed soil importation. Madrone has prepared a separate Soil Placement Plan that is intended to be read in conjunction with this farm plan.

The soil placement plan proposes to import approximately 110,000 m³ of good-quality fill over 9.0 ha of the property to improve soil wetness (predominantly 4W limitation), undesirable soil structure (3D limitation), and fertility limitations due to highly acidic soils and nutrient deficiencies (4F limitation). The intent of soil placement is to improve the aforementioned conditions that limit agricultural capability. After the addition of soil which will raise the existing land surface by an average of 1.3 m, followed by soil profile construction as Mr. Butt, P. Ag. and I have recommended, the agricultural capability will improve to an estimated 2WF.

The site of the proposed vegetable farm was previously used for cranberry farming up until 2016. After improving the agricultural capability of the land by soil importation, Mr. Mahal has proposed the following farm plans in this area instead of cranberries:

- Ornamental trees;
- Indian Vegetable varieties such as Indian carrots, peppers, squash, garlic, eggplant, and bhindi (okra);
- Other locally grown vegetables such as kale, sweet corn, and peas.

For this farm plan, I have selected two vegetable varieties to demonstrate establishment effort and costs; garlic and carrots. Mr. Mahal can grow multiple vegetable crops if desired or rotate in new crops after 2-3 seasons. Diversifying crop production can help the viability of the overall vegetable farm operation.

Paul Mahal of Mahal Farms is a third-generation farmer. His family has farmed the property since 1949. There are currently other active farming ventures on site – these are described in this report as well (Section 2). The property has active farm status with BC Assessment.

2 Area Description and Field Assessment

2.1 Location and Site Description

The farm will be established in the northwest corner of the property at 5800 No. 7 Road in Richmond, BC. The property is situated approximately 6.6 km east of Richmond centre on Lulu Island (**Figure 1, Appendix 2**). The legal description of the property is: Block 4N Part1 S Section 2 Range 5W Land District 36 Except Plan 27718. The Property Identification number is 007-436-815.

The northwest corner of the property was previously farmed for cranberries. The cranberries were sold in the Ocean Spray cranberry collective (**Photos 1 and 2**). To facilitate cranberry farming, there are berms (or dykes) established around the perimeter, as well as an irrigation canal/ditch on the south side of the proposed farm area (to flood the field as a wet harvest). As a legacy of cranberry farming, the native soil was found in our soil testing to be very acidic and severely deficient in both nitrogen and phosphorous. Another legacy of this farming activity is the diversity of mulches that were placed on the soil, including wood chips and sand.

The northeast corner of the property is approximately 5.1 ha in extent and is designated as an Environmentally Sensitive Area (ESA) by the City of Richmond, specifically “Old Fields and Shrublands”. This area was previously farmed for trees (abutting the east side of the cranberry field). There are no plans to further develop this portion of the property. City

of Richmond mapping¹ also shows that the southeast portion of the property is still situated in the ESA but as of 2018 is being farmed for ornamental trees.

Approximately 1.7 ha of land in the northern parcel will not be farmed due to City of Richmond 15 m Riparian Management Area (RMA) setbacks from the watercourse (ditch) along No. 7 Road and the irrigation canal located through the centre of the property.



PHOTO 1. WET HARVEST OF CRANBERRIES ON THE PROPERTY. DATE OF PHOTO UNKNOWN, VIA THE BC CRANBERRY MARKETING COMMISSION².

The remaining southern half of the property is actively farmed by either Mahal Farms or is leased to local farmers. The current farming uses reported by Mahal Farms are vegetables (field and greenhouse), hedging cedar (field-based near No. 7 Road), and tree nurseries (container and caliper trees). A 2018 Google™Earth Pro image shows that at least 0.75 ha of the property is occupied by greenhouses, situated in the approximate centre of the southern portion of the lot (**Photo 3**).

¹ http://map2.richmond.ca/Html5Viewer_2_0/Index.html?viewer=RIM City of Richmond Interactive Map. Accessed November 3, 2018.

² <https://heritagebc.ca/south-asian-canadian-location/mahal-cranberry-farm-richmond/> Mahal Cranberry Farm Photo, Heritage BC. Accessed November 3, 2018.



PHOTO 2. LOOKING DUE EAST ACROSS THE FORMER CRANBERRY BOG. THIS PHOTO IS FROM EARLY OCTOBER DURING A PARTICULARLY WARM AND DRY PERIOD.

2.2 Zoning and Adjacent Land Uses

The property is 29.5 ha and is zoned AG-1 (Agricultural) according to Richmond Zoning Bylaw 2011. The property is in the Agricultural Land Reserve (ALR).

The surrounding area has a mix of uses, including but not limited to:

- Forage and cereal crops;
- Wineries (Lulu Island Winery Ltd.);
- Specialty plants (Hawaiian Botanicals and Water Gardens);
- Dense residential (to the east);
- Golf courses (to the north and northwest);
- Multiple vegetable farms (both open field and greenhouse) and tree nurseries.



PHOTO 3. PANORAMIC VIEW OF THE FIELD AND GREENHOUSES SITUATED JUST WEST OF THE CENTRE OF THE PROPERTY AT WESTMINSTER HIGHWAY. THIS IMAGE IS FROM 2017 VIA GOOGLE™ MAPS.

2.3 Landform, Topography & Drainage

The property is near level with a reported elevation (on the west side of the property) of 1.65 m above sea level (a.s.l.)³. The surrounding area is part of the Fraser River delta and features broadly flat terrain that is at or near sea level. There is no topographic land survey available for the property at this time. The dykes that surround the proposed farm area have been raised above the natural grade of the land. Using Google™Earth Pro imagery, I have calculated the area occupied by the dykes to be approximately 1.6 ha.

There is no bedrock in this area. The floodplain is characterized by silty to silt clay loam up to 2 m thick overlying up to 15 m of deltaic and tidal flat deposits (Fraser River sediments). Post-glacial bog, swamp and shallow lake deposits have also been mapped in this area by Armstrong (1980); these are the post-glacial Salish Sediments. In our soil assessment we found that parent materials correlate well to the Fraser River sediments only.

³ http://a100.gov.bc.ca/pub/mascotw/protected/final_long.html?Q_GCM_NO=274696 Geodetic Control Marker Number 274696. GeoBC Reference Systems and Survey Monuments. Accessed November 3, 2018

There are no mapped watercourses within the property. The entire west side of the property is bound by the No. 7 Road ditch, which is classified as a watercourse and riparian management area by the City of Richmond Official Community Plan Bylaw 9000, Section 9.0⁴. The RMA has a 15 m setback, as measured perpendicular from top-of-bank. The setback is to remain free from development unless authorized by the City of Richmond⁵.

The irrigation canal on the property is not designated as a watercourse and does not have connectivity to the No. 7 Road ditch. There are no plans to alter the irrigation canal, either following soil placement or establishment of the farm. It is used for the farming ventures on the southern half of the property, as described above.

2.4 Native Soils and Land Capability for Agriculture

Madrone conducted a soil assessment in October of 2018 for our Soil Placement Plan. We found that the soils on the property correlate best with the Delta soil series of Luttermerding (1980), who described these soils as “moderately-fine to fine textured deltaic deposits and have a silt loam to silty clay loam textures”. Delta soils are poorly drained and often subject to seasonal ponding. In our soil assessment, we observed mottling caused by high seasonal water tables in the subsoil.

We found the dominant soil limitation to be excess water (W), specifically a 4W limitation due to uniformly poorly drained soils. During the growing season, the water table will be within the rooting zone, restricting the range of crops that can be successfully grown without managing water (via installing drainage systems or raising the land surface via fill).

A second, less serious limitation is present in the native soils due to a dense Btg horizon. The dense subsoils cause an impediment to root growth (“root-restricting horizon”). For the majority of the assessed area, this correlated to a 3D limitation.

As part of our agricultural assessment, we collected soil samples for soil testing (nutrients and salinity). Soil nutrient testing performed by AGAT Labs shows that there is an additional agricultural limitation of fertility (4F) due to very strong acid soils with pH

⁴ https://www.richmond.ca/_shared/assets/OCp_9000_environment34172.pdf Main 2041 Official Community Plan - Bylaw 9000 - Schedule 1. Accessed November 3, 2018

⁵ https://www.richmond.ca/_shared/assets/info_2332212.pdf Riparian Management Areas – Multifamily Residential, Commercial and Industrial Developments. Accessed November 3, 2018

ranges between 3.75 to 4.31 and nutrient deficiencies, specifically nitrogen and phosphorus. There was no salinity limitation reported for the native soils, which was unexpected given the tidal environment of the Fraser River delta. High soil salinity may exist at a deeper depth ($> 1\text{m}$) in this area.

To improve the agricultural capability of the land, we proposed to import soil to the site to increase the elevation of the land by an average of 1.3 m and introduce a well-draining, loose growing medium with improved fertility. We determined that soil importation will improve the Class 4W/4F/3D limitations to a Class 2WF and support a broad variety of soil-based agricultural crops, including vegetables.

3 Soil Placement, Post-Filling Land Preparations Soil

3.1 Importation

Elevating the land by an average of 1.3 m and introducing a well-draining and fertile soil over 9.0 ha corresponds to a proposed importation volume of approximately $110,000\text{ m}^3$. As detailed in the Soil Placement Plan report⁶, the deposited fill material should ideally be a medium-textured loam or sandy loam (less ideal but acceptable in lesser quantities: silty loam and loamy sand) with less than 10% coarse fragments which are defined as sediment sizes 2.5 cm or larger).

If the imported soil contains a high density of coarse fragments such that it presents a significant problem, then stone removal must be carried out to enable proper cultivation. Tractors and other farm machinery, including precision seeders, can be damaged by excessively stony fills. This can be avoided if loads of soils are inspected for stone content prior to off-loading on the property. In our soil placement plan, we supplied an example standard operating procedure (SOP) that could be adopted to minimize the importation of stony fills to the site.

Prior to placement, the upper 30 cm of native topsoil will be stripped and stockpiled. The depth to the native topsoil was found to vary between our soil pits on site and in some places is 20 cm deep (shallow). We have applied the 30 cm stripping parameter to acquire the majority of the topsoil but a small quantity of subsoil will ultimately be “grabbed” by the machine.

⁶ Soil Placement Plan for 5800 No. 7 Road, Richmond, BC. Madrone Environmental Services. January 22, 2019.

Following fill placement, the land will be graded with subtle 1-2% slopes to the east and west; we recommend a crown in the centre of the 9.0 ha field to facilitate a drainage divide but the contractor can vary the grading as the project proceeds to ensure the fill drains prior to topsoil placement, which will occur after the subsoil is placed.

3.2 Land Preparation

As part of land preparations prior to crop establishment, the soil will be tilled or plowed to reduce the density of the fill and topsoil. This will also provide a loose growing bed for the eventual vegetable crops. It is recommended that the plowing or tilling be completed at least one month before seeding any crops. I will describe specific pre-planting plans for each crop in Section 4 – Farm Planning.

Following tilling, soil nutrient and pH testing should be conducted over the entirety of the 9.0 ha area to determine the need for applications of manure or compost and lime⁷ due to nutrient imbalances or overly acidic or alkaline soils respectively. Manure or compost should be surface applied (preferably in the spring, though fall seeding of vegetables may dictate earlier application before heavy rains commence) and worked into the upper 20 cm to 30 cm of soil via plowing, roto-tilling or disking. Since most of the vegetables will be grown in raised beds, bedmaking will also be done after the soil is decompacted and tilled.

The City of Vancouver landfill in Delta sells nutrient-rich compost to the public, produced on site from public yard and garden waste. This organic fertilizer option is a sustainable and locally convenient option but can be expensive at \$8/m³. There are many other options for organic soil amendments, including locally sourced chicken and mushroom manure. We discourage applying wood shavings, saw dust, or wood chips as organic amendments. Except when judiciously applied as mulch on the soil surface.

4 Farm Planning

Mr. Mahal of Mahal Farms intends to convert his former cranberry field into a vegetable and ornamental tree farm. For this farm plan, I have selected two vegetable varieties (specifically from a list of desired Indian vegetable varieties that Mr. Mahal supplied to Madrone) and describe the basic establishment tasks and costs of each crop.

⁷ For lime applications, I strongly suggest utilizing a 'lime calculator' or chart to determine the lime requirements to correct acidity of the soil, based on its pH and soil buffer pH.

For simplicity, I have divided the proposed 9.0 ha farm area into three fields with an extent of 3.0 ha each (for the first year, one 3.0 ha field can remain vacant due to high initial investments costs of establishing each crop). Each plot is approximately 160 m (east-west) by 185 m (north-south). Mr. Mahal may decide to plant more than two crops and vary the proportions of each crop depending on demand, prices, and difficulty of farming a particular crop. He may also rotate the crops over a period of several years to manage nutrients and prevent the build-up of crop-specific resistant weeds and pests.

I understand that Mr. Mahal resides on the farm and has relatives also residing nearby. For costing estimates however I have assumed that Mahal Farms will hire farm workers for all farming activities, including planting, preparation, and harvest. The cost of farm labour is accounted for in this farm plan as it will form a significant portion of the establishment, maintenance, and harvesting costs. The costs of the soil placement are not included in this farm plan.

4.1 Garlic Crop

Garlic can be grown in open fields or in greenhouses. For this farm plan, I have assumed an open field environment for the garlic as the cost of greenhouses may be considerable (Quonset greenhouse structures can be affordable but will likely still require building permits, which can carry a considerable initial cost as well as time investment).

Garlic is a perennial plant that requires a cold period to initiate growth. For cool climates such as that in coastal British Columbia, garlic is generally planted during the fall and harvested the following summer. It is possible to plant in the spring in the South Coast region – this can be achieved by placing bulbs in cold storage prior to planting. This will encourage proper development of the bulbs⁸.

If cold storage is not possible, close monitoring of early spring temperatures will be necessary to ensure it is cool enough for the cloves to develop adequate root systems. There are no set temperature thresholds for garlic cold storage, though this should be cool enough to simulate local fall temperatures.

⁸ <http://www.omafra.gov.on.ca/english/crops/facts/09-011w.htm> Ontario Ministry of Agriculture, Food, and Rural Affairs. Garlic Production Fact Sheet. Accessed December 10, 2018

There are several varieties of garlic grown in British Columbia. White skin garlic is popular in grocery stores whereas varieties such as pink-skinned varieties such as Spanish Roja are sold in farmer's markets and roadside stands (**Photo 4**, below)⁹.

The field should be prepared prior to planting of the cloves. Soil testing can determine whether the pH is ideal for garlic planting. The soil pH should range from 6.0 - 7.5 for garlic. This crop will certainly require lime applications to the soil prior to planting.

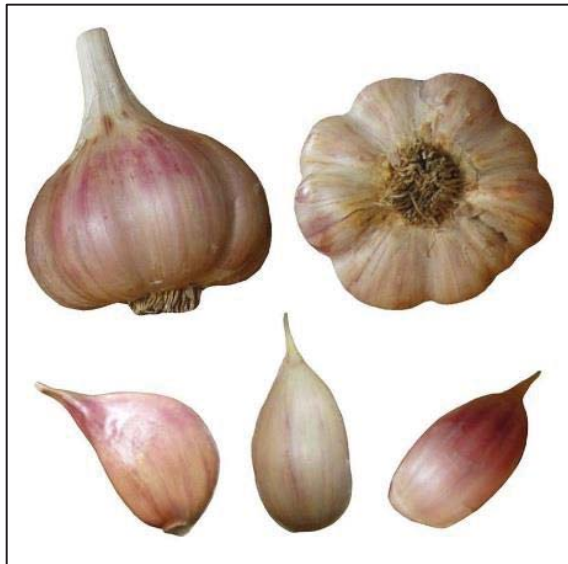


PHOTO 4. SPANISH ROJA GARLIC VARIETY FROM THE MANITOBA, CANADA GARLIC “SEED” SELLER JOHN BOY FARMS. PHOTO COURTESY OF JOHN BOY FARMS AT: [HTTPS://GARLICSEED.CA/COLLECTIONS/ALL-VARIETIES/PRODUCTS/SPANISH-ROJA](https://garlicseed.ca/collections/all-varieties/products/spanish-roja)

4.1.1 Garlic Planting Plan

Garlic bulbs can be purchased by reputable garlic sellers throughout North America. The bulbs are separated (or cracked) by hand or by machine to obtain individual cloves that can then be propagated. Cracking by hand is less damaging but requires high labour inputs. The separation of the cloves from the bulbs should not be done until shortly before planting to avoid deterioration. I have assumed for this farm plan that a machine will be purchased to split the bulbs.

⁹ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/garlic> BC Ministry of Agriculture Garlic Production Guide. Accessed December 10, 2018

A single clove will produce an entire garlic bulb, but cloves must be planted every season in the interests of preserving genetic stock. The clove should be planted with the pointed end facing up at a depth of 3 to 5 cm – cloves placed in an incorrect orientation may develop but with misshapen bulbs and shoots⁸. Depending on weed control methods (such as tilling), rows can be planted as close as 20 cm, with garlic clove plant spacing of 7 to 12 cm within the row¹⁰.

If the 3.0 ha field (160 m x 185 m) is planted using the above parameters, this equates to a maximum of 925 rows oriented east-west, with 1300 plants per row (low density planting at 12 cm between plants). Accounting for row breaks for farm machinery (i.e. tractors), as well as adequate spacing between adjacent crops (carrots, eggplants, okra, beans) in the interests of pest and weed management, I have reduced the planting parameters to 800 rows with 1000 plants per row. This equates to 800,000 garlic plants.

The entire 3.0 ha field is intended for garlic cultivation however, it is not necessary to plant the full extent of the field in the first season. A preliminary crop that is a fraction of this size can be grown in the first season and expanded as the farm grows. For this farm plan, I will use an estimated crop size of 200,000 plants for the first season. This is still a significant initial establishment and will allow for Mahal Farms to determine which varieties respond well to local growing conditions, and assess demand for certain cultivars (i.e. Russian Red, Italian Purple, Spanish Roja, and Music varieties).

Garlic can be planted in single rows or in multi-row beds and the beds themselves may be raised or flat. Note this estimate does **not** take into account the any loss of garlic plants to disease, stunted growth, or poor aesthetic characteristics. For example, hardneck varieties require scape removal to ensure high yield of the bulbs. Retention of the scape can reduce the bulb size by up to 30%.

To protect the young cloves against freeze-thaw (if fall planting) or temperature fluctuations (if spring planting) mulch should be applied to the beds at a depth of at least 10 cm. Mulching will also help maintain even soil moisture. Recommended mulch materials include alfalfa, swamp grass, shredded leaves and reeds. The application of grain straw is not advised due to the potential for host mites to attack the young garlic cloves. Harsh winters (with cooler than seasonal temperatures and/or above average snowfall) may dictate the need for additional mulch application – this can be pulled back in the spring.

¹⁰ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/garlic> BC Ministry of Agriculture Garlic Production Guide. Accessed December 10, 2018

4.1.2 Irrigation for Garlic Plants

The property area is designated as 3A (1) in the Climatic Capability for Agriculture scheme of Coligado, 1980¹¹. Class 3 aridity limitations indicate drought or aridity between May 1 and September 30 resulting in moisture deficits, which are limiting to plant growth and could require moderately intensive management.

Summer moisture deficits will initially have to be offset by irrigation; a new drip irrigation system can be employed (short intervals every day). For a farm of this size, hand watering by a pump is not practical. Basic research shows that drip irrigation costs approximately \$1 per metre¹². Thus initial irrigation installation costs will be considerable.

Garlic bulbs are shallow rooted and as a result are susceptible to moisture stress. A garlic bulb will require between 2.5 and 5.0 cm of water per week, with sandy soils requiring the upper limit of this estimate (the native soils on site would require the lower limit)¹³. The bulbs should not be irrigated in the last two weeks before harvesting.

4.1.3 Weeds, Pests, and Disease Management

Prior to planting, weed management will be required as garlic yields are sensitive to weed competition. Tilling between rows and applications of herbicides (pre-emergence and post-emergence) will be required if weed growth presents an issue at planting time. Between herbicide applications, mulching can reduce weed development and assist with maintaining moisture around the young cloves while they develop into bulbs.

A common herbicide for annual grasses and broadleaf weeds that affect garlic crops is Devrinol 50-DF. This can be applied at a rate of 2.24 to 4.5 kg/ha. Herbicide should only be applied once per season and weeds must be well tilled into the soil prior to planting of garlic cloves.

¹¹ https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/climatic_capability_for_agriculture_in_bc_1981.pdf Climatic Capability for Agriculture in BC. Coligado, 1981.

¹² <http://www.irrigationdirect.ca/Drip-Irrigation-Kits-For-Row-Crops-Using-Drip-Tape/> Canadian drip irrigation sales - \$275 for 300 m installation kit. December 10, 2018

¹³ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/garlic> BC Ministry of Agriculture Garlic Production Guide. Accessed December 10, 2018.

Garlic pests and diseases include fusarium basal plate rot, penicillium mould, leek moth, and bulb and stem nematode¹⁴. Tests can be done on the soil prior to planting to detect many of these pests. Control recommendations include using clean seeds, clean irrigation water, and rotation on all fields with a non-host crop every three years.

The cost of herbicides, pesticides, and insecticides largely varies and their use will greatly depend on the quality of the seed (i.e. disease-free) and local growing conditions. For this farm plan I have included the cost of herbicides for weed management but not pesticides in the event that Mahal Farms wishes to be an organic farm (and utilize natural integrated pest management strategies).

4.1.4 Garlic Harvesting

The harvest time depends on whether the garlic was planted in the fall or spring. If a fall harvest is undertaken (the most common method), the first garlic bulbs will be ready for harvest the following spring or early summer. Garlic maturity is indicated by browning and drying of the leaves. A good point to harvest is once 30% to 50% of the leaves have died back. If the bulbils are to be harvested (scape is retained), then it is recommended to harvest later than normal. The bulbils will be ready once they are pushing their capsules open.

The garlic may be hand harvested or mechanically harvested by tractor. There are specialized machines and machine implements available for both planting and harvest but these require a high initial investment. For this reason, I have assumed that bulbs will be harvested by manual farm labour for the first season.

Once harvested, curing can be facilitated by tying and hanging or in the field by using covered vegetable bins. The purpose of curing is to increase storage life by minimizing microbial and fungal infection and water loss. Once cured, both the tops and roots of the garlic should be removed. Curing lasts approximately one month. I have accounted for the curing costs in my cost establishment table for Garlic.

4.2 Carrot Crop

Mahal Farms has indicated interest in planting Indian carrot varieties. Indian carrots are non-hybrid, natural varieties such as Purple (or black) carrots or “kali gajar” and red

¹⁴ <http://www.omafra.gov.on.ca/english/crops/facts/09-011w.htm> Garlic production guide – Ontario Ministry of Agriculture, Food and Rural Affairs. Accessed December 10, 2018

carrots or “desi gajar”. Orange carrots commonly found in grocery stores are a result of selective plant breeding in Europe, specifically the Netherlands, in the 17th century¹⁵.



PHOTO 5. RED CARROTS USED IN INDIAN CUISINE.



PHOTO 6. PURPLE CARROTS FOUND IN NORTHERN INDIA.

Regardless of the specific cultivars grown, the establishment inputs are similar. There may be slight variations in costs for the seeds as Indian carrot varieties are less commonly grown. Rare varieties should be ordered well in advance of planting to ensure availability.

¹⁵ <https://www.zmescience.com/other/purple-carrots-21032011/> ZME Science, “Purple Carrots”. Accessed December 10, 2018

Only reputable sellers should be selected. **Pre-treated seeds can be purchased to avoid significant crop loss from insects and disease (i.e. coated by protectant fungicide or insecticides).**

4.2.1 Carrot Planting Plan

A 3.0 ha field can be prepared for carrot cultivation following final soil placement. Prior to planting, the soil should be tested for nutrients (particularly P, N, and K) and amended with fertilizers if needed. Carrots will tolerate a pH range of 5.5 – 7.0 but an ideal range is between 6.0 and 6.8.

The field can be prepared by running a roto-tiller or chisel plow through the tested and amended soil. The soils should be worked to a depth of 30 to 40 cm for good root penetration of the carrot plants (a chisel plow may be best for this).

Optimal seeding times depend on how well-draining the field is. The placement of soil according to our placement plan will improve drainage and allow earlier seeding. Carrots can be planted in well-draining fields in mid-March (if soil temperatures exceed 7°C) but no later than the beginning of July. Seeds can be sown at 3 week intervals for continuous harvest.

Carrot seeds are sown shallowly due to their small size; approximately 5 mm deep, with 4 seeds per 2 cm¹⁶. The seeds are planted in raised beds that are at least 10 cm high. The BC Ministry of Agriculture Crop Production Guide (Carrots)¹⁷ recommends seeding in rows of 3, with each row being 46 to 48 cm apart. These form a single bed. This can be done by using a precision seeder with a special shoe that seeds 3 lines per row. Belts allow 6 to 7 seeds per 30 cm of line. Using this method, approximately 7 kg/ha of coated seed are required, resulting in a final population of about 1,000,000 plants/ha.

4.2.2 Irrigation

The soil should be well-irrigated prior to planting. Following planting, the surface of the soil should be kept moist until seeds germinate, which takes approximately 14-21 days

¹⁶ <https://www.westcoastseeds.com/products/deep-purple> West Coast Seeds. Deep Purple Seeds. Accessed December 10, 2018

¹⁷ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/carrots> BC Ministry of Agriculture Crop Production Guides – Carrots. Accessed December 10, 2018

(long germination). An overhead sprinkler system can be utilized for the 3.0 ha carrot crop.

Irrigation systems should be designed and operated in accordance with the BC Sprinkler Irrigation Manual¹⁸. Sprinkler irrigation products are available through several large companies in the Lower Mainland, including Southern Irrigation and WaterTec North America. Using a conservative estimate of \$750 per hectare¹⁹, I have estimated that overhead sprinklers for the 3.0 ha carrot crop will run approximately \$2250.

4.2.3 Weeds, Pests, and Disease Management

Carrots compete poorly with weeds and without proper weed management (which can host carrot pests such as nematodes) yields can be reduced by up to 90%. Weeds also reduce harvest efficiency.

According to the Ontario Ministry of Agriculture, Food, and Rural Affairs “Weed Management in Carrots” Factsheet²⁰:

“There are two separate periods in the life cycle of the carrot crop when weed control is very important. These are 1) early season - the Critical Weed-free Period and 2) late season - the harvest period (Figure 1). During the critical weed-free period, weeds are controlled to protect yield, and, during the harvest period, weeds are controlled to facilitate crop harvestability and future production.”

For carrots, herbicide can be incorporated into the soil prior to planting (i.e. with a chisel plow). A suitable herbicide is trifluralin (Bonanza 480); this can be applied 3 weeks before planting and incorporated thoroughly within 24 hours to 8 to 10 cm deep²¹. Post-emergence weeds can be treated with many types of herbicides including Select (clethodim), Guardsman/ Agricultural Weedkiller No. 1, and Excel Super

¹⁸ <https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/water/irrigation/sprinkler-irrigation-manual> B.C. Sprinkler Irrigation Manual. Accessed December 10, 2018

¹⁹ <http://calag.ucanr.edu/Archive/?article=ca.v050n01p11> Farmers describe irrigation costs, benefits: Labor costs may offset water savings of sprinkler systems. December 10, 2018

²⁰ <http://www.omafra.gov.on.ca/english/crops/facts/09-045w.htm> Ontario Ministry of Agriculture, Food, and Rural Affairs “Weed Management in Carrots” Factsheet. December 10, 2018

²¹ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/carrots> BC Ministry of Agriculture Crop Production Guides – Carrots. Accessed December 10, 2018

(fenoxaprop-p-ethyl). Alternatively, if Mahal Farms wishes to obtain organic farm status, they may wish to utilize an integrated pest management system and manage weeds using labour and machinery instead of pesticide sprays.

Carrot plants can be killed by insects, in particular the carrot rust fly (or carrot maggot) and wireworms, which are the larva of click beetles (the name comes from the act of the larva becoming rigid as wire when squeezed by hand). The following methods may be undertaken to prevent plant damage and death²²:

Carrot Rust Fly

- The avoid the worst infestation period, consider not planting the first carrot seeds until the start of June;
- Use a floating row cover or garden fabric over the crop (carrot rust fly cannot fly very high);
- Use predatory nematodes in the spring, when the larvae are most active.

Wireworm

- Ensure carrot beds are raised and well-drained (the larva prefer moist soils);
- Interplant with mustard leaf, which dries the roots of the carrots (discouraging wireworms from eating the roots) and acts as a flavour deterrent;
- As for Carrot Rust Fly, consider purchasing predatory nematodes to kill larva when they emerge from eggs in the spring.

There are numerous diseases that affect carrots, including aster yellows (spread by aster leafhoppers), foliar blights, root-knot nematode, black root rot, and rusty root (lateral root dieback). Aster yellows in particular affect crops situated near forage legume fields, weedy areas (i.e. ditches), or and crops such as lettuce. This is why crops should be well-spaced in the field, leaving plenty of room between plants and nearby ditches, woodlands, and neighbouring fields and properties. If aster yellows symptoms (indicated by yellowing followed by bronzing of foliage, hairy roots, stunted growth) are evident, insecticide application will be required.

²² <https://www.westcoastseeds.com/products/deep-purple> West Coast Seeds, Carrot Diseases and Pests. Accessed December 10, 2018

Carrots are highly susceptible to root knot nematodes. These can be prevented by testing the soil for nematode populations and fumigating in the fall (or before planting in the spring, as long as average soil temperatures exceed 10°C or soil temperatures at 15 cm are at least 13°C)²³. The soil should be loose; any clods or lumps must be broken up with a tractor prior to fumigation. The soil should also be moist.

Common fumigants include Basamid and Vapam. The BC Vegetable Guide: Planting section on Soil Fumigation²⁴ recommends applying Basamid at rates of 325 to 500 kg per hectare and to a depth of at least 15 cm. The fumigant can be applied by hand (gloved) and by a fertilizer spreader for larger fields. Prior to seeding, soils should be well aerated following fumigation.

4.2.4 Carrot Harvesting

Carrots will mature in approximately 75 days from seeding. With seeding between April and mid-July (note: sowing of seeds should be delayed until early June if soil testing returns high populations of nematodes), carrots can be harvested between July and November.

The flavour of the carrot is best when the colours are bright and well-developed. Harvesting a mature, adequate-sized carrot also ensures sweetness and good storage potential. The two methods of harvesting carrots are: 1) by using a machine to pull carrots by the tops and topping them in the field, or 2) by hand cutting the stem and using a digger to bring the carrots to the surface. Topping of the stem involves removing the foliage and retaining approximately 2.5 to 5 cm of the stem²⁵.

Carrots can be left under soil during the winter or stored in cold storage at temperatures just above freezing (frozen carrots will become damaged and therefore should be removed

²³ <https://www2.gov.bc.ca/gov/content/industry/agriservice-bc/production-guides/vegetables/carrots>
BC Ministry of Agriculture Crop Production Guides – Carrots. Accessed December 10, 2018

²⁴ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agriservicebc/production-guides/vegetables/planting_bc_vegetable_production_guide.pdf BC
Ministry of Agriculture Vegetable Production Guide: Planting. Accessed December 10, 2018

²⁵ <https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/agribusiness-farmers-and-ranchers/crops-and-irrigation/horticultural-crops/vegetables/carrot-production> Government of
Saskatchewan Agriculture, Natural Resources, and Industry, Carrot Production Guide. Accessed
December 10, 2018

from fields as well if an early winter and harsh temperatures occur)²⁶. Mahal Farms can store the carrots on site if they have refrigerators.

4.3 Irrigation and Water Sources

Richmond experiences a moisture deficit during the summer months²⁷ and as such, irrigation may be necessary (Land Capability limitation: 2A). To determine actual crop-specific water requirements and irrigation schedules, such factors as temperature, humidity, soil type, crop age and health, stage of crop development and presence or absence of mulch must be considered. I have described the water needs of each crop in this farm plan but detailed irrigation schedules are beyond the scope of this report.

The property has a large, approximately 10 m wide irrigation canal that runs through the approximate centre (**Figure 1**). This canal also has a pump house. There is thus adequate water for irrigation needs on site. Nearby ditches on No. 7 Road and Westminster Highway are kept artificially high by the City of Richmond during the summer and early fall.



FIGURE 1. IRRIGATION CANAL SITUATED THROUGH THE CENTRE OF THE PROPERTY. OVERHEAD SPRINKLER SYSTEMS AND DRIP IRRIGATION CAN BE CONNECTED TO THIS. MAP IMAGERY FROM IMAPBC 4.0.

²⁶ <https://www.westcoastseeds.com/products/deep-purple> West Coast Seeds, Harvesting Information, Purple Carrots. Accessed December 10, 2018

²⁷ http://climate.weather.gc.ca/climate_normals/index_e.html Richmond Nature Park climate station. Accessed December 10, 2018

5 Farm Establishment Costs

Following soil placement, the establishment of the vegetable crops will require a number of inputs including land preparation, soil nutrient testing, the purchase of materials and machine time (fuel, machinery use and repair costs), as well as the initial investment of large stocks of plants and seeds.

Estimating costs of farming is largely speculative; costs not included in this farm plan include farm marketing (i.e. signs), permit costs for roadside stands, specialty farm products such as bird netting (for protection of shallow carrot seeds, for example), or consulting costs for nutrient and pest management, for example.

Mr. Mahal has assisted with this farm plan by providing a list of desired crop types he wishes to grow and contribute to his community in Richmond. I have calculated the estimated costs of soil preparation, seeds or plants, planting, and harvest of both a garlic crop and a carrot crop (Mr. Mahal may plant more as the farm becomes established), as well as estimated other costs to take into account for the farm as a whole, such as irrigation and soil testing.

As previously mentioned, Mahal Farms will hire farm workers for the farm establishment. I have assumed labour costs at \$15.00 per hour (manual labour, hand harvesting), and \$22.00 per hour for machine labour. These estimates are higher than the reported wages to the Agricultural Labour Pool²⁸. I understand from Mr. Mahal and other farmers that I have worked with in the Richmond area that acquiring manual farm labour is very difficult and thus high wages may be required to attract employees. These costs are shown in Tables 1 and 2 (for each crop) in Appendix 1.

5.1 Garlic

The available field size for garlic cultivation is approximately 160 m by 185 m (3.0 ha). At low density planting and adding in space between rows for row breaks as well as spacing between the adjacent vegetable crops, approximately 800,000 garlic cloves (producing a single bulb each) could conceivably be planted in the prepared field. For this farm plan, I have proposed an initial planting that is one-quarter this, or 200,000 garlic cloves in the initial planting. A percentage of the bulbs will not be harvested due to disease or poor growth characteristics.

²⁸ <http://www.agri-labourpool.com/wage-info.aspx> Agricultural Labour Pool, Industry Wage Information for the Lower Mainland. Accessed January 30, 2019

Garlic is not propagated by seed and as such garlic is sold by the bulb (although this is called a “seed” by some suppliers). I have researched Canadian garlic “seed” sellers and found that garlic bulb prices vary between varieties and bulb sizes. The variation can be between \$1.85 per bulb for small bulb of common varieties such as Russian Red, to approximately \$4.85 for jumbo bulbs²⁹. I will use an average price of \$2.00 per bulb to account for a variety of garlic types that may be grown on the property. The cost decreases if purchased as a large bulk order (i.e. 10 bulbs or more).

The number of clove ‘seeds’ in each bulb differs greatly between garlic varieties – between 4 and 20 seeds in cases. A good average estimate is 10 cloves per bulb. Thus for 200,000 plants, it may be necessary to purchase up to 20,000 bulbs. **This would translate to an initial bulb investment of \$40,000.**

It is important to note that garlic bulbils from the first harvest can be retained to propagate more garlic – this would negate the need to purchase new bulbs for the second season.

In the Lower Mainland, garlic can fetch \$14/lb in local markets (2017 prices). Wholesale/bulk prices are \$9/lb³⁰. The wholesale crop value of 200,000 garlic bulbs (approximately 28,000 lbs³¹ of garlic) before all machine and material costs is roughly \$250,000. Shortages in competing markets (i.e. United States, China, South American countries) can result in higher prices. If only half of the crop is ultimately harvested and sold at wholesale prices, revenue of \$125,000 could be expected.

5.2 Carrots

For the proposed establishment of a carrot farm, I have calculated the estimated level of effort and basic costs for growing and harvesting a 3.0 ha crop amounts to approximately \$60,000.

Using 7 kg per hectare of covered seed produces approximately 1,000,000 plants per ha, or over 3 million carrots for a 3.0 ha planted field. If a medium-sized carrot is approximately 0.15 lb, this translates to a potential yield of 450,000 lbs. Carrots can be

²⁹ <https://garlicseed.ca/collections/all-varieties> John Boy Farms online garlic seed prices for 2018/2019. Manitoba, Canada. Accessed December 10, 2018

³⁰ <http://organicpricetracker.ca/index.php/getprice/lower-mainland-bc/27> Organic Price Tracker. Accessed December 10, 2018

³¹ 1 lb of garlic equates to approximately 7 bulbs (both hardneck and softneck varieties) <https://sowtrueseed.com/how-much-seed-garlic-do-i-need/> Accessed December 10, 2018

seeded at intervals such that harvest occurs at continuous intervals as the plants mature. Carrots that are coloured other than orange are often marketed as “rainbow carrots” and sold in bunches in grocery stores. Rainbow carrots fetch between \$3 and \$4 a bunch, which is approximately 2 lbs (bagged) for a price of \$1.50 per pound³². Prices may differ at farmer’s markets and local specialty stores such as Whole Foods Market and Fruiticana.

If approximately 50% of the crop is harvested (or 225,000 lbs) in good condition and sold for \$0.75 per lb, this amounts to revenue of approximately \$168,000. Mahal Farms may sell their carrot crop to a farmer’s market or distributor for a reduced profit but overall, the financial viability of a carrot farm is good (\$60,000 establishment and harvesting costs vs. potential revenue for 50% of a harvested crop using provincially-recommended spacing and expected yields).

5.3 Other Costs – Applicable to All Crops

Soil Testing

Local laboratory nutrient and pH testing is approximately \$1500 per crop area – reputable labs such as Exova and AGAT Labs charge no less than \$1000 for soil testing (major nutrients, available) and pH testing. Consultants hired to conduct soil sampling will charge at least \$500 for field work and reporting. Thus soil testing costs (nutrients, pH) will amount to approximately \$3000 for the initial establishment of two crops in the 9.0 ha site.

Soil testing may need to be conducted on an annual basis to identify persistent nutrient deficiencies and potentially improve crop yields. Thus this cost may be repeated each season.

Pest and Nutrient Management, Farm Supplies, Marketing, Accounting

The success of the first crops may dictate the need for professional assistance if pests and poor yields (due to poor nutrients) become an issue. I have not included these costs for the initial establishment of the proposed crops at this time.

³² <https://thehealthybutcher.com/organic-rainbow-carrots-2-lb.-bag.html> Organic Rainbow Carrots Bag. United States retailer “The healthy butcher”. Accessed February 1, 2019

I have assumed that Mahal Farms employs a bookkeeper or accountant for their current farm operations. These costs have not been quantified in this report. Similarly, costs related to the marketing of the farm products (i.e. farmers market sales, U-pick, or roadside stand signage), purchase of office supplies, and the purchase of miscellaneous farm equipment such as containers or pallets, twine for tying garlic, and temporary shed structures for cold vegetable storage and curing may be considerable.

6 Conclusions

Mahal Farms wishes to convert a pre-existing cranberry farm (last farmed in 2016) into a vegetable farm that occupies 9.0 ha of the northwest corner of their property. Prior to establishing vegetable crops, they wish to overcome a combination of agricultural limitations that include excess wetness (4W limitation), undesirable soil structure (3D limitation), and soil infertility (due to high acidity and low nitrogen and phosphorus, 4F limitation).

We proposed that in order to improve the land, 110,000 m³ of good-quality soil imported to the site and prepared according to our accompanying Soil Placement Plan report will enable soil-based agriculture for vegetable crops.

Mahal Farms wishes to diversify their farm by growing vegetables used predominantly in local Indian cuisine and improve the supply of locally grown produce. In the winter of 2018, Canadian news outlets reported that 2019 grocery prices would rise and “vegetables will see the biggest price jumps — between four and six per cent”.³³

According to the City of Richmond³⁴, “cranberries are the most dominant crop in Richmond, with almost 858 ha (2,120 ac) in production. In 2011, Richmond accounted for approximately 33% of BC’s cranberry acreage.” Blueberries are next at over 556 ha in production during the 2011 year, and third place is “Other hay” crops comprising 320 ha of production (**Figure 2**, below). Thus moving away from cranberry production will also help Mahal Farms diversify the City of Richmond’s crops and improve the supply of local fresh vegetables. I understand that Mahal Farms recently retained a consultant to view their old cranberry farm and were advised that new cranberry plants would cost

³³ <https://business.financialpost.com/news/economy/average-family-to-pay-400-more-for-groceries-next-year-report-estimates> Big Price Spikes Ahead For Vegetables As Average Family Pays \$400 More For Groceries Next Year, Report Predicts. Financial Post. December 4, 2018

³⁴ <https://www.richmond.ca/plandev/planning2/agriculture/about.htm> About Agriculture in Richmond. Accessed December 4, 2018.

approximately \$25,000 USD (plants are purchased from the United States) per acre at this time. For a 22 acre cranberry bog this would be approximately \$550,000 USD.

Land Used in Crop Production - Top 10				
Crop	Hectares	% of crops	% of census farms	% of ALR
Cranberries	858	38.9%	11.4%	21.5%
Blueberries	556	25.2%	33.2%	13.9%
Other Hay	320	14.5%	8.1%	8.0%
Potatoes	88	4.0%	2.8%	2.2%
Cabbage	64	2.9%	4.7%	1.6%
Strawberries	57	2.6%	2.4%	1.4%
Sweet Corn	52	2.4%	4.7%	1.3%
Chinese Cabbage	51	2.3%	10.0%	1.3%
Pumpkins	25	1.1%	5.2%	0.6%
Squash and Zucchini	21	1.0%	7.1%	0.5%
Total	2,092	94.7%	89.6%	52.4%

FIGURE 2. RICHMOND'S TOP CROPS BY LAND USED IN THEIR PRODUCTION, 2011

The accompanying tables (Appendix 1) shows costs related to the establishment effort, level of management and production value for both a 1.0 ha (first crop) garlic crop and 3.0 ha carrot crop.

I estimate that total costs for the land preparation, planting/seeding, and maintenance of both crops amounts to approximately \$160,000 for the first year. There is an additional cost of approximately \$3000 related to soil testing at the start of the farm establishment (prior to planting and seeding). This is necessary to determine fertilizer and lime amendment quantities, if required.

Other costs such as pest and disease management (consulting, testing, purchase of insecticides and pesticides, fumigating, purchase of predatory nematodes) may be considerable in the first few seasons while the farm is established.

In order to maintain farm status with BC Assessment, the total farm sales required by Mahal Farms (which is 29.5 ha in extent) is \$2,500 plus five per cent of the actual value of any farm land in excess of 4 hectares³⁵. According to BC Assessment³⁶, the land was assessed in July of 2018 at \$4,085,914. Using this metric, the farm would be required to report farm sales of over \$210,000. Currently, several crops (nursery trees, cedar hedging, greenhouse and field vegetables) are being produced and sold from the southern half of the property thus Mahal Farms is meeting the minimum farm gate sales required by BC Assessment without this vegetable farm establishment.

Using both conservative estimates of yields and prices (wholesale), I have determined that in the 2021 tax year (assuming 2020 soil placement, land preparation, and planting/seeding), planting only two vegetables crops will generate approximately \$293,000 in revenue (assuming only 50% of each crop is ultimately harvested and sold due to mortality, disease etc.) and require approximately \$163,000 in establishment costs, for an estimated profit of \$130,000 for the first year. It is important to note that the purchase costs of the garlic bulbs (estimated at \$40,000 for the first planting) is a one-time cost as garlic bulbils can be propagated by retaining the cloves for a fixed period of time, before they need to be replaced.

³⁵ <https://info.bcasessment.ca/Services-products/property-classes-and-exemptions/farm-land-assessment/farm-classification-in-british-columbia/Apply-for-farm-classification> BC Assessment: Classifying Farm Land. Accessed January 3, 2019

³⁶ <https://www.bcasessment.ca/> BC Assessment. Accessed January 3, 2019

A vegetable farm at Mahal Farms will contribute locally-grown vegetables to Richmond consumers and contribute towards diversifying the crop types grown in Richmond's farmland and the Agricultural Land Reserve.

Prepared by:

Reviewed by:

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Gordon Butt, M.Sc.
Professional Agrologist

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APPENDIX 1

Cost Tables – Crop Establishment and Harvesting

Table 1. Estimated Costs of Establishing a Garlic Crop (First Planting: 1 ha)

Farming Activity/ Requirement	Description of Work	Units or Machine Time	Unit Costs	Total (\$C, 2019 estimated)
Site Preparation	Tilling or rotovating field, applying manure, mulching	24 hours/ha x 1.0 ha	\$110/hr ^a	\$2400
	Machine Costs (Rental, Fuel ^c)	12 hours/ha x 1.0 ha	\$25/hr	\$300
Planting, 400 rows x 500 plants (low density planting, ¼ of field)	Purchase garlic bulbs (one-time purchase)	20,000 bulbs (10 cloves per bulb – 200,000 cloves)	\$2.00/bulb ^d	\$40,000
	Cracking bulbs for cloves (machine) ^e	\$1000 for a splitting machine, 400 kg/hr	\$1000/machine	\$1000
	Plant garlic cloves	200 hrs/ha x 1.0 ha	\$15/hr ^f	\$3000
Fertilizer (Compost, Lime) ^g	Purchase	Compost: 150 yards/1.0 ha Lime: 50 lbs/1.0 ha	Compost - \$40/yard Lime - \$1.50/lb	\$3000 \$75
Herbicide (napropamide)	Purchase	2kg/ha x 1.0 ha	\$30/kg	\$60
	Application (Pre-Emergence)	12 hrs/ha x 1.0 ha	\$15/hr	\$180
Maintenance Of Crop During Growing	Weed control, additional applications of fertilizer, herbicide.	48 hours/ha x 1.0 ha	\$15/hr	\$720
Harvest ^h	Hand harvest labour, tying, curing	3000 hours x 1.0 ha	\$15/hr	\$45,000
Irrigation (Drip)	Purchase & Installation by Irrigation Company (Local)	\$1/ m planted x 5000 m (first planting at 60 m x 80 m)	\$1/m	\$5000
TOTAL				\$100,000 (rounded)

^a \$22.00 per hour machine labour cost per employee, 5 employees for the 1.0 ha field establishment (labour intensive).

^b Soil testing costs from a reputable testing laboratory such as Exova, AGAT Labs. Current 2019 pricing.

^c February 2019 Diesel Price in Richmond is \$1.33/L, via <https://www.gasbuddy.com/Station/77015>

^d Average price per bulb from online retailer John Boy Farms. <https://garlicseed.ca/collections/all-varieties>

^e A garlic bulb splitting machine can be purchased for approximately \$1000 and process up to 400 kg of garlic in 1 hour.

^f \$15.00 per hour manual labour cost per employee.

^{g,h} Fertilizer costs, units, and labour inputs for planting and harvesting are via: Southwest British Columbia Small-Scale Farm Enterprise Budget: Garlic. Kwantlen Polytechnic University. <https://www.kpu.ca/sites/default/files/ISFS/Garlic.pdf>

Table 2. Estimated Costs of Establishing a 3.0 ha Carrot Crop

Farming Activity/ Requirement	Description of Work	Units or Machine Time	Unit Costs	Total (\$C, 2019 estimated)
Site Preparation	Chisel plow field, management of weeds, applying fertilizer, irrigating prior to planting (5 employees)	12 hours/ha x 3.0 ha	\$110/hr	\$4000
	Machine Costs (rental, fuel)	12 hours for 3.0 ha field	\$25/hr	\$300
Planting	Purchase carrot seeds (pre-treated)	7 kg/ha x 500,000 seeds/kg = 3.5 million seeds ^a	\$70 per 25,000 seeds ^b	\$9800
	Purchase precision seeder (tractor mounted)	\$4000 for a tractor mounted seeder	\$4000/machine ^c	\$4000
Fertilizer ^e	Plant carrot seeds with precision seeder	4 hrs/ha x 3.0 ha	\$50/hr ^d	\$600
	Purchase	70 kg/ha - Nitrogen x 3.0 ha 40 kg/ha - Potash x 3.0 ha	\$0.55/kg \$0.40/kg	\$120 \$50
	Application	Continuous applications over growing period (weekly)	\$66/hr	Estimated \$1000
Herbicide (trifluralin, Bonanza 480)	Purchase	1.25 L/ha x 3.0 ha	\$10/L	\$40
Maintenance of crop during growing period, after harvesting	Application (applied with 100 L/ha of water at 275 kPa), 2 employees	3 hrs/ha x 3.0 ha	\$30/hr	\$270
	Weed control, additional applications of herbicide, pesticide. Assessing carrot crop for pests such as nematode (prior to planting), fumigating.	50 hrs /ha x 3.0 ha	\$15/hr	\$2250
Irrigation	Purchase of overhead sprinkler system	\$750/ha x 3.0 ha	\$750/ha	\$2250
	Installation of irrigation, 3 employees	12 hrs/ha x 3.0 ha	\$45/hr	\$1600
Harvest	Machine harvest of carrots using carrot harvester (attached to tractor), topping carrots, cold storage	100 hrs / ha x 3.0 ha	\$110/hr	\$33,000
TOTAL				\$60,000

^a Number of seeds determined via the BC Ministry of Agriculture Crop Production Guide for Carrots (planting spacing) and size of field at 3.0 ha.

^b Deep Purple Carrot price from West Coast Seeds: <https://www.westcoastseeds.com/products/deep-purple>

^c Precision Seeder, Tractor Mounted. <https://woodwardcrossingscountrybasics.com/product/jph-4-jiang-seeder/>

^d Combined cost of \$22/hr machine labour, 1 employee and 25/hr machine costs (fuel, maintenance)

^e Fertilizer prices are current to 2019 in North America, via <https://farmdocdaily.illinois.edu/2018/09/fertilizer-prices-higher-for-2019-crop.html>

APPENDIX 2

Maps



FIGURE 1. OVERVIEW OF 5800 NO. 7 ROAD ON GOOGLE™ EARTH PRO. THE 15 M RIPARIAN MANAGEMENT AREA (RMA) SETBACK FROM THE NO. 7 ROAD DITCH IS SHOWN, AS IS THE ENVIRONMENTALLY SENSITIVE AREA (ESA) IN THE 5.1 HA RECTANGLE IN THE NORTHEAST CORNER OF THE PROPERTY. THE VEGETABLE FARM AREA IS 9.0 HA.



SOIL PLACEMENT PLAN

5800 No. 7 Road, Richmond, BC

FOR:

**Mahal Farms Ltd., Mr. Paul Mahal
c/o Mr. Ron Wilson
Hexcel Construction Ltd.**

BY:

**Jessica Stewart, A.Ag., G.I.T.
Gordon Butt, M.Sc., P.Ag., P.Geo.
Madrone Environmental Services Ltd.**

March 18, 2019

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Synopsis

Mahal Farms Ltd., the owner of the property at 5800 No.7 Road, proposes to import approximately 110,000 m³ of good-quality fill over 9.0 ha of land located in the un-farmed northwest portion of the 29.5 ha property to improve soil wetness (predominantly 4W limitation), undesirable soil structure (3D limitation), and fertility limitations due to highly acidic soils and nutrient deficiencies (4F limitation).

The intent of soil placement is to improve the aforementioned conditions that limit agricultural capability. After the addition of soil which will raise the existing land surface by an average depth of 1.3 m, followed by soil profile construction as we have recommended, the agricultural capability will improve to a 2WF.

Mahal Farms intends to engage Hexcel Construction Ltd. to source and import the soil. We have proposed the following basic plan for the site:

- 1** Prior to any importation, strip approximately 0.2 - 0.3 m of the existing topsoil (and overlying peat, vegetation, woodchips, and compost) over the 9.0 ha area. This approximates to 36,000 m³. This can proceed in stages as determined by the earthworks contractor.
- 2** All stripped soil should be stockpiled on site for later use. No soil shall be stockpiled in proximity (<10 m) to property lines or ditches. There is a required 15 m setback from the riparian management area (RMA) on the west side of the property at No. 7 Road.
- 3** Import good-quality soil (as described in this report in Sections 5.2 and 5.3) on the stripped land, which is level with slopes less than 2% and situated at elevations less than 2 m above sea level.
- 4** Sourced soil should consist of clean soil from an uncontaminated source; it should have less than 20% coarse fragments, should not be clay-rich (<20%), and should not contain any non-soil material. Madrone can assist with screening soil sites for potential contaminants (desktop preliminary studies and site visits) and assessing coarse fragment content of incoming soil loads. Sites should also be checked for potential invasive plant species.

- 5 The final surface after completion of fill placement should be graded with an even 1-2% grade; we recommend sloping the soil to the east and west, with a crown in the centre. As the project nears completion, drainage will be assessed and the drainage plan revised if needed (i.e. ponding observed and ditches installed within the placement area to direct drainage where preferred).
- 6 The original topsoil (stripped) should be spread evenly over the final graded surface in such a way as to avoid compaction.
- 7 After spreading the surface should be seeded with an appropriate forage mix to prevent erosion and maintain soil fertility. Manure and liming will be necessary to improve soil nutrients and acidity. We recommend soil testing after amending the soil to assess nutrients prior to any planting.
- 8 The soil placement operation should be monitored at regular intervals through the process. We recommend monitoring reports every 3000 m³ in the first year of the project, in addition to extra monitoring visits required by the City of Richmond at their request.
- 9 Once complete a final report should be issued on the condition and final, improved land capability of the filled area. This is required by the ALC for the return of security bonds posted for the duration of the project.

SOIL PLACEMENT PLAN

5800 No. 7 Road, Richmond, BC

1 Introduction

Hexcel Construction Ltd (Hexcel) retained Madrone Environmental Services Ltd. (Madrone) on behalf of Mahal Farms Ltd. (the property owners) to prepare a Soil Placement Plan for a portion of the property located at 5800 No. 7 Road, Richmond B.C. (**Figure 1**). In addition to preparing a placement plan that adheres to local bylaws¹ and the Agricultural Land Commission (ALC) Act², (and specifically Policy L-23³) a Soil Placement Plan comprises a soil survey of the existing property, soil and climatic restrictions to agriculture, as well as a determination of the land capability for agriculture based on our field assessment.

Previously, Mahal Farms applied to the ALC for subdivision approval; their intent in this application was to divide the 29.5 ha (73 acre) property into two lots (referred to as Lot A, north and Lot B, south in application documents). According to a City of Richmond report⁴ prepared by the Agricultural Advisory Committee Meeting conducted on November 15, 2015, Mahal Farms wished to subdivide the lot into two parcels to “manage its financial risk and liability by aligning its land holdings with its separate [farm] enterprises”. This report was provided to the ALC for their review of the proposal.

¹https://www.richmond.ca/_shared/assets/BL809447443.pdf Soil Removal and Fill Deposit Regulation Bylaw No. 8094. City of Richmond. Accessed October 15, 2018

²http://www.bclaws.ca/Recon/document/ID/freeside/00_02036_01 BC Laws; Agricultural Land Commission (ALC) Act. Accessed October 15, 2018

³https://www.alc.gov.bc.ca/assets/alc/assets/legislation-and-regulation/policies/alc_-_policy_l-23_-_placement_of_fill_for_soil_bound_agricultural_activities.pdf Policy L-23, Placement of Fill For Soil Bound Agricultural Activities. ALC.

⁴https://www.richmond.ca/_shared/assets/14_ALR_Appeal_Mahal_Farms43899.pdf *Agricultural Land Reserve Appeal Application by Mahal Farms Ltd. for Subdivision at 5800 No. 7 Road*. Report to Committee. City of Richmond, March 1, 2016. [Accessed October 15, 2018]

The ALC declined the subdivision proposal in July of 2016, finding that subdivision approval would not be consistent with the Agricultural Land Commission Act to preserve agricultural land, citing that subdividing the ALR into smaller parcels can limit agricultural opportunities on these lands.

Since this decision, Mahal Farms have revised their plans and now wish to farm the majority (9.0 ha) of the under-utilized northern parcel, (which is 15.8 ha total according to a land survey prepared in June of 2014 by J.C. Tam and Associates Land Surveyors, as part of the original subdivision application) **without** subdividing.

This plan pertains to approximately 9.0 ha of land located in the northwest corner of the property (the “soil placement area”). This part of the property was previously farmed for cranberries for Ocean Spray (cooperative); the last year of cranberry farming in this area was 2016 (two years ago). The northeast portion of the northern property parcel is approximately 5.1 ha and is designated as an Environmentally Sensitive Area (ESA)⁵, specifically “Old Fields and Shrublands”. This area will not be developed; it was previously used for growing ornamental trees. The southeast part of the property at Westminster Highway is also located in the City of Richmond ESA.

The remaining 1.7 ha of land in the northern parcel will not be farmed due to City of Richmond 15 m Riparian Management Area setbacks⁶ from the watercourse (ditch) along No. 7 Road and the irrigation canal located through the centre of the property (**see Figure 2**), which is south of the proposed soil placement area.

The planned use of the property is to develop the northwest corner into productive soil-based farmland for vegetable crops, specifically, Indian Vegetable varieties, for which there is a high demand in the Richmond area. However, with evidence of excess free water in the soil (class W limitation), dense, root-restricting subsoils (class D limitation), and acidic and nutrient deficient subsoil conditions (Class F limitation), the owners of the property are seeking a permit to deposit good-quality subsoil to improve the land capability for agriculture. The native topsoil on site is good quality (as described in our soil assessment in Section 4 of this report) and will be stripped, stockpiled, then re-spread over the placed soil. The plan is located in Section 5 of this report.

⁵ <https://maps.richmond.ca/rim/> City of Richmond Interactive Map V1.11. Accessed October 11, 2018

⁶ https://www.richmond.ca/_shared/assets/info_2332212.pdf Riparian Management Areas. City of Richmond. Accessed October 15, 2018

2 Site Description

The proposed soil deposit site is located in the northwest corner of the property at 5800 No. 7 Road in Richmond, BC, approximately 6.6 km east of Richmond centre on Lulu Island (**Figure 2**). The property is bound to the north by Mayfair Lakes Golf and Country Club, to the west by No. 7 Road, to the south by Westminster Highway, and to the east by a dense residential area.

The legal description of the property is: Block 4N Part1 S Section 2 Range 5W Land District 36 Except Plan 27718. The Property Identification number is 007-436-815. The property is 29.5 ha (73 acres) in extent. The property is zoned AG1 (Agricultural) according to the Richmond Zoning Bylaw 2011 and the property is within the Agricultural Land Reserve (ALR).

The property does not form a complete rectangular parcel as there is a separate 2.0 ha (5.0 acres) property parcel on the southwest side with the civic address of 5780 No. 7 Road. This parcel is also owned by Mahal Farms. The legal description of this property is Block 4N Part1 S Section 2 Range 5W Land District 36 Except Plan 27718 (PID: 007-436-815). This Soil Placement Plan does not include this separate property despite its location and ownership.

2.1 Historical Land Use – Airphoto Review

According to Mr. Paul Mahal, the property has been farmed by the Mahal family since they purchased the farm in 1949. The residence located in the southwestern corner of the property is a heritage farmhouse known as “Rathburn House”. Currently, two of eight family members (third generation farmers) reside on the property (in separate residences with different residential addresses than 5800 No. 7 Road) and are active in the farming operations on site.

We obtained aerial photographs (airphotos) from the Geographic Information Centre at the University of British Columbia to review the historical farm use of the property. The airphotos we received span the time period of 1938 to 2009. We supplemented these photos with two airphotos from 2013 and 2016, available through the City of Richmond Interactive Map program⁷. The airphotos were reviewed by Sharon Podesta, P.Ag. of Madrone; the observations are summarized in Table 1, below.

⁷ <https://maps.richmond.ca/rim/> Richmond Interactive Map program. Accessed October 27, 2018

Table 1. Airphoto Interpretation

Year	Site (5800 No. 7 Road, Richmond)	North	South	East	West
2016 (Richmond Interactive Map)	Agricultural: cranberry fields along the north half of the property, a drainage ditch oriented east-west in the approximate middle of the Site, and greenhouses/rows of plants, sheds, a house along the southern side of the property. The southeastern side of the property looks unused but the soil is disturbed. A small portion of the area is shown as 5780 No. 7 Road and has a house and some rows of crops visible, but it takes up less than 25% of the total area of the site.	Mayfair Lakes Golf and country Club, a few houses, a barn or greenhouse, some accessory/shed/outbuildings; Highway 91 abuts the golf course to the north.	Houses and agriculture (greenhouses, fields), Lulu Island Winery is to the southeast.	Kartner Road and a residential development. Smaller parcels with single family homes and lawns. No cultivation visible.	No. 7 Road, followed by 2 fields and a dwelling, followed by greenhouses and more fields.
2013 (Richmond Interactive Map)	No change.	No change.	No change (other than a couple of the houses in 2016 are under construction or not there in 2013).	No change.	No change.
2009 (SRS 7964 - 484)	No change.	No change.	No change.	No change.	No change.

SOIL PLACEMENT PLAN - 5800 NO. 7 ROAD, RICHMOND, BC

MARCH 18, 2019

Year	Site (5800 No. 7 Road, Richmond)	North	South	East	West
2002 (SRS 6600 - 268-269)	<p>North side: the northwest and middle cranberry fields are present; shifting use in northwest corner (cranberry production not consistent). There is a small drainage ditch running northwest to southeast and some access roads or access paths.</p> <p>The drainage ditch still bisects the property in the approximate middle.</p> <p>Southwest corner: buildings are present, as well as a field and crops.</p> <p>South-middle: Fill has been placed and spread, greenhouses are not yet present. A couple access roads are visible running north-south. The dwelling/building along Westminster Highway is still present here (though in the present it is now surrounded by nursery plants).</p> <p>Southeast: a house is visible and the rest of the area has nursery plant rows with a couple of access paths.</p>	No change.	No change.	No change.	No change. (Greenhouses not present)
1997 (FFC VCR9700 L-4 #110-111)	<p>North half: Fields - not clear if they are in use but very different from the 3 distinct cranberry fields that are present in 2016 airphotos.</p> <p>Drainage ditch still bisects the middle (between north and south halves).</p> <p>Southwest corner: buildings in the corner as today, some soil disturbance around the house (perhaps a crop rotation or change).</p> <p>South-middle and southeast: House fronts on Westminster highway, nursery plants apparent from green rows.</p>	No change.	No change - the large houses present today are not there.	No change.	No change.
1991 (FF 9131 #.80-.81)	<p>North half: Fields with some patches of vegetation. No clear pattern of cultivation.</p> <p>Ditch bisects the property in the middle (first airphoto appearance; therefore constructed sometime between 1984 and 1991).</p> <p>Southwest corner: a house and trailer or shed, and some small cultivated fields oriented north-south.</p> <p>Southeast corner: The house fronts on Westminster highway and is surrounded by a green field, no pattern of cultivation. The area to the east of the house appears to have rows of plants or trees and there is a patch of fill just northeast of the house.</p>	No change.	No change.	No change.	No change.

SOIL PLACEMENT PLAN - 5800 NO. 7 ROAD, RICHMOND, BC

MARCH 18, 2019

Year	Site (5800 No. 7 Road, Richmond)	North	South	East	West
1984 (15BC 84013 No 188- 189)	The house and trailer/shed has been built in the southwest corner. The rest of the property consists of fields, and the drainage ditch bisecting the property later is not visible (a smaller ditch may be there, but it isn't readily visible as in later years). There is no house fronting on Westminster Highway.	Fields and a house and a barn/sheds or accessory buildings. The area encompassed by the golf course at present appears to be a vacant field, with no natural lakes or any water present.	No change.	No change.	No change.
1979 (BC7901 6 No. 112-113)	House fronts on No. 7 Road and there are a few sheds/accessory buildings and a barn, plus a second house that appears to have driveway access from Westminster Highway. The rest of the property is fields and the large drainage ditch is NOT present in the middle of the property running east-west. It may be a hay field/cattle (the southwestern field has cattle in it.) There are small access roads around each of the fields (in the form of tracks, not proper roads). Some darker patches in the east fields might be wetness but it not obvious.	Same as 1984. The field appears to be cultivated for hay - there are tractor tracks throughout but no obvious crops.	Lots of greenhouses and nursery type properties, where presently there are fields.	The residential development and roads are there, but it isn't as densely developed as it appears later. Same basic layout and use though.	Fields and a dwelling.
1975 (BC5650 0061- 0062)	No change.	No change.	No change.	No change.	No change.
1969 (BC5320- 070-071)	No change. Some dark patches which could be wetness are seen throughout the fields. There is also a strip that runs northwest to southeast in the northeast corner of the Site that appears to be pooled water. The northeast field has the most evidence of wetness (dark patches)	No change. Drainage ditches are seen around the fields.	No change	Residential development is still there but much less dense.	No change. Some wet patches in the field are visible.

SOIL PLACEMENT PLAN - 5800 NO. 7 ROAD, RICHMOND, BC

MARCH 18, 2019

Year	Site (5800 No. 7 Road, Richmond)	North	South	East	West
1963 (BC5063: 233-234)	The only access to the house is from Westminster Highway in the southwest corner. 2 houses are present and some sheds, but it appears that the barn is not in place. The rest of the Site is fields. There are apparently small drainage ditches running throughout the property but no obvious flooding or dark patches.	No change.	Greenhouses are not present (maybe a few small ones). Mostly houses and fields fronting on Westminster Highway.	Small residential development (1 house) and fields.	Fields and agricultural dwellings.
1954 (BC 1672: 69)	No change - a few dark patches in the southeastern field and what appears to be a remnant stream running northwest to southeast in the northeastern corner of the field. Some dark patches in the south-central field as well.	No change.	All fields and a dwelling.	Fields and a couple houses fronting on Westminster Highway. No residential development or Kartner Road yet.	Fields and drainage channels (perhaps altered natural streams)
1949 (BC 782:32- 33)	No change. The property has numerous dark patches throughout the western fields and lines which could be natural drainages here until development altered their paths.	No change. A drainage is apparent running northwest to southeast and intersects the Site in the northeast corner.	Fields, no change.	No change.	No change.
1938 (A5937:69)	No change.	No change.	No change.	No change.	No change.

2.2 Current Land Use – Property and Surrounding Area

The northern half (approximate) of the property is not actively farmed as of the 2016 field season. It was previously farmed for cranberries (for Ocean Spray) and ornamental trees. The southern half is currently (as of the time of this report) farmed by either Mahal Farms or by farmers leasing the land. The current farm uses in the southern portion are:

- Vegetables (field and greenhouse);
- Hedging cedar (field-based near No. 7 Road); and
- Nursery (container and caliper trees).

The surrounding area is actively farmed. There is currently a large forage crop farm located across No. 7 Road to the west and hobby farms, nurseries, specialty plant growers, and a winery to the south across Westminster Highway⁸.

2.3 Climate

The nearest Environment Canada weather station is at Richmond Nature Park⁹, located approximately 3.5 km to the west at an elevation of 3 m above mean sea level. The records from 1981 to 2010 show a mean annual precipitation of 1262 mm, a daily average temperature of 11°C (among the highest in Canada), and 2244 effective growing (> 5°C) degree days (Environment Canada, 2011).

Due to the distribution of when precipitation falls, the property is designated a 3A(1) in the Climatic Capability for Agriculture scheme of Coligado, 1980. Class 3 aridity limitations indicate drought or aridity between May 1 and September 30 resulting in moisture deficits, which are limiting to plant growth and could require moderately intensive management. This will dictate that certain crops will require irrigation for dry periods in mid-summer to early fall.

⁸ Farm Activity information in the surrounding area gathered by data from City of Richmond Interactive Map Program, BC Assessment, and Google Earth Pro imagery for 2018.

⁹ http://climate.weather.gc.ca/climate_normals/index_e.html Richmond Nature Park climate station. Accessed October 15, 2018

By incorporating meteorologic data from Richmond Nature Park spanning the period of 1981 – 2010, the cumulative moisture deficit can be calculated by subtracting mean annual precipitation (reported above) and the evaporation potential of the area, which is a function of temperature, windspeed, and solar radiation. Using the ClimateWNA_Map model from UBC Forestry¹⁰, the cumulative moisture deficit is calculated to be 181 mm/year – which corresponds to the 3A aridity limitation of climate capability.

The Thermal class assigned in the same report is 1, meaning there are no significant temperature limitations during the growing season.

2.4 Landscape and Topography

The property is situated on the Fraser River delta and features flat topography with no visually discernible slopes or natural terrain features such as bedrock or streams. A Geodetic Control Marker (GCM) located at No. 7 Road on the west property line is situated at 1.65 m above sea level (a.s.l.)¹¹. This is the main topographic information I have found for this area; there are no topographic land survey data or contours available from iMapBC or the Richmond Interactive Map. This topographic elevation data was used to prepare our soil volume cross-sections.

There are dykes located in the northern half of the property; these were constructed for the cranberry farm. The area of the dykes is approximately 1.6 ha (4.0 acres). To accurately determine the elevation of the dykes relative to the native land, a topographic survey would need to be performed¹². An approximately 10 m wide irrigation canal also runs through the centre of the property, oriented east-west. It terminates approximately 10 m from both the east and west property lines; **the canal does not connect to the No. 7 Road ditch**. There are farm machinery access roads on either side of the canal; these run across the dykes as well. The proposed soil importation area is east of the No. 7 Road ditch and north of the irrigation canal.

¹⁰ <http://www.climatewna.com/ClimateWNA.aspx> ClimateWNA_Map. Accessed October 15, 2018

¹¹ http://a100.gov.bc.ca/pub/mascotw/protected/final_long.html?Q_GCM_NO=274696 Geodetic Control Marker Number 274696. GeoBC Reference Systems and Survey Monuments. Accessed October 15, 2018

¹² Note that there is very little elevation differences over the property; the area lies at 1.65 m GSC according to the Geodetic Control Marker on No. 7 Road at the property line.

The surficial geology of this area was mapped by Armstrong (1980) as Fraser River Sediments, specifically overbank silty to silt clay loam up to 2 m thick overlying up to 15 m of deltaic and tidal flat deposits.

The very southwest corner of the property is mapped as post-glacial Salish Sediments. These sediments are composed of bog, swamp and shallow lake deposits. More specifically, these deposits are characterized by organic rich sandy to clay loams 15 to 45 cm thick overlying Fraser River deltaic and tidal flat deposits.

The description of surficial geology conforms well to our field observations of silt loams and silty clay loams (Fraser River Sediments). We did not observe significant differences in surficial geology (indicated by soil texture) in our soil survey, nor did we observe bog, swamp, or shallow lake deposits that are characteristic of the Salish Sediments mapped by Armstrong (1980).

We found the following native vegetation in the northern half of the property during our field assessment:

- Hardhack (*Spiraea douglasii*)
- Sheep sorrel (*Rumex acetosella*);
- Cultivated Cranberry (*Vaccinium macrocarpon*);
- Reed canary grass (*Phalaris arundinacea*);
- Paper birch (*Betula papyrifera*);
- Orchard grass (*Dactylis glomerata*);
- Silverweed (*Argentina anserina*);
- Bulrush (*Typha latifolia*);
- Canada thistle (*Cirsium canadensis*);
- Vetch weed (*Vicia* sp.).

2.5 Published Soils and Land Capability Data

This section of the report summarizes the characteristics of the surveyed soils and the Land Capability for Agriculture (LCA) ratings for the property. LCA ratings describe the general suitability of the land for agriculture as seven classes for mineral soil and seven classes for organic soil. The capability classes are modified into subclasses when limitations to agriculture exist. There are twelve subclasses for mineral soils and nine subclasses for organic soils. A detailed description of LCA rating classes and subclasses is provided in Appendix C.

The soils in this area were mapped by Luttmerring in the 1980's. The soil maps were printed at a scale of 1:25,000 and are based on a reconnaissance level soil survey and air photo interpretation and represent a broad interpretation of soils and agricultural capability. We provide a site-specific assessment of the agricultural capability of the property in Section 3, below.

Existing soil survey maps indicate that the soils in the assessment area are most commonly the Blundell and Delta soil series (Luttmerring, 1980), with the majority of the property mapped as 70% Delta soils and 30% Blundell soils. According to the Province of B.C. Soil Information Finder Tool (SIFT)¹³ which is based on data collected from Provincial Soil Surveys, the assessed capability of land for agriculture for the Delta and Blundell soil complex is Class 4W.

The Canadian Soil Information Service (CanSIS)¹⁴ describes the Delta soil series (the predominantly-mapped unit here) as poorly drained:

*“Water is removed so slowly in relation to supply that the soil remains wet for a comparatively large part of the time the soil is not frozen. Excess water is evident in the soil for a large part of the time. Subsurface flow or groundwater flow, or both, in addition to precipitation are the main water sources; there may also be a perched water table, with precipitation exceeding evapotranspiration. Soils have a wide range in available water storage capacity, texture, and depth, and are gleyed subgroups, Gleysols, and Organic soils. . . . Delta soils are good agricultural soils and are utilized for a variety of crops, including forages, cereal grain, potatoes, vegetables and some small fruits. **Watertable control through artificial drainage, however, is required for optimum utilization.**”*

¹³ <https://www2.gov.bc.ca/gov/content/environment/air-land-water/land/soil/soil-information-finder> Soil Information Finder Tool. Accessed October 15, 2018

¹⁴ <http://sis.agr.gc.ca/cansis/soils/bc/DLT/sad~~/A/description.html> CanSIS. Accessed October 15, 2018

The subcategory, W, indicates excess free water present during the growing season that potentially inhibit plant growth or damage crops (Coligado, 1980). Soils with a Class 4W limitation are amenable to improvement through drainage or well-draining fill, with the SIFT data indicating a potential mixed Class 2 and/or 3 improved status for this property.

Other limitations for the Blundell and Delta soils include:

- salinity (N, due to tidal environment of the deeper horizons) and;
- undesirable soil structure (D, due to firm and clay-enriched subsoils with low perviousness)

Blundell Soils can be improved to mixed 30% Class 3N and 70% 2N. Delta Soils can be improved to 2D.

The soils are organized into associations, groups of soils that occur together on the same parent material, to form a land pattern (SCWG, 1998). In this case the above mentioned soils are formed from deltaic sediments. Soil properties are summarized in Table 2.

Table 2. Summary of Mapped¹⁵ Soil Properties

Soil Series	Parent Material	Texture	Drainage	Classification
Blundell	10 – 40 cm organic material over medium-textured deltaic deposits	Poorly decomposed organic surface with medium grained sandy silt loam under layering. Saline and peaty conditions present.	Poor to very poor; high groundwater table	Rego Gleysol
Delta	Medium to moderately fine-textured deltaic deposits	Silt loam or silty clay loam grading to silty clay loam or silty clay. Saline conditions present.	Poor; high groundwater table	Orthic Humic Gleysol

3 Soils and Land Capability for Agriculture Assessment

Gordon Butt, P.Ag., and Jessica Stewart, A.Ag. visited the property on October 10, 2018 to carry out a detailed soil survey. Conditions were clear with excellent visibility. We were met on site by Mr. Mahal of Mahal Farms. Hexcel had brought an excavator on site for our soil investigation.

¹⁵ Based on mapping by Luttmerding (1980) and the Soil Information Finder Tool; actual soils on site are described in Section 4.0 of this report.

We described soil profiles in eight excavated soil pits that ranged in depth from 0.8 m to 1.3 m. Soil pit locations were randomly chosen in the northern part of the property and were marked by GPS in the field (**Figure 2** in Appendix A). Detailed observations of soil properties, including soil texture, drainage, consistency, structure, colour, horizon classification and thickness, and evidence of gleying or mottling were noted during our assessment. Soil Pit Descriptions and photos are located in Appendix B.

We made additional surface observations in the areas around the test pits, such as the location of ditches, vegetation, and other features such as dykes and irrigation canals.

Based on my soil profile descriptions, we correlated the site soils to soils described in the Soils of the Langley-Vancouver Map Area, MoE Technical Report 15 (Luttmerding, 1980). The report also provides Land Capability for Agriculture (LCA) ratings for the assessment area. In this section we indicate our LCA ratings for the property that is proposed to receive soil, which are summarized in Table 3 below.

We also collected eight soil samples for laboratory testing, specifically for nutrient, salinity, and textural analysis. The samples were taken at random sites from the northern parcel (soil placement area) to depths of up to 0.8 m. As such, the sampled horizons include the Btg or IIBg horizons we observed in our soil pits (subsoils sampled only). All soil samples were collected using lab-provided containers. The sealed samples were placed in a cooler and delivered under chain-of-custody documentation to AGAT Laboratories in Burnaby.

3.1 Soils – Determined from Assessment

The soils described in all eight pits correlate best with the Delta soil series of Luttermerding (1980), who described these soils as “moderately-fine to fine textured deltaic deposits and have a silt loam to silty clay loam textures”. He further stated that Delta soils are poorly drained and often subject to seasonal ponding. We stress that where differences occur in soils mapping, our findings should be accepted due to the much higher sampling density (i.e. not based on airphoto interpretation and soil surveys over large areas).

We observed mottling caused by high seasonal water tables in the subsoil; mottling starts at 20-25 cm below the surface for most soil pits, with the exception of Pit 7 (12 cm below surface) and Pit 8 (60 cm below the surface). Mottling and oxidized root channels are encountered in the Btg horizon, which is a firm to very firm horizon that restricts root

growth (Class D limitation). This soil is agriculturally limited by both 1) excess free water and 2) dense subsoils/undesirable soil structure in the Btg horizon.

Wetness subclass information can be found in Appendix C.

Table 3. Summary of Soil Observations from Pit Investigation

Test Pit	Textures (by horizon)	Drainage and LCA Class	Soil Classification	Correlation
1	Silt loam, silty clay loam, fine sandy loam, to loamy sand	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
2	Sandy loam, silty clay loam, silt loam, to fine sandy loam containing lenses of fine sand.	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
3	Silt loam (-silty clay loam), silty clay loam, silt loam, to (very) fine sandy loam	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
4	Silt loam, silty clay loam, fine sandy loam	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
5	Sandy loam, silty clay loam, silt loam, to fine sandy loam	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
6	Sandy loam, silty clay loam, silty clay loam, to (very) fine sandy loam	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
7	Silt loam, silty clay loam, silty clay loam, to loamy sand. Fine.	Poorly-drained, Class 4W, 3D	Orthic Luvisol	Delta
8	Sandy loam, silt loam (-silty clay loam), silty clay loam, to fine to medium, sand	Poorly-drained, Class 4W, 2D	Orthic Luvisol	Delta

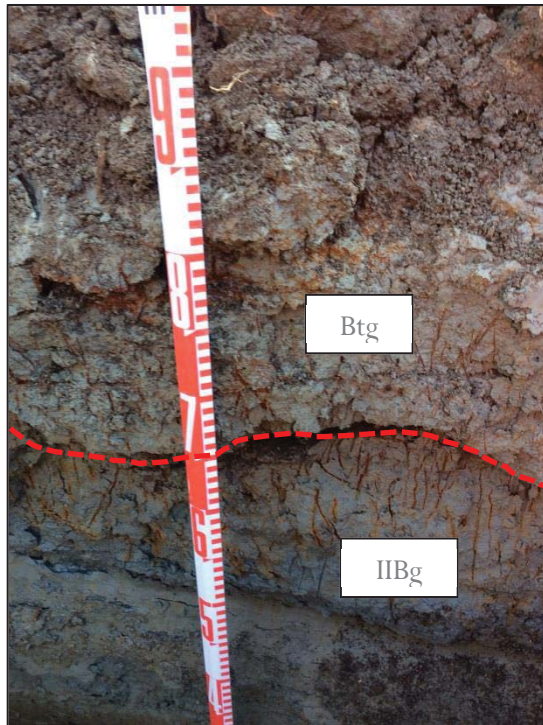


PHOTO 1. THIS PHOTO SHOWS THE SUBSOIL PROFILE OF PIT 1.

Note strong angular blocky structure, generally grey matrix colours and lack of roots. The distinction between Btg and IIBg represents a difference in the deposition mode; the Btg was developed from finely textured shallow marine deposits; the coarser textured IIBg was developed from river deposits.



PHOTO 2. LOOKING DUE WEST ACROSS THE MAHAL FARM (PROPOSED SOIL PLACEMENT AREA).

Vegetation includes Hardhack, Sheep sorrel, Cultivated Cranberry Reed canary grass (*Phalaris arundinacea*), and Orchard grass.



PHOTO 3. WOOD SHAVINGS PRESENT AT THE TOP OF THE AH LAYER IN SOIL PIT 7.

These were brought in for the cranberry farm previously located here. Cranberries have not been harvested since 2016. We did not observe these shavings anywhere else on the property during our assessment.

3.2 Soil Nutrient, pH, and Salinity Analysis

Soil analytical results generated by AGAT Laboratories of Burnaby, B.C. are presented in Table 4 for the eight samples collected by Mr. Butt on site. Copies of AGAT's full analytical laboratory reports are contained in Appendix D. The results of the nutrient, pH and salinity tests are discussed as follows. Note that the eight samples do not correlate to the eight test pits (i.e. they are located at various points of the northern parcel but not from the pits themselves). The soil samples are from subsoils, not topsoils.

3.2.1 Nitrate (NO₃-N)

The concentration of nitrate in the tested soil is a good indicator of how much nitrogen is available to plants. Nitrate is present in agricultural soils either as a result of direct addition (manure) or due to microbial fixation and transformation of soil nitrogen to nitrate.

The B.C. Ministry of Agriculture 2017 study titled "Tracking Post-Harvest Soil Nitrate in Agricultural Fields in the Hullcar Valley¹⁶, B.C."¹⁷ describes nitrogen in agricultural soils as follows:

¹⁶ This is near the City of Vernon in the Okanagan.

¹⁷ <https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/technical-reports/soil->

“Nitrogen may be added to soil as a crop nutrient that is required by plants in large amounts, and crops take up N as nitrate from the soil root zone. In addition to plant uptake, microbes can ‘immobilize’ nitrate and make nitrate part of soil organic N, the largest portion of N in soil, or the nitrate can be lost from the root zone of the soil by leaching or by transformation into gases that escape into the atmosphere.

*Various factors control the rates of uptake, transformations, or losses of N. For example, favourable soil temperatures and moisture conditions during the growing season promote the microbial conversion of organic N to nitrate and the plant uptake of nitrate (biological processes). Rainfall or irrigation water favours nitrate leaching (physical process) any time the infiltrating water exceeds the water-holding capacity of soil or when the water flows through burrows or cracks in the soil (Jarvis 2007). **The producer’s goal is to manage nitrate for crop uptake or to keep nitrate in the soil root zone for later crop uptake.**”*

The required soil nitrate-nitrogen (NO₃-N) for specific crops varies from crop to crop but in general, a concentration range of 10-50 mg/kg is desired¹⁸. Within this range, 20-40 mg/kg is considered optimal for most crops, including the vegetables that Mahal Farms intends to farm here.

The soil analysis shows that available nitrate is less than 5.0 mg/kg (also equivalent to 5.0 ppm¹⁹) for all soil samples. Six out of eight of the samples have nitrate that is actually below the reported laboratory detection limit of 2.0 mg/kg. **These analyses show that nitrate is severely limited in these subsoils²⁰.** Sampling was done in the fall, approximately two years since the last crop rotation of cranberries. The soils have not been amended by fertilizers since the last rotation.

[nutrient-studies/post-harvest_nitrate_study_-_final_report_-_sep_2017.pdf](#) Tracking Post-Harvest Soil Nitrate in Agricultural Fields in the Hullcar Valley, B.C. Accessed November 19, 2018

¹⁸ <http://www.horiba.com/us/en/application/material-property-characterization/water-analysis/water-quality-electrochemistry-instrumentation/support/application-support/application-notes/ion/nitrate/soil-nitrate-measurement-for-determination-of-plant-available-nitrogen/> Accessed November 19, 2018

¹⁹ Mg/kg is roughly equivalent to ppm: we use both in this report as these units are both used in soil BC Ministry of Agriculture and other pertinent publications.

²⁰ We expect that the nitrate-nitrogen in topsoils will be much higher.

3.2.2 Phosphorus

According to the United States Department of Agriculture²¹ after nitrogen, phosphorus (P) is often the most limiting nutrient for crop and forage production. The primary role of phosphorus in plants is to store and transfer energy produced by photosynthesis for use in growth and reproductive processes. Phosphorus loss in soils is mainly associated with erosion and runoff rather than leaching out of the root zone (via rainfall or irrigation processes).

The availability of phosphorus to plants depends on factors such as soil pH, soil texture and mineralogy²². The B.C. Ministry of Agriculture Sustainable Agriculture Management Branch states that a soil pH of 6.0 to 7.0 is the optimum range for phosphorus availability. As soil pH increases above 7.0, or decreases below 6.0, phosphorus binds with cations (i.e., calcium, aluminum, or iron) and becomes unavailable for immediate plant uptake. Phosphorus is bound by clay particles and oxides in low pH soils²³.

According to the B.C. Ministry of Agriculture “Phosphorus Considerations for Nutrient Management” Factsheet²⁴, the optimal range of phosphorus in soils is between 41 – 75 ppm (41-75 mg/kg of tested soil).

In our survey, phosphorus concentrations ranged from 7 mg/kg to 47 mg/kg for the eight samples. Six out of eight of samples are below the optimal rates for soil phosphorus. The

²¹https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053254.pdf
Accessed November 19, 2018

²² https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/response_to_comments_questions_2011_p_seminars_final_july2013.pdf Ministry of Agriculture: Phosphorus Seminars, 2011. Accessed November 19, 2018

²³ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/response_to_comments_questions_2011_p_seminars_final_july2013.pdf Accessed November 19, 2018

²⁴ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/631500-4_phosphorus_considerations_factsheet_no6_sep2010.pdf Phosphorus Considerations for Nutrient Management Factsheet. Accessed November 19, 2018

soils are thus limited by phosphorus availability as well. We emphasize that these results are for the tested subsoils.

3.2.3 Potassium

Phosphorus (P) and potassium (K) are two of the three macronutrients (the other being nitrogen) required by plants for optimum growth. They are required in larger amounts compared to the micronutrients (e.g., zinc, iron, boron, etc.)²⁵.

B.C. Ministry of Agriculture classifies 0 to 80 ppm (or mg/kg) of Potassium in soils as “low”²⁶. Optimal potassium concentrations are reported between approximately 131 and 175 ppm or mg/kg.

Of the eight soil samples, only one has a “very high” potassium concentration of 329 mg/kg. Two other samples have “moderate” potassium concentrations that are below optimal, and the remaining five samples have “low” to “very low” potassium concentrations that are not optimal for plant growth of any crop.

3.2.4 Sulphur

Sulphur (S, along with magnesium, iron, manganese, copper and zinc) is sometimes deficient in soil for optimum crop production. Soil pH is also lowered (when desired) using elemental sulphur, sulphuric acid, aluminum sulfate and iron sulfate (ferrous sulfate)²⁷.

The optimal sulfur range in soils is reported to be between 20 and 35 mg/kg (or ppm)²⁸. The soils we sampled on site have sulfur concentrations ranging from 3 to 33 mg/kg.

²⁵ <https://www.uaex.edu/publications/PDF/FSA-2118.pdf> Accessed November 19, 2018

²⁶ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/600-series/634200-2_soil_test_p_and_k_interpretations.pdf Accessed November 19, 2018

²⁷ file:///U:/Nutrient%20Management_BC%20Vegetable%20Production%20Guide.pdf Nutrient Management_BC Vegetable Production Guide.pdf Accessed November 19, 2018

²⁸ https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/agricultural-land-and-environment/soil-nutrients/600-series/631004-1_sulphur_deficiencies_in_central_bc.pdf Sulphur Deficiencies in Central British Columbia. Accessed November 19, 2018

Seven of the eight samples have low to very low concentrations outside of the optimal range (7-20 mg/kg); only one sample has an optimal sulphur concentration for crops.

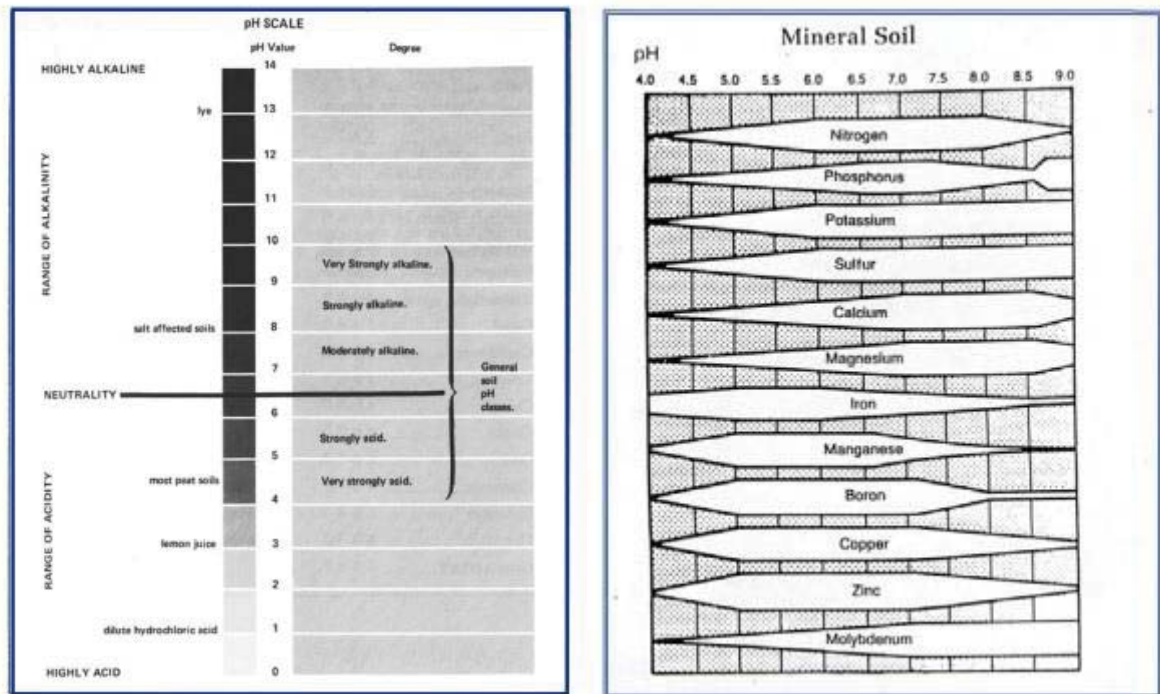
In the B.C. Ministry of Agriculture soil factsheet titled “Sulphur Deficiencies in Central British Columbia”, it is reported that *“serious economic losses have occurred when crops have failed to respond to nitrogen fertilizer when soil sulphur levels were low. Knowledge of available soil sulphur levels is important in formulating appropriately balanced fertilizer blends that avoids crop failures”*.

3.2.5 PH (Acidity Or Alkalinity)

According to the B.C. Ministry of Agriculture Soil pH Factsheet:

“Soil pH refers to the degree of acidity or alkalinity of the soil. [The] pH scale shows how pH numbers relate to acidity or alkalinity. The scale ranges from 1 to 14, pH 7.0 being the neutral point. A reading below 7.0 indicates the degree of acidity; a reading above pH 7.0 indicates the degree of alkalinity. Soil pH is normally determined on all agricultural soil samples sent to soil testing laboratories. Materials are available that when applied to the soil will change the pH to a point more favourable for crop production. These materials are referred to as soil amendments.”

According to our laboratory test results, the soil pH of our eight samples range from 3.75 to 4.31. This range is defined on the Soil pH factsheet as “very strongly acid”. This range is characteristic of most peat soils (Fibrisols, Mesisols, and Humisols) but our surveyed soils were not found to be peaty. Soil pH influences the solubility of plant nutrients and thus, their availability to plants. Low pH values in mineral soils correlate to unfavourable influence on element availability (readily available forms).



DRAWING 1 (LEFT). SOIL PH SCALE AND GENERAL SOIL PH CLASSES (BLACK BRACKET).

DRAWING 2 (RIGHT). SOIL PH INFLUENCE ON AVAILABILITY OF NUTRIENTS (MINERAL SOILS).

For reference, optimal soil pH's for crops that Mahal Farm's intends to grow are as follows:

Vegetables (General): 6.5-8.0

Asparagus: 6.5-8.0

Broccoli, Cabbage: 6.0-7.0

Beans, Peas: 6.0-7.0

Potato: 5.0-6.5

As such, the soils in their current state are too acidic for optimal vegetable crop yields and would require amendments such as lime to raise the pH ideally to 6.0. Liming depends on the pH of the imported soil and highlights the need for soil nutrient testing prior to any spreading of manure or other amendments. To summarize, the native subsoils are very infertile for a combination of low N, P and very low pH and this is a further reason that soil importation is required to improve the agricultural viability of this portion of the property for vegetable crops (desired by Mr. Mahal).

Table 4. Summary of Soil Analyses – Nutrients Package (8 samples)

Parameter	Unit	Soil Sample Description / Sample Number							
		18.0429-1	18.0429-2	18.0429-3	18.0429-4	18.0429-5	18.0429-6	18.0429-7	18.0429-8
Available Nitrate (NO3-N)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5.0	2.5
Available Phosphorus (P)	mg/kg	42	7	47	12	19	15	24	24
Available Potassium (K)	mg/kg	62	63	68	42	329	63	114	81
Available Sulphur (SO4-S)	mg/kg	11	3	9	6	33	8	7	20
pH (1:1 extraction)	pH units	3.95	4.24	3.97	4.12	4.31	4.11	3.75	3.82
Electrical Conductivity (1:1: extraction)	dS/m	0.14	0.06	0.1	0.07	0.2	0.08	0.13	0.13
Organic Matter (W-B Wet Oxidation)	%	7.58	2.18	5.53	2.74	14.3	2.79	3.34	16.5

3.2.6 Salinity

As mentioned in Section 3.5, both the Delta and Blundell soil series mapped in this area by Luttemerding (1980) have salinity limitations due to their origin as deltaic deposits in a tidal zone. Salinity (N) is identified as a land capability limitation subclass, and includes soils affected by soluble salts that can restrict the range of crops grown. The salt content of soils is tested by creating a water-saturated paste and measuring the electrical conductivity. This value is commonly reported as mS/cm (millisiemens per centimeter).

Our electrical conductivity results ranged from 0.06 to 0.20 mS/cm for the eight samples tested. This correlates to a class 1, or no limitation for crop growth due to salinity. There is no salinity limitation found in the sampled soils, which was not expected for these soils. High salinity values may be confined to the deep horizons (> 1 m) that were not sampled on site. However the proposed crops for this area are shallow-rooted vegetables that will not be affected by salinity in subsoils of greater depth than 1 m.

4 Land Capability for Agriculture

4.1 Land Capability for Agriculture of the Property

Using the specific criteria presented in Land Capability Classification for Agriculture in British Columbia (Kenk and Cotic, 1983), we rated the agricultural capability of the proposed soil deposit area, which is dependent upon the existing soil and site conditions.

Based on our soil pit observations, we found the dominant soil limitation to be excess water (W), specifically a 4W limitation due to uniformly poorly drained soils. During the growing season, the water table will be within the rooting zone, restricting the range of crops that can be successfully grown without managing water (via installing drainage systems or raising the land surface via fill). Excess water limitations are determined based on soil drainage characteristics, the duration that the water saturates the soil, and the season of the soil saturation. Soil saturation characteristics are defined based on the presence of redoximorphic features in the soil profile (mottling, oxidized root channels, red and orange colours).

We also determined there is a significant limitation in the native subsoils, namely impediment to root extension due to high bulk density (the Btg horizon). This is rated as Class 3D for seven of the eight soil pits we investigated. This can be improved to a 2D

overall (although this would not improve the next limitation, which is fertility) with sufficient deep ploughing or ripping to break up the dense subsoil. Deep ripping must be done when the soil is as dry as possible, generally Mid to late summer). It may be required more than once, since soils can regain high bulk densities over time.

The soil pit sites did not show evidence of other limitations, due to erosion, salinity, stoniness, bedrock, topographic or permafrost.

Finally, the soil nutrient testing performed by AGAT Labs shows that there is an additional agricultural limitation of fertility (4F) due to very strong acid soils with pH ranges between 3.75 to 4.31 and nutrient deficiencies.

4.2 Improvement

The 4F limitation can only be improved to the next most serious limitation, which is excess water 4W in the northern proposed fill area. We are seeking to improve the fertility limitation by importing high quality fills, then re-spreading topsoil. Note that cranberries require low pH, but cranberries are not an economic crop²⁹ at the present time.

Improvement of the 4W limitation will be challenging. Drainage requires ditches with water levels lower than that in the field; and because water levels are high through the winter months throughout Richmond, it is not practical to achieve any relief of high water tables. Furthermore, the ditches on No. 7 road have mapped connectivity to fish habitat in the Fraser River. Control would depend on regional drainage and pumping to areas with lower winter water tables. Drainage is further impeded by the surrounding dykes (installed for cranberry cultivation) which impede drainage in spring and fall.

Fertility limitations can be ameliorated through liming although initial amounts of lime may be large. On-going fertilization will be required in addition to the application of micro-nutrients through spraying of crops.

²⁹ We understand that currently there is an oversaturated market for both blueberries and cranberries.

Local blueberry farmers operating in poorly-drained, native soils have reported (to Madrone) the following complications during farming operations:

- The development of deep ruts in the ground by harvest machinery if hand harvesting is not performed;
- Resulting damage to farm equipment when stuck, and further damage to surrounding plants when machinery needs to be towed out;
- Narrow harvest windows means hand-harvest is not ideal (machine-harvest for optimum crop harvest);
- Difficulty of acquiring labourers for hand-harvest of crops.

Given the significant constraints for drainage improvement we suggest that the most practical way of improving the soil is to import clean subsoil and cover with a minimum of 0.3 m of good quality topsoil or organic soil stripped from the study area, stockpiled and re-spread over the surface after grading. Any soil imported would have to be monitored to ensure it does not contain:

- Excessive coarse gravel, cobbles or stones;
- Contaminants;
- Foreign material;
- Excessive clay; or
- Other undesirable substances.

4.3 Soil Management Recommendations

Soils described in the Langley-Vancouver soil survey have been sorted into soil management groups according to soil characteristics that are significant for agricultural production. Soil management recommendations describe general types and levels of management inputs required to overcome soil limitations to crop production (Bertrand *et al.*, 1991; Luttmerding 1984).

The Delta soil series is a member of The Delta soil management group . The soils are mainly friable to firm silt loam, with poorly drained soils and high water holding capacity. The high water tables associated with Delta soils are usual during winter and early parts of the growing season. Surface ponding is common, which all contribute to the deterioration of surface soil structure and can result in fungal infection to crops.

Unfortunately, subsoiling will not improve water movement due to the high water tables and considerable drainage installations and/or pumping of water out of drainage ditches would be necessary to improve rooting distribution and depth.

The Delta soils have high to very high nutrient holding capability and a surface-layer of high organic content (Bertrand *et al.*, 1991; Luttmerding, 1984). Our soil survey shows that our soils are in fact highly deficient in N, P and S and have a very low pH, so that even though they have a high nutrient holding capacity, they are in fact quite infertile, except for the shallow surface organic horizon, which contains most of the nutrients in the soil.

5 Soil Placement Plan

We recommend that soil placement proceed through a series of well-defined steps.

Step 1. Protection of water courses

The first step on this property is to install any erosion and sediment control (ESC) measures on site and have these assessed for effectiveness prior to the arrival of any machinery on site. We also recommend measuring and flagging the 15 m setback from the Riparian Management Area (RMA) situated on the west side of the fill area; this is measured from the top of the bank of the No. 7 Road ditch. Madrone can assist with flagging this setback prior to any earthworks activities on site, to ensure that the RMA is not disturbed.

Step 2. Preparation for fill

Following proper placement of ESC measures, the earthworks operators will proceed strip approximately 0.3 m of the topsoil (**but not the nutrient-deficient subsoils**) This can occur in stages, with some areas being stripped and filled with soil prior to other areas; we will defer the exact sequence of topsoil stripping and storage to the earthworks operators.

All stripped topsoils and organics should be stored in stockpiles on site, preferably in rows directly next to their source fill areas so as not to mix sourced fills and topsoils. The limited removal of topsoils is prescribed so as to not extend into the local water table while conducting a fill operation.

Step 3. Importation and monitoring of soil

Next, good quality well-draining (i.e. loam, sandy loam) soil ideally sourced from local sites (Richmond, Vancouver South, and Burnaby) is spread over the deposit area, graded to an average depth of **1.3 m**, and graded. Finally, the stockpiled topsoil will be spread over the fill. The intent of soil placement is to construct a consistent soil profile that is suited to vegetable, soil-based agriculture across the filled area.

We estimate that approximately 110,000 m³ of fill will be spread over the site area of 9.0 ha. Deposited soil will be placed with slightly varying thicknesses, although an average final grade (above the existing grade, which varies by approximately 0.3 m) of 1.3 m is desired. We recommend sloping the fill to the east and west such that it drains into the ditches (west) and ESA (east) areas. All fill will be confined within the pre-existing berms/dykes constructed around the fill area.

There will be slight settling of fill material through time, however if a primarily mineral-fill (i.e. not organics) is used, there will be minimal disruption of the intended final grade.

5.1 Topsoil Management

The topsoil on the property should be retained and managed such that it can be used at the surface of the constructed soil profile. It is important to ensure no topsoil resources are lost to erosion and that topsoil quality is not degraded while it is stored. Topsoil should be stored for the duration of the project.

Topsoil stockpiles can be placed directly on the existing land surface and adjacent to the fill area. They should be no more than 5 m high, with 2:1 (horizontal to vertical) slopes. They should be constructed such that water cannot accumulate on the surface. Topsoil stockpiles should be seeded with an acceptable mix of grass and legume seeds if they are allowed to stand for longer than six months, otherwise they should be covered with straw or plastic to protect the topsoil from wind erosion.

To ensure topsoil does not become compacted, it should be handled only with moisture contents equivalent to field capacity—the moisture content of a soil after free water drainage has ceased. For practical purposes, field capacity for the soils on site usually occurs 36 hours after a saturating rainfall.

We recommend stripping the topsoil in all areas to ensure there is sufficient topsoil for constructing the final soil profile. The uppermost 0.2 to 0.3 m represents the growing portion of the in-situ soil and should be conserved.

Prior to topsoil stripping, Madrone should be contacted by Hexcel to ensure that the proper depth is excavated. Deep excavations are discouraged as this will result in too much of the Btg horizon being mixed into the topsoil. This soil is firm to very firm and is not a desirable growing medium (i.e. within 0.5 m of the surface). Our analysis shows that subsoils are also highly infertile. Excavating subsoils and mixing them with topsoil will result in ‘dilution’ of the topsoil and reduction of its value in reconstructing the soil profile. It may be necessary to import additional topsoil, compost, manure, or other suitable organic-rich amendment to achieve the objectives of a final soil that will be highly suitable of supporting soil-bound agriculture.

5.2 Sourced Soil

5.2.1 Physical Properties of Acceptable Source Soil

Soil sourced and brought to site should be coarse-textured, preferably sandy loam or loamy sand, to promote subsurface drainage. Soils containing high clay content or coarse fragments larger than fine gravels (2.5 cm or greater) are not desirable and should be avoided. Soils should be checked for these parameters ideally before arriving on site to ensure they are suitable as subsoils. If stony soils are unintentionally brought onto the site, the soils should be raked or sorted to remove the stones. A standard operating procedure (SOP) can be followed – an example SOP has been included in Appendix F.

Soils should be free of foreign or non-soil material and uncontaminated. Foreign material includes but is not limited to concrete, asphalt, waste, garbage, and lumber. As a large quantity of soil is sourced from properties featuring recently-demolished residences, we advise Hexcel and any contracted earthworks operators to check that demolished house waste has been removed from the source site prior to any excavations and transfers of soil to the property.

5.2.2 Chemical Properties of Acceptable Fill Material

All imported fill must meet the Soil Standards for Agricultural Land (Column II of Schedule 5 of Contaminated Sites Regulation³⁰ of the *Environmental Management Act*).

Contaminated soils must not be used as fill. The supplier should warrant that the source soil is free from contamination. Fill should not come from areas that have histories of industrial or commercial land use. If contaminated fill material is brought onto the site, Mahal Farms will assume liability for remediating the site or removing the contaminated material. We encourage Mahal Farms and Hexcel to include an agreement that assigns liability for contaminated soils.

Currently, Madrone conducts a desktop environmental assessment as well as a site visit to assess for any visible non-soil material and invasive species in each fill site. We also recommend obtaining Phase 1 reports for large sites (i.e. >3000 m³ of soil) that are less than 2 years old from contractors. If a Phase 1 report is not available, we encourage Hexcel to contact Madrone for a pre-importation site assessment and desktop study.

We recommend that all fills be inspected before it is imported to the receiving site.

5.3 Constructed Soil Profile

The constructed soil profile will have approximately 0.3 m of stockpiled topsoil at the surface. Below this, the upper 0.3-0.5 m of the subsoils should consist of soil fill that meets the criteria for Land Capability Class 1; these are listed in Table 5. The key parameters that must be met to achieve this capability class are textures of loam, sandy loam, loamy sand, and organic matter content greater than 2%.

³⁰ http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/375_96_07

Table 5. Criteria for Land Capability Class 1

Source of Criteria	Soil Parameter	Subsoil 40-80 cm	Topsoil 0-40 cm
Land Capability Classification for Agriculture in British Columbia	Soil Moisture Deficiency	N/A	<40 mm
	Available water storage capacity	>45 mm	>76 mm
	depth to root-restricting layer	N/A	>75
	texture	coarser than silty clay loam	fine sandy loam, silt loam, loam
	permeability	>1.0 cm/hour	>1.0 cm/hour
	erosion	N/A	not eroded or very slightly eroded
	salinity	<2 mS/cm	<2 mS/cm
	inundation	N/A	no damage to crops
	stoniness	<20% total (>2.5 cm) and <5% cobbles and stones (>7.5)	<5% total (>2.5 cm) and <.01% cobbles and stones (>7.5)
	topography	N/A	simple slopes <5% complex slopes <2%
	excess water	soils are freely draining	no damage to crops
	fertility	N/A	no restriction to crop growth
Modified from ALC reclamation criteria	reaction	5.0 to 7.5	5.5 to 7.0
	base saturation	20-80%	30-60%
	texture	<30% clay and <80% sand	sandy loam, loam
	moist consistence	friable or loose	friable
	organic C	0.5-2%	>2%

This subsoil must be placed on the graded surface. Soils destined to form the profile within 40 cm of the surface should either be free of cobbles and stones OR removed by screening or crushing to meet these criteria.

Weed or invasive species control should be practiced, under the direction of the monitoring Agrologist. After the soil profile has been constructed, the site should be inspected to determine if further treatments are necessary before establishing the crop. If subsoils remain compacted, then the Professional Agrologist may prescribe decompaction, using ripper or chisel blades. Decompaction should extend to a depth of 60 cm.

Finally in preparation for crop establishment, a top-dressing of organic amendment will be applied. Such an amendment will add further organic matter to enhance the physical structure ('tilth'), nutrient and moisture retention in the upper part of the soil profile, but will also encourage the development of a microbial community that can facilitate nutrient transformation. This can be compost or manure that meets certain criteria. **Products of**

wood-processing such as wood shavings, sawdust or wood chips are not appropriate.

All amendments should be tested through laboratory analysis prior to application; in addition, top-dressings of amendments should undergo experimentation by application of 'test areas' a year before widespread application. Typical application rates should be in the order of 10 Tonnes per acre or 2.5 T/ha.

6 Hydrology

There are no mapped or observed natural watercourses on site. The property features an irrigation canal through the centre but surface flow to this is blocked by the presence of raised dykes. Placed soil can be graded with a local topographic high through the approximate centre, and subtle slopes (1-2%) to the east and west. This will allow surface and subsurface (<0.5 m) water to flow east and west towards the ESA and the No. 7 Road ditch, respectively.

With proper runoff management (i.e. gently sloping stockpiles and final soil profiles), we do not anticipate that the hydrology of this area will change. The land will be raised by approximately 1.0 m, which will effectively raise the upper growing medium above seasonally ponded waters and high water tables. **The site should be assessed for the need for subsurface drainage when the site fill is complete or nearly complete. If it is deemed necessary, subsurface drainage will be installed.**

The only shared property line with the soil will be to the north; these are Mayfair Lakes golf course and a 0.25 hectare residential property to the northwest. **Drainage will not be directed towards these sites.** We recommend that soil placement in the north side of the property is ideally performed during the drier weather periods (i.e. late spring to early fall, after heavy precipitation) to ensure that surface erosion and run-off is limited while the soil profile is constructed and the surface is seeded. If wet conditions prevail, machinery can move to work on other parts of the site, for example.

There will be a required 15 m setback from the No. 7 Road ditch; silt fencing will be installed along the perimeter of soil on the west side to prevent surface run-off to the ditch. The RMA will not be disturbed during site activities (including removal of any vegetation in this area).

7 Post-Fill Land Capability for Agriculture

Following proper soil placement as per our recommendations, we estimate that the post-fill Land Capability for Agriculture ratings will improve from Class 4W with excess water limitations to a Class 2W with minor excess water limitations. The undesirable soil structure/root restricting layer limitation (3D) will be eliminated or improved to 2D. The existing subsurface will then be too deep to affect the growth of crops (undesirable Btg horizon is >0.75 m below the surface, as per the Land Capability Classification for Agriculture criteria).

Finally, the fertility limitation due to acidic and nutrient deficient subsoils in the upper 0.5 m will be completely resolved (no limitation) with the placement of good-quality, more alkaline soil (ideally pH 5.0 to 6.5). The topsoil can also be limed following placement to reduce natural acidity in this horizon. We will test the final reclaimed soil to assess nutrient status and pH; if additional amendments are necessary they will be done.

8 Summary of Recommendations

Mahal Farms intends to engage Hexcel Construction Ltd. to source and place the soil on site. We have proposed the following basic plan for the site:

- 1 Prior to any importation, strip between 0.2 and 0.3 m of the existing topsoil (and overlying peat, vegetation) over the 9.0 ha area. This approximates to 36,000 m³. This can proceed in stages as determined by the earthworks contractor.
- 2 All stripped soil should be stockpiled on site for later use. No soil shall be stockpiled in proximity (<10 m) to property lines, ditches, or riparian areas (RMA along No. 7 Road).
- 3 Placing locally sourced (if possible), good-quality soil on the stripped land, which is level with slopes less than 2% and situated at elevations less than 2 m above sea level.
- 4 Sourced soil should consist of clean soil from an uncontaminated source; it should have less than 10% coarse fragment, should not be clay-rich, and should not contain any foreign material. Madrone can assist with screening soil sites for potential contaminants (preliminary studies) and assessing coarse fragment content of incoming soil loads. Sites should also be checked for potential invasive plant species.
- 5 The final surface after completion of fill placement should be graded with an even 1-2% grade; we recommend sloping the soil to the east and west, with a crown in the centre.

- 6 The original topsoil (stripped) should be spread evenly over the final graded surface in such a way as to avoid compaction.
- 7 After spreading the surface should be seeded with an appropriate forage mix to prevent erosion and maintain soil fertility. Manure and liming will be necessary to improve soil nutrients and acidity of the Ah/Ap horizon. We recommend soil testing after amending the soil to assess nutrients prior to any planting.
- 8 The soil placement operation should be monitored at regular intervals through the process.
- 9 Once complete a final report should be issued on the condition and final, improved land capability of the filled area.

8.1 Monitoring

Should your soil placement application be jointly approved by the ALC and the City of Richmond, the terms of the soil deposit permit will indicate that Madrone is expected to conduct inspections of the site and materials and to provide inspection reports. Mahal should contact Madrone before it begin any site preparation work or soil placement to develop a monitoring schedule that meets the conditions of its permit and conforms to our recommendations for the site.

Monitoring visits should be scheduled to coincide with important project milestones and randomly when the site is active. The important milestones are:

- The installation of Erosion and Sediment Control measures on site, including the flagging of the RMA to the west of the fill area along No. 7 Road;
- At the start of topsoil stripping to ensure that an appropriate amount of topsoil is being stripped; we have indicated in our report that this is roughly 0.2 to 0.3 m. This will likely require the use of a smaller excavator with a smaller bucket;
- After extreme storm events to inspect stripping and stockpiled soil and the ESC measures;
- Once the fill has been graded, prior to spreading topsoil. If this proceeds in a sequence (i.e. cells are stripped and soil is placed in sequence), we will inspect each soil placement prior to the spreading of soil to ensure that there is no undesirable debris or high quantities of coarse fragments;
- When the reclaimed soil profile has been constructed.

Furthermore, we will inspect the site for the spread of any invasive plant species or soil erosion and transport issues (i.e. stockpiles sloping too steeply, resulting in rill erosion).

8.2 Reporting

We recommend preparing periodic monitoring reports every 3000 m³ of imported soil during the first year, and reports every 5000 m³ after the first year if there are no significant project issues (such as excessive soil stoniness, invasive species spread). In addition, a closure report should be prepared once the project is complete. The report should include an assessment of the final land capability for agriculture ratings and a comparison between the initial and final LCA ratings. It should contain an estimate of the volume of fill placed and details about fill source site. We recommend that accurate and complete records of all fill brought to the site, including truck counts, be kept. We are aware that Hexcel is currently completing a similar project on Westminster Highway and is informed of, and prepared for, the reporting and record-keeping requirements described in this plan.

9 Conclusions

Mahal Farms, with the assistance of earthworks experts Hexcel, proposes to place approximately 110,000 m³ of good-quality fill over 9.0 ha of the northwest portion of the property to improve soil wetness, undesirable soil structure, and soil fertility (due to high acidity) limitations. This will enable soil-based agriculture for vegetable crops.

The primary intent of soil placement is to improve drainage conditions that limit agricultural capability. By raising the land (and as a result, introduce 1.3 m of a good growing medium), the undesirable soil structure and fertility (due to high acidity) limitations are also improved. This proposal will also allow Mahal Farms to diversify their crop rotations, from cranberries to vegetables, particularly varieties used in Indian cuisine such as chili peppers, eggplants, and indian carrots.

Prepared by:

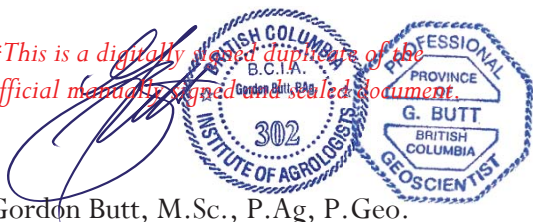
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Jessica Stewart, A.Ag., G.I.T.

Field assessment and supervision:

**This is a digitally signed duplicate of the official manually signed and sealed document.*



Gordon Butt, M.Sc., P.Ag, P.Geo.

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11 Limitations

The evaluations contained in this report are based on professional judgment, calculations, and experience. They are inherently imprecise. Soil, agricultural, hydrological, and drainage conditions other than those indicated above may exist on the site. If such conditions are observed, Madrone should be contacted so that this report may be reviewed and amended accordingly.

The recommendations contained in this report pertain only to the site conditions observed by Madrone at the time of the inspection. This report was prepared considering circumstances applying specifically to the client. It is intended only for internal use by the client for the purposes for which it was commissioned and for use by government agencies regulating the specific activities to which it pertains. It is not reasonable for other parties to rely on the observations or conclusions contained herein.

Madrone completed the field survey and prepared the report in a manner consistent with current provincial standards and on par or better than the level of care normally exercised by Professional Agrolologists currently practicing in the area under similar conditions and budgetary constraints. Madrone offers no other warranties, either expressed or implied.

APPENDIX A

Maps & Figures



FIGURE 1. OVERVIEW OF 5800 NO. 7 ROAD



FIGURE 2. SOIL PIT PLACEMARKS



PROJECT:
Soil Deposit Assessment: 5800 No. 7 Road

CLIENT:
Mahal Farms Ltd. & Hexcel Construction Ltd.

ASSESSED BY:
Jessica Stewart, A.Ag., G.I.T.

LOCATION:
Richmond, BC

DOSSIER:
18.0429

DRAWN BY:
Jessica Yellowlees



FIGURE 3: Soil Deposit Plan & RMA Setback



CNCL - 192

- Project Line
- Riparian Setback- RMA (15m As Measured From No. 7 Road Ditch)
- Fill Area
- Soil Pit Location



All feature positions as shown are approximate



NOTES

-ALL DISTANCES AND MEASUREMENTS ARE IN METRIC UNITS

-All volumes, calculations and calculated areas do not reflect the legal dimensions of the property.

HEXCEL CONSTRUCTION LTD.

11300

HEXCEL CONSTRUCTION LTD.

11300

NOT FOR CONSTRUCTION

CONTACT NUMBERS

REV	DATE	BY	DESCRIPTION
0	Dec/17	ESH	INITIAL SKETCH

PROJECT NAME: 7 Rd. RICHMOND

DRAWN: Dec 6 / 2017

PROJECT NO: 604.834.6940

CELL: 604.834.6940

TOPOGRAPHIC SURVEY

7 Road & Westminster Hwy.

RICHMOND

PROJECT NO: 7 Rd.

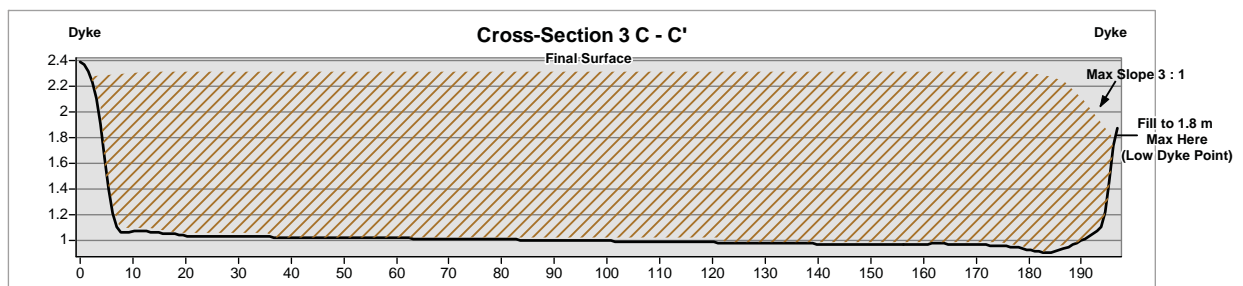
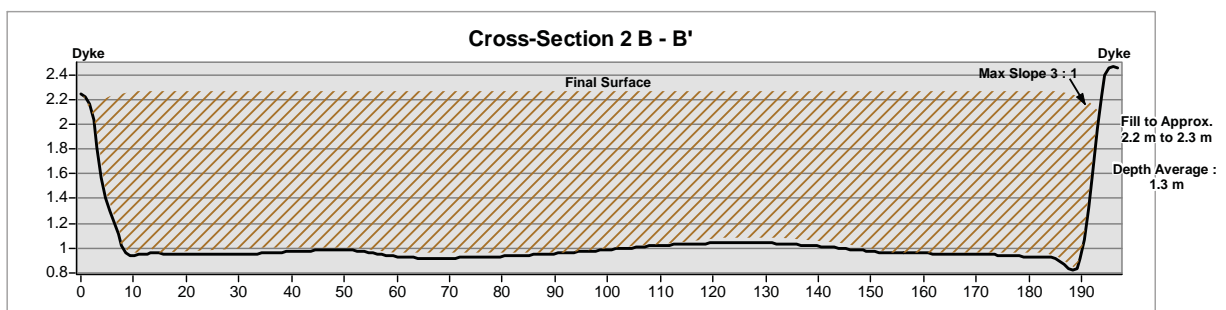
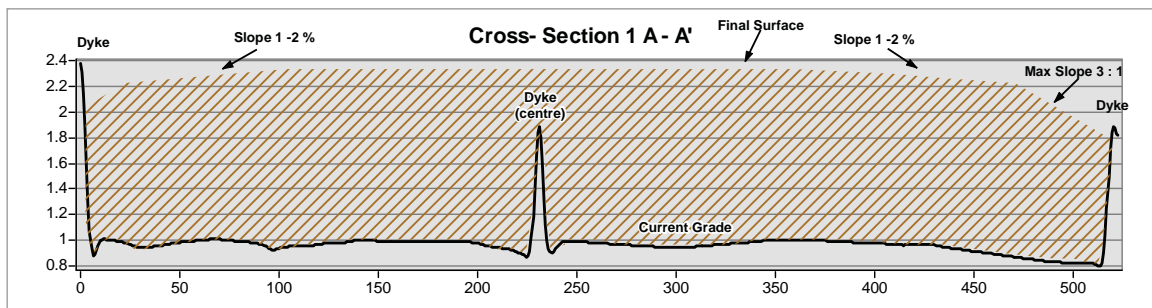
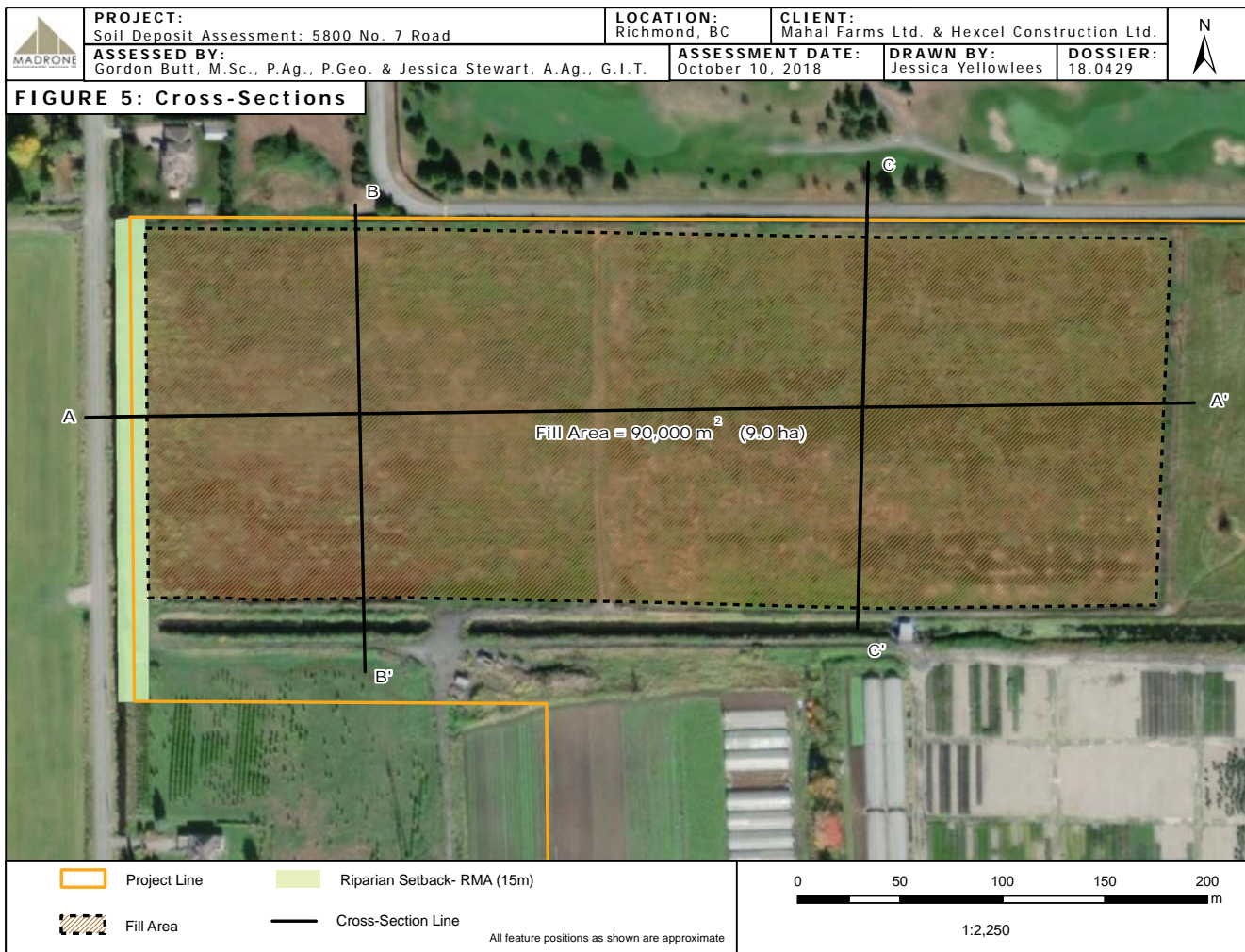
DRAWN: Dec 6 / 2017

PROJECT NO: 604.834.6940

CELL: 604.834.6940

1 OF 1

AS SHOWN



Cross-Section Legend	
	Current Soil Grade
	New Surface Following Soil Importation

APPENDIX A

Soil Pit Descriptions & Photographs

Pit 1 – Soil Profile Description (Placemark 1, Figure A2)

Property	Value
Pit Depth	1.3 m
# of soil horizons	5
Horizon	Depth (m)
Of	+12-0
Ap	0-0.2
Btg	0.2-0.6
IIBg	0.6-0.88
IICg	0.88-1.25
IIICg	1.25+
Water table depth	1.3 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvic Gleysol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: 12 cm of reddish-brown to black fibric peat overlying. Mottling starts at 20 cm below the surface (oxidized root channels). Excess free water due to high water tables; surface water during growing season due to poor surface drainage. Water table encountered at 1.3 m. Btg horizon is a Silty Clay Loam that is firm to very firm. There are very few, very fine to fine roots in the Btg horizon. There is an undesirable soil structure limitation.

Soil Textures, Pit 1:

Horizon	Soil Texture
Ap	Silt loam
Btg	Silty clay loam
Bg	Fine sandy loam
IICg	Sandy loam (-loamy sand)
IIICg	Medium sand

Pit 2 – Soil Profile Description (Placemark 2, Figure 2)

Property	Value
Pit Depth	1.3 m
# of soil horizons	4
Horizon	Depth (m)
Of	+12-0
Ap	0-0.25
Btg	0.25-0.57
BCg	0.57-1.12
IICg	1.12-1.3+
Water table depth	1.3 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvisol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: Same Btg horizon as Pit 1 – firm to very firm with oxidized root channels. Silty clay loam (light grey, faint blue mottles) grades to silt loam (medium grey, prominent orange mottles). Mottling (faint) starts at 25 cm below the surface.

Soil Textures, Pit 2:

Horizon	Soil Texture
Ap	Sandy loam (different from Pit 1)
Btg	Silty clay loam
BCg	Silt loam
IICg	Fine sandy loam, lenses of fine sand.

Pit 3 – Soil Profile Description (Placemark 3, Figure 2)

Property	Value
Pit Depth	1.4 m
# of soil horizons	4
Horizon	Depth (m)
Of	+10-0
Ap	0-0.3
Btg	0.3-0.8
BCg	0.8-1.3
Cg	1.3-1.4+
Water table depth	1.4 m
Soil type	Mineral with 10 cm of overlying peat
Overall classification	Orthic Luvisol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: Mottling starts in Ap horizon (<30 cm); watertables are higher here during the growing season. The Btg horizon is firm to very firm (dense subsoil, root restricting layer).

Soil Textures, Pit 3:

Horizon	Soil Texture
Ap	Silt loam (-silty clay loam)
Btg	Silty clay loam
BCg	Silt loam
Cg	(Very) Fine sandy loam

Pit 4 – Soil Profile Description (Placemark 4, Figure 2)

Property	Value
Pit Depth	1.4 m
# of soil horizons	3
Horizon	Depth (m)
Of	+10-0
Apgj	0-0.4
Btg	0.4-0.8
BCg	0.8-1.4+
Water table depth	Below 1.4 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvisolic Gleysol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: Buried log encountered in Ap horizon (ploughed). Oxidized root channels and faint orange mottling in the Ap horizon; perched watertables during growing season indicated. No water encountered at bottom of pit.

Soil Textures, Pit 4:

Horizon	Soil Texture
Apgj	Silt loam
Btg	Silty clay loam
BCg	Fine sandy loam

Pit 5 – Soil Profile Description (Placemark 5, Figure 2)

Property	Value
Pit Depth	1.4 m
# of soil horizons	4
Horizon	Depth (m)
Of	+10-0
Ah	0-0.15(0.3)
Btg	0.15(0.3)-0.66
BCg	0.66-0.96
Cg	0.96-1.4+
Water table depth	1.4 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvis Gleysol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: The Ah horizon depth is variable; it is between 15 and 30 cm thick and the contact with the Btg horizon is wavy. Water was encountered at 1.4 m and quickly filled the pit. There was seepage in the BCg and Cg horizons. The BCg horizon is firm and the Btg is firm to very firm, as for the previous four soil pits. Mottling starts in the Btg horizon in this pit. Sand in Ah layer not native: brought for cranberry bog.

Soil Textures, Pit 5:

Horizon	Soil Texture
Ah	Sandy loam
Btg	Silty clay loam
BCg	Silt loam
Cg	Fine sandy loam

Pit 6 – Soil Profile Description (Placemark 6, Figure 2)

Property	Value
Pit Depth	1.2 m
# of soil horizons	
Horizon	Depth (m)
Of	+10-0
Ah	0-0.2(0.25)
Btg	0.2(0.25)-0.6
Bg	0.6-0.7
Cg	0.7-1.2+
Water table depth	1.2 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvis Gleysol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 3D



Comments: Mottling within 20 cm of the surface (oxidized root channels and faint orange mottles). As for Pit 5, sand in Ah layer not native: brought for cranberry bog. Seepage at base of pit (1.2 m). As for previous pits, the Btg horizon is firm to very firm.

Soil Textures, Pit 6:

Horizon	Soil Texture
Ah	Sandy loam.
Btg	Silty clay loam
Bg	Silty clay loam
Cg	(Very) fine sandy loam

Pit 7 – Soil Profile Description (Placemark 7, Figure 2)

Property	Value
Pit Depth	1.3 m
# of soil horizons	5
Horizon	Depth (m)
Of	+12-0
Ah	0-0.12
Btg	0.12-7
Bg	0.7-1.3
Cg	1.3+
Water table depth	1.3 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvisic Gleysol
Parent material origin	Estuarine environment
Land Capability (unimproved)	4W, 3D



Comments: Thin Ah layer here. Wood shavings at surface for cranberry farm. Btg is very firm. Mottling starts within 12 cm of the surface. Estuarine environment suggested in lower C horizon; poorly-graded and well-sorted sand. There is decomposed plant matter in the Bg horizon.

Soil Textures, Pit 7:

Horizon	Soil Texture
Ap	Silt loam
Btg	Silty clay loam
Bg	Silty clay loam
Cg	Loamy sand. Fine.

Pit 8 – Soil Profile Description (Placemark 8, Figure 2)

Property	Value
Pit Depth	1.6 m
# of soil horizons	5
Horizon	Depth (m)
Of	+20-0
Ap	0-0.6
Btg	0.6-0.95
BCg	0.95-1.5
Cg	1.5-1.6+
Water table depth	1.6 m
Soil type	Mineral with 12 cm of overlying peat
Overall classification	Orthic Luvisol
Parent material origin	Deltaic overbank deposits over fluvial sands
Land Capability (unimproved)	4W, 2D



Comments: thickest Ah horizon encountered of all pits (as a result, dense subsoils are not encountered until 60 cm below the surface). Btg horizon is firm to very firm and grey with prominent orange mottles. Seepage at base of the pit.

Soil Textures, Pit 8:

Horizon	Soil Texture
Ap	Sandy loam
Btg	Silt loam (-silty clay loam)
BCg	Silty clay loam
Cg	Fine to medium, wet sand

APPENDIX C

Land Capability for Agriculture Overview

Land Capability for Agriculture (LCA) in BC is a classification system that groups agricultural land into classes that reflect potential and limitations to agriculture. The classes are differentiated based on soil properties, landscape, and climate conditions. The system considers the range of possible crops and the type and intensity of management practices required to maintain soil resources but it does not consider suitability of land for specific crops, crop productivity, specific management inputs or the feasibility of implementing improvements.

There are two land capability hierarchies, one for mineral soils and one for organic soils. Each hierarchy groups the land into seven classes that describe the range of suited crops and required management inputs. The range of suited crops decreases from Class 1 to Class 7 (Class O1 and O7 for Organic soils) and/or the management inputs increase from Class 1 to Class 7. For example, Class 1 lands can support the broadest range of crops with minimal management units.

Lands in Classes 1 to 4 are considered capable of sustained agricultural production of common crops. Class 5 lands are considered good for perennial forage or specially-adapted crops. Class 6 lands are good for grazing livestock and Class 7 lands are not considered capable of supporting agricultural production.

LCA Classes are subdivided into subclasses based on the degree and kind of limitation to agriculture. Subclasses indicate the type and intensity of management input required to maintain sustained agricultural production and specify the limitation. For example, lands rated Class 2W have an excess water limitation that can be improved by managing water on the site. Most lands are rated for unimproved and improved conditions. Unimproved ratings are calculated based on site conditions at the time of the assessments, without irrigation. Past improvements are assessed as part of the unimproved rating. Forested lands are assessed assuming they are cleared. Improved ratings are assigned assuming that existing limitations have been alleviated. Generally, improvement practices taken into account are drainage, irrigation, diking, stone removal, salinity alleviation, subsoiling, intensive fertilization and adding soil amendments.

LCA CLASSES

Table A describes the characteristics of each mineral and organic soil class. Mineral soil classes are 1–7 and organic soil classes are O1–O7.

Table A. LCA Classes

Class	Description	Characteristics
1 01	No or very slight limitations that restrict agricultural use	Level or nearly level. Deep soils are well to imperfectly drained and hold moisture well. Managed and cropped easily. Productive.
2 02	Minor limitations that require ongoing management or slightly restrict the range of crops, or both	Require minor continuous management. Have lower crop yields or support a slightly smaller range of crops that class 1 lands. Deep soils that hold moisture well. Managed and cropped easily.
3 03	Limitations that require moderately intensive management practices or moderately restrict the range of crops, or both	More severe limitations than Class 2 land. Management practices more difficult to apply and maintain. Limitations may: Restrict choice of suitable crops. Affect timing and ease of tilling, planting or harvesting. Affect methods of soil conservation.
4 04	Limitations that require special management practices or severely restrict the range of crops, or both	May be suitable for only a few crops or may have low yield or a high risk of crop failure. Soil conditions are such that special development and management conditions are required. Limitations may: Affect timing and ease of tilling, planting or harvesting. Affect methods of soil conservation.
5 05	Limitations the restrict capability to producing perennial forage crops or other specially adapted crops (e.g. Cranberries)	Can be cultivated, provided intensive management is employed or crop is adapted to particular conditions of the land. Cultivated crops may be grown where adverse climate is the main limitation, crop failure can be expected under average conditions.
6 06	Not arable, but capable of producing native and/or uncultivated perennial forage crops	Provides sustained natural grazing for domestic livestock. Not arable in present condition. Limitations include severe climate, unsuitable terrain or poor soil. Difficult to improve, although draining, dyking and/or irrigation can remove some limitations.
7 07	No capability for arable culture or sustained natural grazing	All lands not in class 1 to 6. Includes rockland, non-soil areas, small water-bodies.

LCA SUBCLASSES FOR MINERAL SOIL

LCA Classes, except Class 1 which has no limitations, can be divided into subclasses depending upon the type and degree of limitation to agricultural use. There are twelve LCA subclasses to describe mineral soils (Table B). Mineral soils contain less than 17% organic carbon; except for an organic surface layer (SCWG, 1998).

Table B. LCA Subclasses for Mineral Soil

LCA Subclass	Map Symbol	Description	Improvement
Soil moisture deficiency	A	Used where crops are adversely affected by droughtiness, either through insufficient precipitation or low water holding capacity of the soil.	Irrigation
Adverse climate	C	Used on a subregional or local basis, from climate maps, to indicate thermal limitations including freezing, insufficient heat units and/or extreme winter temperatures.	N/A
Undesirable soil structure and/or low perviousness	D	Used for soils that are difficult to till, requiring special management for seedbed preparation and soils with trafficability problems. Includes soils with insufficient aeration, slow perviousness or have a root restriction not caused by bedrock, permafrost or a high watertable.	Amelioration of soil texture, deep ploughing or blading to break up root restrictions. Cemented horizons cannot be improved.
Erosion	E	Includes soils on which past damage from erosion limits erosion (e.g. Gullies, lost productivity).	N/A
Fertility	F	Limited by lack of available nutrients, low cation exchange capacity or nutrient holding ability, high or low Ph, high amount of carbonates, presence of toxic elements or high fixation of plant nutrients.	Constant and careful use of fertilizers and/or other soil amendments.
Inundation	I	Includes soils where flooding damages crops or restricts agricultural use.	Diking
Salinity	N	Includes soils adversely affected by soluble salts that restrict crop growth or the range of crops.	Specific to site and soil conditions.
Stoniness	P	Applies to soils with sufficient coarse fragments, 2.5 cm diameter or larger, to significantly hinder tillage, planting and/or harvesting.	Remove cobbles and stones.
Depth to solid bedrock and/or rockiness	R	Used for soils in which bedrock near the surface restricts rooting depth and tillage and/or the presence of rock outcrops restricts agricultural use.	N/A
Topography	T	Applies to soils where topography limits agricultural use, by slope steepness and/or complexity.	N/A
Excess Water	W	Applies to soils for which excess free water limits agricultural use.	Ditching, tilling, draining.
Permafrost	Z	Applies to soils that have a cryic (permanently frozen) layer.	N/A

LCA SUBCLASSES FOR ORGANIC SOIL

Organic soils are composed of organic materials such as peat and are generally saturated with water (SCWG, 1998). Subclasses for organic soils (Table C) are based on the type and degree of limitation for agricultural use an organic soil exhibits. There are three subclasses specific to organic soils. Climate (C), fertility (F), inundation (I), salinity (N), excess water (W) and permafrost (Z) limitations for organic soil are the same as defined for mineral soil.

Table C. LCA Subclasses for Organic Soil.

LCA Subclass	Map Symbol	Description	Improvement
Wood in the profile	B	Applies to organic soils that have wood within the profile	Removal
Depth of organic soil over bedrock and/or rockiness	H	Includes organic soils where the presence of bedrock near the surface restricts rooting depth or drainage and/or the presence of rock outcrops restricts agricultural use	N/A
Degree of decomposition or permeability	L	Applies to organic soils that are susceptible to organic matter decomposition through drainage	N/A

APPENDIX D

Soil Analytical Results – AGAT Labs

CLIENT NAME: MADRONE ENVIRONMENTAL
202 - 2790 Gladwin Road
ABBOTSFORD, BC V2T 4S7
(604) 504-1972

ATTENTION TO: Gordon Butt

PROJECT: 18.0429

AGAT WORK ORDER: 18V404140

SOIL ANALYSIS REVIEWED BY: Dana Solari, Lab Reporter

DATE REPORTED: Nov 14, 2018

PAGES (INCLUDING COVER): 8

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (778) 452-4000

***NOTES**

VERSION 1: Sample receipt temperature 9°C.

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V404140

PROJECT: 18.0429

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
http://www.agatlabs.com

CLIENT NAME: MADRONE ENVIRONMENTAL

SAMPLING SITE:

ATTENTION TO: Gordon Butt

SAMPLED BY:

Nutrients Package 5

DATE RECEIVED: 2018-10-31			DATE REPORTED: 2018-11-14																
Parameter	Unit	SAMPLE DESCRIPTION:		18.0429-01		18.0429-02		18.0429-03		18.0429-04		18.0429-05		18.0429-06		18.0429-07		18.0429-08	
		G / S	RDL	SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
				DATE SAMPLED:		2018-10-29		2018-10-29		2018-10-29		2018-10-29		2018-10-29		2018-10-29		2018-10-29	
				9666663		9666668		9666669		9666670		9666671		9666672		9666673		9666674	
Available Nitrate (NO3-N)	mg/kg	2.0	<2.0	42	7	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	5.0	24	2.5	
Available Phosphorus - P	mg/kg	1	42	62	63	68	12	47	19	15	24	329	63	114	81	7	20	3.82	
Available Potassium	mg/kg	8	3	11	3.95	0.05	0.06	0.10	0.07	0.20	0.13	0.08	0.13	0.34	16.5				
Available Sulfur (SO4-S)	mg/kg	3	N/A	0.05	0.06	0.10	0.07	0.20	0.13	0.08	0.13	0.34	16.5						
pH (1:1 Extraction)	pH Units																		
Electrical Conductivity (1:1 Extraction)	dS/m																		
Organic Matter (W-B Wet Oxidation)	%																		



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V404140

PROJECT: 18.0429

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Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: MADRONE ENVIRONMENTAL
SAMPLING SITE:

ATTENTION TO: Gordon Butt
SAMPLED BY:

Soil Analysis - Texture

DATE RECEIVED: 2018-10-31

DATE REPORTED: 2018-11-14

SAMPLE DESCRIPTION: 18.0429-02 18.0429-06

SAMPLE TYPE: Soil Soil

DATE SAMPLED: 2018-10-29 2018-10-29

G / S RDL 9666668 9666672

Parameter

Unit

7

53

40

Silt Clay Loam Silt Clay

Particle Size Distribution (Sand)

Particle Size Distribution (Silt)

Particle Size Distribution (Clay)

Soil Texture

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Calgary (unless marked by *)

CNCL - 212

Certified By:

D. Soliman



AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 18V404140

PROJECT: 18.0429

Unit 120, 8600 Glenlyon Parkway
Burnaby, British Columbia
CANADA V5J 0B6
TEL (778)452-4000
FAX (778)452-4074
<http://www.agatlabs.com>

CLIENT NAME: MADRONE ENVIRONMENTAL

SAMPLING SITE:

ATTENTION TO: Gordon Butt

SAMPLED BY:

Soil Salinity - Basic

DATE RECEIVED: 2018-10-31		DATE REPORTED: 2018-11-14									
SAMPLE DESCRIPTION:		18.0429-01		18.0429-02		18.0429-03		18.0429-04		18.0429-05	
SAMPLE TYPE:		Soil		Soil		Soil		Soil		Soil	
DATE SAMPLED:		2018-10-29		2018-10-29		2018-10-29		2018-10-29		2018-10-29	
G / S		RDL		9666663		9666668		9666670		9666671	
Parameter	Unit	pH units		dS/m		%		mg/L		mg/L	
pH (Saturated Paste)		4.8		0.17		75.4		11		11	
Electrical Conductivity (Saturated Paste)		0.01		0.09		58.9		5		5	
Saturation Percentage		0.5		72.4		9		6		60.7	
Calcium, Soluble		1		5		9		18		9	
Potassium, Soluble		2		<2		<2		<2		<2	
Magnesium, Soluble		1		4		4		11		3	
Sodium, Soluble		2		13		6		11		13	
Calcium, Soluble (mg/kg)		1		8		7		4		6	
Magnesium, Soluble (mg/kg)		1		3		3		1		2	
Potassium, Soluble (mg/kg)		2		<2		<2		<2		<2	
SAR (Soil)		0.85		0.67		0.42		0.99		1.24	
Sodium, Soluble (mg/kg)		2		4		4		7		8	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard
Analysis performed at AGAT Vancouver (unless marked by *)

Certified By:

D. Soliman

Quality Assurance

CLIENT NAME: MADRONE ENVIRONMENTAL

PROJECT: 18.0429

SAMPLING SITE:

AGAT WORK ORDER: 18V404140

ATTENTION TO: Gordon Butt

SAMPLED BY:

Soil Analysis

RPT Date: Nov 14, 2018			DUPLICATE			Method Blank	REFERENCE MATERIAL		METHOD BLANK SPIKE			MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Soil Salinity - Basic

pH (Saturated Paste)	9672240	IH20181	6.7	6.8	1.5%	< 0.1	97%	80%	120%						
Electrical Conductivity (Saturated Paste)	9672240	IH20181	6.14	6.29	2.4%	< 0.01	97%	80%	120%						
Saturation Percentage	9672240	IH20181	37.1	36.9	0.5%	< 0.5	100%	80%	120%						
Calcium, Soluble	9672240	IH20181	647	620	4.3%	< 1	96%	80%	120%	100%	85%	115%			
Potassium, Soluble	9672240	IH20181	16	15	6.5%	< 2	84%	80%	120%	99%	85%	115%			
Magnesium, Soluble	9672240	IH20181	196	188	4.2%	< 1	110%	80%	120%	102%	85%	115%			
Sodium, Soluble	9672240	IH20181	565	526	7.1%	< 2	97%	80%	120%	100%	85%	115%			

Comments: RPDs are calculated using raw analytical data and not the rounded duplicate values reported.

Nutrients Package 5

Available Phosphorus - P	9666670	9666670	12	12	2.5%	< 1	103%	80%	120%	94%	80%	120%	NA	80%	120%
Available Potassium	9666670	9666670	42	39	6.8%	< 8	92%	80%	120%	87%	80%	120%	87%	80%	120%
Available Sulfur (SO4-S)	9666671	9666671	33	32	2.1%	< 3	109%	80%	120%	101%	80%	120%	NA	80%	120%
pH (1:1 Extraction)	2157	6663	3.95	3.90	1.3%	N/A	101%	90%	110%						
Electrical Conductivity (1:1 Extraction)	2157	6663	0.14	0.14	NA	< 0.05	99%	80%	120%						
Organic Matter (W-B Wet Oxidation)	9666663	9666663	7.58	7.39	2.5%	< 0.30	91%	80%	120%	NA	80%	120%	96%	80%	120%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Soil Analysis - Texture

Particle Size Distribution (Sand)	9675844		48	48	0.0%	< 2	110%	80%	120%						
Particle Size Distribution (Silt)	9675844		29	29	0.0%	< 2	89%	80%	120%						
Particle Size Distribution (Clay)	9675844		23	23	0.0%	< 2	103%	80%	120%						

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:



Method Summary

CLIENT NAME: MADRONE ENVIRONMENTAL

AGAT WORK ORDER: 18V404140

PROJECT: 18.0429

ATTENTION TO: Gordon Butt

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Available Nitrate (NO ₃ -N)	SOIL 0110; SOIL 0120; SOIL 0130	SHEPPARD 2007, ALBERTA AGRICULTURE 1988	DISCRETE ANALYZER
Available Phosphorus - P	SOIL 0110; SOIL 0120; SOIL 0130	SHEPPARD 2007, ALBERTA AGRICULTURE 1988	DISCRETE ANALYZER
Available Potassium	SOIL 0110; SOIL 0120; SOIL 0131; INST 0140	SHEPPARD 2007, ALBERTA AGRICULTURE 1988	ICP/OES
Available Sulfur (SO ₄ -S)	SOIL 0110; SOIL 0120; SOIL 0131; INST 0140	SHEPPARD 2007, KOWALENKO 1993	ICP/OES
pH (1:1 Extraction)	SOIL 0110; INOR 401 0120; SOIL 0260	SHEPPARD 2007; HENDERSHOT 2008 S	PH METER
Electrical Conductivity (1:1 Extraction)	SOIL 0110; INOR 401 0120; SOIL 0260	SHEPPARD 2007; HENDERSHOT 2008 S	CONDUCTIVITY METER
Organic Matter (W-B Wet Oxidation)	SOIL 0480; SOIL 0110; SOIL 0120	Skjemstad 2008	SPECTROPHOTOMETER
Particle Size Distribution (Sand)	SOIL 0520; SOIL 0110; SOIL 0120	JONES 2001	HYDROMETER
Particle Size Distribution (Silt)	SOIL 0520; SOIL 0110; SOIL 0120	JONES 2001	HYDROMETER
Particle Size Distribution (Clay)	SOIL 0520; SOIL 0110; SOIL 0120	JONES 2001	HYDROMETER
pH (Saturated Paste)	LAB-181-4022	BC MOE Lab Manual Section B	PH METER
Electrical Conductivity (Saturated Paste)	LAB-181-4022	BC MOE Lab Manual Section B	CONDUCTIVITY METER
Saturation Percentage	LAB-181-4022	BC MOE Lab Manual Section B	GRAVIMETRIC
Calcium, Soluble	LAB-181-4022, MET-181-6106	BC MOE Lab Manual Section B	ICP/OES
Potassium, Soluble	LAB-181-4022, MET-181-6106	BC MOE Lab Manual Section B	ICP/OES
Magnesium, Soluble	LAB-181-4022, MET-181-6106	BC MOE Lab Manual Section B	ICP/OES
Sodium, Soluble	LAB-181-4022, MET-181-6106	BC MOE Lab Manual Section B	ICP/OES



SAMPLE INTEGRITY RECEIPT FORM - BURNABY

Work Order # 18V404140

RECEIVING BASICS:

Received From: LOOMIS

Waybill #: _____

SAMPLE QUANTITIES:

Coolers: 1 Containers: 8

TIME SENSITIVE ISSUES:

Earliest Date Sampled: Oct 29, 2018

ALREADY EXCEEDED? Yes ☐ No ☒

NON-CONFORMANCES:

3 temperatures of samples* and average of each cooler: (record differing temperatures on the CoC next to sample ID's) *use jars when available

(1) 10 + 9 + 9 = 9 °C (2) ____ + ____ + ____ = ____ °C (3) ____ + ____ + ____ = ____ °C (4) ____ + ____ + ____ = ____ °C

Was ice or ice pack present: Yes ☐ No ☒

Integrity Issues:

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date and Time: _____

ADDITIONAL NOTES:

APPENDIX E

Inclusion in Fill Importation Assessment reports

For each source site, the owner/operator of the receiving site should secure a written Soil Acceptance Agreement with the parties responsible for supplying and transporting soils. The agreement should specify that

- 1** The imported soil must not contain:
 - a** any contaminants in concentrations that exceed the standards in Schedule 7, Column III of the Contaminated Sites Regulation under BC's Environmental Management Act, or
 - b** any hazardous waste as defined in the Hazardous Waste Regulation of the Environmental Management Act,
- 2** The imported soil must not have been transported onto the donor site from another site,
- 3** The owner of the receiving site has the right to test and/or require the supplier to test for contaminants and soil texture, and to inspect the source site,
- 4** The supplier will provide *all* available site contamination reports pertaining to the imported soil and that at minimum a Preliminary Site investigation Phase 1 (or Stage 1) or Phase 2 (or Stage 2) report will be provided for any source site that is an industrial, government or large residential development,
- 5** The parties supplying/transporting soils are responsible for removing any soils and remediating any resulting contamination if the soils are found to be contaminated or if the supplier failed to supply all available site contamination reports pertaining to the imported soil, and

- 6** Any loads arriving at the site without proper documentation of the source of the soil and evidence of Soil Acceptance Agreement for the source site will be refused entry.

Entrance to the receiving site should be controlled and records should be maintained that identify the source of each load and the parties supplying/transporting the load. Consideration should be given to requiring security deposits from the suppliers/transporters.

APPENDIX F

STANDARD OPERATING PROCEDURE: STONY SOILS IN IMPORTED FILLS

Objective

The objective of the SOP is to ensure soils in the upper 50 cm of the fill meet stoniness standards for Class 2P limitations; that is:

- A. Total coarse fragment content (>2.5 cm or 1 inch): **less than 10%**;
- B. Cobbles and stones (>7.5 cm or 3 inches): **less than 1%**.

We recognize that the identification of stoniness may be difficult; therefore this SOP identifies measures at different stages in the importation of fill. Following all measures in this SOP will reduce the chance that stony soils will be incorporated in the fill.

Measures to be Implemented

Control of stoniness will be accomplished by measures implemented at

- A. the source site,
- B. upon entry to the receiving site;
- C. at the dump site on the property.

The measures are:

- 1 inspect soils before dumping and keep them in separate stockpiles for either processing (stone removal) or later removal from site;
- 2 treat soils that have more than 1% cobbles and stones using a rake;
- 3 ensure that soils that have more than 10% gravel (2.5 to 7.5 cm) are buried at least 50 cm from the final grade of the fill.

Procedures

- 1 At **source site**. Fill with excessive coarse fragments will be identified at the source site and separated from non-stony soils. **Only non-stony soils will be delivered** to the fill site.
- 2 At **receiving site entrance**. All fill that contains excessive coarse fragments (based on visual inspection) will be identified upon entry and dumped separately from the fill, for removal or processing later. If stony soils are suspected in a load, this must be communicated to the project supervisor.
- 3 At **receiving site, at dumping site**. As fill is being dumped it must be inspected for stoniness, relative to the above standards. If the soil does not meet the standards, it must be removed from the fill and stockpiled separately for removal or processing later.
- 4 All separated stockpiles of stony material must be inspected, and the decision to remove or process should be made by the site supervisor.
- 5 All cobbles and stones greater than 7.5 cm or 3 inch diameter should be removed using the specially designed rake. After processing, the cobbles and stones should occupy less than 1% of the volume of soil. (fragments less than 7.5 cm cannot be removed by the rake).
- 6 If coarse fragments between 2.5 cm and 7.5 cm (1 and 3 inches) occupy more than 10% of the soil volume, after removal of cobbles and stones, the soil should only be used as a subsoil and should not be placed within 50 cm of the final grade of the fill.

The stoniness content of all fill will be assessed during routine site inspections by Madrone after every increment of 3000 m³ fill volume (recommended volume – may be adjusted according to the project).



7119 River Road, Delta, British Columbia V4G 1A9

Tel : 946-8744 • Fax: 946-8704

City of Richmond
6911 No. 3 Rd
Richmond, BC V6Y 2C1

June 3, 2020

RE: Soil Use for the Placement of Fill Application for the Property Located at 5800 No. 7 Road (Mahal)

To whom it may concern,

In response to the FSAAC committee motion supporting the soil deposit proposal for the property and their recommendation that we provide a performance bond to ensure the proposed Farm Plan is implemented, Hexcel Construction is prepared to provide a returnable surety bond or letter of credit in the amount of \$100,000.00 specifically to ensure the implementation of the Farm Plan.

This offer is contingent upon project approval by both the City and the ALR.

If you have any questions about this matter, please contact Ron Wilson at 604-946-8744.

Sincerely,

A handwritten signature in black ink, appearing to read "Ron Wilson", is written over a horizontal line.

Ron Wilson
President
Hexcel Construction Ltd



TECHNICAL MEMORANDUM

**Soil Source Sites for the Proposed Soil
Placement at 5800 No. 7 Road,
Richmond, BC**

FOR:

**Mr. Paul Mahal, Mahal Farms Ltd.
&
Mr. Ron Wilson, Hexcel Construction Ltd.**

BY:

**Jessica Stewart, P.Ag., P.Geo.
Madrone Environmental Services Ltd.**

Revised: January 7, 2020

MADRONE ENVIRONMENTAL SERVICES LTD.
#202-2790 GLADWIN ROAD • ABBOTSFORD • BC • V2T 4S7
TEL 604.504.1972 • FAX 604.504.1912 • WWW.MADRONE.CA

DOSSIER: 18.0429

CNCL - 223

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2.2	TYPE OF SOIL TO BE IMPORTED	2
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TECHNICAL MEMORANDUM

Soil Source Sites for the Proposed Soil Placement at 5800 No. 7 Road, Richmond, BC

1 Introduction

The City of Richmond (CoR) has requested a technical memorandum to accompany a previously-submitted soil deposit application for 5800 No. 7 Road, Richmond (referred to as 'the Property' or 'the Site'). The memorandum will be submitted to the CoR Food Security and Agricultural Advisory Committee (FSAAC) and the General Purposes Committee (GPC) for their review when considering the project, which entails the placement of 110,000 m³ of soil over 9.0 ha of land.

The client, Hexcel Construction Ltd. (Hexcel), has retained Madrone Environmental Services (Madrone) to prepare this memorandum. Madrone also prepared the Soil Placement Plan and Farm Plan for the Property, which is owned by Mahal Farms Ltd.¹ (Mahal Farms). Mahal Farms has hired Hexcel to manage the project on their property, including all soil sourcing and earthworks operations.

This technical memorandum is to describe the proposed soil source sites for the project. The Agricultural Land Commission (ALC) has made it a condition of soil deposit permits in general that only agriculturally-suitable soil is used, that is, soil that does not contain prohibited materials and does not result introduce new agricultural limitations to the receiving site (such as stoniness limitations, for example). The ALC does not specify what types of soil the landowner (granted approval) is to bring to the site as this is at the direction of the agrologist.

¹ Mr. Paul Mahal has been the representative of Mahal Farms for the project.

2 Project Background

2.1 Rationale and Volume

Madrone (Jessica Stewart, P.Ag. and Gordon Butt, P.Ag.) prepared a Farm Plan and Soil Placement Plan for the Property on behalf of Mahal Farms and Hexcel in March of 2019. These documents were submitted to the ALC and the CoR, along with a Schedule C (Application for Soil Removal/Fill Deposit)², a Traffic Management Plan, and a Cost Estimates Table (for the project). The project has not been formally reviewed by the FSAAC or the GPC at this time.

The Soil Placement Plan included an assessment of the existing agricultural limitations of the land subject to the placement proposal, which comprises approximately 9.0 ha of land in the northwest corner of the 29.5 ha property (much of the remainder of the property is farmed as nursery and greenhouse operations). Our assessment found that the current limitations are excess wetness (predominantly 4W limitation), undesirable soil structure (3D limitation), and fertility limitations due to highly acidic soils and nutrient deficiencies (4F limitation).

This area was formerly used for cranberry farming and as such, there are currently berms constructed around the entirety of the placement area. These further act to confine water in this area. We proposed improving the existing limitations by importing approximately 110,000 m³ of soil to an average depth of 1.3 m. Hexcel has prepared drawings prepared by their land surveyor that show the proposed depths and grades of the placement.

2.2 Type of Soil to be Imported

Our plan envisions the placement of coarse-textured, preferably sandy loam or loamy sand, to promote good sub-surface drainage. Fine sandy loams and loams are also acceptable textures for placement (minor: sandy clay loam, if clay is less than 30%). **Soils should have less than 30% clay and less than 80% sand.**

The soil to be placed has been termed 'the mineral horizon' by Hexcel. The replaced native topsoil is termed 'the growing medium'. Essentially, the growing medium is elevated through placement of a **mineral** soil.

² https://www.richmond.ca/_shared/assets/BL809447443.pdf City of Richmond. Soil Removal and Fill Deposit Regulation. Bylaw No. 8094.

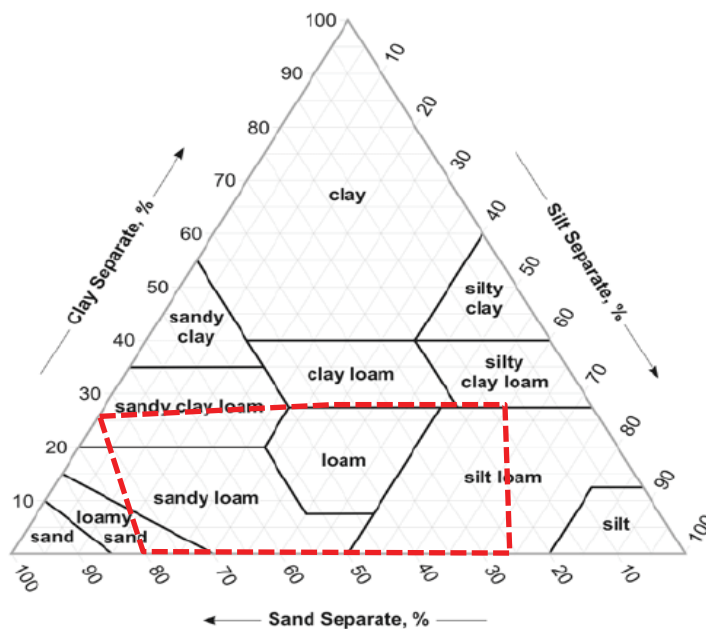


FIGURE 1. SOIL TEXTURE TRIANGLE (CANADIAN SYSTEM OF SOIL CLASSIFICATION) WITH THE IDEAL SOIL TEXTURES OUTLINED IN RED. IDEALLY, WE ARE LOOKING FOR LESS THAN 80% SAND AND LESS THAN 30% CLAY.

All topsoil on site will be salvaged and placed over the imported soil at the end of the project. If the volume of salvaged topsoil is insufficient³ to complete the project (as determined by a professional agrologist), it may be necessary to import compost, manure, or other suitable organic-rich amendment to achieve the objectives of a final soil that will be highly suitable of supporting soil-bound agriculture (the intended farm use following placement is vegetable farming, specifically, indian vegetable varieties).

Insufficient topsoil would be determined by assessing the thickness of the re-spread native topsoil (which will most likely be done in sections as the project progresses). If the thickness is consistently less than 20 cm, we will either import additional topsoil or apply organic amendments to placed soil. **If additional topsoil is imported, this will be done such that the final volume does not exceed 120,000 m³ (i.e. the salvaged**

³ From our soil assessment done in 2018, we excavated eight soil pits on site and found adequate topsoil in these however, native topsoil thickness may vary outside of these assessed areas (i.e. may be less than 20 cm thick) and some may also be lost due to inadvertent mixing with mineral soil during the salvage process. This can be minimized by ensuring salvage is complete before importing mineral soil to the site.

topsoil volume will be assessed and if required, we will adjust the total amount of mineral soil imported to the site down such that the total volume of imported mineral soil and topsoil does not exceed the permitted amount).

We understand the FSAAC and GPC have previously requested only importing **alluvial** soils to soil deposit sites. Alluvial by definition refers to loose sediments that have been eroded, transported, and deposited within a non-marine setting by water in some form. Sediments deposited by streams or rivers associated with glaciers, ice sheets, or ice caps are known as glaciofluvial sediments. These are commonly found in the Fraser Valley. By using the term 'alluvial', there may be great confusion amongst the earthworks contractor and the agrologist tasked with finding such source soils. **This will also exclude appropriate soils of glaciofluvial origin, or aeolian (wind-blown silts and fine sand) origin, for example.**

As such, I have only described ideal soil textures rather than specifying exact soil parent materials for this project. Soil textures can be assessed by an agrologist for suitability prior to importing as part of the screening process that we have implemented with Hexcel for similar projects.

Aside from soil texture, we have indicated in our Soil Placement Plan that sourced soils should have an organic matter content greater than 0.5% and less than 5% (to avoid post-deposit settlement due to decomposition of organic matter). Imported topsoil (if required) will have an organic matter content greater than 2%. Source soils with organic matter >5% should be reserved for topsoil, if brought to the site. The agrologist can make a determination of organic matter content through soil testing preferably during the screening process before the soil reaches the site (to avoid importing soils that do not meet the requirements).

2.3 Soil to be Rejected

Soils containing the following will be rejected during our screening process:

- 1** High clay content (generally glaciomarine, glaciolacustrine in origin), i.e. greater than 30% clay, including silty clay loams, clay loams (clay soil has never been observed by Madrone in the field in Richmond);
- 2** High organic content (peat soils such as Humisols, Mesisols, or Fbrisols, which are found in abundance in Richmond, are at or near 100% organic matter);

- 3 Excessive (i.e. >20% by total volume) quantities of coarse fragments (sized 2.5 cm or greater) – coarse gravels should comprise less than 10% by volume if placed in the upper 0.5 m of the deposit⁴. Cobbles (7.5 – 25 cm) and stones (>25 cm) should comprise less than 1% to meet a Class 2P limitation for stoniness. If stony soils are unintentionally brought onto the site, the soils should be raked or sorted to remove the stones. A standard operating procedure (SOP) has been provided to Hexcel in a separate document and can be supplied to the FSAAC and the GPC if requested. A higher percentage of coarse fragments can be placed below 0.5 m (i.e. 20% maximum);
- 4 Materials prohibited by the Agricultural Land Commission Act - Agricultural Land Reserve Use Regulation⁵, including:
 - a. Construction or demolition waste, including masonry rubble, concrete, cement, rebar, drywall and wood waste;
 - b. asphalt;
 - c. glass;
 - d. synthetic polymers;
 - e. treated wood;
 - f. unchipped lumber.

Currently, there is a large number of potential soil source sites being brought to our attention in the screening process that are small property parcels featuring recently-demolished residences. I strongly advise avoiding these sites for future projects as frequently, there is demolition debris mixed in the soil. Screening this material is possible but due to the small size of the parcels, may not be worth the effort for a small volume of recovered soil.

⁴ The Land Capability Classification for Agriculture in B.C. MOE Manual defines stoniness as the sieved portion of coarse fragments in the upper 25 cm. We have expanded this to the upper 50 cm of the horizon, which is beyond the current criteria by 25 cm.
https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/land_capability_classification_for_agriculture_in_bc_1983.pdf

⁵ http://www.bclaws.ca/civix/document/id/complete/statreg/30_2019#section36
ALC Act – Land Use Reserve Regulation. Accessed December 16, 2019

3 Proposed Source Sites

At this time, Hexcel has numerous projects it is undertaking within the City of Richmond and in adjacent municipalities, including Delta and Burnaby. These projects include development sites at hospitals, marinas, old shopping centres, and post-secondary institutions.

We (Hexcel and Madrone) jointly propose that soil will come from development sites that contain predominantly mineral soil that is primarily sandy in texture (see Figure 1 for reference). Development sites in peat bogs (organic soils) and industrial lands should be rejected as there is a low probability that these sites will yield favourable soils for the project. Commercial sites (such as parking lots and marina's) may be suitable if at least a Phase 1 study has been conducted and shown the probability of contamination to be low, and the soil has been buried by concrete or asphalt that is stripped away prior to excavations.

Source sites should be free of invasive species, in particular, Japanese knotweed (*Fallopia japonica*) and Scotch broom (*Cytisus scoparius*).

Currently, Madrone conducts source site screening on behalf of Hexcel. These sites are assessed prior to importation for the following conditions:

- 1 Whether invasive species are present on the site, in particular, if they are situated near excavations;
- 2 Whether there are prohibited materials mixed in the soil (i.e. demolition debris); and
- 3 Whether the soil is texturally suitable as a mineral horizon, specifically, does not contain more than 30% clay, more than 80% sand, and does not comprise purely peat soils (organic matter less than 5% for mineral soil).

If the following conditions are found, we advise the landowner, the City of Richmond, and the earthworks contractor in writing and recommend rejecting the site. Furthermore, Madrone conducts a desktop environmental site assessment (which we call a Phase 1-lite) for each site if a Phase 1 study has not been conducted already (for larger sites, this generally has already been done and as such, we greatly prefer these sites for source soils. I expand on this in Section 4, below).

4 Hexcel – Proposal to Import Only Richmond Soils

Hexcel has expressed interest in importing soils only from within the City of Richmond to its various project sites (including the subject Property for the placement proposal). The rationale for this is to reduce the volume of soil leaving the city limits for projects in other municipalities, particularly in the Fraser Valley.

Obtaining soils from more distant sources comes with significant environmental and social costs, such as increased vehicle emissions due to extensive travel, and increasing congestion on Highway 1 in the Fraser Valley due to increased truck traffic. Furthermore, due to the long distances that the material is transported, we cannot verify in a timely fashion where the material actually came from (i.e. same day screening is difficult if source and receiving sites are several hours apart). There is also considerations of wear and tear on Highways and roadways between municipalities if material is trucked long distances.

Madrone supports this proposal for several reasons:

1 The number of source sites is drastically reduced due to large size of the projects that these soils originate from.

For example, the Atmosphere project at No.3 Road and Alderbridge Way will produce over 200,000 m³ of soil, according to Hexcel's calculations. These is nearly double the soil that we require for the 5800 No. 7 Road placement project. Although some soil may be rejected (due to containing, for example, contaminants or high volumes of coarse fragments which tends to be gravel placed during construction), much of the soil for the project could be sourced from these sites.

A reduction in the number of source sites will assist the agrologist greatly in their screening efforts. There will certainly be Phase 1 environmental Site Assessments (ESA) for projects of this scale, which would negate the need for soil testing. The agrologist will not be required to travel long distances to assess multiple sites, which can be time-consuming and cost-prohibitive to the clients and landowners.

2 Reduction in time to complete the project.


The ALC has recently reduced the timelines it allows for soil placement projects, from 3 years to 2 years. Therefore, it is imperative that soil is sourced quickly and efficiently. If soil can be sourced locally from large projects, the time it will take to

complete the project will be greatly reduced. There will be less travel time for trucks due to the shorter distances.

A reduction in project time will also correlate to a reduced nuisance to locals who oppose truck traffic around the project area, lower costs to the client and landowner (who are required to pay for earthworks, screening by an agrologist, safety controls on the road ect.), and reduced time between topsoil stripping and replacement (topsoil stockpiles left over multiple years will be subject to erosion and reduction in organic content due to lack of vegetative cover).

Please contact the undersigned with any questions regarding this memorandum.

**This is a digitally signed duplicate of the official manually signed and sealed document.*



Jessica Stewart, P.Ag, P.Geo.



TECHNICAL MEMORANDUM

**Drainage and Suitability of Excess
Water Management Options
for
Proposed Soil Placement at 5800 No. 7
Road, Richmond, BC**

FOR:

Mr. Paul Mahal, Mahal Farms Ltd.

&

Mr. Ron Wilson, Hexcel Construction Ltd.

BY:

Thomas R Elliot PhD P.Ag P.Geo.

Jessica Stewart, P.Ag., P.Geo.

Madrone Environmental Services Ltd.

January 27, 2020

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TECHNICAL MEMORANDUM

Drainage and Suitability of Excess Water Management Options for Proposed Soil Placement at 5800 No. 7 Road, Richmond, BC

1 Introduction

The City of Richmond (CoR) has requested a technical memorandum pertaining to drainage and suitability of water management options to accompany previously-submitted soil deposit application for 5800 No. 7 Road, Richmond (referred to as 'the Property' or 'the Site'). The memorandum will be submitted to the CoR Food Security and Agricultural Advisory Committee (FSAAC) and the General Purposes Committee (GPC) for their review when considering the project, which entails the placement of 110,000 m³ of soil over 9.0 ha of land.

The client, Hexcel Construction Ltd. (Hexcel), has retained Madrone Environmental Services (Madrone) to prepare this memorandum. Madrone also prepared and previously submitted: Soil Placement Plan, Farm Plan, Traffic Management Plan, and a Soil Source Site Technical Memo for the Property, which is owned by Mahal Farms Ltd.¹ (Mahal Farms). Mahal Farms has hired Hexcel to manage the project on their property, including all soil sourcing and earthworks operations. Hexcel is experienced at managing such projects (both type and scale) within the City of Richmond.

¹ Mr. Paul Mahal has been the representative of Mahal Farms for the project. He is a third-generation farmer – his family has farmed this property continuously since 1949.

The Soil Placement Plan included an assessment of the existing agricultural limitations of the land subject to the placement proposal, which comprises approximately 9.0 ha of land in the northwest corner of the 29.5 ha property (much of the remainder of the property is farmed as nursery and greenhouse operations). Our assessment found that the current limitations are excess wetness (predominantly 4W limitation), undesirable soil structure (3D limitation), and fertility limitations due to highly acidic soils and nutrient deficiencies (4F limitation). A 4W limitation is defined as:

Frequent or continuous occurrence of excess water during the growing period causing moderate crop damage and occasional crop loss. Water level is near the soil surface during most of the winter and/or until late spring preventing seeding in some years, or the soil is very poorly drained.²

This technical memorandum is to describe the local drainage conditions and suitability of water management options for the Property. The Agricultural Land Commission (ALC) generally requires that soil deposit operations result in an improvement of the existing limitations to the prominent Land Capability for Agriculture ('Land Capability'), and does not result introduce new agricultural limitations to the receiving site (such as stoniness limitations, for example). The ALC does not specify how to accomplish an improvement to the assessed existing Land Capability, as this is at the direction of the Property owner, Farm Operator and their consulting Qualified Professional (QP) Agrologist(s).

2 Project Background

2.1 Context of Property Drainage Conditions

The property is bound to the north by Mayfair Lakes Golf and Country Club, to the west by No. 7 Road, to the south by Westminster Highway, and to the east by a dense residential area. There are drainage ditches to the south, east and west; and a significant drainage ditch to the north.

There are no nearby watercourses (natural streams, rivers, groundwater springs) which would cause inundation due to flood waters.

² Land Capability Classification for Agriculture in BC, 1983.
https://www.alc.gov.bc.ca/assets/alc/assets/library/agricultural-capability/land_capability_classification_for_agriculture_in_bc_1983.pdf

The excess water limitation to agriculture, noted in the previous Madrone Farm Plan and Soil Placement Plan, results from high local groundwater conditions and poor regional conveyance of water within drainage infrastructure due to the low-lying, and therefore low-gradient, context.

Historical aerial photo review presented in the Madrone Soil Placement Plan demonstrates a history of excess water that was previously used for cranberry farming. Since approximately 1991, farm operations appear to move away from Cranberries and a central ditch-line was established to further address the excess water condition. However, the historic drainage activities on the Property have not resolved the excess water condition, made apparent by late planting season surficial water observable in aerial imagery dating as far back as 1949.

From the review of historic aerial imagery and historic crop types (grown on the Property), it is apparent that the Property has been subject to excess water conditions for much of the historic use as a farm-plot. Furthermore, it is likely that the changing precipitation timing and volumes associated with Climate Change impact current agricultural land capability, which will only increase in the future as per predictions³ adopted by the Province of BC.

The proposed soil placement area is contained within previously-constructed soil berms⁴ (in the 1940's) intended to facilitate flooding of cranberries during the fall wet-harvest. The berms cannot be deconstructed without significant impacts to surrounding drainage infrastructure, such as the ditch on No. 7 Road. Removing the berm material (which is compacted soil) would require a soil removal permit with the CoR. Removing the berms would also not improve the high water tables evidently persisting in this area, nor would this result in improvement to the remaining assessed agricultural limitations of nutrient deficiencies and high acidity (4F) and undesirable soil structure (3D limitation).

2.2 Applicable Regulations

The Agricultural Environmental Management Code of Practice (AEMCoP) Division 4 (Section 48 – 60) governs the land application of nutrient sources to agricultural parcels

³ PCIC Climate Prediction Portal: <https://pacificclimate.org/analysis-tools/pcic-climate-explorer>

⁴ These are not dykes – dykes are for flood protection (i.e. Fraser River freshet) whereas these berms were constructed to contain water pumped into the field to harvest cranberries in the fall.

experiencing excess water conditions. Specifically, Section 49 (Prohibitions on applications to land) of the AEMCoP indicates that:

- (1) *A person must not apply nutrient sources to land*
- (a) on which there is standing water or water-saturated soil,*
 - (b) on ground in which the top 5 cm of soil is frozen so as to be impenetrable to manually-operated equipment,*
 - (c) on a field having at least 5 cm of ice or snow over at least 50% of its area, or*
 - (d) at a rate of application, under meteorological, topographical or soil conditions, or in a manner, that may cause nutrient sources or contaminated runoff, leachate or solids to enter a watercourse, cross a property boundary or go below the seasonal high water table. [emphasis is added]*

After clarification with the Ministry of Environment and Climate Change Strategy (MoECCS), it was determined that:

- Inundation due to flooding does not discount application of nutrient sources (fertilizers, compost, wood residue, etc.), which allows for continued use of floodplains as agricultural lands so long as nutrients are not applied during flood-conditions;
- Seasonal high water table at, near or above ground surface would restrict land application of nutrient sources both during times of water table being above ground surface, but also during periods of generally high water table whereby precipitation/infiltration/dispersion would result in direct transmission of nutrients to groundwater/nearby watercourse⁵.

Since the utilization of agricultural land generally requires addition of nutrient sources to ensure economic growth of crops (particularly following continuous harvest, which depletes the soil of nutrients), and the Property context discussed in Section 2.1 of this document (specifically the definition of the 4W limitation) characterizes a land parcel subject to excess water conditions, it is apparent that AEMCoP Section 49(1)(d) does prohibit nutrient application within the critical early- to mid-season vegetative growth fertilization window. This prohibition limits the potential crop types to short-season forage and grains, and further restricts the timing of nutrient application which may result in application timing that does not coincide with crop demand. It is noted that the

⁵ It is noted by Madrone that planners at the the City of Richmond define all ditches within the city as watercourses (i.e. watercourse crossing application required for all ditch crossings such as driveway crossings and culverts) due to the low-lying topography and connectivity to the Fraser River and numerous, intermediate fish-bearing tributaries.

property directly across from the Mahals (the May family farm, at 5031 No. 7 Road) is in fact, currently farmed for forage and grains. This is readily visible on aerial imagery on Google™Earth Pro and recent airphoto imagery from the City of Richmond Interactive Map (RIM)⁶.

2.3 Excess Water Management Options

2.3.1 Subsoiling & Drainage Ditching

Subsoiling is the careful disruption of massive soil structure that otherwise restricts infiltration and lateral movement of water within soil. It is typically most effective for soils that were deposited under marine or lacustrine conditions that have subsequently experienced a decrease in the regional water table. Subsoiling is a temporary improvement to infiltration and subsurface conveyance because the subject soils are typically fine-grained (e.g. silt or clay), which ‘heal’ or reconstitute as a massive unit (following saturation) which has a low level of infiltration and conveyance.

Subsoiling is best paired with incorporation of organic matter and potentially soil amendments (sand, gypsum, etc.) which will support development of a granular soil structure that facilitates infiltration and subsurface conveyance. Subsoiling is conventionally utilized where there is ditching to receive the newly mobilized water, which then conveys the water emerging to surface toward larger watercourse (such as the Fraser River) or the ocean.

2.3.2 Drainage Tile

Drainage Tile⁷ is a series of perforated pipes, often within a fabric filter ‘sock’ to prevent mobilization of fine-grain silt/clay particles, installed at depth to collect and convey subsurface water to ditching along a 1 – 2% gradient. Drainage tile functions entirely through subsurface conveyance of water to the perforated pipe, and subsequent gravity-driven drainage to ditching. The spacing of drainage tile is adjusted based on the soil texture, while the depth is varied depending on local water table elevation and intended crop type. Drainage tile does not function when the water level in the receiving drainage ditch is higher than the drainage tile.

⁶ <https://maps.richmond.ca/rim/> City of Richmond – Richmond’s Interactive Map (RIM).

⁷ The term ‘Drainage Tile’ is becoming an outdated term in agriculture but it is used frequently by the ALC.

2.3.3 Berm & Pumping

Berming is intended to prevent floodwater (i.e. overland water) from inundating a land parcel. Berming is ineffectual when addressing excess groundwater emerging to surface, as the source of water (i.e. the water table) continues to contribute to the land parcel – potentially at a rate which is greater than the rate of evacuation. Evacuation is typically driven by ‘trash pumps’ which are high volume discharge pumps driven by an Internal Combustion Engine (ICE).

While it is possible to artificially suppress a local groundwater table through a combination of drainage tile & ditching (i.e. collection of water), berming (i.e. prevention of overland inundation), and evacuation via pumping – it must be noted that continuous operation of ICE pumps to achieve this is not an acceptable best practice for agriculture due to issues of reliability, local hydrologic function, and cost. Furthermore, the location receiving evacuated water must be able to accommodate the volume, and if not there is a high likelihood that the evacuated waters will impact other agricultural operators in the area or re-inundate the land parcel due to an increased hydraulic gradient/water level that would overwhelm the berm or subsurface hydraulic conveyance.

2.3.4 Soil Placement

The removal of topsoil, placement of soil with suitable quality for agricultural purposes, and replacement of salvaged topsoil (the ‘growing medium’, now elevated) generally increases the land level above the regional water table, and the resulting capillary fringe within the placed soil. The disrupted native topsoil is often recommended to receive soil amendment with organic matter and be subject to a rotational nitrogen-fixing cover-crop under no-till conditions for a period of 1 to 3 years in order to re-establish soil structure and function. After which, assessment of drainage conditions and soil structure will guide any further requirement for water management infrastructure, such as installation of drainage tile.

It is critical to recognize that placement of quality soil is a solution to excess water conditions resulting from a high local water table that permanently addresses the agricultural limitation. Further, Soil Placement – when Climate Change is accounted for by the QP Agrologist making recommendations on depth of placed soil – is a method of Climate Adaptation that does not require continual input beyond initial establishment.

3 Suitability of Excess Water Management Options for 5800 No. 7 Road

3.1 Subsoiling & Drainage Ditching

The local excess water conditions are driven by seasonal high water tables and sustained by low conveyance within the regional drainage network. As such, the water table at or near surface during the planting and initial fertilization windows prevents machine access and, according the AEMCoP S.49, early- to mid-season nutrient application.

Subsoiling and drainage ditching within 5800 No.7 Road has a low level of suitability due to the excess waters mobilized (via subsoiling) and accumulated (via ditching) within the agricultural parcel being unable to drain from the area due to the limitation in regional conveyance.

Therefore, subsoiling and drainage ditches will result in 5800 No.7 Road – having a 4W limitation – being out-of-compliance with AEMCoP should the Farm Operator attempt to grow economic crops (such as Indian vegetables discussed in the Farm Plan prepared for CoR) that require nutrient application during the early- to mid-season.

This method of excess water management is not recommended.

3.1.1 Drainage Tile

Similar to the issue of subsoiling and drainage ditching wherein regional conveyance limits efficacy, the installation of drainage tile will result in 5800 No.7 Road – having a 4W limitation – being out-of-compliance with AEMCoP Section 49 should the Farm Operator attempt to grow economic crops that require nutrient application during the early- to mid-season.

This method of excess water management is not recommended.

3.1.2 Berm & Pumping

Due to 5800 No.7 Road being subject to excess water resulting from high seasonal water tables, the inability of regional drainage network to convey evacuated waters, and the reliability/cost – the use of berms and pumping is poorly suited to improve the excess water limitation. Furthermore, unless pumping is continued throughout the growing

season, the land parcel will be prohibited from receiving nutrient application in accordance with AEMCoP Section 49.

This method of excess water management is not recommended.

3.1.3 Soil Placement

The context of 5800 No.7 Road provides for soil placement that will have low impact to local hydrology, no displacement of water to adjacent agricultural land, and a permanent improvement to the Class 4W limitation to agricultural capability. This excess water management option is the only pathway which will allow the farm operator to pursue economic crops which require nutrient application while meeting Section 49 of the AEMCoP.

Soil placement is the recommended method of excess water management for 5800 No.7 Road.

Please contact the undersigned with any questions regarding this technical memorandum.

 <p><i>*This is a digitally signed duplicate of the official manually signed and sealed document.</i></p>	 <p><i>*This is a digitally signed duplicate of the official manually signed and sealed document.</i></p>
Thomas R Elliot PhD P.Ag P.Geo.	Jessica Stewart, P.Ag, P.Geo
Hydrologist	

Soil Use for the Placement of Fill Application for the Property Located at 5800 No. 7 Road (Mahal)

Cost Estimates	
Erosion Sediment Control Installation	\$35,000 ⁱ
Ongoing Project Reporting by Agrologist (per 3,000m ³)	\$12,000 (\$500 per month typical, can be up to \$1,000 per month if more visits required)
Earthworks costs (Project management, load inspector, machine/labour costs, fuel, traffic management)	\$29,120 per month OR \$720,000
Farm Plan implementation	\$160,000
ALC application fee (if proposal is forwarded to the ALC)	\$1,500
Final topographic survey	\$5,000
Final Agrologist Report	\$2,000 - \$3,000
Final Geotechnical Report (if required)	\$2,000 - \$4,000
Project Cost Estimate (does not include upfront costs)	\$940,000*
Upfront Cost to Date	\$13,500**
Potential Tipping Fee Income (\$85-\$95 per load)	\$1,335,714 – \$1,492,857 (estimate)

ⁱ Installation costs depends on the duration of project and the materials, supplier and the labour required to install and repair when required/needed

*Proponent has estimated that this project will take approximately two (2) years to complete. Costs will not be consistent every month (i.e. earthworks may be reduced in the winter during high precipitation events which correlates to reduced soil importation activity)

**Upfront costs include Farm Plan, Soil Placement Plan, Traffic Management Plan, two technical memorandums and City application fee



City of Richmond

Report to Committee

To: General Purposes Committee
From: Cecilia Achiam
General Manager, Community Safety
Date: June 22, 2020
File: 12-8000-01/2020-Vol
01
Re: Options for a Residential Backyard Chicken Program

Staff Recommendation

That "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²" as outlined in the staff report titled "Options for a Residential Backyard Chicken Program" from the General Manager, Community Safety, dated June 22, 2020, be approved.

Cecilia Achiam
General Manager, Community Safety
(604-276-4122)

Att. 4

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

Staff Report

Origin

At the July 8, 2019 Council meeting, Council made the following referral:

“That staff study the viability of the current rules regarding chickens in backyards on properties within the Agricultural Land Reserve and properties outside the Agricultural Land Reserve.”

Following a discussion at the May 19, 2020 General Purposes Committee regarding the keeping of backyard chickens in the Agricultural Land Reserve (ALR), Council made the following two referrals:

“That the staff report titled “Proposed Bylaw Amendment To Allow Backyard Chickens On Properties Within The Agricultural Land Reserve”, dated April 22, 2020, from the General Manager, Community Safety, be referred back to staff to examine the following:

- (1) building and fencing requirements;*
- (2) the maximum number of chickens; and*
- (3) other related requirements;*

for backyard chickens in Agricultural Land Reserve lots, and report back.”;

and

“That staff investigate allowing backyard chickens in single-family residential properties, including the maximum number of chickens, lot size requirements and other related requirements, and report back.”

This report addresses the two referrals made on May 19, 2020 and provides available options for Council to allow the keeping of backyard chickens in Richmond.

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

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

2.3 Increase emphasis on local food systems, urban agriculture and organic farming.

Analysis

Current Provisions for the Keeping of Backyard Chickens

Previously, there was a general prohibition of poultry under the Animal, Bird & Beekeeping Regulation Bylaw No. 7137, which was adopted on July 24, 2000. On October 15, 2002, Council adopted a Bylaw Amendment 7424 that allowed for the keeping of backyard chickens in the City for properties that have a parcel size greater than 2,000 square metres (m²), or 21,529 square feet (sf). The Animal, Bird & Beekeeping Regulation Bylaw No. 7137 has since been repealed and replaced with the current Animal Control Regulation Bylaw No. 7932 (Animal Control Bylaw) effective June 15, 2005. The provision for backyard chickens has been carried over and unchanged since the amendment in 2002. Currently, the keeping of backyard chickens in Richmond is permitted given that the properties (within and outside of the ALR) meet the minimum parcel size requirement.

Two existing Council policy objectives provide further context for the recent referral to examine the feasibility of an urban backyard chicken program in Richmond. One of the objectives identified in the Richmond Official Community Plan (OCP) Section 7.2 “Promote Urban Agriculture and Advance Food Security” is “to support and increase the range of urban agriculture (e.g. community gardening) and strengthen the food system beyond production.” One of the policies identified in the OCP is “to explore the keeping of small animals (e.g. poultry and bees) on a limited basis on small agricultural parcels, in consultation with the AAC [now the Food Security and Agricultural Advisory Committee (FSAAC)], ALC [Agricultural Land Commission] and Vancouver Coastal Health”¹.

Furthermore, at the July 11, 2016, Council meeting², Council endorsed the “Richmond Food Charter” which sets out the City’s commitment to support urban agriculture, strengthening the local food system, increasing access to affordable and healthy food and promoting environmentally sustainable practices related to food production, distribution and disposal.

Residential Backyard Chickens Programs in Metro Vancouver

In an effort to situate Richmond’s policy objectives within the broader Lower Mainland context, staff have completed an environmental scan of municipalities that allowed backyard chickens programs (Attachment 1). Of the 16 municipalities researched, 11 allow the keeping of backyard chickens in residential zones (outside of the ALR) and six municipalities have a designated backyard chicken program and accompanying bylaws to permit backyard chickens in residential zones.

Staff have contacted the City of Vancouver, the City of Surrey and the District of North Vancouver, which have implemented a registration/licensing regime to permit keeping of backyard chickens in their communities. The City of Vancouver and City of Surrey implemented a one-time registration requirement for the keeping of chickens, while the District of North Vancouver has implemented an annual licensing model. The City of Vancouver started their

¹ Richmond Official Community Plan 2041, Chapter 7.2.1, Policies (e), page 7-10
https://www.richmond.ca/__shared/assets/OCP_9000_agriculture34171.pdf

² https://www.richmond.ca/cityhall/council/agendas/council/2016/071116_minutes.htm

program in 2010 (operated for 10 years) and reported approximately 340 registrations; the City of Surrey started in 2016 (four years) and reported approximately 130 registrations; and the District of North Vancouver started in 2017 (three years) and reported approximately 20 licenses.

The three municipalities have advised that although there was some initial resistance from the community, the backyard chicken program has not resulted in an increase in significant public concern such as odour and noise complaints, abandonment or disease.

Risks Factors of Having Backyard Chickens in Residential Zones

There are risks associated with having chickens in residential zones. The main risks are abandonment, unhygienic housing conditions, increased noise, and attraction of pests (mice, rats) and predatory animals (raccoons, coyotes, dogs, cats).

The three municipalities (Vancouver, Surrey and District of North Vancouver) recommended that a separate backyard chicken bylaw be implemented as it would provide clarity on permitted activities, the requirements for keeping hens and available enforcement powers for compliance. A backyard chicken bylaw would also be instrumental in establishing rules to mitigate the risks of keeping chickens in residential zones.

The general consensus from the three municipalities is that owners of backyard chickens are responsible caretakers and they provide proper living conditions, adequate coop structure and humane treatment for their hens. In fact, the City of Vancouver noted a decrease in complaints regarding backyard chickens after the program and bylaws were in place. The three municipalities advised that they have not experienced any on-going issues regarding abandonment, unhygienic housing conditions, increased noise, increased pests and predatory animals affecting the backyard chicken program. A detailed risk analysis and feedback from Vancouver, Surrey and the District of North Vancouver is provided in Attachment 2.

Based on the risk analysis and the experiences of the three municipalities, the risk of negative impacts of a backyard chicken program, if complemented with a bylaw, is low.

Available Options to Allow Backyard Chickens in Richmond

There are three options available for allowing backyard chickens in Richmond:

- Option 1:** Status-quo, where the keeping of backyard chickens is permitted on properties with a parcel size of no less than 2,000 m².
- Option 2:** Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m².
- Option 3:** Allow the keeping of backyard chickens on all ALR properties and establish a Residential Backyard Chicken Program for single detached family residential zones.

Option 1: Status-quo, where the keeping of backyard chickens is permitted on properties with a parcel size of no less than 2,000 m² (Not Recommended)

As outlined in the earlier section on “Current Provision for the Keeping Backyard Chickens”, the keeping of backyard chickens is permitted, under the status-quo, as long as the property has a parcel size greater than 2,000 m², or 21,529 sf. This requirement is outlined in the Animal Control Bylaw and applies to all properties in Richmond inclusive of the ALR. However, raising poultry on the ALR, regardless of parcel size, is a permitted use and is a “farm operation” defined under the provincial *Farm Practices Protection (Right to Farm) Act*.

The current prohibition of backyard chickens on ALR properties due to parcel size is inconsistent with the *Local Government Act* and the *Farm Practices Protection (Right to Farm) Act*. Therefore, “Option 1: Status-quo, where the keeping of backyard chickens is permitted on properties with a parcel size of no less than 2,000 m²” is not a viable option.

Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m² (Recommended)

“Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²” is recommended. This recommendation is consistent with the staff report titled “Proposed Bylaw Amendment to Allow Backyard Chickens on Properties within the Agricultural Land Reserve”, provided at the May 19, 2020 General Purposes Committee.

Option 2 will amend the Animal Control Bylaw to provide an exclusion for parcels located within the ALR, so it is consistent with the *Local Government Act* and the *Farm Practices Protection (Right to Farm) Act*. This amendment will allow the keeping of backyard chickens for all parcels within the ALR which will permit an additional 278 properties (zoned AG) to be able to keep backyard chickens. Bylaw provisions for having farm animals, farm structures and conducting farm operations are already part of the Richmond Zoning Bylaw No. 8500 and provided in the Provincial *Agricultural Land Reserve Regulation*.

For detached single family in residential zones outside of the ALR, Option 2 would permit backyard chickens with parcel size at or greater than 2,000 m².

This option supports the Richmond OCP Section 7.2 and the Richmond Food Charter, and brings the Animal Control Bylaw into alignment with other Provincial Legislation. Additional provisions can be introduced in the Animal Control Bylaw to limit the number of chickens outside of the ALR. From staff’s research, the number of backyard chickens permitted outside of the ALR ranges from two to 12 should Council wish to limit the number of backyard chickens in residential zones outside of the ALR.

Option 3: Allow the keeping of backyard chickens on all ALR properties and establish a Residential Backyard Chicken Program for single detached family residential zones (Not Recommended)

Option 3 would allow the keeping of backyard chickens on all properties within the ALR and establish a Residential Backyard Chicken Program (RBCP) to promote urban agriculture and

enhance food security. This option fully supports the Richmond OCP Section 7.2 and the Richmond Food Charter.

Should Council choose this option, having a stand-alone backyard chicken program and bylaw (and associated licensing requirement) is a best practice because it provides clarity on backyard chicken rules, establishes expectations to owners and provides enforcement powers for compliance. Under this option, the Animal Control Bylaw would be amended to allow backyard chickens on all parcels within the ALR and a new Residential Backyard Chicken Bylaw would be introduced to allow the keeping of backyard chickens on single detached family residential zones in the City. A prospective RBCP bylaw provisions is provided in Attachment 3.

The concept of the RBCP would permit only hens over four months and prohibit all other types of poultry such as roosters, ducks, geese, etc. Residents on detached single family lots would be limited to a minimum of two and a prospective maximum of four hens. As well, there would be no parcel size requirement and the allowable zones would exclude multi-unit properties such as duplexes, townhouses and condos. The minimum number of hens is required to ensure the humane treatment of hens, as research indicates that hens are social animals and require companionship.

The guideline for the maximum number of hens is in line with neighbouring municipalities with no parcel size restrictions (City of Vancouver), and is based on the risk analysis in Attachment 2. While other municipalities have adopted a higher maximum limit of hens for their backyard chicken program, those same municipalities have also limited the program to larger parcel size properties (i.e. lots larger than 6,000 sq. ft). As such, the four hens limit with no parcel size requirement balances the opportunity for owners to keep backyard hens and minimizes the risks of keeping chickens in urban areas.

Based on the risk analysis and the experiences gathered from the City of Vancouver, the City of Surrey and the District of North Vancouver, the risk of negative impacts to the community is low if a RBCP is supported by a comprehensive bylaw and enforcement regime. In addition, for Option 3, it would be prudent that the RBCP and the prospective bylaw provisions (Attachment 3) be forwarded for community consultation with the residents of Richmond, Food Security and Agricultural Advisory Committee, Vancouver Coastal Health, Regional Animal Protection Society, and other stakeholders interested in the issue.

Based on the positive feedback from other municipalities' backyard chicken programs and the ability to control risks with a Residential Backyard Chicken Bylaw, and with this option fully supporting the Richmond OCP Section 7.2 and the Richmond Food Charter, "Option 3: Allow the keeping of backyard chickens on all ALR properties and establish a Residential Backyard Chicken Program for single detached family residential zones" is a viable option.

Financial Impact

None.

Conclusion

Having backyard chickens in an urban residential setting can be a polarizing topic with varying viewpoints. Other municipalities that have adopted a backyard chicken program indicated that there were initial concerns and resistance from the community. This report responds to the Council's referrals made in the General Purposes Committee on May 19, 2020 and provided available options as directed by Council to allow backyard chickens in single detached family zones in Richmond. There is an opportunity to better align the existing the Animal Control Bylaw for keeping backyard chickens in the ALR with the *Local Government Act* and the *Farm Practices Protection (Right to Farm) Act*. In order to bring the Animal Control Bylaw into alignment with Provincial Legislation, "Option 2: Allow the keeping of backyard chickens on all ALR properties and properties outside of the ALR with a parcel size of no less than 2,000 m²" is recommended.



Douglas Liu
Program Manager, Business and Operational Analysis
(604-276-4004)

DL:dl

- Att. 1: Environmental Scan of Backyard Chicken Regulations
2: Risk Analysis of Backyard Chicken in Residential Zones
3: Prospective Residential Backyard Chicken Program and Bylaw Provisions
4: Prospective Minimum Hen Enclosure Floor Area and Setbacks

Attachment 1

Environmental Scan of Backyard Chicken Programs

Municipality	Backyard Chicken Program/Bylaw	Number of Chickens	Additional Rules	Minimum Parcel Size	Allowed Zone	Setbacks	Coop Required	Fencing Required	Fees
Richmond (current)	No	Animal Control Bylaw	Permitted with minimum parcel size	2,000 sq. m (21,529 sq. ft.)	Various	N/A	N/A	N/A	N/A
(Richmond Prospective RBCP)	Prospective RBCP	Minimum 2 to maximum 4 hens	No other fowl or livestock; no slaughtering on property; no sale of by-products; no roosters or chicks under 4 months; annual license; register with BC Premises ID	No	Single detached residential zones	Yes	Yes	Yes	\$50 annual licensing fee
Vancouver	Yes	Maximum 4 hens	No other fowl or livestock; no slaughtering on property; no sale of by-products; no roosters or chicks under 4 months.	No	Single and multi-family residential zones (RA-, RS-, RT-, RM-, FM-, FSD-)	Yes	Yes	Yes	No
North Vancouver (City)	Yes	Maximum 8 hens	No other fowl or livestock; no slaughtering on property; no sale of by-products; no roosters or chicks under 4 months.	557 sq. m (6,000 sq. ft.)	Single-family zones (OCP-R1)	No	Yes	Yes	No
North Vancouver (District)	Yes	Minimum 2 to maximum 6 hens	No other fowl or livestock; no slaughtering on property; no sale of by-products; no roosters or chicks under 4 months. Must hold a license.	No	Single-family zones	Yes	Yes	Yes	\$52 annual licensing fee
Victoria	Yes, Animal Control Bylaw	Maximum 15 hens or other poultry (Chickens, ducks, geese)	No slaughtering on property; no sale of by-products; no roosters or chicks under 4 months.	No	Residential zones	Yes	Yes	Yes	No
Delta	Zoning Bylaw	Maximum 12 chickens for properties 2,000 sq. m in size. An additional 12 chickens per 2,000 sq. m for larger properties - Max 24 chickens for 4,000 sq. m properties	For properties that abut agricultural land - maximum 4 chickens are permitted	2,000 sq. m or (21,529 sq. ft.)	Single-family zones (RS2 and RS3) or land abutting AG land.	Yes	Yes	Yes	No
Surrey	Yes	Maximum 12 heads of poultry per 1 acre (4,046 sq. m), on lots greater than 1 Acre but less than 5 Acres. Maximum 4 hens per lot, on lots greater than 7,200 sq. ft.	No other fowl or livestock; no slaughtering on property; no sale of by-products; no roosters or chicks under 4 months. Requires BC Premises ID	669 sq. m (7,200 sq. ft.)	Single-family zones	Yes	Yes	Yes	No
New Westminster	Yes	Up to 8 poultry (includes chickens, ducks, turkeys, geese, pigeons, pheasants)	Increases of 1 poultry for each 750 sq. ft. up to a site of 0.5 acre provided it does not exceed 50 on a site.	557 sq. m (6,000 sq. ft.)	Single-family zones	Yes	Yes	Yes	No

Attachment 1 (Cont.)

Municipality	Backyard Chicken Program/Bylaw	Number of Chickens	Additional Rules	Minimum Parcel Size	Allowed Zone	Setbacks	Coop Required	Fencing Required	Fees
Abbotsford	No	Not applicable			Agricultural zones	N/A	N/A	N/A	N/A
Burnaby	No	Not applicable			Agricultural zones	N/A	N/A	N/A	N/A
Coquitlam	No	Not applicable		4,000 sq. m (1 ac.)	Agricultural and RS-2 (suburban) Residential Zones	N/A	N/A	N/A	N/A
Pitt Meadows	No	Not applicable		4,000 sq. m (1 ac.)	RR (Rural Residential); RS (large lot residential); AG (agricultural zones)	N/A	N/A	N/A	N/A
Port Coquitlam	No	Not applicable	Backyard chicken allowed for household consumption only	4,000 sq. m (1 ac.)	RS3 Zones and Agriculture Zones	N/A	N/A	N/A	N/A
Port Moody	No	Not applicable				N/A	N/A	N/A	N/A
Langley (Township)	No	Not applicable			Agricultural zones	N/A	N/A	N/A	N/A
Langley (City)	No	Not applicable			Agricultural zones	N/A	N/A	N/A	N/A

Risks Analysis of Backyard Chickens in Residential Zones

Risk of Abandonment

According to the BC SPCA, hens have a life expectancy of five to eleven years, and their productive egg-laying diminishes significantly after the first year³. Hens may also stop laying eggs before they reach the end of their lives. The humane treatment of hens must be respected and bylaws need to be in place to prevent and mitigate the risks of owners abandoning them.

Municipalities with backyard chicken programs indicated that they have not experienced a problem of owners abandoning their hens. There are chickens that were turned into their respective animal shelters, but they tend to originate from chicken processing facilities or through stray capture. The overall number of chickens that were turned into the shelter was relatively low. The City of Vancouver reported an annual average of six chickens and City of Surrey reported an annual average of 10 chickens being turned-in to their animal shelter over the last three years.

Most hen owners generally view their chickens as pets even after their egg-laying diminishes. Nonetheless, owners also have the option to have the hen processed on a farm or be euthanized by a veterinarian.

The risk of abandonment can be mitigated or prevented with the following bylaw measures:

1. Limiting the number of hens, which will lessen the impact of abandonment;
2. Adopt an annual licensing fee, which will serve as a responsible ownership tool to ensure owners are committed on the responsibility of keeping hens;
3. Only permit hens older than four months, which will reduce the chance that owners mistakenly obtaining a rooster (not permitted under any surveyed municipalities) or obtaining chicks for their cuteness;
4. Prohibit the slaughtering of hen on premise, which will prevent the inhumane treatment of hens. Hens nearing end of life must be managed by a veterinarian similar to dogs and cats;
5. Provide information and resources on the City's website, which will provide prospective owners the necessary resources for decision making; and
6. Recommend to potential owners to stagger the keeping of hens, which will provide a consistent egg supply during ownership.

Risk of Unhygienic Housing Conditions

The care of backyard chickens requires daily maintenance and upkeep to ensure hygiene and odor control. To ensure good health, hens require the following: shelter, food, water, adequate space, protection from environmental conditions, adequate ventilation, and day light. Hens are social creatures and require the opportunity to socialize and room for scratching (foraging by

³ <https://spca.bc.ca/news/backyard-chickens/>

scrapping the ground with their claws), roosting (resting on a stick or branch), and dustbathing (thrashing around in the dirt to clean feathers and remove parasites)⁴.

Chicken coops must be properly maintained by the owner by regularly cleaning waste and manure to remove foul odors. Municipalities with a backyard chicken program have advised that odor has not been a concern. Generally chicken owners are responsible pet owners and living conditions were properly maintained. The chicken by-product and manure could be used as compost on the property and excess waste could be recycled at any one of the Metro Vancouver recycling facilities that accepts chicken manure.

Communicable Diseases

Diseases such as avian flu are a common concern for urban chickens. The BC Centre for Disease Control (BCCDC) indicates that poultry flocks in Canada are usually free of avian influenza viruses. However, sometimes domesticated birds can become infected with these viruses through direct and indirect contact with infected waterfowl, other infected poultry, or through contact with surfaces that have been contaminated with a virus⁵.

The three municipalities surveyed indicated they did not experienced an outbreak of avian flu related to the backyard chickens. They have also indicated that the risk of avian flu is low due to the limited of number of hens and their sparse location. The City of Vancouver published an extensive research on avian flu risks on backyard chickens and concluded that “keeping backyard chickens, with the proper regulations, should pose minimal risks to public health”⁶.

The provincial Ministry of Agriculture has a “Premises ID” registration and traceability system that allows Canada’s livestock and poultry industries, and individuals, to quickly respond in the event of an animal disease outbreak. A Premises ID also provide resources for non-disease emergencies that threaten livestock, such as floods, forest fires, or environmental contamination events. Only one municipality, City of Surrey, has implemented a requirement for a Premises ID. During the permit process, the City of Surrey requires that an owner must first register for a Premises ID as part of their backyard chicken application. Furthermore, it is a best practice to require owners to register their properties in the Premises ID as a requirement for keeping of backyard chickens so that these properties could be tracked and owners notified in the event of a disease outbreak.

The risk of unhygienic housing conditions can be mitigated or prevented with the following bylaw measures:

1. Limiting the number of hens, which will lessen the impact of hygiene concerns;
2. Establish a minimum coop size and coop requirements, which will allow each hen to have sufficient space for natural behaviours;
3. Adopt the BC Premises ID registration as a condition of licensing, which will enable contact tracing in the event of a disease outbreak;

⁴ <https://council.vancouver.ca/20100408/documents/penv3.pdf>

⁵ <http://www.bccdc.ca/health-info/diseases-conditions/avian-influenza>

⁶ Page 8-10; Appendix H: <https://council.vancouver.ca/20100408/documents/penv3.pdf>

4. Prohibit the slaughtering of chickens on premise, which will eliminate exposure to blood and other bodily fluids to prevent spread of diseases;
5. Prohibit the sale of by products including eggs, meat, manure, and feathers from backyard chickens, which will limit disease transmission; and
6. Impose fines for the failure to keep chickens in sanitary living conditions that are free from excessive manure and waste.

Risk of Increased Noise

Noise is a common concern with backyard chickens. In Richmond, there were 13 complaints over the last three years (2016 to 2019) regarding chickens on residential properties. The majority of these complaints were noise related due to the keeping of roosters. Although hens also make noise throughout the day, their clucks are very subdued compared to roosters, and generally do not cause a disturbance. Some breeds of hens may sing an “egg song”⁷ when they are in the process of laying eggs. The “egg song” would be the loudest noise that hens make in their normal behavior and normally occurs in the morning, or when they are about to lay an egg inside the coop nest, which also lessens noise impacts. The “egg song” may be a cause for concern; however, the singing is momentary (approximately 2 to 5 minutes) and stops shortly after the hen finishes laying an egg. Some hens may sing louder than others and it is also possible the singing would decrease, or even cease, as the hen matures. The noise level of an “egg song” is less than that of a dog barking. Municipalities with a backyard chicken program have indicated that noise is not a serious concern and complaints are minimal.

The existing Noise Regulation Bylaw No. 8856 (Noise Bylaw) specified the limits for residential zone to be between 55 to 65 decibels for day and 45 to 55 decibels for night. The City of Pleasanton, California, noted noise readings of a “squawking” chicken at 63 decibels at two feet away, and would not register the noise at nine feet away. For comparison, the average human conversation registers at about 60 decibels and a barking dog can be as loud as 100 decibels⁸. The keeping of backyard chickens generally falls within these decibel limits and are consistent with the Noise Bylaw. There are also other provisions in the City’s Noise Bylaw to enforce excessive noise for any animals, including backyard chickens.

The risk of increased noise can be mitigated or prevented with the following bylaw measures:

1. Prohibit roosters in residential zones, which will eliminate the rooster crow;
2. Limiting the number of hens, which will lessen the noise generated;
3. Establish requirements for an enclosed coop, which will reduce the noise when hens are laying eggs;
4. Establish coop setbacks, which will provide distancing to nearby residences;
5. Recommend that owners to insulate the coop, which will further reduce the noise and also provide proper protection during inclement weather;
6. Recommend to potential owners to stagger the keeping of hens, which will lessen the noise; and

⁷ Sounds like repeated “clucking” or “cackling”.

⁸ Page 10-11: <https://council.vancouver.ca/20100408/documents/penv3.pdf>

7. Require that hens be kept inside their coop at night, which will reduce potential noise impacts at night.

Risk of Increased Pests and Predatory Animals

Backyard chickens can attract unwanted pests such as rodents seeking chicken feed, or larger animals, such as raccoons, dogs, cats, foxes, skunks and coyotes. Municipalities with a backyard chicken program have a coop enclosure and fencing requirements that effectively prevents pests and predators. There are no reports of issues that owners are not following coop and fencing requirements. As well, it is in the owner's best interest to adequately secure their coop to ensure that their investment in time, feed, and care for the hens are rewarded (with fresh eggs to their families rather than a free meal eaten by pests and predators).

The risk of increased pests and predatory animals can be mitigated or prevented with the following bylaw measures:

1. Limiting the number of hens, which will reduce the attraction of pests and predators;
2. Establish enclosed coop and fencing requirements, which will protect the hens from pests, predators, and prevent escapes;
3. Provide guidance to owners to store chicken feed in a secured container and provide food/water for the hens inside the coop, which will eliminate a potential food source for pests and predators;
4. Require that hens be kept in their coops from sunset to sunrise, which will protect the hens from predators and reduce noise throughout the night; and
5. Recommend that owners retrieve the eggs daily, which will eliminate a potential food for pests and predators.

Attachment 3

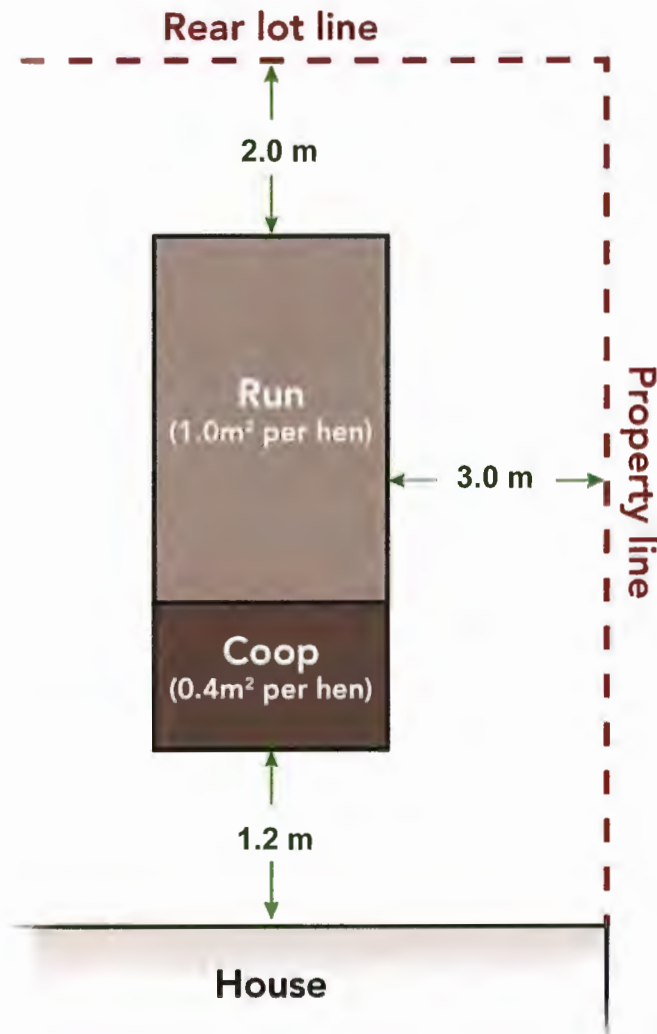
Prospective Residential Backyard Chicken Program and Bylaw Provisions

Based on the best practices from other municipalities, Table 1 outlines the prospective bylaw provisions for a RBCP in Richmond.

Table 1: Prospective Bylaw Provisions for a Residential Backyard Chicken Program	
Definition of “Backyard Chicken”	Hen (female chicken) that is four months or older. Exclusion for rooster, chicks, or any other poultry species.
Allowable zones	All standard and site-specific zones that permits single detached housing. For example: RS1/A-H, J-K, RS2/A-H, J-K. Exact zoning to be determined based on consultation and stakeholder input.
Parcel Size	No minimum parcel size.
Number of Hens	Minimum two hens and maximum of four hens per parcel.
Hen Enclosure and Run	<p>Minimum coop floor area per hen: 0.4 m² per hen (4.3 sf) Maximum coop floor area per hen: 5.0 m² per hen (53.8 sf) Maximum total coop floor area: 9.2 m² total (100 sf)</p> <p>Hen enclosure requirements:</p> <ul style="list-style-type: none"> • At least one nest box • Inclined roof built with waterproof material (no tarp) • Wooden or concrete floor of at least 0.3 metres above grade • Minimum one perch at least 0.25 metres in length • Minimum run of 1.0 m² (10.7 sf) of vegetation or bare earth per hen • Maximum height of 1.8 metres • Maximum one hen enclosure per property • Rear yard only <p>Building permit is not required if the hen enclosure is within the specified limits.</p>
Hen Enclosure Fencing and Setbacks	<p>Coop and run must be surrounded with appropriate fencing designed to prevent escape of hens and provides protection from pests and predators.</p> <p>Setbacks for hen enclosure (Illustrated in Attachment 4):</p> <ol style="list-style-type: none"> 1. Rear Lot Line: 2 metres 2. Side Property Line: 3 metres 3. House: 1.2 metres

Table 1: Prospective Bylaw Provisions for a Residential Backyard Chicken Program	
Basic Care	Hens must be provided with food, water, shelter, adequate light and ventilation, veterinary care, and opportunities to scratch, dust-bathe, and roost.
Pest and Hygiene	Hen enclosures must be kept in good repair and in sanitary condition. Construction of hen enclosure must prevent access by other animals. Food and water must be kept in coop at night. Manure and waste must be removed in a timely manner so it does not produce foul odor.
Prohibitions	The following will be prohibited: <ul style="list-style-type: none"> • Keeping hens in the front or side yard. • Slaughtering hens on premise. • Sales of eggs, manure, feathers or other products. • Keeping of roosters or any other poultry species other than hen (female chicken). • Keeping of chickens younger than four months. • Keep hens in a cage, other than for transport. • Dispose manure in municipal sewage, garbage or green bin. • Dispose chicken carcasses in municipal garbage. • Burying a chicken on premise.
Prohibitions (Cont.)	
Licensing and Fees	Annual licensing (similar to dog licenses) fee of \$50 per property per year (for maximum of four hens), prescribed under the Consolidated Fees Bylaw No. 8636. Property owners to register BC “Premises ID” as a requirement for licensing.
Inspection	Inspection for new builds. Inspection not required for renewals.
Violation	Impose fines, under the Notice of Bylaw Violation Dispute Adjudication No. 8122.

Prospective Minimum Hen Enclosure Floor Area and Setbacks



Sample prefabricated chicken coop that is available from retailers:



6483312

CNCL - 259



To: General Purposes Committee

Date: June 22, 2020

From: Wayne Craig
Director, Development

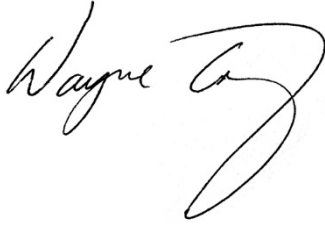
File: RZ 18-807640

Re: **Application by IBI Group Architects to Amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan) and Rezone 5740, 5760, and 5800 Minoru Boulevard from “Industrial Retail (IR1)” to “School and Institution Use (SI)” and “High Density Mixed Use and Affordable Rental Housing (ZMU46) – Lansdowne Village (City Centre)”**

Staff Recommendation

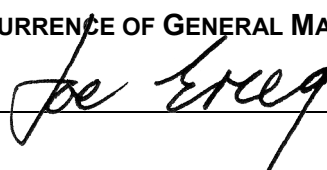
1. That Official Community Plan Bylaw 7100, Amendment Bylaw 10136, to amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to amend:
 - a) Section 2.2 “Jobs and Business” and the “Specific Land Use Map: Lansdowne Village”, to encourage office development along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and
 - b) Section 4.0 “Implementation & Phasing Strategies”, to clarify City Centre Area Plan density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit bonus density to be increased, on a site-specific basis, for rezoning applications that provide additional affordable housing to address community need,be introduced and given first reading.
2. That Official Community Plan Bylaw 7100, Amendment Bylaw 10137, for amending Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), to facilitate the construction of a high-rise, high density, mixed use development, including the designation of a 7 m (23 ft.) wide strip of land along the north side of 5740 Minoru Boulevard as City “Park” and the remainder of 5740, 5760, and 5800 Minoru Boulevard as “Village Centre Bonus” area (to permit an additional 1.0 floor area ratio for office use only), be introduced and given first reading.
3. That Bylaw 10136 and Bylaw 10137, having been considered in conjunction with:
 - a) the City’s Financial Plan and Capital Program; and
 - b) the Greater Vancouver Regional District Solid Waste and Liquid Waste Management Plans;are hereby found to be consistent with said program and plans, in accordance with Section 477(3)(a) of the *Local Government Act*.

4. That Bylaw 10136 and Bylaw 10137, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, are hereby found not to require further consultation.
5. That Richmond Zoning Bylaw 8500, Amendment Bylaw 10138, to create the "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)" zone, and to rezone 5740, 5760, and 5800 Minoru Boulevard from "Industrial Retail (IR1)" to "School and Institution Use (SI)" and "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)", be introduced and given first reading.



Wayne Craig
Director, Development
(604-247-4625)

WC:sch
Att. 10

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Affordable Housing	<input checked="" type="checkbox"/>	
Community Social Development	<input checked="" type="checkbox"/>	
Engineering	<input checked="" type="checkbox"/>	
Parks Services	<input checked="" type="checkbox"/>	
Policy Planning	<input checked="" type="checkbox"/>	
Sustainability	<input checked="" type="checkbox"/>	
Transportation	<input checked="" type="checkbox"/>	

Staff Report

Origin

IBI Group Architects has applied to the City of Richmond for permission to amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan) and rezone 5740, 5760, and 5800 Minoru Boulevard (Attachments 1, 2, and 3) from “Industrial Retail (IR1)” to “School and Institution Use (SI)” and a new site-specific zone, “High Density Mixed Use and Affordable Rental Housing (ZMU46) – Lansdowne Village (City Centre)”, to permit the construction of a high-rise, high density, mixed use development.

On December 17, 2019, the subject application was considered by Planning Committee and referred back to staff under the following resolution:

That the Application by IBI Group Architects to Amend Schedule 2.10 of Official Community Plan Bylaw 7100 (City Centre Area Plan), Amend the “Residential/Limited Commercial (RCL3)” Zone, and Rezone 5740, 5760, and 5800 Minoru Boulevard from “Industrial Retail (IR1)” to “Residential/Limited Commercial (RCL3)” be referred back to staff to:

- a) speak with the developer about integration of affordable housing units within the development;***
- b) determine the non-profit housing operator;***
- c) investigate the treatment of the tenants; and***
- d) explore options to increase the affordable housing requirement to above 10%.***

The purpose of this report is to respond to this referral motion. Details are included in the report’s Analysis section. Key changes to the applicant’s proposal include the following:

1. S.U.C.C.E.S.S., a non-profit housing operator and social services organization, has entered into a Memorandum of Understanding with the applicant for the purpose of managing the development’s proposed stand-alone affordable rental housing building;
2. The developer has provided relocation assistance to the site’s commercial and non-profit social services tenants (all of which have now relocated off-site), and the developer is not aware of any tenant requiring further assistance; and
3. The project’s affordable low-end-of-market-rental (LEMR) housing contribution (constructed to a turnkey level of finish, at the developer’s sole cost, and secured in perpetuity with a Housing Agreement registered on title to the site) has been increased with respect to:
 - a) Number of units, from 47 to 88 units (i.e. 41 additional LEMR units); and
 - b) Habitable LEMR unit area, from 10% to 19% of the total residential floor area on the site, which represents an additional 2,997 m² (32,262 ft²) of habitable space.

Overall, the revised development proposal provides for the following:

1. 3.2 floor area ratio (FAR) and a total floor area of 48,110 m² (517,849 ft²), including:
 - a) 1.0 FAR (15,034 m²/161,828 ft²) of office in a single tower, which shall be limited (with a legal agreement registered on title) to subdivision by air space parcel or strata-title on a floor-by-floor basis (subject to a proposed City Centre Area Plan amendment to designate the site as “Village Centre Bonus” for office);

- b) 0.15 FAR (2,328 m²/25,054 ft²) of ground floor retail along the site's Lansdowne Road and east frontages;
 - c) 0.43 FAR (6,431 m²/69,217 ft²) in the form of a stand-alone affordable rental housing building containing 88 affordable LEMR units, including 47 family-friendly two-bedroom and three-bedroom units (53%), secured with residential rental tenure zoning and a Housing Agreement registered on title to the site; and
 - d) 1.62 FAR (24,317 m² / 261,751 ft²) in the form of three market residential towers containing 341 units, including 186 (55%) family-friendly two- and three-bedroom units (which exceeds the OCP target of 40% family-friendly units).
2. Affordable replacement non-profit social service agency space, including at least 426 m² (4,582 ft²) of gross leasable area in the form of two tenant units (constructed to a shell level of finish), together with common circulation, parking, and other ancillary spaces (constructed to a turnkey level of finish), all at the developer's sole cost. Prior to rezoning adoption, legal agreements will be registered on title to secure the replacement space, in perpetuity, for non-profit social service use, restrict the rental rate to 50% of market rent (based on the rents of comparable spaces nearby), and give the site's two original non-profit tenants first right of refusal, as determined to the City's satisfaction.
 3. A 7 m (23 ft.) wide linear park, with a total area of 859 m² (0.21 ac.), along the site's Lansdowne Road frontage, which shall be transferred to the City as fee simple and constructed to the City's satisfaction, at the developer's sole cost.
 4. Off-site works, including utility upgrades, street widening and frontages improvements along three sides of the subject site (including the conversion of an existing lane to a local street along the site's east side), and park construction, will be the subject of the City's standard Servicing Agreement processes, secured with Letters of Credit. Development Cost Charge credits may apply to road and utility works only (i.e. not to park works).

To facilitate the subject development, amendments are proposed to Schedule 2.10 of Official Community Plan (OCP) Bylaw 7100, City Centre Area Plan (CCAP), including:

1. OCP Amendment Bylaw 10136, to encourage office uses along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and
2. OCP Amendment Bylaw 10137, to designate a 7 m (23 ft.) wide strip of land along the north side of the site as "Park" and the remainder of the site as "Village Centre Bonus" (1.0 FAR) for office use only.

Additional bylaw amendments are proposed to facilitate the applicant's revised affordable housing contribution, including:

1. OCP Amendment Bylaw 10136, to amend the City Centre Area Plan (CCAP) to clarify the Plan's density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit the allowable bonus density to be increased to address community need, on a site-specific basis, for rezoning applications that provide additional affordable housing; and

2. Zoning Amendment Bylaw 10138, to rezone the subject site to a new site-specific zone, "High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)", that permits a maximum density of 3.2 FAR, including a density bonus for additional affordable housing (0.2 FAR), and secures the developer's proposed 88 affordable housing units as residential rental tenure.

Findings of Fact

Attachment 4 includes a Development Application Data Sheet with the details of the development.

Related Policies & Studies

Development of the subject site is affected by the OCP, CCAP, and other policies (e.g., affordable housing) and studies. Relevant information is provided below and in the report's Analysis section.

1. OCP Aircraft Noise Sensitive Development (ANSD) Policy: The subject site is located within ANSD "Area 3", which permits all aircraft noise sensitive uses if the building design includes required noise mitigation measures and purchasers are made aware of potential noise conditions. Prior to rezoning adoption, a covenant will be registered on title requiring that the developer satisfies all City requirements.
2. Airport Zoning Regulations (AZR): Transport Canada regulates maximum permitted building heights in City Centre locations that may affect airport operations. The developer has submitted a letter, prepared by a registered surveyor, confirming that the proposed maximum building height of 47 m (154 ft.) GSC complies with AZR requirements.
3. Floodplain Management Implementation Strategy: City Centre buildings are required to comply with Richmond Flood Plain Protection Bylaw 8204. Prior to rezoning adoption, a flood indemnity covenant will be registered on title.

Public Consultation

Rezoning information signs are installed on the subject property. At the time of writing this report, correspondence regarding the subject application had been received from the following parties:

1. Richmond Society for Community Living (RSCL), one of the site's two original non-profit tenants, submitted a letter dated October 31, 2019 (Attachment 5);
2. Community Mental Wellness Association of Canada (CMWAC), the site's other original non-profit tenant, submitted a letter dated November 5, 2019 (Attachment 6); and
3. Robert Grosz has submitted correspondence indicating that he opposes the rezoning application until the issue of the equitable ownership of the property(ies) can be determined by the Court(s) when it resumes public operations and his Mareva Injunction motion to determine, among other things, the equitable ownership issue can be heard by the Court(s). Attached is correspondence from July 15, 2019, and June 8, 2020, regarding the rezoning application (Attachments 7 and 8). Additional correspondence regarding Mr. Grosz's legal issues is on file.

Should the Committee endorse this application and Council grant first reading to the OCP amendment bylaws and rezoning bylaw, the bylaws will be forwarded to a Public Hearing, where any area resident or interested party will have an opportunity to comment.

Staff have reviewed the proposed OCP and zoning amendments, with respect to the *Local Government Act* and the City's OCP Consultation Policy No. 5043 requirements, and recommend that this report does not require referral to external stakeholders. The table below clarifies this recommendation as it relates to the proposed OCP amendment.

OCP Consultation Summary

Stakeholder	Referral Comment (No Referral necessary)
BC Land Reserve Co.	No referral necessary because the Land Reserve is not affected.
Richmond School Board	No referral necessary because the proposed amendment will not increase the permitted amount of residential floor area nor increase the projected number of school-age children. (See below)
The Board of Metro Vancouver	No referral necessary because the Regional District is not affected.
The Councils of adjacent Municipalities	No referral necessary because adjacent municipalities are not affected.
First Nations (e.g., Sto:lo, Tsawwassen, Musqueam)	No referral necessary because First Nations are not affected.
TransLink	No referral necessary because the proposed amendment will not result in road network changes.
Port Authorities (Vancouver Port Authority and Steveston Harbour Authority)	No referral necessary because the Port is not affected.
Vancouver International Airport Authority (VIAA) (Federal Government Agency)	No referral necessary because the proposed amendment does not affect Transport Canada's maximum permitted building height or the OCP Aircraft Noise Sensitive Development (ANSI) Policy.
Richmond Coastal Health Authority	No referral necessary because the Health Authority is not affected.
Community Groups and Neighbours	No referral necessary, but the public will have an opportunity to comment on the proposed amendment at the Public Hearing.
All relevant Federal and Provincial Government Agencies	No referral necessary because Federal and Provincial Government Agencies are not affected.

Richmond Official Community Plan Bylaw 7100, Amendment Bylaw 10136 and Bylaw 10137, having been considered in accordance with OCP Bylaw Preparation Consultation Policy 5043, are hereby found to not require further consultation.

The public will have an opportunity to comment further on all of the proposed amendments at the Public Hearing. Public notification for the Public Hearing will be provided as per the Local Government Act.

School District

Official Community Plan (OCP) Bylaw Preparation Consultation Policy 5043 was adopted by Council and agreed to by School District No. 38 (Richmond). The Policy directs that OCP amendments expected to generate less than 50 additional school aged children (i.e. at least 295 dwelling units) over and above existing OCP population projections do not need to be referred to the School District. The subject OCP amendment provides for a site-specific affordable housing density bonus that, if approved, would result in 41 additional LEMR units on the subject site. As the proposed number of additional dwellings is less than the threshold set out in the Policy, the City is not required to refer the subject application to the School District. Nevertheless, as a

courtesy, staff will refer the proposed OCP amendment to the School District for information purposes.

Analysis

Response to Referral Items

1. Affordable Rental Housing Building and Non-Profit Operator (Referral items a & b)

On December 17, 2019, the Planning Committee requested confirmation of the project's non-profit affordable housing operator and questioned whether the development's affordable housing units should be dispersed (instead of clustered in a stand-alone building).

The Affordable Housing Strategy encourages the participation of non-profit organizations in the delivery and operation of buildings that feature clustered LEMR units because their mandates and capacity to support tenants (i.e. through expertise in tenant selection, housing management, and complementary services) are recognized to contribute towards successful housing outcomes. The subject developer has engaged S.U.C.C.E.S.S. as its non-profit housing operator and the two parties have entered into a preliminary Memorandum of Understanding.

S.U.C.C.E.S.S. has been operating affordable housing projects across Metro Vancouver since 2008, including 81 units in the "Remy" at 9388 Cambie Road and 53 units in "Storeys" at 8080 Anderson Road in Richmond. Originally conceived as an immigrant settlement service, the mandate of S.U.C.C.E.S.S. has expanded to make it a multi-service, multi-cultural agency serving the needs of families with children, seniors, and others. The organization's experience as a non-profit housing operator makes it well qualified to manage the proposed affordable housing rental building; and, its mandate to support the needs of a range of household types, including residents with diverse cultural/ethnic backgrounds, is expected to contribute towards inclusive tenant selection processes that align with the objectives of Richmond's Affordable Housing Strategy. In addition, the Housing Agreement securing the affordable housing units will require the owner/operator to report annually to the City through the Statutory Declaration process to ensure the units are managed according to the terms outlined in the Housing Agreement, including adherence to maximum rents and income thresholds for tenants.

As with S.U.C.C.E.S.S.'s other Richmond projects, the subject affordable housing proposal involves a stand-alone rental building. S.U.C.C.E.S.S. has indicated to staff that the clustering of units in a stand-alone building is preferred because it increases operational efficiencies and provides greater control over costs. It is the view of S.U.C.C.E.S.S. that dispersing affordable units within a strata-titled development may increase conflicts with strata owners because a non-profit operator, who is making a long-term commitment, must prioritize timely repairs and maintenance (to minimize potentially costly building deterioration), whereas strata owners may prioritize minimizing strata fees. This information is consistent with findings of the Affordable Housing Strategy update process completed in 2018, and contributed towards amendments to the Strategy to permit the clustering of affordable units if they are to be managed by non-profit housing operators.

2. Non-Residential Tenant Relocation (Referral item c)

When Planning Committee considered the subject application on December 17, 2019, thirteen non-residential tenants, including two non-profit social services agencies, Richmond Society for Community Living (RSCL) and Community Mental Wellness Association of Canada (CMWAC), and eleven commercial businesses, occupied the site's existing buildings. On November 30, 2019, the developer gave all tenants six months advance notice to vacate, as required under the tenants' lease agreements with respect to building demolition.

As set out in the December 2, 2019 staff report, as a consideration of the subject rezoning application, the developer proposes to provide the two non-profit social services agencies with 426 m² (4,582 ft²) of gross leasable area in the new development (i.e. 1:1 replacement space) at 50% of net market rent, first right of refusal, and relocation assistance, all at the developer's sole cost (secured with legal agreements registered on title prior to rezoning adoption). However, at the time of the Planning Committee meeting, the non-profit tenants had not received relocation assistance.

Since December 2019, all thirteen tenants have vacated the property. To assist with their relocation and mitigate business impacts, the developer provided:

- a) The services of a commercial realtor (at the developer's sole cost) to all tenants; and
- b) Rent reductions, including:
 - For all tenants, a 15% reduction for February through April 2020 (three months) and waiving of rents for May 2020 (the final month of tenancy); and
 - For CMWAC, an additional 25% reduction for January through April 2020 and use of an additional unit at no charge.

The developer has reported that RSCL has relocated to the Ironwood area and CMWAC has found new premises within 2 km of the subject site. As previously described, legal agreements to be registered on title prior to rezoning will ensure that both non-profit organizations have first right of refusal with respect to the affordable replacement space constructed, at the developer's sole cost, in the new development.

With regard to the commercial tenants, the realtor working on behalf of the developer has submitted information indicating that they were able to help a number of tenants find alternative accommodation, but some did not make use of their services. At the time of writing this report, the developer and realtor are not aware that any tenant continues to require relocation assistance or has an outstanding complaint about a lack of adequate assistance.

3. Increased Affordable Housing Voluntary Developer Contribution (Referral item d)

The Affordable Housing Strategy requires that the subject development provides at least 10% of its total residential floor area in the form of low-end-of-market-rental (LEMR) housing units secured in perpetuity with a Housing Agreement. The development proposal presented in December 2019 satisfied this requirement; however, having considered the comments of Planning Committee, the applicant has revised the original proposal to provide for additional LEMR units. More specifically, the developer proposes to increase the project's density from 3.0 FAR to 3.2 FAR to provide an additional 3,007 m² (32,366 ft²) (i.e. 0.2 FAR) of affordable housing, including 2,997 m² (32,262 ft²) of habitable LEMR unit area and 10 m²

(104 ft²) of ancillary space (i.e. corridor within the affordable housing rental building). Under this approach, the developer proposes to increase the:

- a) Number of LEMR units from 47 to 88 (i.e. 41 additional units); and
- b) Habitable LEMR unit area, from 10% to 19% of the total residential floor area on the site.

In addition, the applicant is working with BC Housing to secure financing to enable the developer and non-profit housing operator to reduce the rent and household income rates for some units to less than LEMR rates (e.g., Shelter rates).

Unit Types	Minimum Unit Area	Max LEMR Unit Rent*	Max Household Income**	Project Unit Targets Unit Mix**		BUH ***
Studio	37 m ² (400 ft ²)	\$811/mon	\$34,650 or less	17% (15 units)	47% (41 units)	100%
1-BR	50 m ² (535 ft ²)	\$975/mon	\$38,250 or less	30% (26 units)		100%
2-BR	69 m ² (741 ft ²)	\$1,218/mon	\$46,800 or less	47% (41 units)	53% (47 units)	100%
3-BR	91 m ² (980 ft ²)	\$1,480/mon	\$58,050 or less	6% (6 units)		100%
TOTAL	Varies	Varies	Varies	100% (min. 88 units)		100%

* Rates shall be adjusted periodically as provided for under adopted City Policy.

** The unit mix will be confirmed to the satisfaction of the City through the Development Permit* process. The recommended unit mix is shown in the table; however, based on approved design (which may take into account non-profit housing operator input) the unit mix may be varied provided that at least 50% of the total number of affordable housing units are some combination of 2- and 3-bedroom units.

*** BUH units mean those units that comply with the Zoning Bylaw's Basic Universal Housing standards.

As indicated in the table, all proposed 88 LEMR dwellings will comply with Zoning Bylaw standards for Basic Universal Housing (BUH) and include 53% family-friendly, two-bedroom and three-bedroom units (i.e. 47 units) and 47% studio and one-bedroom units (i.e. 41 units). The proposed proportion of family-friendly units is generally consistent with the requirements of the Affordable Housing Strategy, which calls for a minimum of 20% two- and three-bedroom units and aims to achieve 60% where possible. Moreover, the project's non-profit housing operator, S.U.C.C.E.S.S., is supportive of the proposed unit mix because it provides for a good balance between family units and seniors/singles units. From their experience, the operator believes that having multigenerational tenants living in the same building contributes towards a feeling of community, and interactions between seniors and children have a positive effect on both groups. In addition, from a financial perspective, S.U.C.C.E.S.S. notes that a mix of households is advantageous because it helps to average out the cost of maintenance and repairs across the building (i.e. the lower wear typical of senior-occupied units helps to offset the potential cost of maintaining higher-wear family units).

The subject development clusters the proposed 88 LEMR units in a stand-alone building located along the site's east frontage. Key features of the proposal include the following:

- a) **Built Form:** To accommodate the additional 41 LEMR units, the height of the affordable rental housing building has been increased by three storeys, from six to nine storeys (i.e., from four to seven residential floors, over two retail/social service floors). No other changes are proposed to the development's massing or the heights of its towers (Attachment 9). Shadowing caused by the additional height of the rental building will be minimal and have negligible impacts on the development's outdoor podium-level amenity space (i.e. morning only). The project's varied low-, mid-, and high-rise forms and articulated streetwalls are consistent with CCAP Development Permit Guidelines for

high-density mixed use buildings. Prior to adoption of the rezoning bylaw, a Development Permit application shall be processed to a level satisfactory to the Director of Development.

b) Residential Amenity Space: Indoor and outdoor amenity space provided for the residents of the development will meet or exceed OCP and CCAP minimum space requirements.

- The occupants of the affordable rental building and the market strata units will share the project's outdoor amenity space (i.e. at least 2,574 m² / 27,706 ft² located at the podium rooftop), including children's play space, garden plots, and active and passive recreation areas. This is consistent with City policy and the objectives of the non-profit operator and developer who intend that the project's outdoor space acts like a community park that brings all the residents together.
- The project's indoor amenity space, which originally included only separate areas for the use of market strata and rental building occupants, has been revised to include a third indoor amenity space for the shared use of all residents as follows:
 - i. Shared indoor amenity: 465 m² (5,000 ft²), including active recreation uses (e.g., fitness) and spaces to gather and socialize;
 - ii. Rental building indoor amenity (exclusive use): 92 m² (990 ft²) of multi-purpose space; and
 - iii. Market strata indoor amenity (exclusive use): 466 m² (5,019 ft²), including a mix of multi-purpose space and recreation features.

All three indoor amenity spaces will be located at the podium rooftop level and have direct access to the shared outdoor amenity area. The total amount of indoor amenity space available to the occupants of the affordable rental building will exceed the minimum OCP/CCAP requirement (i.e., 557 m² / 5,990 ft² versus 176 m² / 1,894 ft²). In addition, the development provides 19 m² (205 ft²) of indoor space (over and above OCP and CCAP requirements) for program administration and related uses by the non-profit housing operator. S.U.C.C.E.S.S. is supportive of the developer's indoor amenity space proposal because it will reduce operating costs (as compared to having access to all indoor amenities), while giving it exclusive use of a space where it can provide programs for the rental building's tenants (at no cost to the tenants).

c) Transportation Measures: To reduce the amount of parking required to accommodate the additional 41 LEMR units, the developer proposes to provide additional transportation demand management (TDM) measures (i.e., over and above the developer's original proposal) to increase the TDM parking reduction rate from 10% to 25%. As a result, the effective parking rate for the LEMR units will be reduced from 0.81 to 0.675 spaces per unit. The proposed rate is supported by the non-profit housing operator, S.U.C.C.E.S.S., and consistent with TDM reductions recently applied by the City to affordable housing elsewhere in the downtown core. Based on this approach, the development will be required to provide for the following transportation measures, to the satisfaction of the City:

- 60 resident parking spaces, secured for the exclusive use of the LEMR occupants;
- Two visitor parking spaces for the exclusive use of the rental building and shared use (with the general public and other visitors to the site) of the development's 127 short-term (hourly) parking spaces;
- 150 "Class 1" secured bike storage spaces, based on a rate of 1.7 bikes per unit (which exceeds the Zoning Bylaw rate of 1.25 bikes per unit), including 10% over-size lockers for family bike storage, bike trailers, electric assist vehicles, and similar items;

- A bike repair/maintenance facility including a foot-activated pump, repair stand with integrated tools, and bike wash;
- Electric vehicle (EV) charging for 100% of resident parking spaces and for shared use for bicycle charging at one duplex outlet for each 10 bikes (as per standard Zoning Bylaw requirements); and
- A transit pass program for the tenants of the affordable rental housing building (secured by a legal agreement registered on title), which shall provide for monthly, two-zone transit passes for two years for 100% of the LEMR units.

In addition, over and above previously agreed TDM measures, the developer will also provide “Class 1” secured bike storage for the market strata units at the rate proposed for the LEMR units (i.e., 1.7 instead of 1.25 bikes per unit), including 10% over-size bike lockers for family bike storage, bike trailers, electric assist vehicles, and similar items.

- d) Occupancy Requirements: Prior to adoption of the rezoning bylaw, legal agreements will be registered on title to ensure that the proposed 88-unit affordable rental housing building is complete to a turnkey level of finish (at the developer’s sole cost), before occupancy of any market strata units on the site, as determined to the satisfaction of the City.

Proposed Official Community Plan Amendments

When Planning Committee considered the subject application on December 17, 2019, the proposal involved two amendments to the City Centre Area Plan (CCAP), including:

1. (OCP Amendment Bylaw 10136) changes to Section 2.2 “Jobs and Business” and the “Specific Land Use Map: Lansdowne Village”, to encourage office development along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) and pedestrian-oriented retail uses at grade along Lansdowne Road (between No. 3 Road and Minoru Boulevard); and
2. (OCP Amendment Bylaw 10137) designation of a 7 m (23 ft.) wide strip of land along the north side of 5740 Minoru Boulevard as City “Park” and the remainder of 5740, 5760, and 5800 Minoru Boulevard as “Village Centre Bonus” area (to permit an additional 1.0 FAR for office use only).

As originally set out in the report from the Director of Development, dated December 2, 2017, staff are supportive of these proposed CCAP amendments on the basis that:

- a) Lands along the east side of Minoru Boulevard (between Ackroyd Road and Alderbridge Way) are within a five-minute walk (i.e., 400 m / 1,312 ft. radius) of the Lansdowne Canada Line station, which makes them a desirable location for office employment uses;
- b) The development of pedestrian-oriented retail uses along Lansdowne Road will complement increased office employment, enhance pedestrian and cycling access to/from the Lansdowne Canada Line station, and contribute towards residential livability;
- c) The proposed linear park along the south side of Lansdowne Road will be designed, constructed, and transferred to the City (as fee simple), all to the City’s satisfaction, at the developer’s sole cost (i.e. not eligible for Development Cost Charge credits), and will

enhance Lansdowne's role as a recreational amenity, pedestrian/cycling route, and landscape corridor contributing towards the downtown's urban forest canopy; and

- d) The proposed site-specific Village Centre Bonus (VCB) designation is consistent with CCAP objectives for increased office employment near the Canada Line and, prior to rezoning adoption, legal agreements will be registered on title to limit subdivision by air space parcel or strata-title on a floor-by-floor basis (to ensure the development provides for flexible, large floorplate office spaces).

Furthermore, the CCAP requires rezoning applications that make use of the VCB bonus density to provide voluntary developer contributions towards City-owned community amenity space. In compliance with the CCAP, prior to rezoning adoption, the developer proposes to make a voluntary cash contribution of \$5,663,980 to Richmond's Leisure Facilities Fund – City Centre Facility Development Sub-Fund in lieu of constructing community amenity space on-site. The proposed voluntary contribution shall be based on a construction-value amenity transfer rate of \$700/ft² and the amount of amenity space transferred off-site (i.e. 5% of the site's VCB bonus floor area), as specified in the site-specific ZMU46 zone and Rezoning Considerations (Attachment 10). In the event the developer's contribution is not provided within one year of the rezoning bylaw receiving third reading, the construction-value contribution rate shall be increased annually based on Statistics Canada "Non-Residential Building Construction Price Index".

In addition to the two CCAP amendments presented for consideration by Council in December 2019, a third amendment is proposed to the CCAP to facilitate the applicant's revised affordable housing proposal:

- 3. (OCP Amendment Bylaw 10136) to clarify City Centre Area Plan density bonusing requirements with respect to the Richmond Affordable Housing Strategy and Official Community Plan Market Rental Housing Policy, and permit bonus density to be increased, on a site-specific basis, for rezoning applications that provide additional affordable housing to address community need.

City Centre rezoning applications must make use of the CCAP Affordable Housing Bonus to achieve the maximum residential density permitted under the Plan. The Affordable Housing Bonus provides bonus density for developments that satisfy the requirements of the Affordable Housing Strategy (e.g., 10% of total residential floor area), but it does not give Council the flexibility to permit additional bonus density (without amending the CCAP) for rezoning applications that exceed the requirements of the Strategy. In contrast, the OCP Market Rental Housing Density Bonus Policy provides for bonus density for rezoning applications that comply with the density bonus provisions of the Policy, together with the flexibility for Council to grant additional bonus density to rezoning applications that provide additional market rental housing to address community need.

Staff are supportive of the proposed CCAP amendment because it will clarify how affordable housing and market rental housing density provisions apply in the City Centre and, as for market rental housing, permit Council to grant increased bonus density, on a site-specific basis, for rezoning applications (including the subject application) that exceed City requirements (e.g., exceed the Affordable Housing Strategy).

Proposed Site-Specific Zone

When Planning Committee considered the subject application on December 17, 2019, the proposal involved rezoning the site to a standard zone, “Residential/Limited Commercial (RCL3)”. In light of the developer’s revised affordable housing proposal, staff recommend rezoning the property to a new site-specific zone, “High Density Mixed Use and Affordable Rental Housing (ZMU46) – Lansdowne Village (City Centre)” (Zoning Amendment Bylaw 10138).

The new ZMU46 zone is the same as the RCL3 zone with the exception of the following development-specific features:

1. Residential rental tenure zoning secures a minimum of 88 affordable housing units located within a designated area on the east side of the site;
2. An additional 0.2 FAR density bonus is permitted for the provision of affordable housing that exceeds Affordable Housing Strategy requirements (i.e. over 10% of residential floor area);
3. The maximum transportation demand management (TDM) parking reduction is increased from 10% to 25% for affordable housing resident parking, resulting in an effective rate of 0.675 spaces per affordable housing unit (i.e. market strata units will be subject to the City’s standard parking rates);
4. The minimum rate for “Class 1” bicycle storage for affordable housing and market strata units is increased to from 1.25 to 1.7 spaces per dwelling, including 10% over-size bike lockers; and
5. Site-specific requirements are clarified regarding site size, parking requirements for office and community amenity use, and Village Centre Bonus contributions.

Furthermore, when the subject application was considered in December 2019, the staff report indicated that rezoning the site to “Residential/Limited Commercial (RCL3)” would result in the need for a height variance because three of the development’s four towers exceed 35 m (115 ft.). This includes the office tower at 45 m (148 ft.) and two residential towers at 39 m and 42 m (127 ft. and 136 ft.). Staff continue to support the development’s increased height on the basis that it complies with Transport Canada Airport Zoning Regulations (AZR), results in negligible shading of public spaces, contributes to a varied skyline and visual interest, and enables the site to accommodate increased employment (office) and park use without comprising livability. In light of this, the new “High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)” zone sets 35 m (115 ft.) as the maximum permitted height, but allows for increased height if the developer demonstrates, to the satisfaction of the City through the Development Permit process, that a proper interface is provided with neighbouring residential and non-residential buildings, park, and public spaces.

Additional Development Considerations

1. Transportation

The CCAP requires road, pedestrian, and cycling network improvements on and around the subject site. The Zoning Bylaw permits parking reductions for City Centre developments that incorporate transportation demand management (TDM) measures to the City’s satisfaction. The developer’s proposed transportation improvements and measures (to be provided at the developer’s sole cost) satisfy all City requirements and will be secured

through a combination of legal agreements registered on title and the City's standard Servicing Agreement processes (secured with letters of credit). (Credits will be applicable to works identified on the City's Development Cost Charge Program.) In brief, the development proposal will provide for the following:

- a) Road widening and related improvements along all three site frontages, including an off-street bike path along Minoru Boulevard and conversion of a lane to a local street on the site's east side;
- b) Parking as required by the Zoning Bylaw and site-specific ZMU46 zone, including, among other things, 23 spaces for the exclusive use of the non-profit social service agencies, 127 spaces secured for short-term (hourly) public use, eight spaces (i.e. two per building) secured for residential visitors, and, as previously described, 25% TDM rate (versus the standard 10% rate) for the affordable housing units, effectively reducing the required parking from 0.81 to 0.675 spaces per LEMR unit;
- c) Cycling measures as required by the Zoning Bylaw and ZMU46 zone, including, among other things, end-of-trip cycling facilities (e.g., showers, change rooms, and related features) co-located with Class 1 (secure) bicycle storage spaces for the use of commercial and non-profit social services tenants, bike maintenance/wash facilities for residential tenants, and, as previously described, increased Class 1 bike storage rate (1.7 bikes/unit instead of 1.25/unit) for all market and affordable units, including 10% over-sized bike lockers for multi-bike and electric assist vehicle storage;
- d) Transit pass programs, including \$40,000 for a commercial tenant program and, as previously described, monthly, two-zone transit passes for two years for 100% of the LEMR units; and
- e) Two on-site parking spaces dedicated for car-share use and equipped with electric vehicle charging infrastructure (located at the parkade entrance for 24/7 public access), together with two car-share vehicles and a 3-year contract with a car-share operator.

2. Parks

The proposed City-owned linear park along the north side of the subject site will be 7 m (23 ft.) wide and approximately 859 m² (9,248.4 ft²) in size. In addition, prior to rezoning adoption, a statutory right-of-way will be registered on the subject site (along the south side of the park) to secure on-site publicly-accessible open space for expanded plaza, walkway, and landscape purposes. A conceptual design has been prepared for the linear park and related publicly-accessible areas and is attached to the Rezoning Considerations (Attachment 10). Prior to rezoning adoption, the developer shall enter into a Servicing Agreement for the design and construction of the park and related improvements, at the developer's sole cost, to the satisfaction of the Director, Parks Services and Director of Development. (Development Cost Charge (DCC) credits shall not apply.)

3. Public Art

The CCAP encourages voluntary developer contributions towards public art and identifies the Lansdowne Road corridor as an "art walk". Prior to rezoning adoption, the developer proposes to make a voluntary cash-in-lieu contribution towards public art, based on the Council-approved developer contribution rates and the site's maximum buildable floor area

(excluding affordable housing and non-profit social services space). The developer's proposal to voluntarily contribute \$319,771 complies with City Policy and may be applied, at Council's direction, to Public Art and/or related features along the Lansdowne "art walk" or elsewhere in the City Centre.

4. Site Servicing and Frontage Improvements

City policy requires that the developer is responsible for the design and construction of road, water, storm sewer, and sanitary sewer upgrades, together with related public and private utility improvements, arising as a result of the proposed development, as determined to the satisfaction of the City. Prior to rezoning adoption, the developer will enter into standard City Servicing Agreements, secured with a letters of credit, for the design and construction of all required off-site rezoning works, as set out in the attached Rezoning Considerations (Attachment 10). Development Cost Charge (DCC) credits will be applicable to works identified on the City's DCC Program.

5. Tree Retention

No bylaw-size trees are currently located on the subject site.

The conversion of the existing lane along the site's east side to a new local road requires the construction, to City standards, of a new intersection and left-turn lanes on Lansdowne Road. This will require the removal of an existing landscaped median, including the relocation of one small City tree (through a City Servicing Agreement) and the removal of seven others. Prior to rezoning adoption, the developer will contribute \$9,100 to the City's Tree Compensation Fund (i.e. \$1,300 per tree) for Richmond to plant trees elsewhere in the city.

6. Sustainability

The CCAP encourages the coordination of private and City development objectives with the aim of implementing environmentally responsible buildings, services, and related features. Staff support the developer's proposal, which is consistent with City policy and includes:

- a) District Energy Utility (DEU): A City Centre DEU service area bylaw for the subject site will be presented for consideration by Council under a separate report. Prior to rezoning adoption, a standard DEU covenant will be registered on title requiring the developer to design and construct a low carbon energy plant, at the developer's sole cost, and transfer it to the City, together with compatible building and mechanical systems, to facilitate the development's connection to a City DEU.
- b) BC Energy Step Code: As per City policy, as a high-rise building containing a low carbon energy plant, the subject development will comply with "Step 2". Prior to rezoning adoption, the developer will be required to conduct energy modelling and provide a statement to the City confirming that the proposed design can meet all applicable Step Code requirements.
- c) Electric Vehicle (EV) Measures: As required by the Zoning Bylaw, EV charging facilities will be installed to serve 100% of residential parking spaces (240V) and 10% of "Class 1" bike storage spaces (120V). In addition, two dedicated car-share parking spaces will be equipped with EV charging (240V) infrastructure.

7. Community Planning

The CCAP requires that rezoning applications contribute towards future City community planning studies, based on the Council-approved developer contribution rate and the site's maximum buildable floor area (excluding affordable housing and non-profit social services use). The developer's proposal to voluntarily contribute \$127,574 complies with City policy.

8. Phasing

Prior to rezoning adoption, a legal agreement will be registered on title to require that the:

- a) Non-profit social service replacement space and related features (e.g., parking) are granted occupancy prior to occupancy of any other use on the site: and
- b) Affordable rental housing building, including all 88 LEMR units and related features (e.g., amenity space and parking), is granted occupancy prior to occupancy of any of the development's market strata units.

9. Built Form

Prior to rezoning adoption, a legal agreement shall be registered on title requiring that the project is designed and constructed in a manner that mitigates potential development impacts including, among other things, view obstruction, noise or nuisance associated with retail and restaurant activities, shading, reduced privacy, and related issues that may arise as a result of development on the lands and/or future development on surrounding properties.

Development Permit (DP) approval, to the satisfaction of the Director of Development, will be required prior to rezoning adoption. At DP stage, additional design development is encouraged with respect to, among other things, tower design, office streetscape, park interface, affordable rental housing building, non-profit social services space, residential amenity space, accessibility, sustainability measures, emergency services requirements, crime prevention measures, loading, and waste management.

Existing Legal Encumbrances

Development of the subject site is not encumbered by existing legal agreements on title.

Financial Impact or Economic Impact

The proposed changes to the subject development will have no financial impact on the City. As described in the December 2, 2019 report from the Director of Development, through the proposed development, the City will take ownership of developer-contributed assets (e.g., road works, waterworks, storm sewers, sanitary sewers, streetlights, street trees, and traffic signals). The anticipated operating budget impact for the ongoing maintenance of these assets is \$11,000. This will be considered as part of the 2021 Operating Budget.

Conclusion

IBI Group Architects has applied to the City of Richmond for permission to rezone lands at 5740, 5760, and 5800 Minoru Boulevard from “Industrial Retail (IR1)” to “School and Institution Use (SI)” and “High Density Mixed Use and Affordable Rental Housing (ZMU46) - Lansdowne Village (City Centre)”, to permit the construction of a high-rise, high density, mixed use development. In response to the referral from Planning Committee on December 17, 2019, the development proposal has been revised to include a non-profit housing operator (S.U.C.C.E.S.S.), relocation assistance to the site’s non-residential tenants, and 41 additional low-end-of-market-rental (LEMR) units comprising 2,997 m² (32,262 ft²) of additional habitable unit area. To facilitate the additional affordable housing, it is proposed that: (i) the City Centre Area Plan is amended to permit additional density for rezoning applications that exceed Affordable Housing Strategy requirements; and (ii) the site is rezoned to a new site-specific zone (ZMU46) that includes an additional 0.2 FAR affordable housing bonus and secures the 88 proposed LEMR units with residential rental tenure zoning. Prior to adoption of the rezoning bylaw, legal agreements will be registered on title to ensure that that 88-unit affordable rental housing building is complete, to the City’s satisfaction, before occupancy of any market strata units on the site.

It is recommended that Official Community Plan Bylaw 7100, Amendment Bylaw 10136 and Bylaw 10137 and Richmond Zoning Bylaw 8500, Amendment Bylaw 10138 be introduced and given first reading.



Suzanne Carter-Huffman
Senior Planner/Urban Design
(604-276-4228)

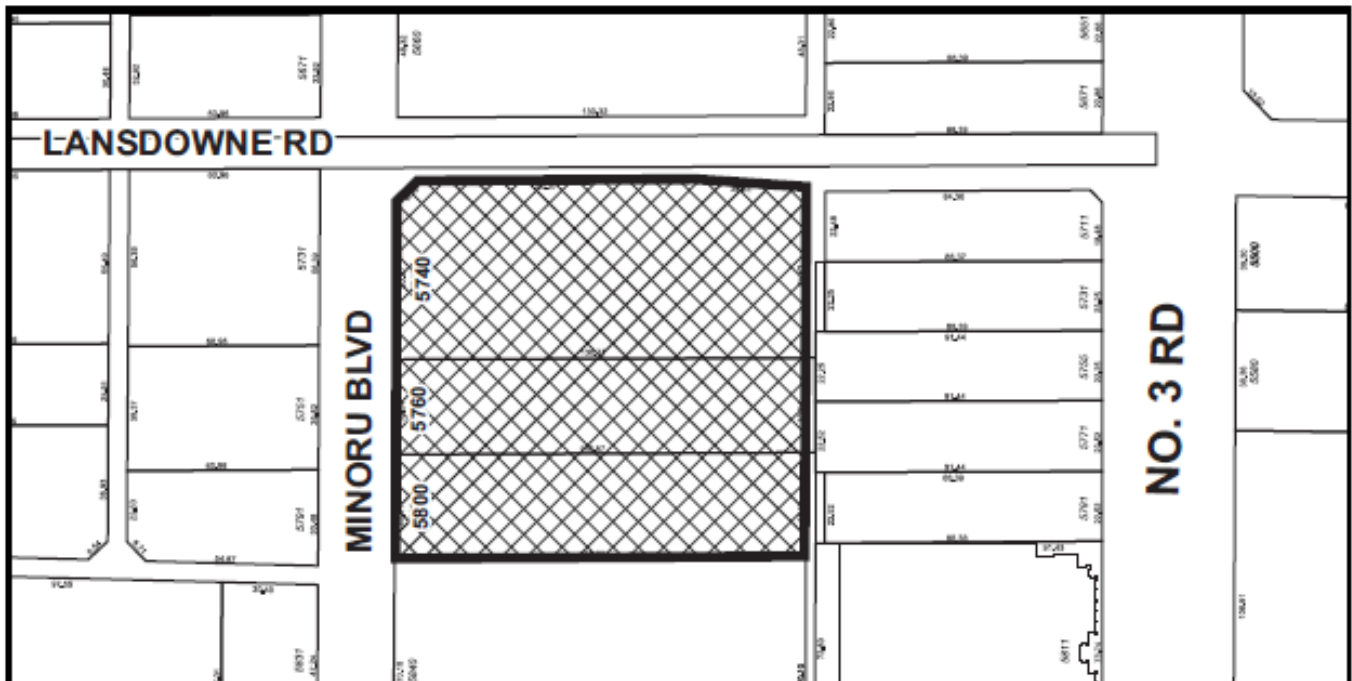
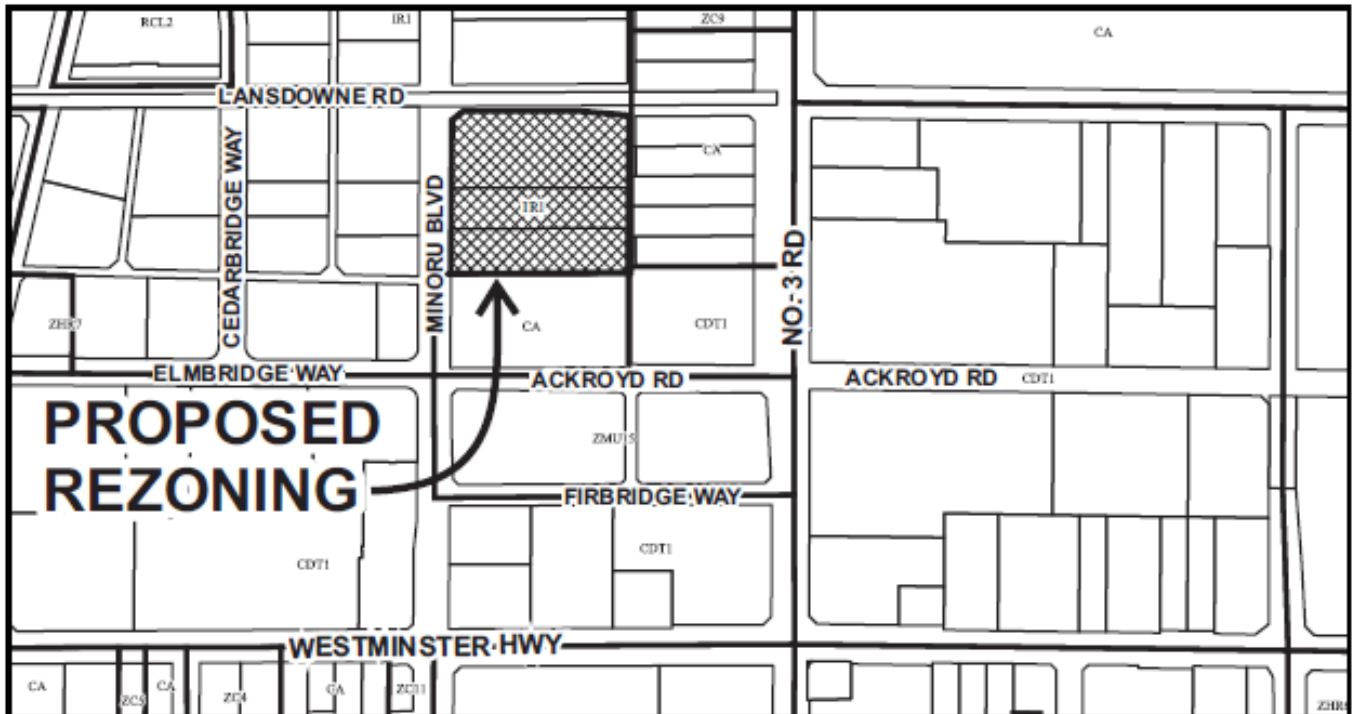
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Attachments:

1. Location Map
2. Aerial Photograph
3. Existing City Centre Area Plan – Specific Land Use Map: Lansdowne Village
4. Development Application Data Sheet
5. Letter – RSCL, October 31, 2019
6. Letter – CMWAC, November 5, 2019
7. Letter – Robert Grosz, July 15, 2019
8. Email – Robert Grosz, June 8, 2020
9. Conceptual Development Plans
10. Rezoning Considerations



City of Richmond



RZ 18-807640

Original Date: 02/28/18

Revision Date:

Note: Dimensions are in METRES



City of
Richmond



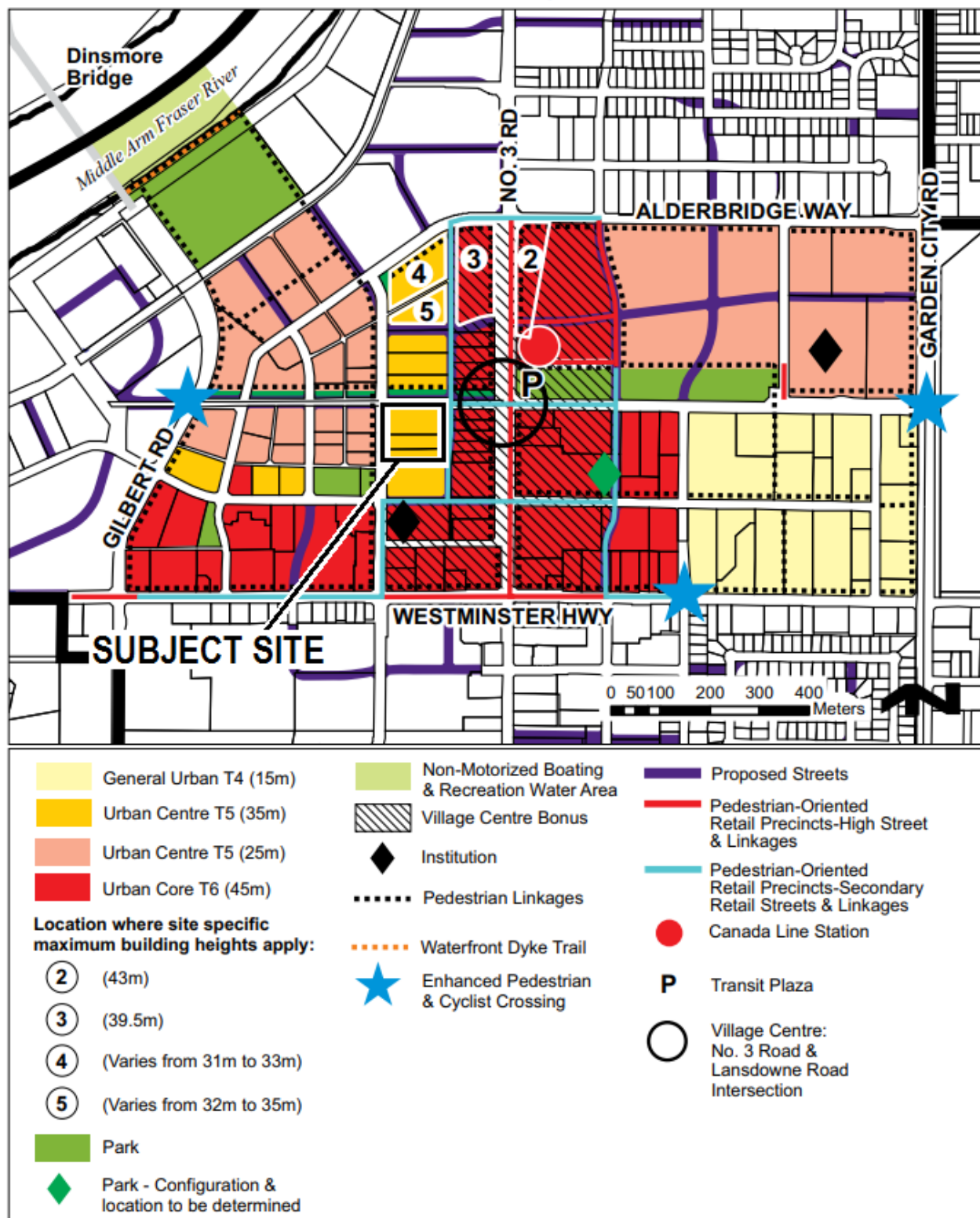
RZ 18-807640

Original Date: 02/28/18

Revision Date:

Note: Dimensions are in METRES

Specific Land Use Map: Lansdowne Village (2031)



Maximum building height may be subject to established Airport Zoning Regulations in certain areas.



Development Application Data Sheet

Development Applications Department

RZ 18-807640

Address: 5740, 5760, and 5800 Minoru Boulevard

Applicant: IBI Group Architects

Planning Area(s): City Centre (Lansdowne Village)

	Existing	Proposed		
Owner	<ul style="list-style-type: none">Minoru View Homes Ltd.	<ul style="list-style-type: none">No change		
Site Size	<ul style="list-style-type: none">15,604.2 m² (167,962.2 ft²)	<ul style="list-style-type: none">Road & Park Contributions:<ul style="list-style-type: none">Density-Eligible Park: 859.2 m² (9,248.4 ft²)Density-Eligible Road: 1,210.3 m² (13,027.6 ft²)Other Road: 569.9 m² (6,134.4 ft²)Net Site: 12,964.8 m² (139,551.9 ft²)		
Site for Density Calculations	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">15,034.3 m² (161,827.9 ft²)		
Land Uses	<ul style="list-style-type: none">Commercial, recreation & light industry	<ul style="list-style-type: none">Office, pedestrian-oriented commercial & multi-family residential		
OCP Designation	<ul style="list-style-type: none">Mixed Use	<ul style="list-style-type: none">Mixed Use		
City Centre Area Plan (CCAP) Designation	<ul style="list-style-type: none">Urban Centre T5 (35 m) (2 FAR)Pedestrian-Oriented Retail PrecinctProposed Streets	<ul style="list-style-type: none">As per the existing CCAP, PLUS:<ul style="list-style-type: none">Village Centre Bonus (office only) (1.0 FAR)ParkPedestrian-Oriented Retail Precinct – High Street & Linkages		
Aircraft Noise Sensitive Development	<ul style="list-style-type: none">Moderate Aircraft Noise (Area 3) – All aircraft noise sensitive development (ANSD) uses may be considered	<ul style="list-style-type: none">As per OCP Policy: Registration of the City's standard restrictive ANSD covenant; preparation of an acoustic report; noise mitigation measures; & air conditioning capability (e.g., pre-ducted)		
Zoning	<ul style="list-style-type: none">Industrial Retail (IR1)	<ul style="list-style-type: none">Development: High Density Mixed Use & Affordable Rental Housing (ZMU46), incl. Residential Rental Tenure securing 88 affordable unitsPark: School & Institution Use (SI)		
Number of Units & Unit Mix (Target)	<ul style="list-style-type: none">N/A	Housing Types	Studio + 1-BR	2-BR + 3-BR
		Market Units (341)	5 + 150 = 155 (45%)	167 + 19 = 186 (55%)
		Affordable H. (88)	15 + 26 = 41 (47%)	41 + 6 = 47 (53%)
		Total (429 Units)	20 + 176 = 196 (46%)	208 + 25 = 233 (54%)
Basic Universal Housing (BUH)	<ul style="list-style-type: none">N/A	<ul style="list-style-type: none">27% of total units (115 units), including:<ul style="list-style-type: none">8% Market Strata Units (27 units)100% Affordable Housing Units (88 units)		

	ZMU46 Bylaw Requirement	Proposed	Variance
Floor Area Ratio (FAR)	<ul style="list-style-type: none"> Max. 3.2 FAR, including: <ul style="list-style-type: none"> Base (including AH): 2.0 FAR Village Centre Bonus: 1.0 FAR (office only) Affordable Rental Bonus: 0.2 FAR Community amenity space: 0.1 FAR max. 	<ul style="list-style-type: none"> Max. 3.2 FAR, including: <ul style="list-style-type: none"> Base (including AH): 2.0 FAR Village Centre Bonus: 1.0 FAR (office only) Affordable Rental Bonus: 0.2 FAR Community amenity space: 0.1 FAR max. 	None permitted

	ZMU46 Bylaw Requirement	Proposed	Variance
Buildable Floor Area*	<ul style="list-style-type: none"> Max. 48,109.8 m² (517,849.2 ft²), including: <ul style="list-style-type: none"> Base (incl. AH): 30,068.6 m² (323,655.7 ft²) Village Centre Bonus: 15,034.3 m² (161,827.9 ft²) (office only) Affordable Rental Bonus: 3,006.9 m² (32,365.6 ft²) Community amenity space: 1,503.4 m² (16,182.8 ft²) max. (i.e. for non-profit social service space secured via a legal agreement) 	<ul style="list-style-type: none"> Max. 48,109.8 m² (517,849.2 ft²), including: <ul style="list-style-type: none"> Base: 30,068.6 m² (323,655.7 ft²), including 2,774.1 m² (29,860.3 ft²) habitable affordable housing units (i.e. 10% of total residential floor area, as per Richmond's Affordable Housing Strategy) Village Centre Bonus: 15,034.3 m² (161,827.9 ft²) (office only) Affordable Rental Bonus: 3,006.9 m² (32,365.6 ft²) Non-Profit Social Services (Replacement) Space: 425.7 m² (4,582.0 ft²) GLA plus common/circulation space as required 	None permitted
Buildable Floor Area – Total Non-Residential	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> 17,361.9 m² (186,881.9 ft²), including: <ul style="list-style-type: none"> Office: 15,034.3 m² (161,827.9 ft²) Retail: 2,327.6 m² (25,054.0 ft²) Non-Profit Social Services (Replacement) Space: 425.7 m² (4,582.0 ft²) GLA plus common/circulation space as required 	None
Buildable Floor Area – Total Residential	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> 30,747.9 m² (330,967.6 ft²), including: <ul style="list-style-type: none"> Affordable Rental Housing Building: 6,430.5 m² (69,217.0 ft²) Market Strata: 24,317.4 m² (261,750.6 ft²) 	None
Buildable Floor Area – Affordable Rental Housing Building (Non-Profit Operator)	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Stand-alone building comprising at least 6,430.5 m² (69,217.0 ft²)* including (estimate): <ul style="list-style-type: none"> Habitable Units: 5,771.3 m² (62,122.0 ft²) Ancillary/circulation*: 659.2 m² (7,095.0 ft²) <p>* Excludes indoor amenity space & typical FAR Zoning Bylaw exemptions</p>	None
Lot Coverage	<ul style="list-style-type: none"> For buildings & landscaped roofs over parking: Max. 90% 	<ul style="list-style-type: none"> 90% 	None
Lot Size	<ul style="list-style-type: none"> Area: 4,000.0 m² (43,055.6 ft²) Width: 45.0 m (147.6 ft.) Depth: 40.0 m (131.2 ft.) 	<ul style="list-style-type: none"> Area: 12,964.8 m² (139,551.9 ft²) Width: 126.3 m (414.4 ft.) Depth: 118.5 m (388.8 ft.) 	None
Setbacks (Min.)	<ul style="list-style-type: none"> Front & Exterior Side Yards: 6.0 m (19.7 ft.), but may be reduced to 3.0 m (9.8 ft.) with a proper interface, as specified in an approved Development Permit Interior Side Yards: Nil 	<ul style="list-style-type: none"> Front & Exterior Side Yards: 3.0 m (9.8 ft.) Interior Side Yards: Nil 	None
Height	<ul style="list-style-type: none"> 35 m (114.8 ft.) to finished grade, but may be increased to 47 m GSC if a proper interface is provided with adjacent buildings and park, as specified in an approved Development Permit 	<ul style="list-style-type: none"> Office tower: 47 m GSC Residential (measured to finished grade): <ul style="list-style-type: none"> Tower A: 35.0 m (114.8 ft.) Tower B: 38.6 m (126.6 ft.) Tower C: 41.5 m (136.2 ft.) 	None
Parking – TOTAL	<ul style="list-style-type: none"> Total: 632 spaces, including - <ul style="list-style-type: none"> Non-residential: 255 Residents: 375 Car-Share: 2 	<ul style="list-style-type: none"> Total: 632 spaces, including - <ul style="list-style-type: none"> Non-residential: 255 Residents: 375 Car-Share: 2 	None
Parking – Non-Residential (Office & retail estimates based on 95% GLA)	<ul style="list-style-type: none"> Total: 255 spaces (estimate), including - <ul style="list-style-type: none"> Non-profit social service use @ 3.75/100 m² GLA – 10% = 15 Office @ 1.275/100 m² GLA – 10% = 165 Retail @ 3.75/100 m² GLA – 10% = 75 	<ul style="list-style-type: none"> Total: 255 spaces (estimate), including - <ul style="list-style-type: none"> 50% Public Parking: 127 secured by legal agreement for general public use 50% Assignable Parking: 128, including 23 spaces secured by legal agreement for the exclusive use of the Non-Profit Social Service tenants & their guests 	None

	ZMU46 Bylaw Requirement	Proposed	Variance
Parking – Residential	<ul style="list-style-type: none"> Total: 375 spaces, including - - Market Strata @ 1/unit – 10% = 307 - Affordable units @ 0.9/unit – 25% = 60 - Visitors: 8 	<ul style="list-style-type: none"> Total: 375 spaces, including - - Market Strata: 307 - Affordable Rental Housing Building: 60 - Visitors: 8 (2 spaces for the exclusive use of each residential building) 	None
Parking – Car-Share	<ul style="list-style-type: none"> 2 spaces secured by legal agreement for exclusive car-share use 	<ul style="list-style-type: none"> 2 spaces secured by legal agreement for exclusive car-share use 	None
Class 1 Bike Storage (Office & retail estimates based on 95% GLA)	<ul style="list-style-type: none"> Total: 776 spaces (estimate), including - - Non-Residential @ 0.27/100 m² GLA: 46 - Residents @ 1.7/unit: 730 including 10% over-size lockers 	<ul style="list-style-type: none"> Total: 776 spaces (estimate), including - - Non-Residential: 46 - Residents: 730 incl. 10% over-size lockers 	None
Class 2 Bike Storage (Office & retail estimates based on 95% GLA)	<ul style="list-style-type: none"> Total: 155 (estimate), including: - Non-Residential @ 0.4/100 m² GLA: 69 - Residents @ 0.2/unit = 86 	<ul style="list-style-type: none"> Total: 155 (estimate), located outdoors around the perimeter of the site for general public use 	None
Residential Amenity Space – Indoor	<ul style="list-style-type: none"> Total: Min. 877.0 m² (9,439.9 ft²), including: - Market Strata @ 2 m²/unit = 682.0 m² (7,341.0 ft²) - Affordable units @ 2 m²/unit: 176 m² (1,894.4 ft²) - Rental Building NP Operator: 19.0 m² (204.5 ft²) for administration/programs 	<ul style="list-style-type: none"> Total: 1,041.7 m² (11,213.0 ft²), including:: - Exclusive use: i) Market Strata: 466.3 m² (5,019.0 ft²) ii) Rental Building: 110.9 m² (1,194.0 ft²) - Shared use: 464.5 m² (5,000 ft²) 	None
Amenity Space – Outdoor	<ul style="list-style-type: none"> Total: Min. 3,870.5 m² (41,661.7 ft²), including: - Residential amenity space @ 6.0 m²/unit incl. 50% children's play (to 600 m²): 2,574.0 m² (27,706.3 ft²) - Additional CCAP landscape space @ 10% of net site area: 1,296.5 m² (13,955.4 ft²) 	<ul style="list-style-type: none"> Total: 4,032.9 m² (43,410.0 ft²) 	None

Other: Tree replacement compensation is required for the removal of City trees within Lansdowne Road. (There are no existing bylaw-size trees on the subject site.)

* Preliminary estimate (exclusive of parking garage). The exact building size shall be determined through Zoning Bylaw compliance review at Building Permit stage.



**Richmond
Society for
Community
Living**

*Seeing beyond disability...
... to ability*

October 31, 2019

City of Richmond
Attention: Lesley Sherlock, Social Planner
6911 No. 3 Road
Richmond BC V6Y 2C1

Re: Thind Properties Development 5740, 5760, 5800 Minoru Blvd. Richmond

Dear Lesley:

I am writing to you to communicate the Richmond Society for Community Living's (RSCL) opinion regarding the proposal to build a replacement program space for one of our Community Inclusion Programs (i.e. Quantum) in the Thind Properties Development at the corner of Minoru Boulevard and Lansdowne. As you are aware, RSCL had three separate programs located in the buildings on this property. These three programs serve over 70 people with an intellectual disability five days a week. The Thind Properties Development proposal will accommodate one of our three programs. As a result of the development application for this property, we have already relocated the other two programs. These programs were moved in September 2019 to Ironwood (outside City Centre) due to the cost and availability of space in City Centre. The cost of renovating and moving the two programs to the new location was substantial and will impact service.

With respect to the proposal to build a program space for one of our programs in the new development, we are pleased that an option has been developed that recognizes the impact and displacement of our program in City Centre. In the absence of a clear City policy to address this growing problem, we are pleased that the developer has agreed to accommodate us in the new development. Moreover, the agreement to lease the space for 50% of current market rates (not including operating costs) will allow us to have a presence in City Centre in the future.

Although the proposal is a positive development, it will not address all our challenges. Specifically;

- We have already incurred the costs of relocating two other programs from this location to Ironwood;
- We will have to find and relocate the third program to a temporary location for at least three years and incur the cost of this relocation;
- The proposed space does not include Tenant Improvement (TI) costs and therefore, we will have to incur the costs of all the leasehold improvements to the space once it is built;
- The disruption and impact on the people in receipt of service and their families will be significant.

In summary, we applaud the efforts of City staff and the developer to try and accommodate us in the new development. However, the proposal will not address all our concerns related to the development of this property. Furthermore, we believe a comprehensive strategy and City policy is required to address the displacement of social agencies and services in the City Centre as a result of development.

Sincerely,

Janice Barr
Executive Director

CC: Melanie Amis, Chair, RSCL Board of Director

#170 - 7000 Minoru Blvd, Richmond, B.C. V6Y 3Z5
Office: 604-279-7040 | Fax: 604-279-7048 | Email: info@rscl.org | www.rscl.org



Community Mental Wellness Association of Canada

加拿大社區情緒健康協會

#250-5726 Minoru Blvd., Richmond, BC, V6X 2A9

Tel: (604) 273-1791

Fax: (604) 273-1751

E-mail: info@cmwac.ca

www.cmwac.ca

November 5th, 2019

Suzanne Carter-Huffman
Senior Planner/Urban Design
Planning & Development
City of Richmond
6911 NO. 3 Road
Richmond, BC
V6Y 2C1

Dear Suzanne,

Thank you for your recent plans for non-profit space in the new building and for your inclusion of CMWAC in your plan.

After meetings with you we are very appreciative that our needs and concerns have been mostly addressed in your plan, which you have tried to tailor to our requirements as follows:

1. Administration office
2. Consultation room
3. Conference room / multi-purpose room where we can hold health conferences, workshops, meetings and other activities
5. Space: At least 1,500 sq. ft.

The maximum rent we can currently afford for the space is \$1500.00.

To ensure a smooth transition we need an affordable temporary accommodation for the Association before the building is demolished.

Lastly, we would like to thank you again for considering our needs in your development plan. and it is hoped that the above could be included.

Sincerely yours,

Ahlay Chin, Executive Director/Founder
Community Mental Wellness Association of Canada
Cc: Lesley Sherlock
CMWAC Board

ROBERT W.G. GROSZ, J.D.

1012-13325 102A Avenue

Surrey, BC Canada V3T 0J5

rob grosz@yahoo.com | rob grosz@gmail.com | robert grosz@hotmail.com

604-500-0794

Monday, July 15, 2019

Ms. Suzanne Carter-Huffman

Senior Planner

City of Richmond

6911 No. 3 Road

Richmond, BC V6Y 2C1

scarter@richmond.ca

Dear Ms. Carter-Huffmann,

RE: 5740, 5760 & 5800 Minoru Blvd. Richmond, Rezoning Application 18-807640

Regarding the above-noted rezoning application and further to our conversation this morning in which I asked to be added to the roster for notice of the forthcoming Public Hearing and Planning Committee Hearing, I hereby put the City of Richmond on notice of my intention to make a submission not regarding the merits of the application which I believe admirably speaks for itself based on the documents in the public file that I have reviewed, but rather on my request that the financial interests of all persons with rights to the three parcels at issue be adequately protected.

I am the former designated paralegal of Ms. Hong Chen *aka* Hong Guo, the widely reported Richmond lawyer who was intimately involved in the assembly of the three parcels beginning in 2010 or thereabouts and through their purported sale to Minoru View Homes Ltd., which is now on title as owner. However the rezoning applicant was Vancouver Soho Holding Ltd. which purportedly sold the parcels. Ms. Guo (Chen)'s Guo Law Corporation suffered the theft of over \$7.5 million from its clients' trust account in early 2016 before I began working for it. The theft caused it to become insolvent, so it is under bankruptcy protection (SCBC Vancouver B170021). I am a creditor of it long with others whose existing or anticipated claims are about \$7.5 million. Without providing particulars, suffice it to say I think the theft proximately related to the parcels. Accordingly, all the creditors presumably have an equitable if not legal interest in the parcels, despite the fact that there has not yet been legal notice of those rights filed on the respective titles.

However there were Certificates of Pending Litigation filed on all three parcels on June 22, 2016 which were briefly lifted by court order on October 3, 2017, refiled on November 17, 2017, and released on April 3, 2018. Copies of the Certificates, Order, and Charge Release are attached. These Certificates were issued pursuant to claims of shareholder oppression and fraud in the civil matter of *Kai Ming Yu et al v. Zhong Ping Xu et al* (SCBC Vancouver S165682/S187297). Moreover, on March 14, 2019 a court order was made authorizing distribution of \$10 million from the trust account of Mr. Marvin Lithwick, lawyer, purportedly holding the proceeds of the sale of the parcels (from Vancouver Soho to Minoru View Homes) to the petitioners/plaintiffs and respondents/defendants in the amount of \$5 million to each side. A copy of the order is attached. Also attached is a copy of the Form B regarding a mortgage of up to \$42.7 million on the parcels.

ROBERT W.G. GROSZ, J.D.

Ms. Suzanne Carter-Huffman

City of Richmond

RE: 5740, 5760 & 5800 Minoru Blvd. Richmond, Rezoning Application 18-807640

Monday, July 15, 2019

On July 5, 2019 I requested from the lawyer for Minoru View Homes, Mr. Aneez N. Devji, proof that the full consideration of \$59.8 million was paid as reflected by the attached Title Searches. However Mr. Devji declined to reply to my letter. Therefore on July 12, 2019 I briefly met with Mr. Jeffrey Lowe, QC, Managing Partner of Richards Buell Sutton LLP, and Mr. Devji, at which time Mr. Lowe advised me, *inter alia*, that his firm was acting in accordance with instructions from its clients and would not respond to any more communications from me, but that his firm has not participated in, aided, or abetted any fraudulent activities or transactions in its 144 year history and it is not going to do so in the future. The latter was comforting to hear. However the issue of proof that the full consideration was paid is still very alive. The lawyer who released the Certificates, Mr. Jeffrey Wittmann, of Wiebe Wittmann El-Khatib LLP acting on behalf of the petitioners/plaintiffs, was replaced by Mr. Glen Forrester of Forrester & Company. Furthermore, its clients have engaged a forensic accountant who is taking instructions from Mr. Forrester, and the issue of whether the full consideration was paid is being investigated. But I think it was not.

I think that the purported sale was actually a non arms-length transfer whereby Vancouver Soho and Minoru View Homes obtained mortgage financing (probably from China) that is managed by Trez Capital Limited Partnership, and from this the previous mortgages were retired, overdue city taxes and legal fees paid, \$10 million was distributed under authority of the court as noted above, and the remainder is being used to fund the rezoning application costs of the IBI Group. If this is correct, but I hasten to note that I have no proof that it is, and the full consideration was not paid, then transfer of title to the parcels may have violated the Fraudulent Conveyance Act.

I intend to promptly apply for leave to bring a derivative action against the Guo Law Corporation and be appointed as its Receiver, dismiss the Trustee appointed by the bankruptcy court, and take such steps as the court approves to defend claims against it, pursue claims by it, liquidate real properties hypothecated for it, and take such steps as necessary to make whole all of its creditors.

In conclusion, I support the rezoning application and wish to see it gain prompt approval, but I first request the City of Richmond take such steps as necessary to obtain proof from the lawyers both for Vancouver Soho and Minoru View Homes that the full \$59.8 million consideration was paid and that the remainder of the \$58.8 million in sale proceeds is held in trust by Mr. Lithwick. I further request that the findings of the City of Richmond in this regard be publicly disclosed.

Yours truly,



Robert W.G. Grosz, J.D.

Attachments: as stated above.

-----Original Message-----

From: Robert Grosz <rob grosz@yahoo.com>

Sent: Monday, 8 June 2020 11:47 AM

To: CityClerk <CityClerk@richmond.ca>

Cc: MayorandCouncillors <MayorandCouncillors@richmond.ca>; Craig, Wayne <WCraig@richmond.ca>;

Erceg, Joe <JErceg@richmond.ca>; Carter-Huffman, Suzanne <SCarter@richmond.ca>; Capuccinello

Iraci, Tony <ACapuccinelloiraci@richmond.ca>

Subject: Rezoning Application RE: 5740-5800 Minoru Boulevard

Ms. Claudia Jesson

Director

City Clerk's Office

City of Richmond

Dear Ms. Jesson,

I was advised this morning by Ms. Suzanne Carter-Huffman, Senior Planner, that the Rezoning Application regarding 5740-5800 Minoru Boulevard may be referred to the General Purposes Committee of the City Council for a hearing in July 2020.

As you know I am opposed to the Rezoning Application until the issue of the equitable ownership of the property(ies) can be determined by the Federal Court of Canada at Vancouver when it resumes public operations and my Mareva Injunction motion to determine, inter alia, the equitable ownership issue can be heard by the court.

Therefore please advise me: (1) when will the Rezoning Application be heard by the General Purposes Committee; (2) how can I submit materials in opposition to the Rezoning Application; and (3) how can I attend the General Purposes Committee meeting by video or telephonically as I am at increased risk to COVID-19 (e.g. advanced age and immunocompromised) and am self-separating based on my physician's medical advice.

I look forward to your prompt reply. Many thanks.

Rob

Robert W.G. Grosz, J.D.

1012-13325 102A Avenue

Surrey, BC Canada V3T 0J5

Cel: 604-500-0794

Attachment 9
Conceptual Development Plans



Thind
PROPERTIES



IBI GROUP
ARCHITECTS (CANADA) INC.
1000-1380 Sheppard Avenue East
Toronto, ON M2K 1K1 Canada
Tel: 416-461-4700 Fax: 416-461-4680
www.ibigroup.com

5740, 5760, 5800 Minoru Blvd., Richmond
Richmond, B.C., Canada Project Number: 172850 Issue Date: JUNE 12, 2020

3D VISUALIZATION 15
■ MINORU / LANSLOWNE CORNER



Thind
PROPERTIES



IBI GROUP
ARCHITECTS (CANADA) INC.
1000-1380 Sheppard Avenue East
Toronto, ON M2K 1K1 Canada
Tel: 416-461-4700 Fax: 416-461-4680
www.ibigroup.com

5740, 5760, 5800 Minoru Blvd., Richmond
Richmond, B.C., Canada Project Number: 172850 Issue Date: JUNE 12, 2020

3D VISUALIZATION 16
■ AERIAL NORTH WEST

Document Number: 0401556
6401336

Version: 3A

CNCL - 288



Thind
PROPERTIES

IBI
BI GROUP
ARCHITECTS (CANADA) INC.
100 - 1280 Papez Avenue, Suite 100
Vancouver, BC V6E 4P1 Canada
Tel: 604 683 6787 Fax: 604 683 6442
ibi@ibi.ca

5740, 5760, 5800 Minoru Blvd., Richmond
Richmond, B.C. Canada Project Number: 170000 Issue Date: JUNE 12, 2020

3D VISUALIZATION 17
- AERIAL SOUTH WEST

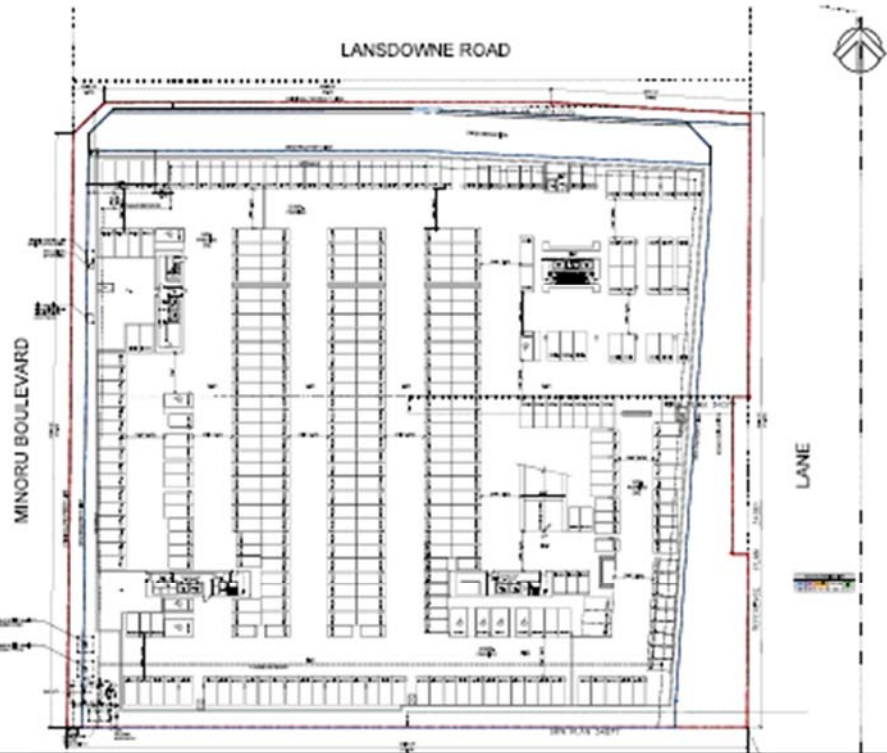


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PROPERTIES

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5740, 5760, 5800 Minoru Blvd., Richmond
Richmond, B.C. Canada Project Number: 170000 Issue Date: JUNE 12, 2020

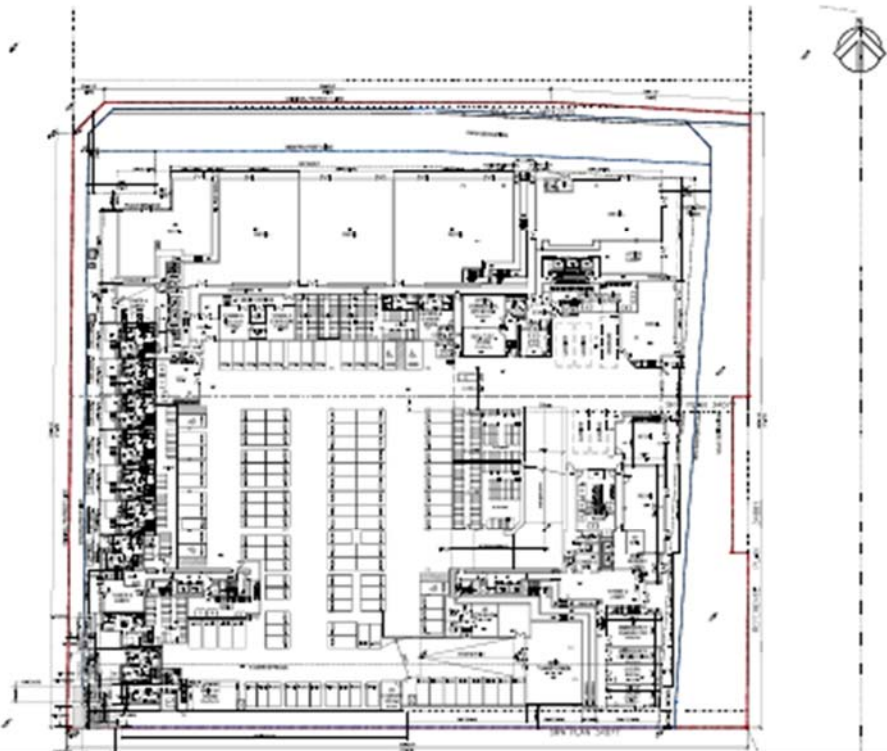
3D VISUALIZATION 25
- EAST LANE VIEW



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Richmond, B.C., Canada Project Number: 172000 Issue Date: JUNE 12, 2020

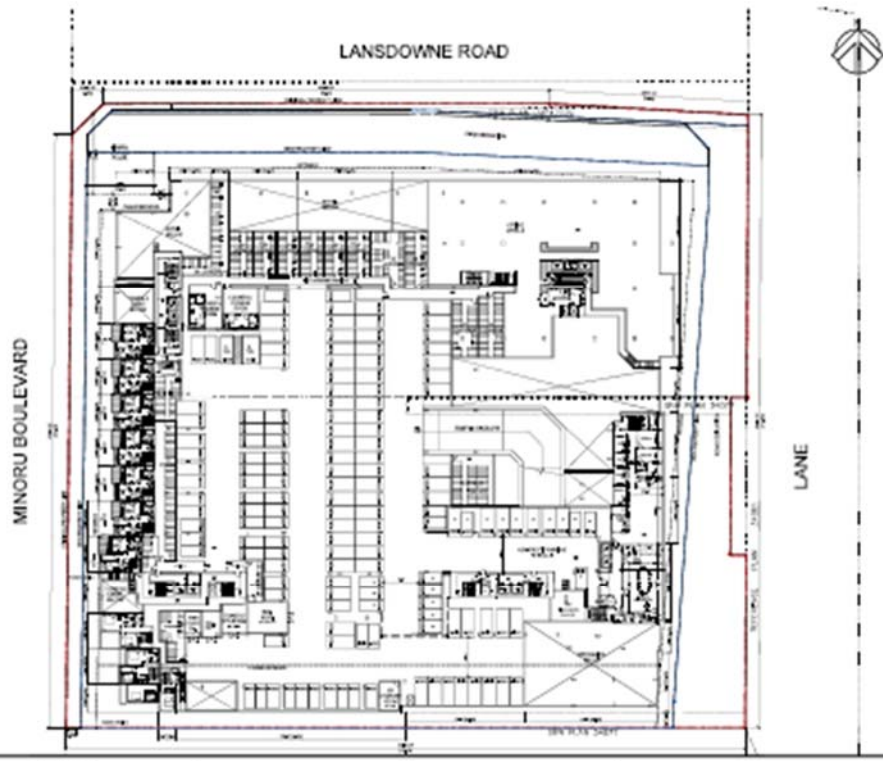
P1 PARKING PLAN 24



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Richmond, B.C., Canada Project Number: 172000 Issue Date: JUNE 12, 2020

LEVEL 1 FLOOR PLAN 25



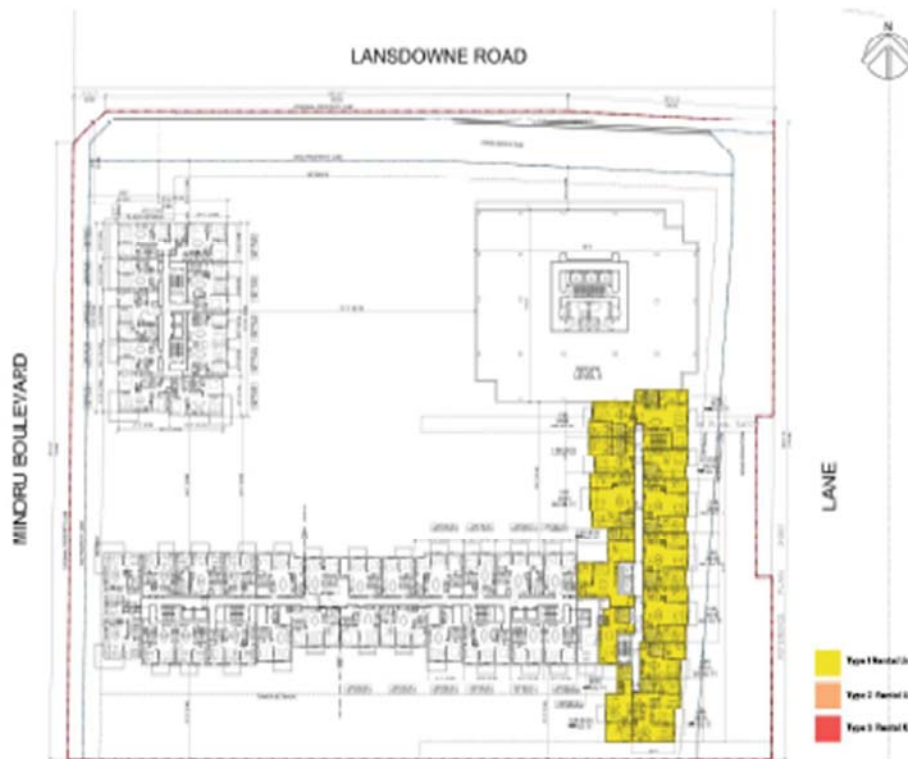


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5740, 5760, 5800 Minoru Blvd., Richmond

Richmond, B.C., Canada Project Number: 17-2005 Issue Date: JUNE 12, 2020

- Type 1 Rental Units
- Type 2 Rental Units
- Type 3 Rental Units

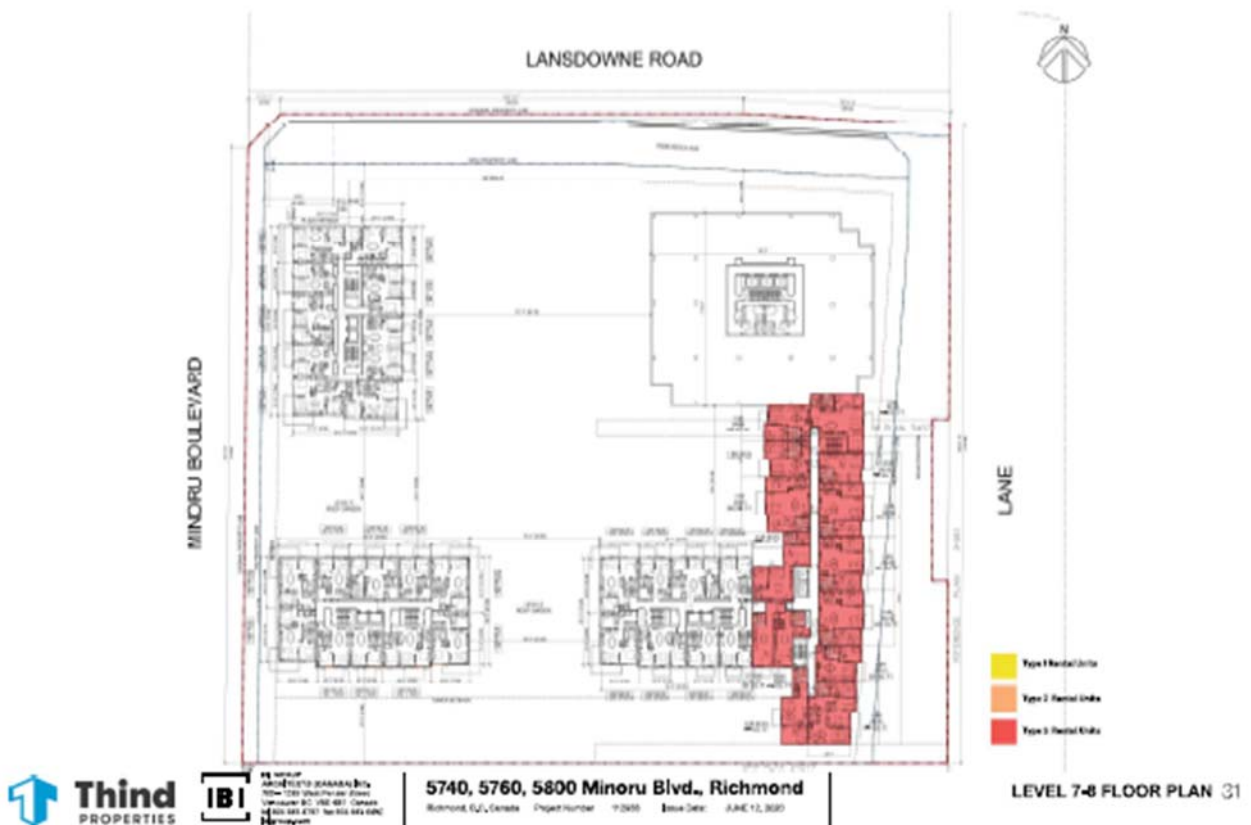
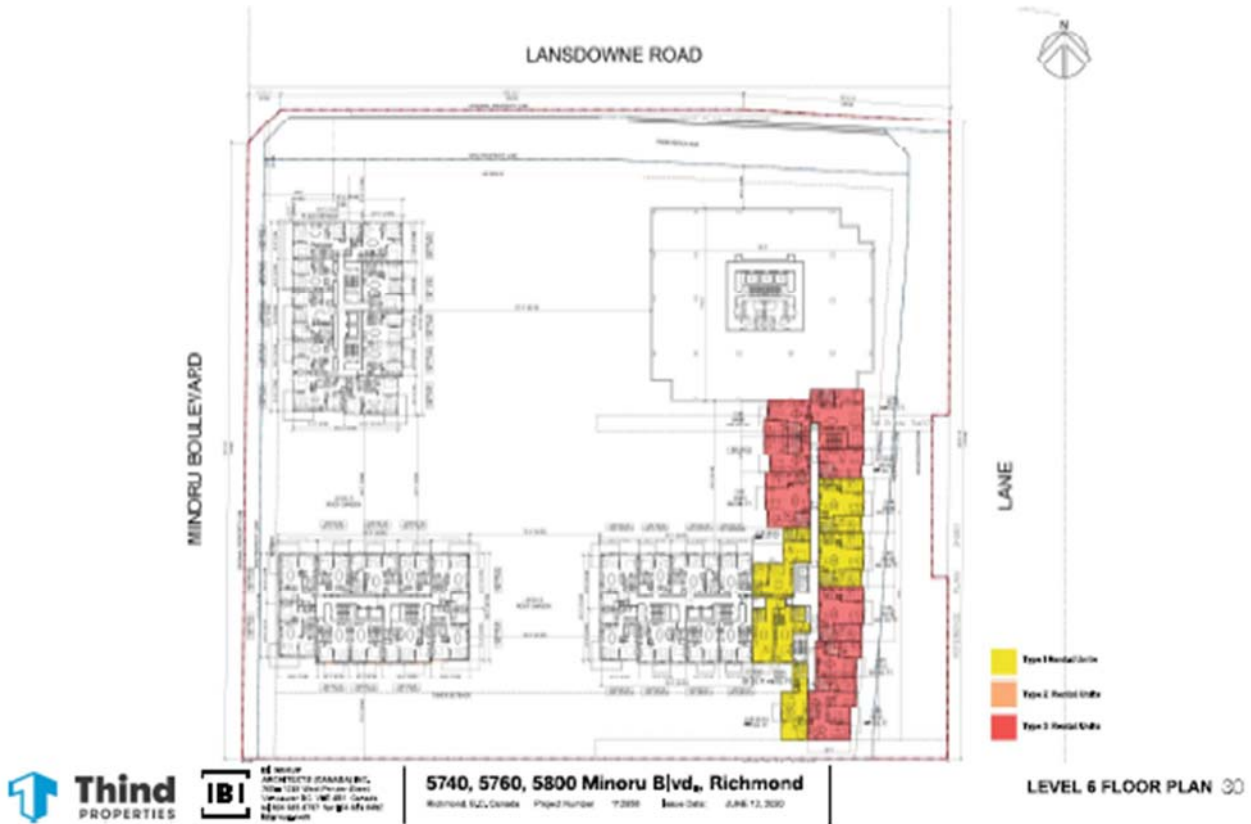


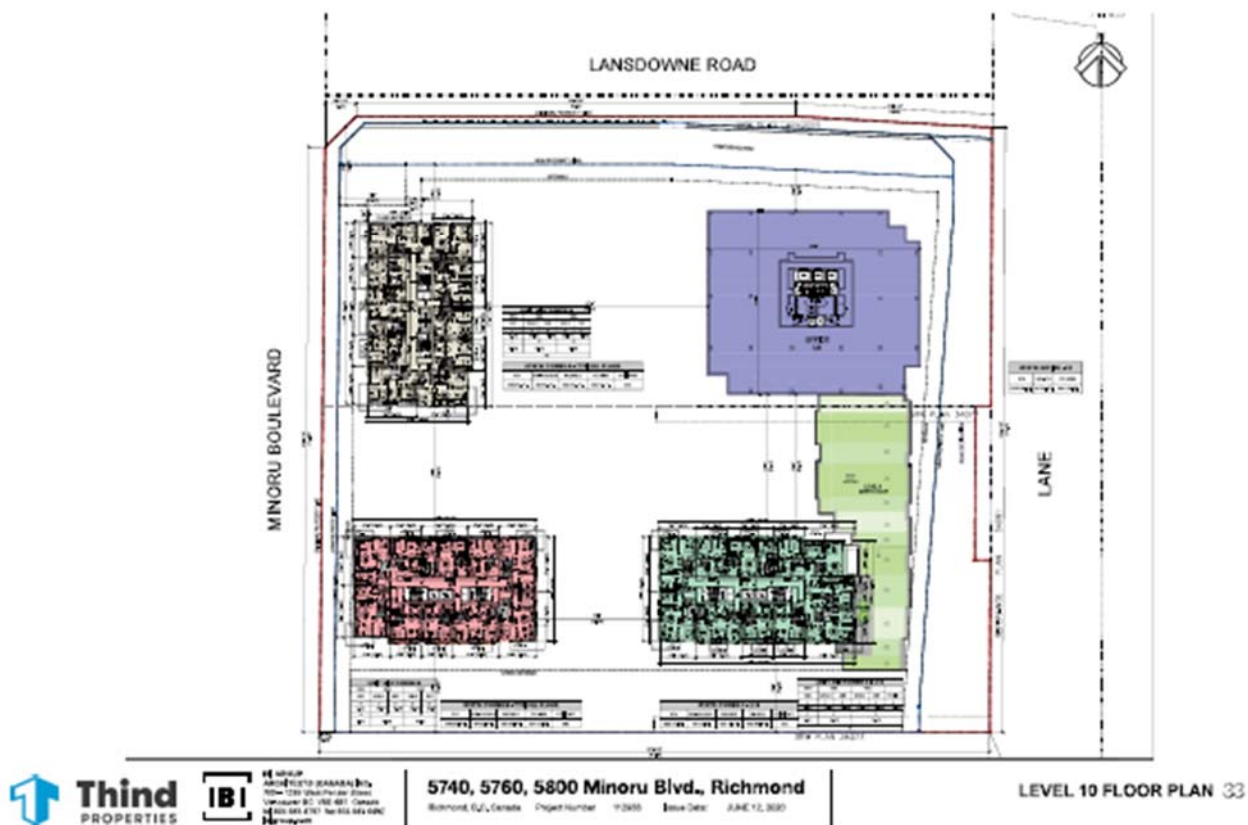
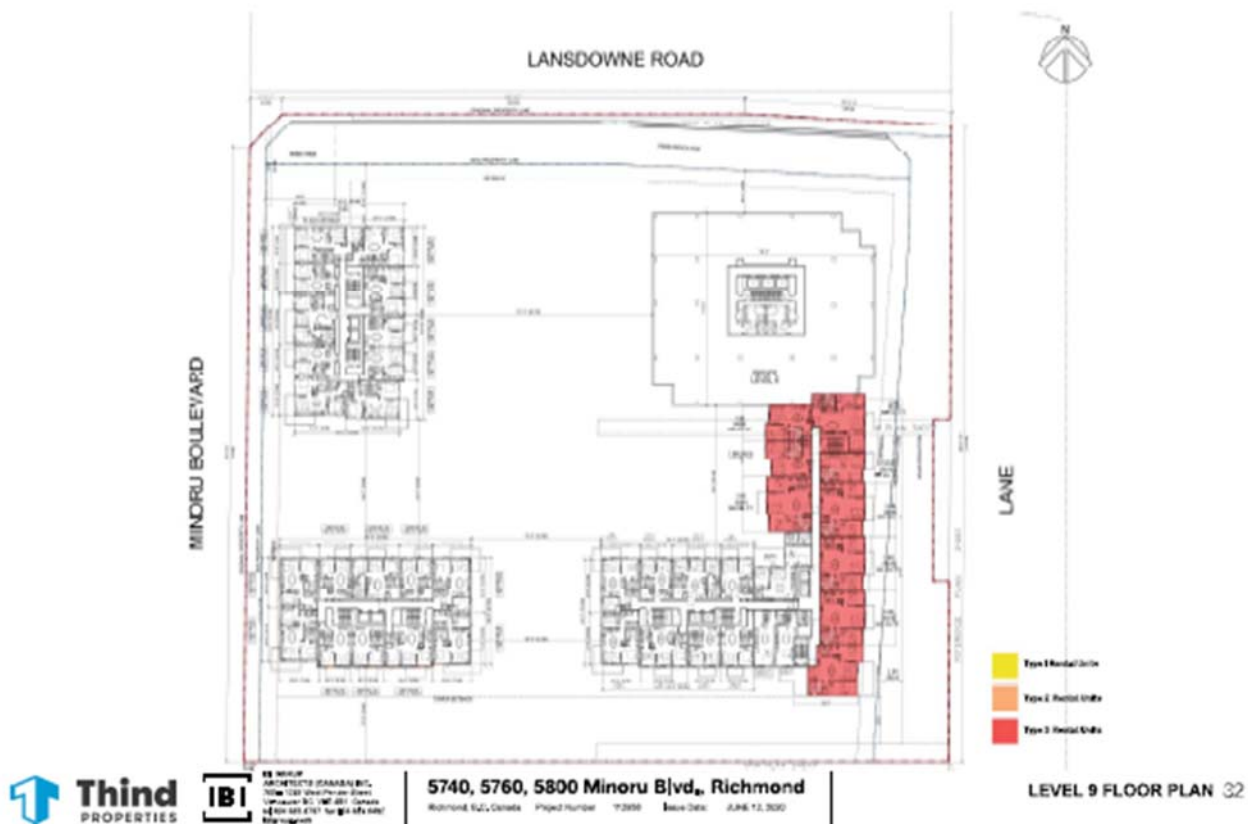
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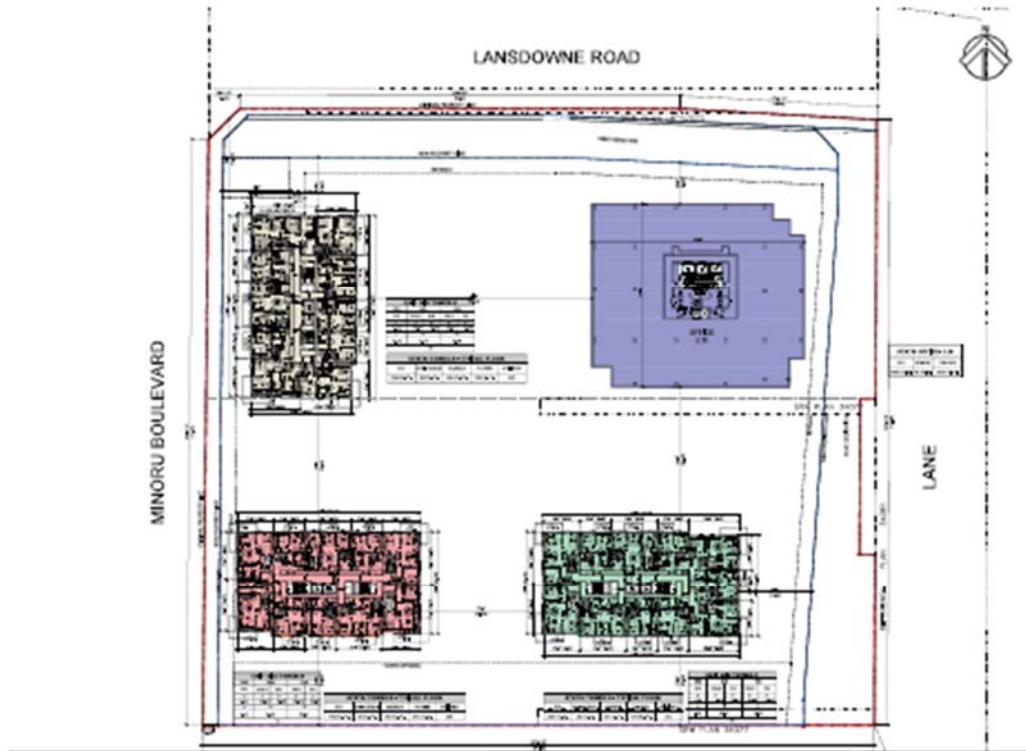
5740, 5760, 5800 Minoru Blvd., Richmond

Richmond, B.C., Canada Project Number: 17-2005 Issue Date: JUNE 12, 2020

- Type 1 Rental Units
- Type 2 Rental Units
- Type 3 Rental Units





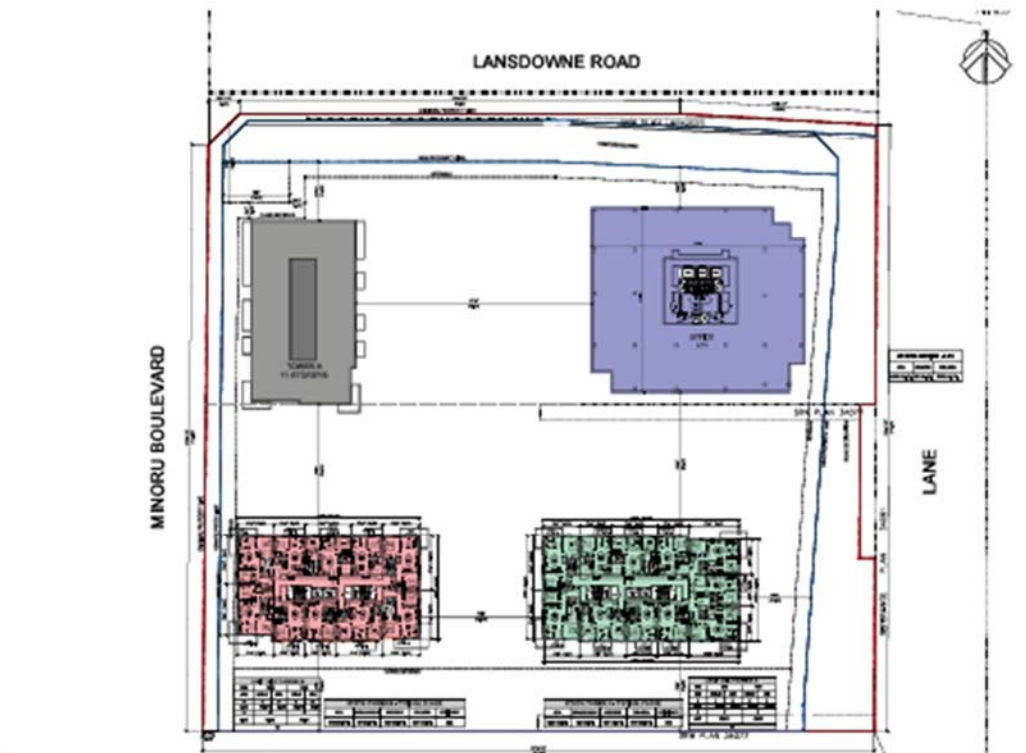


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5740, 5760, 5800 Minoru Blvd., Richmond

Richmond, B.C., Canada Project Number: 17-2000 Issue Date: JUNE 13, 2020

LEVEL 11 FLOOR PLAN 34

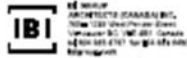
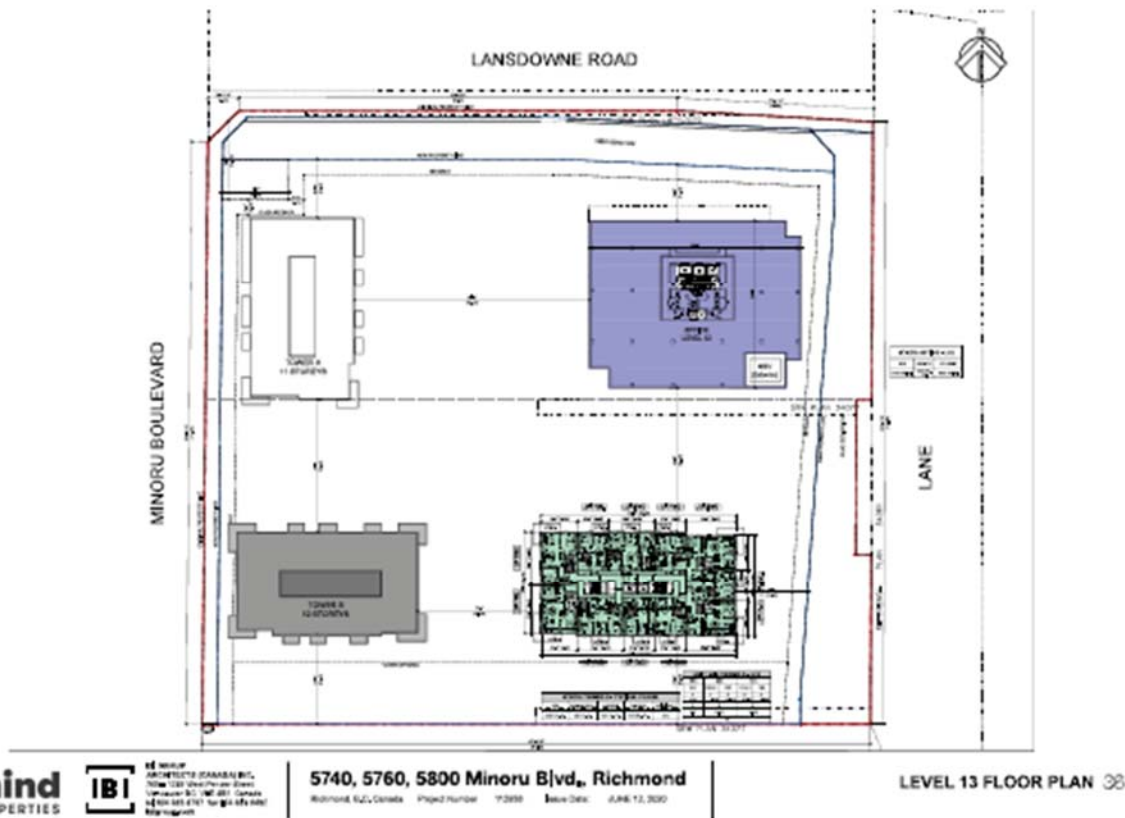


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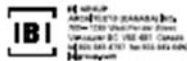
5740, 5760, 5800 Minoru Blvd., Richmond

Richmond, B.C., Canada Project Number: 17-2000 Issue Date: JUNE 13, 2020

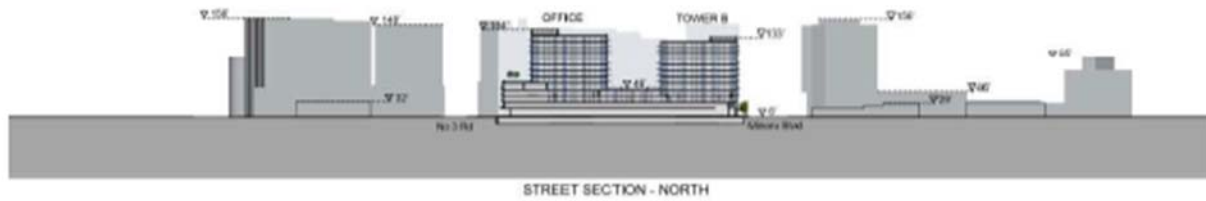
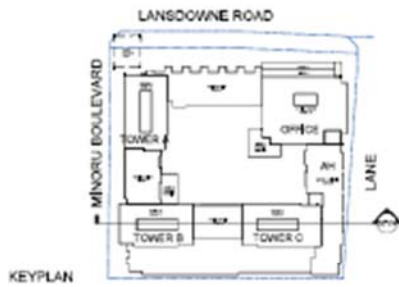
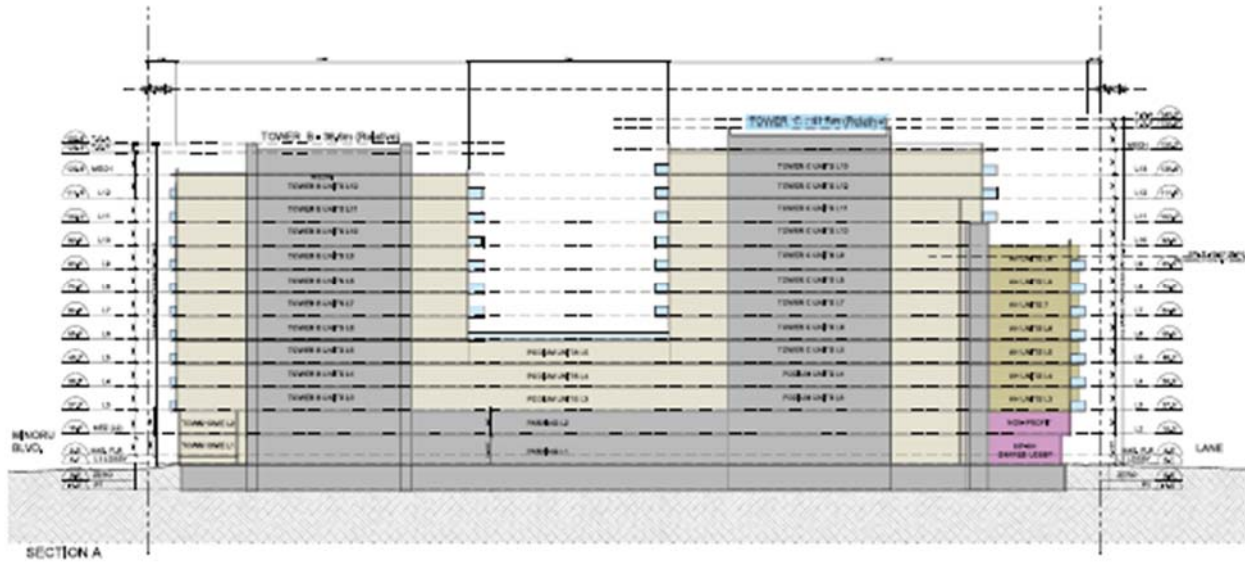
LEVEL 12 FLOOR PLAN 35

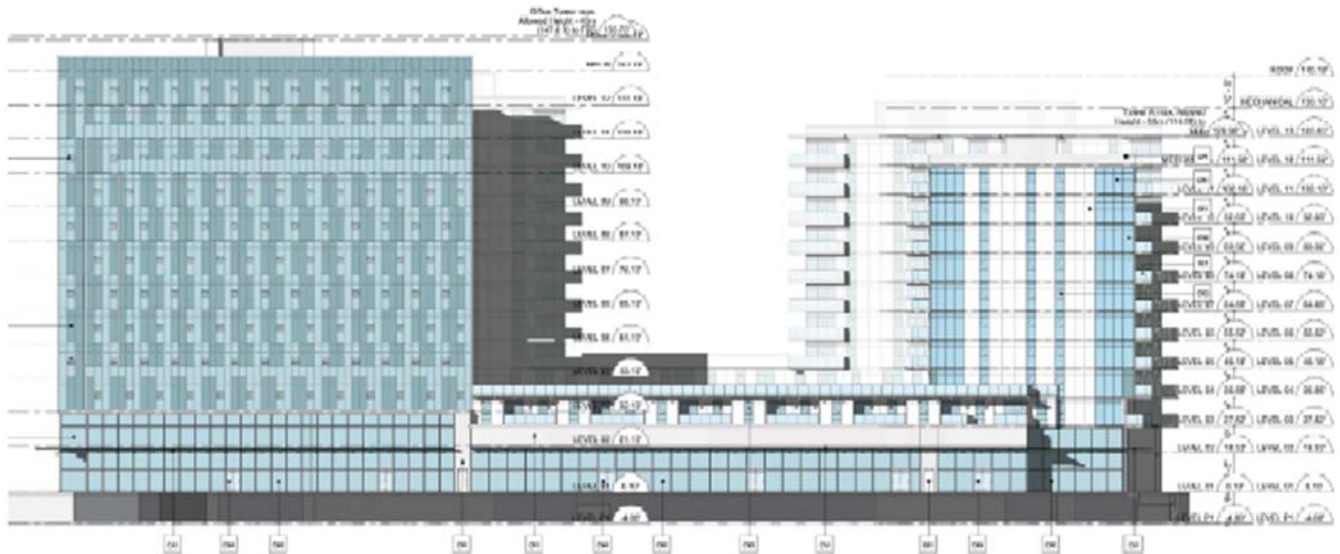


5740, 5760, 5800 Minoru Blvd., Richmond
 Richmond, B.C., Canada Project Number: 172858 Issue Date: JUNE 12, 2020



5740, 5760, 5800 Minoru Blvd., Richmond
 Richmond, B.C., Canada Project Number: 172858 Issue Date: JUNE 12, 2020







Address: 5740, 5760, and 5800 Minoru Boulevard

File No.: RZ 18-807640

Prior to final adoption of Richmond OCP Amendment Bylaw No. 10102 and Zoning Amendment Bylaw No. 10051, the developer/owner is required to complete the following:

1. NAV Canada Building Height: Submit a letter of confirmation from a registered surveyor assuring that the proposed building heights are in compliance with Transport Canada regulations.
(Note: This consideration has been satisfied. REDMS #6158501)
2. Site Contamination (Dedicated and/or Transferred Land): Prior to rezoning bylaw adoption, submission to the City of sufficient information and/or other assurances satisfactory to the City in its sole discretion to support the City's acceptance of the proposed dedicated or transferred land. Such assurances could include one or more of the following:
 - 2.1. A contaminated sites legal instrument (e.g. Certificate of Compliance (COC) or Final Site Determination (FSD) showing no contamination in the dedication lands);
 - 2.2. Evidence satisfactory to the City, in its sole discretion, that the lands to be dedicated to the City are in a satisfactory state from an environmental perspective; and
 - 2.3. The registration of a legal agreement on the title to the Lands which provides that:
 - 2.3.1. No occupancy of any building on the Lands shall be granted until such time that the Owner/Developer has satisfied the City in its sole discretion that the lands to be dedicated to the City are in a satisfactory state from an environmental perspective and a contaminated sites legal instrument has been obtained for the proposed dedication lands; and
 - 2.3.2. The Owner/Developer shall release and indemnify the City from and against any and all claims or actions that may arise in connection with those portions of the lands being dedicated to the City being contaminated in whole or in part.
3. Subdivision: Registration of a subdivision plan to the satisfaction of the City.

Prior to the registration of the Subdivision Plan, the following conditions shall be satisfied:

- 3.1. City Road: Dedication of at least 1,780.2 m² (19,162.0 ft²) for road and related purposes, as per the Preliminary Subdivision Plan (Schedule A), including at least:
 - 3.1.1. 569.9 m² (6,134.4 ft²) for road widening along the south side of Lansdowne Road and the east side of Minoru Boulevard (for which Development Cost Charge/DCC credits shall apply); and
 - 3.1.2. 1,210.3 m² (13,027.6 ft²) for sidewalk widening along the south side of Lansdowne Road and lane widening for the purpose of establishing a new minor street along the subject site's east side (for which Development Cost Charge/DCC credits shall not apply).
- 3.2. City-Owned Park: Transfer of at least 859.2 m² (9,248.4 ft²) to the City as fee simple for park and related purposes, as indicated on the Preliminary Subdivision Plan (**Schedule A**). The primary business terms of the required land transfers shall be to the satisfaction of the Manager, Real Estate Services, the City Solicitor, and the Director of Development. All costs associated with the land transfer shall be borne by the developer/owner. (Note: Development Cost Charge/DCC credits shall not apply.)
- 3.3. Lot Consolidation: The creation of one (1) lot for development purposes with an area of approximately 12,964.8 m² (139,551.9 ft²), as per the Preliminary Subdivision Plan (**Schedule A**).
- 3.4. Statutory Right-of-Way (SRW) – City-Owned Park Enhancement Area: Registration on title of a restrictive covenant and SRW agreement for public access, open space, and related purposes with respect to an irregular

strip of land along the entire north edge of the subject site, comprised of a rectangular “plaza expansion” area adjacent to Minoru Boulevard, measuring approximately 8.0 m (26.3 ft.) deep and 13.0 m (42.7 ft.) wide, and a “linear park expansion” area, measuring at least 3.0 m (9.8 ft.) deep at its west end and tapering towards the east, as generally indicated in the Preliminary Statutory Right-of-Way Plan (**Schedule B**). The SRW area shall be designed, constructed, and maintained at the sole cost of the developer/owner for the purpose of providing for the seamless expansion of the proposed City-Owned Park (e.g., public plaza, landscape features, and related furnishings and infrastructure), as determined to the satisfaction of the City. Prior to adoption of the OCP and Zoning Amendment Bylaws, the agreement shall be registered as a blanket SRW (accompanied by a sketch plan) and shall include provisions for a replacement agreement at Development Permit*, Building Permit*, and/or occupancy, as determined to the satisfaction of the City, at the developer/owner’s cost, for the purpose of accurately reflecting the City-approved permits and replacing the sketch plan with a survey plan (which may be volumetric). The specific location, configuration, design, and related terms of the agreement shall be confirmed through the development’s Development Permit*, Servicing Agreement*, and/or other City approval processes, to the satisfaction of the City, taking into account the following items.

3.4.1. The right-of-way shall provide for:

- a) 24 hour-a-day, year-round, universally accessible, public access in the form of paved walkway(s) and related landscape features, which may include, but may not be limited to, lighting, furnishings, street trees and planting, decorative paving, and storm water management measures, to the satisfaction of the City;
- b) Public art;
- c) Public access to/from fronting uses/spaces including, among other things, fronting on-site commercial units;
- d) Emergency and service vehicle access, City bylaw enforcement, and related or similar City-authorized activities; and
- e) City utilities including, but not limited to, streetlights, traffic control infrastructure (e.g., signals, detector loops, and equipment kiosks), and related or similar features.

2.3.1. Encroachments shall only be permitted within the “plaza expansion” portion of the SRW area (i.e. not within the “linear park expansion” portion) and shall satisfy the following requirements, as determined to the City’s satisfaction:

- a) Encroachments shall not conflict with the design, construction, operation, or intended quality or public amenity of the SRW area (e.g., tree planting, accessible grades, underground utilities);
- b) Permanent encroachments shall be approved by the City through the Development Permit*, Servicing Agreement*, and/or other City approval processes, as applicable, and shall be limited to:
 - A parking structure concealed below the finished grade of the SRW area;
 - Weather protection, architectural appurtenances, and building projections, located at least 2.5 m (8.2 ft.) clear above the finished grade of the SRW area; and
 - Commercial signage, provided that it is integrated into the permitted permanent encroachments described above and is located at least 2.5 m (8.2 ft.) clear above the finished grade of the SRW area; and
- c) Temporary encroachments shall be limited to:
 - Movable furnishings, planters, displays, and similar features (but excluding sandwich boards and other commercial signage);
 - Commercial business operations limited to temporary food service vendors (fresh and/or prepared foods) in the form of food carts and/or knock-down units (operating independently or in coordination with fronting on-site commercial uses/units), provided that they occupy a maximum combined total area of 20.0 m² (215.3 ft²); and
 - Outdoor dining and related furnishings associated with temporary food service vendors (described above) and/or fronting on-site commercial uses/units, provided that

such outdoor dining is not fenced, roofed, or otherwise arranged to restrict casual or free public access through and around the area occupied by the outdoor dining.

Note: Outdoor dining area designated for the exclusive use of a specific on-site commercial use/unit or temporary food service vendor shall not be considered a “temporary encroachment” and will not be permitted within the SRW area.

- 3.4.2. Design and construction of the SRW area shall be the subject of a Servicing Agreement* and Development Permit*, which shall be undertaken at the sole cost and responsibility of the developer/owner, as determined to the satisfaction of the City. Among other things, works essential for public access within the required SRW area are to be included in the Servicing Agreement* and the design of the SRW area must be prepared in accordance with good engineering practice with the objective of optimizing public safety. After completion of the SRW works, the owner is required to provide a certificate of inspection for the works or equivalent, prepared and sealed by the owner’s engineer, architect, and/or landscape architect, as determined to the City’s satisfaction, in a form and content acceptable to the City, certifying that the works have been constructed and completed in accordance with the accepted design.
 - 3.4.3. Maintenance of and liability with respect to the SRW area shall be at the sole cost and responsibility of the owner, except for City utilities, City park improvements, and/or other features that are identified, to the City’s satisfaction, through the Servicing Agreement* for maintenance by the City following the expiry of the Servicing Agreement* maintenance period.
 - 3.4.4. The owner shall be permitted to close public access to the “plaza expansion” portion of the SRW area (i.e. not the “linear park expansion” portion), in whole or in part, to facilitate maintenance, repairs, or construction of the SRW area or the fronting uses, provided that adequate public access is maintained and the duration of the closure is limited, as either determined to the City’s satisfaction through the Development Permit* and specified in the SRW agreement(s) or approved by the City in writing in advance of any such closure.
 - 3.4.5. “No development” shall be permitted on the subject site, restricting Development Permit* issuance for any building on the subject site, in whole or in part, unless the permit includes the design of the SRW area, to the City’s satisfaction.
 - 3.4.6. No Building Permit* shall be issued for a building on the subject site, in whole or in part (excluding parking located below the finished grade of the SRW area indicated in the approved Servicing Agreement*), unless the permit includes the design of the SRW area, to the City’s satisfaction.
 - 3.4.7. “No occupancy” of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.
4. Other Rights-of-Ways, Indemnifications, Releases & Agreements: As determined to the sole satisfaction of the City via the Servicing Agreement*, Development Permit*, development approval, and/or Building Permit* processes.
 5. Aircraft Noise: Registration on title of a standard City of Richmond (mixed use) aircraft noise sensitive use covenant.
 6. Flood Construction: Registration on title of a standard City of Richmond (“Area A”) flood indemnity covenant.
 7. View and Other Development Impacts: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, requiring that the proposed development must be designed and constructed in a manner that mitigates potential development impacts including without limitation view obstruction, increased shading, increased overlook, reduced privacy, increased ambient noise, increased ambient night-time light, and increased public use of fronting streets, sidewalks, and open spaces caused by or experienced as a result of, in whole or in part, development on the lands and future development on or the use of surrounding properties. In particular, as the proposed development is mixed use, the covenant shall notify residential tenants of potential noise and/or nuisance that may arise due to proximity to retail, restaurant, and other commercial uses and activities. The owner shall provide written notification of potential view and development impacts to all initial purchasers through the disclosure statement, and erect signage in the initial sales centre advising purchasers of the potential for such impacts. The legal

agreement shall include a Report prepared by an appropriate registered professional, which demonstrates that adequate development impact mitigation measures will be incorporated into the building's design and construction and, prior to Development Permit* and Building Permit* issuance, the owner shall submit letters of assurance prepared by an appropriate registered professional confirming that the building has been designed in conformance with the Report.

8. **Tree Removal:** The City's acceptance of the developer's voluntary contribution to the City's Tree Compensation Fund (Account # 2336-10-000-00000-0000) for the planting of replacement trees within the City, as indicated in the table below.

TABLE 1

Use	No. of City Trees Proposed for Removal	Min. Developer Contribution Rate	Min. Developer Contribution
TOTAL	7 (Lansdowne Road median removal)	\$1,300/tree	\$9,100 (1)

- (1) In the event that the developer contribution is not provided within one year of the rezoning application receiving third reading of Council (Public Hearing), the Minimum Developer Contribution Rate shall be revised to comply with the City contribution rate in effect at the time of rezoning bylaw adoption, where the change is positive.

Note: In addition to the above, through the required Servicing Agreement*, the developer shall be required, at the developer's sole cost, to remove a small existing City tree from the Lansdowne Road median (*Chamaecyparis obtuse*) and relocate it elsewhere in Richmond, as determined to the satisfaction of the Director, Parks Services.

9. **Public Art:** The City's acceptance of the developer's voluntary cash-in-lieu contribution towards public art (i.e. 15% to Public Art Provision Account # 7500-10-000-90337-0000 and 85% to Account # 7600-80-000-90173-0000), as indicated in the table below.

TABLE 2

Use	Max. Permitted Floor Area Under ZMU46 Zone	Estimated Affordable Housing Exemption (1)	Min. Developer Contribution Rate (2)	Min. Developer Contribution
Residential	30,747.9 m ² (330,967.6 ft ²)	5,781.0 m ² (62,225.9 ft ²)	\$0.87/ft ²	\$233,805.28
Retail	2,327.6 m ² (25,054.0 ft ²)	Nil	\$0.46/ft ²	\$11,524.84
Office (VCB)	15,034.3 m ² (161,827.9 ft ²)	Nil	\$0.46/ft ²	\$74,440.83
TOTAL	48,109.8 m² (517,849.2 ft²)	5,781.0 m² (62,225.9 ft²)	Varies	\$319,770.95 (3)

- (1) Floor area excludes Affordable Housing (habitable floor area) and the Affordable Rental Housing (0.2 FAR) Bonus.
 (2) The Council-approved contribution rates in effect at the time of writing these Rezoning Considerations.
 (3) The actual value of the developer contribution shall be confirmed and updated, as necessary, based on the floor areas approved through the Development Permit. In addition, in the event that the developer contribution is not provided within one year of the rezoning application receiving third reading of Council (Public Hearing), the Minimum Developer Contribution Rate shall be revised to comply with the Council-approved contribution rates in effect at the time of rezoning bylaw adoption, where the change is positive.

10. **Community Planning:** The City's acceptance of the developer's voluntary contribution towards future City community planning initiatives (CC-Community Planning and Engineering Account # 3132-10-520-00000-0000), as set out in the City Centre Area Plan, as indicated in the table below.

TABLE 3

Use	Max. Permitted Floor Area Under ZMU46 Zone	Estimated Affordable Housing Exemption (1)	Min. Developer Contribution Rate (2)	Min. Developer Contribution
TOTAL	48,109.8 m² (517,849.2 ft²)	5,781.0 m² (62,225.9 ft²)	\$0.28/ft²	\$127,574.52 (3)

- (1) Floor area excludes Affordable Housing (habitable floor area) and the Affordable Rental Housing (0.2 FAR) Bonus.
 (2) The Council-approved contribution rates in effect at the time of writing these Rezoning Considerations.
 (3) In the event that the developer contribution is not provided within one year of the rezoning application receiving third reading of Council (Public Hearing), the Minimum Developer Contribution Rate shall be revised to comply with the Council-approved contribution rate in effect at the time of rezoning bylaw adoption, where the change is positive.

11. Village Centre (Office-Only) Bonus (VCB): The City's acceptance of the developer's voluntary contribution and legal agreement(s) registered on title to the lot, to the satisfaction of the City, for the purpose of satisfying OCP, Zoning Bylaw, and related City requirements with the respect to the developer's proposed bonus office density, including:

- 11.1. Amenity Contribution: Submission of a voluntary developer cash contribution, in the amount of \$5,663,980, to Richmond's Leisure Facilities Reserve Fund – City Centre Facility Development Sub-Fund, in lieu of constructing community amenity space on-site, as determined based on a construction-value amenity transfer rate of \$700/ft² and an amount of amenity transferred off-site based on 5% of the maximum VCB buildable floor area permitted on the subject site under the proposed High Density Mixed Use and Rental Housing (ZMU46) zone, as indicated in the table below.

TABLE 4

Use	Maximum Permitted VCB Bonus Floor Area Under the ZMU46 Zone	VCB Community Amenity Space Area (5% of Bonus Area)	Construction-Value Amenity Transfer Contribution Rate	Minimum Voluntary Developer Cash Contribution
TOTAL	15,034.3 m² (161,827.9 ft²)	751.7 m² (8,091.4 ft²)	\$700.00/ft²	\$5,663,980.00 (1)

(1) In the event that the developer contribution is not provided within one year of the rezoning application receiving third reading of Council (Public Hearing), the Construction-Value Amenity Transfer Contribution shall be increased annually thereafter based on the Statistics Canada "Non-Residential Building Construction Price Index" yearly quarter-to-quarter change for Vancouver, where the change is positive..

- 11.2. Office Subdivision Restriction: Registration on title of a restrictive covenant or alternative legal agreement, to the satisfaction of the City, to require that the subdivision of any Village Centre Bonus floor area within the building that is used for office shall not exceed one strata lot or air space parcel per storey of the building.

- 11.3. Non-Residential Parking: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of restricting the use of parking provided on-site in respect to non-residential uses and providing for the shared use of that parking with visitors to the subject development's market residential uses and Affordable Rental Housing Building. More specifically, Non-Residential Parking requirements for the subject development shall include the following.

11.3.1. Non-Residential Parking shall mean any parking spaces needed to satisfy Zoning Bylaw or other transportation requirements with respect to commercial or community amenity uses, as determined to the satisfaction of the City through the rezoning and/or an approved Development Permit*, including spaces required for the use of:

- The general public;
- Businesses and tenants on the lot, together with their employees, visitors, customers, and guests (including parking secured by legal agreement registered on title to the lot for the exclusive use of the tenants and visitors to the Non-Profit Social Services Agency Replacement Space); and
- Residential visitors.

11.3.2. Non-Residential Parking shall include:

- No less than 50% Public Parking spaces, which spaces shall be designated by the owner/operator exclusively for short-term parking (e.g., drop-off/pick-up or hourly) by the general public; and
- No more than 50% Assignable Parking spaces, which spaces:
 - may be designated, sold, leased, reserved, signed, or otherwise assigned by the owner/operator for the exclusive use of employees or specific persons or businesses; and
 - shall include 23 spaces secured by legal agreement registered on title to the lot for the exclusive use of the tenants and guests of the Affordable Non-Profit Social Service Agency Replacement Space (which spaces shall be located adjacent to the Replacement Space's public lobby entrance at the second level of the parking structure).

11.3.3. Public Parking spaces shall:

- a) Include at least 85% of the non-residential parking spaces located at the entry level of the lot's parking structure or as otherwise determined to the satisfaction of the Director of Transportation; and
- b) Be available for use 365 days per year for a daily duration equal to or greater than the operating hours of transit services within 400 m (5-minute walk) of the lot, businesses located on the lot, or as otherwise determined by the City.

11.3.4. Visitors to the subject development's market housing tenants, Affordable Rental Housing Building tenants, and Non-Profit Social Service uses shall have shared use of the Public Parking on the same terms as members of the general public.

11.3.5. Non-Residential Parking shall not include tandem parking.

11.3.6. Non-Residential Parking (both Public Parking and Assignable Parking) must include a proportional number of handicapped parking spaces and small car parking spaces in compliance with the Zoning Bylaw or as otherwise determined to the satisfaction of the Director of Transportation.

11.3.7. "No development" shall be permitted on the lot, restricting Development Permit* issuance for a building on the lot, in whole or in part, unless the permit provides for the required Non-Residential (Public and Assignable) Parking and related features to the satisfaction of the City.

11.3.8. No Building Permit* shall be issued for a building on the lot, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless the permit provides for the required Non-Residential (Public and Assignable) Parking and a letter of confirmation is submitted by the architect assuring that the facilities satisfy the City's objectives.

11.3.9. "No occupancy" of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.

11.4. Non-Residential Tenant Cycling Facilities: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of requiring that the developer/owner provides, installs, and maintains cycling facilities for the exclusive use of the development's non-residential tenants (including Non-Profit Social Service Replacement Space tenants), to the satisfaction of the City as determined via the Development Permit* review and approval processes. More specifically:

11.4.1. The developer/owner shall, at its sole cost, design, install, and maintain cycling facilities on the lot for the shared use of the development's non-residential tenants (including Non-Profit Social Service use tenants), including:

- a) End-of-trip cycling facilities in the form of a handicapped-accessible suite of rooms designed to accommodate use by four or more people (of the same or different genders) at one time, as determined to the City's satisfaction through the Development Permit* review and approval process, including at least two (2) shower/change cubicles with doors, two (2) change cubicles with doors, two (2) toilet cubicles with doors, two (2) wash basins, and a common change room with a bench(s), grooming station (i.e. mirror, counter, and electrical outlets), and lockers;
- b) A maintenance facility in the form of a bike repair and maintenance station comprising a foot-activated pump, repair stand with integrated tools, and a bike wash; and
- c) EV-equipped storage facilities in the form of "Class 1" bike storage spaces for the non-residential tenants of the building, as per the Zoning Bylaw, which storage must include 120V energized (duplex) outlets for the shared use of cyclists at a rate of 1 energized (duplex) outlet for each 10 bike storage spaces or portion thereof in each bike storage room (which energized outlets shall be located to facilitate shared use by bikes in the storage room);

11.4.2. For ease of use and security, the required cycling facilities shall be clustered together on the building's ground floor and provide for convenient and safe access to/from the office tower's elevator/stair core, unless an alternative location is approved, at the sole discretion of the Director of Transportation, through the Development Permit* review and approval processes;

- 11.4.3. “No development” shall be permitted on the lot, restricting Development Permit* issuance for any building on the lot, in whole or in part, unless the permit provides for the required cycling facilities to the satisfaction of the City;
- 11.4.4. No Building Permit* shall be issued for a building on the lot, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless the permit provides for the required cycling facilities to the satisfaction of the City and a letter of confirmation is submitted by the architect assuring that the design of the facilities satisfies all applicable City’s requirements; and
- 11.4.5. “No occupancy” of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.
- 11.5. Commercial Tenant Transit Pass Program: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of securing the developer/owner’s commitment towards implementing, at the developer/owner’s sole cost, a coordinated strategy providing transit passes for commercial (e.g., office and retail) tenants (valued at \$40,000). “No occupancy” of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.
- 11.6. Car-Share Measures: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of securing the developer/owner’s commitment towards implementing, at the developer/owner’s sole cost, a car-share strategy comprised of designated car-share parking spaces, car-share vehicles, and contractual arrangements with a car-share operator, all to the satisfaction of the City.
- 11.6.1. The car-share parking facility shall provide for the following:
- a) Two (2) car-share parking spaces located together on the ground floor of the building where they will be secure, universally-accessible, and provide for safe and convenient 24/7 public pedestrian and vehicle access, as determined to the City’s satisfaction;
 - b) Operating electric vehicle (EV) quick-charge (240 V) charging stations for the exclusive use of and simultaneous charging of the car-share vehicles parked in the required car-share spaces; and
 - c) Pedestrian and vehicle access, signage, lighting, and other features necessary to the operation of the car-share facility and vehicles as determined to the satisfaction of the City.
- 11.6.2. The required car-share spaces shall be provided by the developer/owner in addition to that parking provided to satisfy Zoning Bylaw parking requirements with respect to residential, commercial (e.g., retail and office), and Non-Profit Social Service Replacement Space on the lot.
- 11.6.3. Users of the car-share spaces shall not be subject to parking fees or EV charging fees, except as otherwise determined at the sole discretion of the City.
- 11.6.4. The developer/owner shall, to the City’s satisfaction, enter into a contract with a car-share operator for the operation of the car-share parking facility for a minimum term of three (3) years, which contract shall require, among other things, that:
- a) The developer/owner provides two (2) car-share cars at no cost to the operator;
 - b) The car-share cars shall be electric vehicles, unless otherwise determined to the satisfaction of the car-share operator and the City; and
 - c) The required car-share parking facility and vehicles will be 100% available for use upon the required occupancy of the car-share parking facility as set out in a City-approved Occupancy Staging Plan.

- 11.6.5. “No development” shall be permitted on the subject site, restricting Development Permit* issuance for a building on the subject site, in whole or in part, unless the developer, to the City’s satisfaction:
- a) Designs the subject site to provide for the required car-share parking facility to the City’s satisfaction;
 - b) Secures the car-share parking facility via a statutory right-of-way(s) and easement(s) registered on title and/or other legal agreements, as determined to the City’s satisfaction;
 - c) Provides a Letter of Credit (LOC) to the City to secure the developer’s commitment to the provision of two (2) car-share vehicles, the value of which shall be the estimated retail value of the two (2) car-share cars at the time of purchase or as otherwise determined to the satisfaction of the Director of Transportation and Director of Development; and
 - d) Registers legal agreement(s) on title requiring that, unless otherwise agreed to in advance by the City, in the event that the car-share parking facility is not operated for car-share purposes as intended via the subject rezoning application (e.g., the operator’s contract is terminated or expires), control of the car-share facility shall be transferred to the City, at no cost to the City, and the City at its sole discretion, without penalty or cost, shall determine how the facility shall be used going forward.
- 11.6.6. No Building Permit* shall be issued for a building on the subject site, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), until the developer provides for the required car-share parking facility to the City’s satisfaction and a letter of confirmation is submitted by the architect assuring that the design of the facility satisfies all applicable City’s requirements.
- 11.6.7. “No occupancy” of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.

12. Residential Requirements:

- 12.1. Affordable Rental Housing Building: The City’s acceptance of the developer/owner’s offer to voluntarily contribute affordable low-end-of-market-rental (LEMR) housing units, constructed to a turnkey level of finish on the subject site at the sole cost of the developer, the terms of which voluntary contribution shall include, but will not be limited to, the registration of the City’s standard Housing Agreement and Covenant on title to secure the dwelling units. The form of the Housing Agreement and Covenant shall be agreed to by the developer and the City prior to final adoption of the subject rezoning application; after which time, only the Housing Covenant may be amended or replaced and any such changes will only be permitted for the purpose of accurately reflecting the specifics of the Development Permit* for the subject site and other non-materials changes resulting thereof and made necessary by the Development Permit* approval requirements, as determined to the satisfaction of the Director of Development and Director of Community Social Development. The terms of the Housing Agreement and Covenant shall indicate that they apply in perpetuity and provide for, but will not be limited to, the requirements set out in the Affordable Rental Housing Building Terms of Reference (**Schedule C**). “No occupancy” of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.
- 12.2. Market Resident Cycling Facilities: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of requiring that the developer/owner provides, installs, and maintains bike maintenance facilities and “Class 1” bike storage on-site for the use of the occupants of the subject development’s market residential units (i.e. separate from that provided for Affordable Rental Housing Building occupants), which measures shall generally be clustered together adjacent to each of the market residential housing’s 3 elevator/stair cores, as determined to the satisfaction of the City through the Development Permit* review and approval processes. More specifically:

12.2.1. The developer/owner shall, at its sole cost, design, install, and maintain cycling facilities on the lot for the shared use of the development's market residential tenants (i.e. not shared with the Affordable Rental Housing Building occupants), including:

- a) Bike repair and maintenance facilities, at a rate of 1 per elevator/stair core (i.e. 3 in total), each of which shall comprise a foot-activated pump, repair stand with integrated tools, and a bike wash; and
- b) EV-equipped storage facilities in the form of "Class 1" bike storage spaces for the market residential tenants of the building (at a rate of 1.7 bike spaces/unit, including 10% over-size lockers for family bike storage, bike trailers, electric assist vehicles, and similar items), which bike storage must include 120V energized (duplex) outlets for the shared use of cyclists at a rate of 1 energized (duplex) outlet for each 10 bike storage spaces or portion thereof in each bike storage room (which outlets shall be located to facilitate shared use by bikes in the room).

12.2.2. "No development" shall be permitted on the lot, restricting Development Permit* issuance for any building on the lot, in whole or in part, unless the permit provides for the required cycling facilities to the satisfaction of the City;

12.2.3. No Building Permit* shall be issued for a building on the lot, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless the permit provides for the required cycling facilities to the satisfaction of the City and a letter of confirmation is submitted by the architect assuring that the design of the facilities satisfies all applicable City's requirements; and

12.2.4. "No occupancy" of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.

12.3. Residential Visitor Parking: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, for the purpose of requiring that the developer/owner provides, installs (including appropriate signage), and maintains eight (8) designated parking spaces for the use of visitors to the units/tenants of the development's market housing and Affordable Rental Housing Building on the basis of:

12.3.1. 2 spaces for the exclusive use of each market residential tower (i.e. 6 in total); and

12.3.2. 2 spaces for the exclusive use of the Affordable Rental Housing Building.

In addition, as indicated with respect to the required "Commercial Parking" covenant, visitors to the subject development's market housing and Affordable Rental Housing Building units/tenants shall have shared use of the Public Parking on the same terms as members of the general public.

Note: Compliance with this section and the "Non-Residential Parking" covenant shall be understood to fully satisfy the subject development's residential visitor parking requirements with respect to the Zoning Bylaw.

13. Non-Profit Social Service Agency Accommodation Measures: The City's acceptance of the developer's offer to voluntarily contribute affordable community amenity space for operation by non-profit social service agencies, together with tenant relocation assistance, as determined to the satisfaction of the City. The terms of the developer's contribution shall include, but shall not be limited to, the developer's design and construction (to a shell level of finish, at the developer's sole cost) of at least 425.7 m² (4,582.0 ft²) of gross leasable space on the east side of subject site (co-located with the Affordable Rental Housing Building), together with related uses/spaces (e.g., lobby, circulation, parking), to the satisfaction of the City. The form of the legal agreements securing the developer's commitment shall be agreed to by the developer and the City prior to final adoption of the subject rezoning application; after which time, the agreement(s) may only be amended or replaced for the purpose of accurately reflecting the specifics of the Development Permit* for the subject site and other non-materials changes resulting thereof and made necessary by the Development Permit* approval requirements, as determined to the satisfaction of the Director of Development and Director of Community Social Development. The terms of the legal agreements shall indicate that they apply in perpetuity and provide for, but will not be limited to, the requirements set out in the Non-Profit Social Service Agency Accommodation Measures Terms of Reference. "No occupancy" of the

development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.

Note: For the purposes of calculating maximum permitted floor area under the Zoning Bylaw, the non-profit social service agency tenant units, circulation intended for the exclusive use of the non-profit social service agency tenants and their visitors, and any lobby and/or vertical circulation shared by the non-profit social service agency tenants and the occupants of the Affordable Rental Housing Building shall be treated as “community amenity space” to a maximum of 0.1 FAR, as permitted under the High Density Mixed Use and Affordable Rental Housing (ZMU46) zone.

14. Driveway Crossings: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, to ensure that all vehicle access to the subject site shall be from the new City Road along the east side of the subject site (i.e. not from Minoru Boulevard).
15. Tandem Parking: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, to ensure that:
 - 15.1. Resident Parking: Where two parking spaces are provided in a tandem arrangement for the use of resident parking (excluding Affordable Rental Housing Building parking), as per the Zoning Bylaw, both parking spaces must be assigned to the same dwelling unit; and
 - 15.2. Elsewhere: Tandem parking shall be prohibited for all other purposes including, but not limited to, parking for the Affordable Rental Housing Building occupants and Non-Residential (Public and Assignable) Parking.
16. District Energy Utility (DEU): Registration of a restrictive covenant and/or alternative legal agreement(s), to the satisfaction of the City, securing the owner's commitment to connect to District Energy Utility (DEU), which covenant and/or legal agreement(s) will include, at minimum, the following terms and conditions:
 - 16.1. No Building Permit* will be issued for a building on the subject site unless the building is designed with the capability to connect to and be serviced by a DEU and the owner has provided an energy modelling report satisfactory to the Director of Engineering;
 - 16.2. If a low carbon energy plant district energy utility (LCDEU) service area bylaw which applies to the site has been adopted by Council prior to the issuance of the development permit for the subject site, no Building Permit* will be issued for a building on the subject site unless:
 - 16.2.1. The owner designs, to the satisfaction of the City and the City's DEU service provider, Lulu Island Energy Company Ltd. (LIEC), a low carbon energy plant to be constructed and installed on the site, with the capability to connect to and be serviced by a DEU; and
 - 16.2.2. The owner enters into an asset transfer agreement with the City and/or the City's DEU service provider on terms and conditions satisfactory to the City to transfer ownership of the low carbon energy plant to the City or as directed by the City, including to the City's DEU service provider, at no cost to the City or City's DEU service provider, LIEC, on a date prior to final building inspection permitting occupancy of the first building on the site. Such restrictive covenant and/or asset transfer agreement shall include a warranty from the owner with respect to the on-site DEU works (including the low carbon energy plant) and the provision by the owner of both warranty and deficiency security, all on terms and conditions satisfactory to the City;
 - 16.3. The owner agrees that the building(s) will connect to a DEU when a DEU is in operation, unless otherwise directed by the City and the City's DEU service provider, LIEC.
 - 16.4. If a DEU is available for connection and the City has directed the owner to connect, no final building inspection permitting occupancy of a building will be granted unless, and until:
 - 16.4.1. The building is connected to the DEU;
 - 16.4.2. The owner enters into a Service Provider Agreement for that building with the City and/or the City's DEU service provider, LIEC, executed prior to depositing any Strata Plan with LTO and on terms and conditions satisfactory to the City; and

- 16.4.3. Prior to subdivision (including Air Space parcel subdivision and Strata Plan filing), the owner grants or acquires, and registers, all Statutory Right-of-Way(s) and/or easements necessary for supplying the DEU services to the building.
- 16.5. If a DEU is not available for connection, but a LCDEU service area bylaw which applies to the site has been adopted by Council prior to the issuance of the development permit for the subject site, no final building inspection permitting occupancy of a building will be granted unless and until:
 - 16.5.1. The City receives a professional engineer's certificate stating that the building has the capability to connect to and be serviced by a DEU;
 - 16.5.2. The building is connected to a low carbon energy plant supplied and installed by the owner, at the owner's sole cost, to provide heating, cooling and domestic hot water heating to the building(s), which energy plant will be designed, constructed and installed on the subject site to the satisfaction of the City and the City's service provider, LIEC;
 - 16.5.3. The owner transfers ownership of the low carbon energy plant on the subject site, to the City or as directed by the City, including to the City's DEU service provider, LIEC, at no cost to the City or City's DEU service provider, on terms and conditions satisfactory to the City;
 - 16.5.4. Prior to depositing a Strata Plan, the owner enters into a Service Provider Agreement for the building with the City and/or the City's DEU service provider, LIEC, on terms and conditions satisfactory to the City; and
 - 16.5.5. Prior to subdivision (including Air Space parcel subdivision and Strata Plan filing), the owner grants or acquires, and registers, all additional Covenants, Statutory Right-of-Way(s) and/or easements necessary for supplying the services to the building and the operation of the low carbon energy plant by the City and/or the City's DEU service provider, LIEC.
- 16.6. If a DEU is not available for connection, and a LCDEU service area bylaw which applies to the site has not been adopted by Council prior to the issuance of the development permit for the subject site, no final building inspection permitting occupancy of a building will be granted until:
 - 16.6.1. The City receives a professional engineer's certificate stating that the building has the capability to connect to and be serviced by a DEU; and
 - 16.6.2. The owner grants or acquires any additional Statutory Right-of-Way(s) and/or easements necessary for supplying DEU services to the building, registered prior to subdivision (including Air Space parcel subdivision and strata plan filing).
- 17. Occupancy Staging Agreement: Registration on title of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, securing that should the developer/owner request that occupancy of the building proceeds in stages (e.g., tower-by-tower), that "no occupancy" shall be permitted of any portion of the building, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless the developer/owner satisfies the following:
 - 17.1. Prior to first occupancy of the building on the subject site, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction and/or tenant improvement purposes), the developer/owner shall:
 - 17.1.1. Complete the prior-to-first-occupancy requirements to the satisfaction of the Director of Development, Director of Transportation, Director, Parks Services, and Director of Engineering including:
 - a) All District Energy Utility requirements;
 - b) All Affordable Non-Profit Social Service Agency Replacement Space ("Replacement Space") requirements including, but not limited to tenant improvements and parking (i.e. 23 Assignable Parking spaces secured by legal agreement for the exclusive use of the tenants/guests of the Affordable Non-Profit Social Service Agency Replacement Space); and

- c) All engineering, transportation, and parks works subject to a Servicing Agreement* including, but not limited to, the Minoru Corner Plaza Expansion (SRW). (Note: For off-site works and improvements within SRW areas, completion to the City's satisfaction shall mean, among other things, that the works have received a Certificate of Completion, final Building Permit* inspection granting occupancy, or alternate City approval(s), as determined to be applicable at the sole discretion of the City.)
- 17.1.2. Submit a letter prepared by the architect confirming that all prior-to-first-occupancy requirements are complete.
- 17.2. Prior to occupancy of any commercial uses on the subject site, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction and/or tenant improvement purposes), the developer/owner shall complete the following to the satisfaction of the Director of Development and Director of Transportation and receive, as applicable, a Certificate of Completion and/or final Building Permit* inspection granting occupancy for those features:
 - 17.2.1. 100% of the prior-to-first-occupancy requirements;
 - 17.2.2. 100% of the Public Parking portion of the development's required Non-Residential Parking spaces;
 - 17.2.3. 100% of the Non-Residential Tenant Cycling Facilities;
 - 17.2.4. 100% of the Car-Share Measures, including the developer/owner's required contract with a car-share operator;
 - 17.2.5. A proportional share of the Assignable Parking portion of the development's required Non-Residential Parking spaces;
 - 17.2.6. A proportional share of EV charging infrastructure for vehicles and bikes, loading and waste management facilities, and other features as required to satisfy the Zoning Bylaw and Development Permit*;
 - 17.2.7. Implementation, to the City's satisfaction, of the required Commercial Tenant Transit Pass Program (as secured by legal agreement registered on title to the lot); and
 - 17.2.8. Submission of a letter prepared by the architect confirming that all applicable prior-to-commercial occupancy-requirements are complete.
- 17.3. Prior to occupancy of any residential uses on the subject site, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction activities and/or tenant improvement purposes), the developer/owner shall complete the following to the satisfaction of the Director of Development, Director of Transportation, and Manager of Community Social Development and receive as applicable, a Certificate of Completion and/or final Building Permit* inspection granting occupancy for those features:
 - 17.3.1. 100% of the prior-to-first-occupancy requirements;
 - 17.3.2. 100% of the Affordable Rental Housing Building and all related features/requirements (e.g., Basic Universal Housing units, parking, cycling facilities, and related EV charging infrastructure, indoor and outdoor amenity spaces, and waste management facilities), together with implementation, to the City's satisfaction, of the required Affordable Rental Housing Building Transit Pass Program (as secured by legal agreement registered on title to the lot);
 - 17.3.3. 100% of the Public Parking portion of the development's required Non-Residential Parking spaces;
 - 17.3.4. A proportional share of residential parking, residential cycling facilities, and related EV charging infrastructure, indoor and outdoor amenity spaces, loading and waste management facilities, and other features as required to satisfy the Zoning Bylaw and Development Permit*; and
 - 17.3.5. Submission of a letter prepared by the architect confirming that all applicable prior-to- residential occupancy-requirements are complete.

17.4. Related Permits Holds:

Note: For clarity, the following restrictions are NOT intended to apply to tenant improvements undertaken with respect to the existing building or construction activity required with respect to tenant improvements to commercial units in the subject development, as determined at the City's discretion.

- 17.4.1. "No development" shall be permitted on the subject site, restricting Development Permit* issuance for any building on the subject site, unless the permit includes the entirety of the subject development.
- 17.4.2. No Building Permit* shall be issued for a building on the subject site unless the permit, which may be issued in parts (e.g., partial permit issuance for foundation works), includes the entirety of the subject development and a letter of confirmation is submitted by the architect assuring that the design of the building and related features satisfies all applicable City's requirements.
- 17.4.3. "No occupancy" shall be permitted of a building on the lot, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction activities and/or tenant improvement purposes), unless the building and related features are completed in accordance with the City-approved Occupancy Staging Plan (which may be amended subject to an approved Development Permit) to the satisfaction of the City and a letter of confirmation is submitted by the architect assuring that the building and related features satisfy all applicable City's requirements.

- 18. Development Permit*: The submission and processing of a Development Permit* for the entirety of the subject development to a level deemed acceptable by the Director of Development.
- 19. Servicing Agreement*: Enter into a Servicing Agreement* for the design and construction, at the developer's sole cost, of full upgrades across the subject site's frontages, together with various engineering, transportation, and parks works, to the satisfaction of the City. Prior to rezoning adoption, all Servicing Agreement* works must be secured via a Letter(s) of Credit, as determined by the City. All works shall be completed prior to first occupancy of the building on the lot, in whole or in part (excluding parking intended as an ancillary use to non-parking uses on the site), unless otherwise permitted by a City-approved Occupancy Staging Plan.

Servicing Agreement* works shall include, but may not be limited to, the following:

- 19.1. Engineering Servicing Agreement* Requirements: The developer shall be responsible for the design and construction of water, storm sewer, sanitary sewer, frontage improvements, and general engineering works to the satisfaction of the Director of Engineering, which works shall include, but may not be limited to, those set out in **Schedule E**. (Development Cost Charge (DCC) credits may apply.)
- 19.2. Transportation Servicing Agreement* Requirements: The developer shall be responsible for the design and construction of road and related improvements, to the satisfaction of the Director of Transportation, which works shall include, but may not be limited to, those set out in **Schedule F, Schedule G, and Schedule H**. (Development Cost Charge (DCC) credits may apply.)
- 19.3. Parks Servicing Agreement* Requirements: The developer shall be responsible for the design and construction of park and related improvements, to the satisfaction of the Director, Parks (Services) and Director of Development, which works shall include, but may not be limited to, those set out in **Schedule I**. (Development Cost Charge (DCC) credits shall not apply.)

Prior to a Development Permit* being forwarded to the Development Permit Panel for consideration, among other things the developer/owner must complete the following requirements:

- 1. Submission of a letter prepared by a BCLS registered surveyor confirming that information submitted prior to Council consideration of the rezoning application remains up to date with respect to building height compliance with Transport Canada regulations.
- 2. Submission of an acoustical and mechanical report and recommendations prepared by an appropriate registered professional, which demonstrates that the interior noise levels and noise mitigation standards comply with the City's Official Community Plan and Noise Bylaw requirements. The standard required for air conditioning systems and

their alternatives (e.g. ground source heat pumps, heat exchangers and acoustic ducting) is the ASHRAE 55-2004 “Thermal Environmental Conditions for Human Occupancy” standard and subsequent updates as they may occur. Maximum interior noise levels (decibels) within the dwelling units must achieve CMHC standards follows:

Portions of Dwelling Units	Noise Levels (decibels)
Bedrooms	35 decibels
Living, dining, recreation rooms	40 decibels
Kitchen, bathrooms, hallways, and utility rooms	45 decibels

3. Richmond Fire Department (RFD) review, which may include, but may not be limited to:

- Addressing (e.g., visible from the street, contrasting colours);
- Fire hydrant measurements (e.g., principle entrance, RFD connection);
- Fire panel (e.g., operation sequence, stages, elevator operation);
- RFD connection (e.g., inter-connected, connections at amenities, podium roof, other accessible rooftops and open spaces);
- Fire ratings (e.g., podium);
- RFD access route measurements (e.g., widths, lengths, dead ends);
- Smoke control measures (e.g., vestibules, stairwells, kitchens);
- Tank permits (e.g., emergency generator);
- Emergency generator (e.g., power) and the spaces serviced (e.g., firefighter elevator, annunciator panel, emergency lights);
- Designated firefighter elevator;
- Firefighter voice communication;
- Fire extinguisher installation areas (e.g., measurements); and
- Alarm-activated front door release.

Prior to Building Permit issuance, among other things the developer/owner must complete the following requirements:

1. Submission of a Construction Parking and Traffic Management Plan to the Transportation Department. Management Plan shall include location for parking for services, deliveries, workers, loading, application for any lane closures, and proper construction traffic controls as per Traffic Control Manual for works on Roadways (by Ministry of Transportation) and MMCD Traffic Regulation Section 01570.
2. Incorporation of accessibility measures in Building Permit* plans in compliance with the approved rezoning and/or Development Permit*.
3. Receipt of a Building Permit* for any construction hoarding. If construction hoarding is required to temporarily occupy a public street, the air space above a public street, or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit*. For additional information, contact the Building Approvals Department at 604-276-4285.

Note:

- The asterisk (*) indicates that a separate application is required.
- Where the Director of Development deems appropriate, the preceding agreements are to be drawn not only as personal covenants of the property owner but also as covenants pursuant to Section 219 of the Land Title Act.
All agreements to be registered in the Land Title Office shall have priority over all such liens, charges and encumbrances as is considered advisable by the Director of Development. All agreements to be registered in the Land Title Office shall, unless the Director of Development determines otherwise, be fully registered in the Land Title Office prior to enactment of the appropriate bylaw.
The preceding agreements shall provide security to the City including indemnities, warranties, equitable/rent charges, letters of credit and withholding permits, as deemed necessary or advisable by the Director of Development. All agreements shall be in a form and content satisfactory to the Director of Development.
- Additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering may be required including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.

- Applicants for all City Permits are required to comply at all times with the conditions of the Provincial *Wildlife Act* and Federal *Migratory Birds Convention Act*, which contain prohibitions on the removal or disturbance of both birds and their nests. Issuance of Municipal permits does not give an individual authority to contravene these legislations. The City of Richmond recommends that where significant trees or vegetation exists on site, the services of a Qualified Environmental Professional (QEP) be secured to perform a survey and ensure that development activities are in compliance with all relevant legislation.

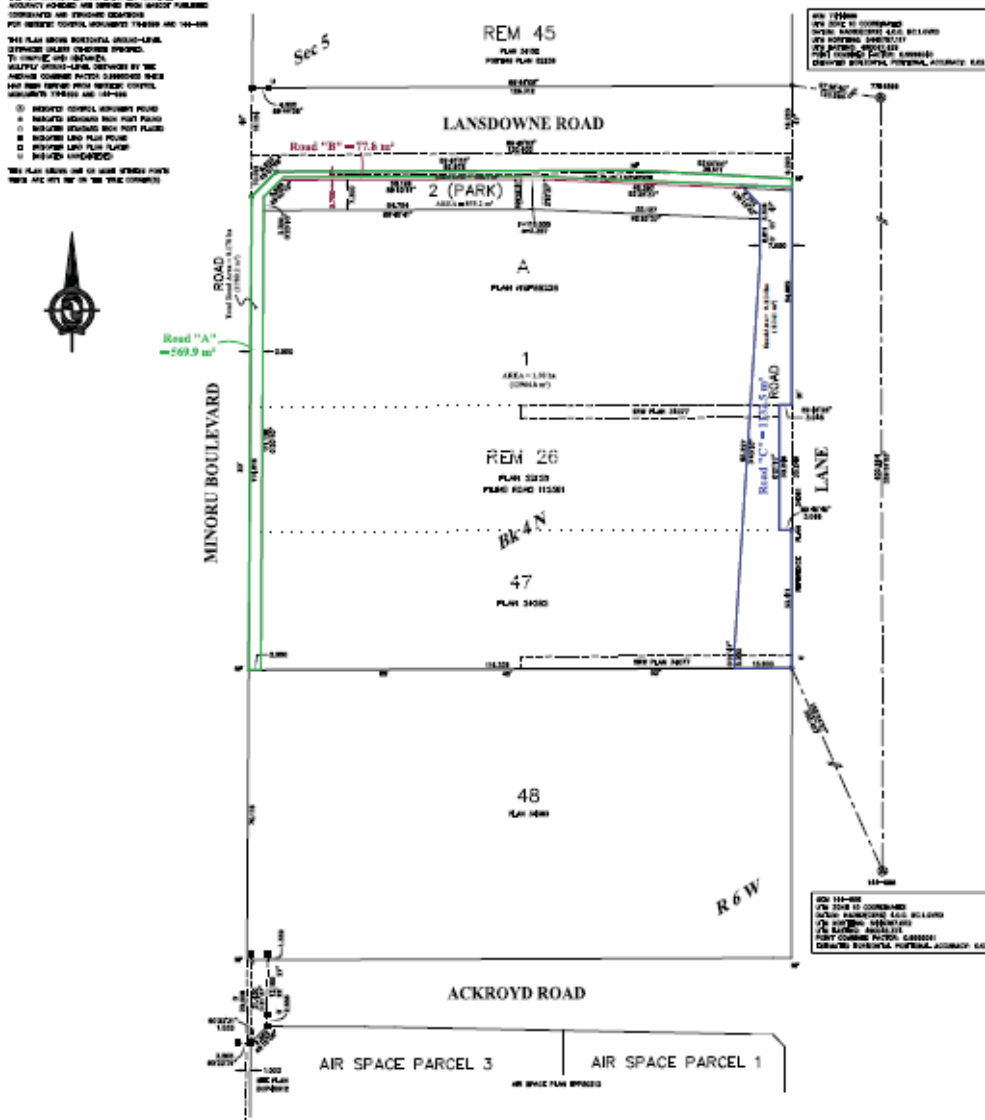
SIGNED COPY ON FILE

PLAN EPP_____

DRAFT

PLAN EPP_____

DRAFT



THE PLAN LIES WITHIN THE JURISDICTION OF THE APPLICABLE CODES FOR THE CITY OF INDIANAPOLIS.

THE PLAN LIES WITHIN THE UNITED NATIONS FEDERAL DISTRICT - CITY OF INDIANAPOLIS.

THE FIELD BUREAU REPRESENTED BY THIS PLAN WAS COMPLAINED ON THE ____ DAY OF MAY, 2018.

CORRIGING WORK, SEE THE

SCHEDULE B
Preliminary Statutory Right-of-Way Plan (City-Owned Park Enhancement Area)



RZ 18-807640

Affordable Rental Housing Building

Terms of Reference

Prior to final adoption of Richmond OCP Amendment Bylaw No. 10136 and Bylaw No. 10137 and Zoning Amendment Bylaw No. 10138, the developer/owner is required to complete the following:

***Affordable Rental Housing Building:** The City's acceptance of the developer/owner's offer to voluntarily contribute affordable low-end-of-market-rental (LEMR) housing units, constructed to a turnkey level of finish on the subject site at the sole cost of the developer, the terms of which voluntary contribution shall include, but will not be limited to, the registration of the City's standard Housing Agreement and Covenant on title to secure the dwelling units. The form of the Housing Agreement and Covenant shall be agreed to by the developer and the City prior to final adoption of the subject rezoning application; after which time, only the Housing Covenant may be amended or replaced and any such changes will only be permitted for the purpose of accurately reflecting the specifics of the Development Permit* for the subject site and other non-materials changes resulting thereof and made necessary by the Development Permit* approval requirements, as determined to the satisfaction of the Director of Development and Director of Community Social Development. The terms of the Housing Agreement and Covenant shall indicate that they apply in perpetuity and provide for, but will not be limited to, the requirements set out in the Affordable Rental Housing Building Terms of Reference (**Schedule C**). "No occupancy" of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.*

1. **Stand-Alone Building & Not-for-Profit Operator:** The developer/owner has submitted a preliminary Memorandum of Understanding (MOU) with an experienced non-profit housing operator to demonstrate the developer/owner's intent to engage the non-profit organization as the operator of the proposed Affordable Rental Housing Building. In light of this arrangement, the City is willing to accept clustering of the required LEMR units and the Affordable Rental Housing (0.2 FAR) Bonus units in the form of a stand-alone building, together with the clustering of other building features intended for the exclusive use of the Affordable Rental Housing Building occupants (e.g., parking), provided that the Affordable Rental Housing Building shall:
 - a) Front the new City Road along the east frontage of the subject site;
 - b) Be integrated with the development's underground parking structure, roof deck, and related features, but function as an independent building that does not share common circulation (e.g., lobbies, hallways, elevators, and stairs) or emergency exit routes with the market residential or commercial uses on the subject site; and
 - c) Be located within an Air Space Parcel approved by the City. Legal agreements shall be registered on title, to the satisfaction of the City, to ensure that the occupants of the Affordable Rental Housing Building, non-profit operator, guests, and designates have adequate access to and enjoyment of facilities intended for their:
 - i. exclusive use (e.g., parking, "Class 1" bike storage, designated indoor amenity space, and waste management facilities);
 - ii. shared use with the market residential occupants (e.g., outdoor amenity space and designated indoor amenity space); and
 - iii. shared use with both market residential and commercial occupants (e.g., driveways and loading), as determined to the City's satisfaction through the Development Permit*. Use of any such exclusive or shared facilities shall result in no additional charge to the occupants of the affordable housing units (i.e. no monthly rents or other user fees shall apply for casual, shared, or other use). In the event that any exclusive or shared facilities are not part of the Air Space Parcel (e.g., parking) and the non-profit operator is subject to additional charges for the use of such facilities, any such charges may not exceed the rates charges to other users on the lot for access to/use of similar uses and spaces, as determined to the City's satisfaction.
2. **Minimum Required Floor Area:** The required minimum floor area of the Affordable Rental Housing Building, exclusive of parking, bike storage, indoor amenity space, and uses not intended for the exclusive use of the occupants of the Affordable Rental Housing Building, shall be at least 6,430.5 m² (69,217.0 ft²) (exclusive of standard Zoning

Bylaw floor area exemptions) or as otherwise determined to the satisfaction of the Director of Development and Director of Community Social Development and set out in an approved Development Permit*, including:

- a) At least 2,774.1 m² (29,860.3 ft²) or 10% of the maximum residential floor area permitted on the subject site (exclusive of market rental density bonus floor area permitted under the ZMU46 zone), whichever is greater, in the form of habitable affordable housing dwelling unit floor area;
- b) At least 3,006.9 m² (32,365.6 ft²) in the form of habitable affordable housing dwelling unit floor area and ancillary spaces (as per the Affordable Rental Housing (0.2 FAR) Bonus provision under the ZMU46 zone);
- c) Approximately 649.5 m² (6,991.1 ft²) of additional floor area, including:
 - i. Circulation (e.g., lobbies, hallways, elevators, and stairs) intended for the exclusive use of the affordable housing occupants; and
 - ii. All walls, mechanical, electrical, and similar spaces required to facilitate the developer/owner's provision of the proposed Affordable Rental Housing Building on the lot.

3. **Residential Amenity Space:** In addition to the minimum floor area of the Affordable Rental Housing Building described above, the developer/owner shall construct residential amenity space for the unrestricted use and enjoyment of the occupants of the Affordable Rental Housing Building, including:

- a) At least 110.9 m² (1,194.0 ft²) of indoor amenity space within the Affordable Rental Housing Building for the exclusive use of the building's occupants, including at least 18.6 m² (200.0 ft²) as administrative space for the use of the non-profit housing operator;
- b) At least 464.5 m² (5,000.0 ft²) of indoor amenity space at the podium rooftop level of the development for the shared use of the occupants of the Affordable Rental Housing Building and market residential units; and
- c) Outdoor amenity space for the shared use of the occupants of the Affordable Rental Housing Building and market residential units, the size and design of which shall comply with the Official Community Plan, as determined to the satisfaction of the Director of Development and Director of Community Social Development and set out in an approved Development Permit*.

4. **Housing Requirements:** As required under the ZMU46 zone, the Affordable Rental Housing Building shall contain a minimum of 88 Residential Rental Tenure dwelling units, all of which shall be affordable low-end-of-market-rental (LEMR) housing units, as determined to the satisfaction of the City through an approved Development Permit*.

- a) The developer shall, as generally indicated in the table below:
 - i. Ensure that the types, sizes, rental rates, and occupant income restrictions for the affordable housing units are in accordance with the City's Affordable Housing Strategy and guidelines for low-end-of-market-rental (LEMR) housing, unless otherwise determined to the satisfaction of the Director, Community Social Development through an approved Development Permit*; and
 - ii. Achieve the Project Targets for units mix and Basic Universal Housing (BUH) standard compliance or as otherwise determined to the satisfaction of the Director, Community Social Development through an approved Development Permit*.

	Minimum Unit Area	Max. Monthly LEMR Unit Rent***	Total Maximum Household Income**	Project Unit Targets		
				Unit Mix**		BUH Units*
Studio	37 m² (400 ft²)	\$811	\$34,650 or less	17% (15 units)	47% (41 units)	100%
1-Bedroom	50 m² (535 ft²)	\$975	\$38,250 or less	30% (26 units)		100%
2-Bedroom	69 m² (741 ft²)	\$1,218	\$46,800 or less	47% (41 units)	53% (47 units)	100%
3-Bedroom	91 m² (980 ft²)	\$1,480	\$58,050 or less	6% (6 units)		100%
TOTAL	Varies	Varies	Varies	100% (min. 88 units)		100%

* BUH units mean those units that comply with the Zoning Bylaw's Basic Universal Housing standards.

** The unit mix will be confirmed to the satisfaction of the City through the Development Permit* process. The recommended unit mix is indicated in the table; however, based on approved design, which may take into account non-profit housing operator input, the unit mix may be varied provided that at least 50% of total affordable housing units are some combination of 2- and 3-bedroom units.

*** Rate shall be adjusted periodically as provided for under adopted City policy.

- b) The developer/owner shall provide for full and unlimited use of the following features by the Affordable Rental Housing Building occupants at no charge to those occupants (i.e. no monthly rents or other fees shall apply for the casual, shared, or exclusive use of the features), which features may be secured with legal agreement(s) registered on title prior to Development Permit* issuance or as otherwise determined to the satisfaction of the City:
- i. All designated indoor and outdoor amenity spaces, intended for shared use by market residential and Affordable Rental Housing Building occupants or for exclusive use by the Affordable Rental Housing Building occupants, as determined to the City's satisfaction through an approved Development Permit*; and
 - ii. On-site parking, "Class 1" bike storage, and related electric vehicle (EV) charging stations provided for the use of the Affordable Rental Housing Building occupants in compliance with an approved Development Permit*. (For clarity, those occupants of the affordable units who utilize the vehicle EV charging stations may be required to pay for the cost of their utility usage, but not for their use of the EV charging equipment or associated parking.)
5. **Transportation Requirements:** On-site parking, "Class 1" bike storage, and related electric vehicle (EV) charging stations shall be provided for the use of Affordable Rental Housing Building occupants as per the OCP, Zoning Bylaw, and an approved Development Permit*. At least two parking spaces shall be provided for the exclusive use of visitors to the Affordable Rental Housing Building (as per the rate set out in the ZMU46 zone). In addition, the developer/owner shall implement Transportation Demand Management (TDM) measures, as determined to the satisfaction of the City. (As provided for under the ZMU46 zone, implementation of the required TDM measures shall provide for the parking rates applicable to the Affordable Rental Housing Building to be reduced by up to 25%.) The required TDM measures shall include:
- a) **Cycling Facilities:** The developer/owner's provision of bike-related measures for the exclusive use of the occupants of the Affordable Rental Housing Building, which measures shall be clustered together adjacent to the Affordable Rental Housing Building's elevator/stair core, as determined to the satisfaction of the City through the Development Permit* review and approval processes, including:
 - i. EV-equipped "Class 1" bike storage spaces at a rate of 1.7 bikes/dwelling unit, as required under the ZMU46 zone (i.e. increased from the standard Zoning Bylaw rate of 1.25 bikes/unit), which bike storage must include 120V energized (duplex) outlets for the shared use of cyclists at a rate of 1 energized (duplex) outlet for each 10 bike storage spaces or portion thereof in each bike storage room (which energized outlets shall be located to facilitate shared use by bikes in the storage room);
 - ii. 10% of the required "Class 1" bike storage in the form of over-size lockers for family bike storage (e.g., bike trailers), electric-assist vehicles (e.g., mopeds), and similar equipment/uses, as required under the ZMU46 zone; and
 - iii. A bike repair and maintenance facility comprised of a foot-activated pump, repair stand with integrated tools, and a bike wash.
 - b) **Transit Pass Program:** Registration of a legal agreement on title requiring the developer/owner's implementation, at the developer/owner's sole cost, of a coordinated strategy providing for monthly transit (2-zone) passes for 2 years for 100% of the Affordable Rental Housing Building units, to the satisfaction of the Director of Transportation. It shall be the responsibility of the developer/owner to ensure that the transit pass program and how to access it is clearly conveyed to the Affordable Rental Housing Building occupants (e.g., through tenancy agreements). Prior to adoption of the rezoning bylaw, the developer/owner shall submit a letter of credit to the City, based on 100% of the estimated value of the transit pass program. If the transit pass program is not fully subscribed within two years (such that the value secured by the letter of credit has not been fully utilized by the building occupants), the program shall be extended by one year. If the transit pass program is not fully subscribed at the end of the 1-year extension period, the remaining value of the program shall be transferred to the City of Richmond as a voluntary cash-in-lieu contribution towards alternative transportation demand management measures, as determined at the City's sole discretion.

6. Level of Finish:

- a) The Affordable Rental Housing Building, related uses (e.g., parking, garbage/recycling, indoor and outdoor amenities), and associated spaces shall be completed, to a turnkey level of finish, at the sole cost of the developer, to the satisfaction of the Director of Development and Director, Community Social Development.
- b) The Affordable Rental Housing Building (including all dwelling units, common areas, and related uses and spaces) and areas intended for the shared use of the occupants of the Affordable Rental Housing Building and market residential units (e.g., indoor and outdoor amenity spaces) shall be accessible to people with disabilities, in compliance with the BC Building Code or as otherwise determined to the satisfaction of the Director of Community Social Development and Manager of Building Approvals.
- c) The Affordable Rental Housing Building, including its common areas and dwelling units, shall be equipped with an audio/visual alarm system.

7. Prior-to Requirements:

- a) “No development” shall be permitted on the subject site, restricting Development Permit* issuance for a building on the site, in whole or in part, until the developer, to the City’s satisfaction:
 - i. Submits, for consideration by the City, a current memorandum of understanding with a non-profit operator demonstrating, among other things, support for the developer’s proposed Affordable Rental Housing Building design and related features;
 - ii. Designs the lot to provide for the Affordable Rental Housing Building and required ancillary spaces and uses (e.g., Basic Universal Housing units, parking, cycling facilities, and related EV charging infrastructure, indoor and outdoor amenity spaces, and waste management facilities);
 - iii. Amends or replaces the Housing Covenant to accurately reflect the specifics of the Affordable Rental Housing Building and ancillary spaces and uses as per the approved Development Permit*; and
 - iv. As required, registers additional legal agreements on title to the site to facilitate the detailed design, construction, operation, and/or management of the Affordable Rental Housing Building and/or ancillary spaces and uses (e.g., parking) as determined by the City via the Development Permit* review and approval processes.
- b) No Building Permit* shall be issued for a building on the subject site, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless:
 - i. The developer provides for the required Affordable Rental Housing Building and ancillary spaces and uses (e.g., Basic Universal Housing units, parking, cycling facilities, and related EV charging infrastructure, indoor and outdoor amenity spaces, and waste management facilities) in the permit;
 - ii. The detailed design shall of the Affordable Rental Housing Building and all related spaces and features are satisfactory to the Director of Development and Director, Community and Social Development in their sole discretion; and
 - iii. A letter of confirmation is submitted by the architect assuring that the design of the facilities satisfies all applicable City requirements.
- c) As set out in the Occupancy Staging Plan requirements, prior to occupancy of any residential use on the subject site, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction and/or tenant improvement purposes), the developer/owner shall:
 - i. Complete the required Affordable Rental Housing Building and ancillary spaces and uses (e.g., Basic Universal Housing units, parking, cycling facilities, and related EV charging infrastructure, indoor and outdoor amenity spaces, and waste management facilities) to the satisfaction of the City; and
 - ii. Implement the required Affordable Rental Housing Building Transit Pass Program to the satisfaction of the City (as secured by legal agreement registered on title to the lot).

RZ 18-807640

Non-Profit Social Service Agency Accommodation Measures

Terms of Reference

Prior to final adoption of Richmond OCP Amendment Bylaw No. 10050 and Bylaw No. 10102 and Zoning Amendment Bylaw No. 10051, the developer/owner is required to complete the following:

Non-Profit Social Service Agency Accommodation Measures: The City's acceptance of the developer's offer to voluntarily contribute affordable community amenity space for operation by non-profit social service agencies, together with tenant relocation assistance, as determined to the satisfaction of the City. The terms of the developer's contribution shall include, but shall not be limited to, the developer's design and construction (to a shell level of finish typical of commercial/office lease industry standards, at the developer's sole cost) of at least 425.7 m² (4,582.0 ft²) of gross leasable space on the east side of subject site (co-located with the Affordable Rental Housing Building), together with related uses/spaces (e.g., lobby, circulation, parking), to the satisfaction of the City. The form of the legal agreements securing the developer's commitment shall be agreed to by the developer and the City prior to final adoption of the subject rezoning application; after which time, the agreement(s) may only be amended or replaced for the purpose of accurately reflecting the specifics of the Development Permit for the subject site and other non-materials changes resulting thereof and made necessary by the Development Permit* approval requirements, as determined to the satisfaction of the Director of Development and Director of Community Social Development. The terms of the legal agreements shall indicate that they apply in perpetuity and provide for, but will not be limited to, the requirements set out in the Non-Profit Social Service Agency Accommodation Measures Terms of Reference. "No occupancy" of the development shall be permitted, in whole or in part, unless the development is completed in accordance with a City-approved Occupancy Staging Plan.*

Note: For the purposes of calculating maximum permitted floor area under the Zoning Bylaw, the non-profit social service agency tenant units, circulation intended for the exclusive use of the non-profit social service agency tenants and their visitors, and any lobby and/or vertical circulation shared by the non-profit social service agency tenants and the occupants of the Affordable Rental Housing Building shall be treated as "community amenity space" to a maximum of 0.1 FAR, as permitted under the High Density Mixed Use and Affordable Rental Housing (ZMU46) zone.

A. **Intent:** To mitigate the impact of the subject development on two non-profit social service agencies currently located on the subject site through the developer/owner's provision, at the developer/owner's sole cost, of:

1. Affordable Non-Profit Social Service Agency Replacement Space ("Replacement Space") on the subject site; and
2. Tenant Relocation Assistance (as described in Section C).

Prior to adoption of the Rezoning Bylaw, legal agreements must be registered on title, to the City's satisfaction, to provide for the following Non-Profit Social Service Agency Accommodation Measures.

B. **Affordable Non-Profit Social Service Agency Replacement Space ("Replacement Space"):**

3. **Minimum Required Floor Area:** As determined to the satisfaction of the City through an approved Development Permit* application, the minimum floor area of the Affordable Non-Profit Social Service Agency Replacement Space ("Replacement Space") shall include:
 - a) At least 425.7 m² (4,582.0 ft²) of gross leasable space in the form of non-profit social service agency tenant units capable of accommodating program spaces, administration, and ancillary spaces/uses (e.g., private washrooms);
 - b) Spaces/uses intended for shared use by the non-profit social service agency tenants and their visitors (e.g., circulation and common washrooms);
 - c) Any lobby and/or vertical circulation shared by the non-profit social service agency tenants and the occupants of the Affordable Rental Housing Building; and
 - d) Ancillary uses/spaces (e.g., parking, loading, secure bicycle storage, and waste management) required to satisfy the Official Community Plan (OCP), Zoning Bylaw, and/or other City policies, objectives, or guidelines.

4. Location: The Replacement Space shall be co-located with the Affordable Rental Housing Building on the east side of subject site, which co-located arrangement may include, but may not be limited to the following, as determined to the satisfaction of the City through an approved Development Permit* application:
 - a) Above the second storey, spaces/uses secured for the exclusive use of the occupants of Affordable Rental Housing Building;
 - b) At the second storey, non-profit social service agency tenant units, together with an elevator lobby and related circulation, spaces, and uses for the exclusive use of the non-profit social service agency tenants and their visitors, the design of which shall, among other things, provide for convenient, universally-accessible, and safe public access to/from the parking structure and take into account the needs of people with mobility issues and wheelchairs with attendants;
 - c) At the ground floor, a universally accessible lobby (the design of which must take into account the needs of people with mobility issues and wheelchairs with attendants) for shared use by the occupants of the Affordable Rental Housing Building, non-profit social service agency tenants, and visitors, which lobby shall provide direct access to the fronting street and a shared elevator/stair providing for:
 - i. Above the second storey, 24/7 access for the exclusive use of the Affordable Rental Housing Building occupants and their visitors; and
 - ii. At the ground and second storeys, unrestricted public access during regular business hours and secure access for non-profit social service agency tenants and Affordable Rental Housing Building occupants outside of regular business hours; and
 - d) Within the development's parkade structure, parking, loading, waste management facilities, bike storage and end-of-trip cycling facilities, and related uses/spaces for the use of the non-profit social service agency tenants (on a shared and/or exclusive basis, as determined to the City's satisfaction through an approved Development Permit* application).
5. Parking, Loading & Waste Management Requirements: As determined to the satisfaction of the City through an approved Development Permit* application, the subject development shall include, but may not be limited to:
 - a) At least 23 parking spaces for the exclusive use of the non-profit social service agency tenants (including applicable signage), which parking shall:
 - i. Comprise 23 of the development's required Assignable Parking Spaces (as per the development's Non-Residential Parking agreement);
 - ii. Be clustered together on the first parking level above the ground floor and located to provide for convenient/direct and safe public access to/from the Replacement Space's second floor lobby (the design of which must take into account people with mobility issues and wheelchairs with attendants);
 - iii. Include at least 1 Accessible Space and 1 Van-Accessible Space;
 - iv. Not include more than 12 small car spaces;
 - v. For at least 12 of the 23 spaces (including some combination of accessible, standard, and small car spaces), energized electric vehicle (EV) charging equipment (i.e. including all the wiring, electrical equipment, and related infrastructure necessary to provide Level 2 charging or higher to an electric vehicle, as per the Zoning Bylaw);
 - b) Bike storage provided in accordance with Zoning Bylaw requirements for retail/office uses, including:
 - i. Class 1 (secured) bike storage equipped with energized EV charging equipment (i.e. operational 120V duplex outlets and all the wiring and related infrastructure necessary to provide their operation) for the exclusive use of the non-profit social service tenants, which bike storage should be co-located with the Non-Residential Tenant Cycling Facilities "End-of-Trip Facilities"; and
 - ii. Class 2 (unsecured/public) for public use;

- c) Shared use (secured by legal agreement) of the development's:
 - i. Non-Residential Tenant Cycling Facilities "End-of-Trip Facilities";
 - ii. Retail/office loading facilities; and
 - iii. Retail/office waste management facilities; and
 - d) Designated (i.e. marked with signage) short-term curb-side parking along the fronting street for exclusive use as a public passenger drop-off/pick-up zone for taxis, Handi Dart, and private vehicles (i.e. NOT for the exclusive use of the non-profit social service agency tenants).
6. Tenant Eligibility: As determined to the satisfaction of the City, all eligible tenants of the Replacement Space must be verifiable non-profit social services agencies that provide Richmond-serving programs. As determined at the City's discretion, preference may be given to agencies that, among other things:
- a) Are exclusively Richmond-based;
 - b) Provide services aimed at addressing one or more City priorities (e.g., recognized local needs);
 - c) Support City objectives for inclusiveness, community building, and livability of Richmond and its downtown; and/or
 - d) Demonstrate opportunities for synergy with the operator and/or tenants of the Affordable Rental Housing Building.
7. Rental Terms: Rental rates and terms shall be approved by the City with the aim of ensuring that the Replacement Space shall:
- a) Be secured in perpetuity for exclusive use as "affordable" space for non-profit social service programs, operations, and related activities/uses conducted by eligible tenants that have been pre-qualified by the developer/owner and approved by the Director of Community Social Development or their alternate.
 - b) Be subject to maximum rental rates such that:
 - i. The net rent applicable to the gross leasable area of the non-profit social service tenant units shall not exceed 50% of net market rent (i.e. based on comparable commercial spaces in Richmond's City Centre);
 - ii. An applicable base rent, together with a mechanism for periodic rent increases (i.e. every 5 years), shall be determined to the satisfaction of the City, together with an obligation to deliver to the City annual statutory declarations as to the tenant(s) and current net rent;
 - iii. The tenants of the non-profit social service tenant units shall not be subject to additional rents or other fees with respect to their casual, shared, or exclusive use of:
 - common spaces shared among the non-profit social service tenants, with the Affordable Rental Housing Building occupants, and/or with other tenants of the development (e.g., loading and waste management facilities);
 - parking provided for the exclusive use of the non-profit social service tenants and their guests (secured by legal agreement), except for electrical costs with respect to the tenants' use of the EV charging equipment; or
 - Class 1 (secured) bike storage provided for the exclusive use of the non-profit social service tenants, except for electrical costs for the tenants' use of the EV charging equipment.
8. Developer/Owner Responsibility: The developer/owner will be responsible (at the sole cost of the developer/owner) for the following:
- a) Design and construction of the Replacement Space, at the developer's cost, as determined to the satisfaction of the City through an approved Development Permit* and Building Permit*, including:
 - i. At least 425.7 m² (4,582.0 ft²) of gross leasable space in the form of non-profit social service agency tenant units, which spaces shall be constructed to a shell level of finish typical of commercial/office lease industry standards (which, for clarity, shall include, among other things, plumbing rough-ins for two accessible washrooms and a kitchen/kitchenette in each of the two tenant units); and

- ii. Spaces/uses intended for shared use by the non-profit social service agency tenants and their visitors (e.g., circulation and common washrooms), any lobby and/or vertical circulation shared by the non-profit social service agency tenants and the occupants of the Affordable Rental Housing Building, and ancillary uses/spaces (e.g., parking, loading, secure bicycle storage, and waste management) required to satisfy the Official Community Plan (OCP), Zoning Bylaw, and/or other City policies, objectives, or guidelines, which spaces shall be constructed to a turnkey level of finish;
- b) Pre-qualifying of potential tenants for review and selection by the City;
- c) Renting of the Replacement Space to eligible, City-approved tenants; and
- d) Maintenance of the Replacement Space and related uses/spaces in good repair (exclusive of tenant improvements).

9. City Responsibility: The Director of Community Social Development or their alternate will be responsible for:

- a) Defining the Replacement Space tenant eligibility criteria and, as determined to be necessary by the City in its sole discretion, updating the criteria on a periodic basis;
- b) Setting the Council-approved rental rates for the Replacement Space and reviewing and updating the rates on a periodic basis (e.g., once every five years) as required to the City's satisfaction; and
- c) Approving tenants from a list of applicants that are pre-qualified by the developer/owner based on City-approved Replacement Space eligibility criteria. (Selection will be done via a selection panel or as otherwise determined to the sole satisfaction of the City.)

10. Tenure:

- a) **Ownership**: Developer-owned; however, the Replacement Space may be sold to an alternate owner, provided that the Replacement Space is sold as a single unit and all rights (e.g., parking, waste facilities, access, rental terms) are transferred with the Replacement Space, to the satisfaction of the City.
- b) **Legal**: Prior to adoption of the Rezoning Bylaw, legal agreements must be registered on title, to the City's satisfaction, to:
 - i. Secure the Replacement Space in perpetuity (including uses/spaces shared with the Affordable Rental Housing Building) for exclusive use as "affordable" space for non-profit social service programs, operations, and related activities/uses conducted by eligible tenants (pre-qualified by the developer/owner and approved by the Director of Community Social Development or their alternate);
 - ii. Secure easement(s) and/or alternate agreements as required with respect to parking, shared use of loading and access, rental terms, maintenance, and other considerations; and
 - iii. Provide for "no development", "no build", and "no occupancy" covenants, an option for the City to purchase (at a nominal charge), and other measures as the City determines to be necessary.
- c) **Subdivision**: Air Space Parcel (ASP)

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C. **Tenant Relocation Assistance**: The developer/owner shall, at the developer's sole cost and to the City's satisfaction, provide relocation assistance to the two non-profit social service agencies located on the subject site including:

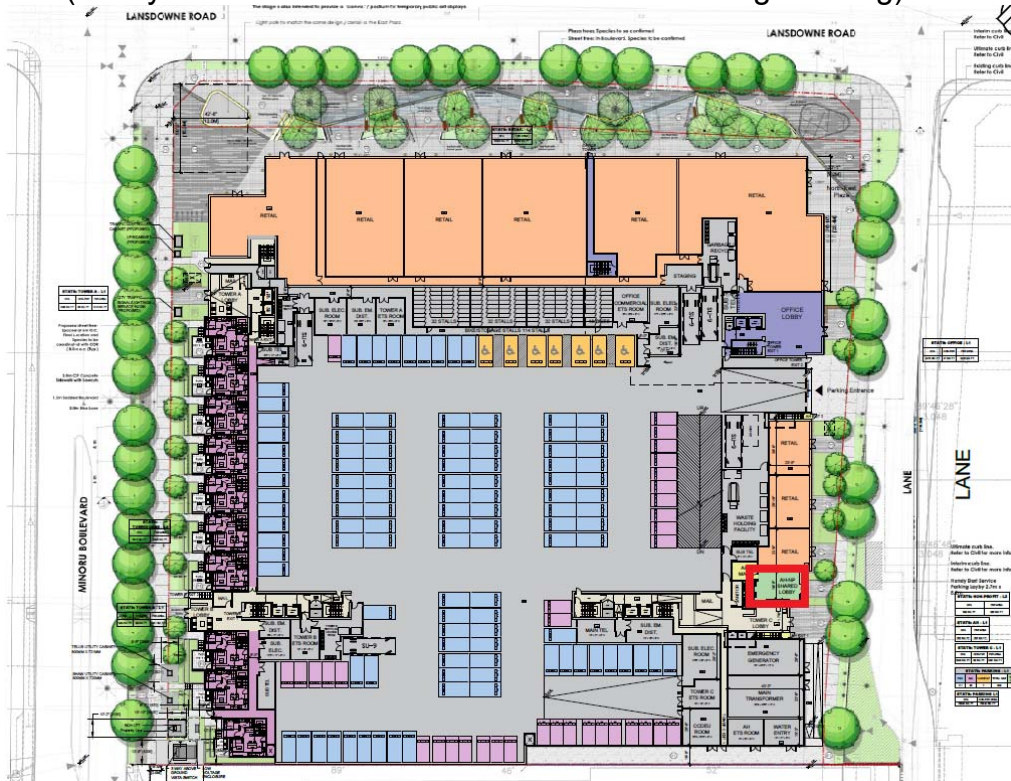
- 1. Three months advance notice of the date when the agencies' current premises must be vacated;
- 2. Assistance of a commercial real estate broker to find new spaces for the two agencies, which spaces may be temporary or permanent (as determined at the discretion of the individual agency operators); and
- 3. First right of refusal with respect to relocating to the tenant units within the on-site Replacement Space.

D. *Prior-to Requirements:*

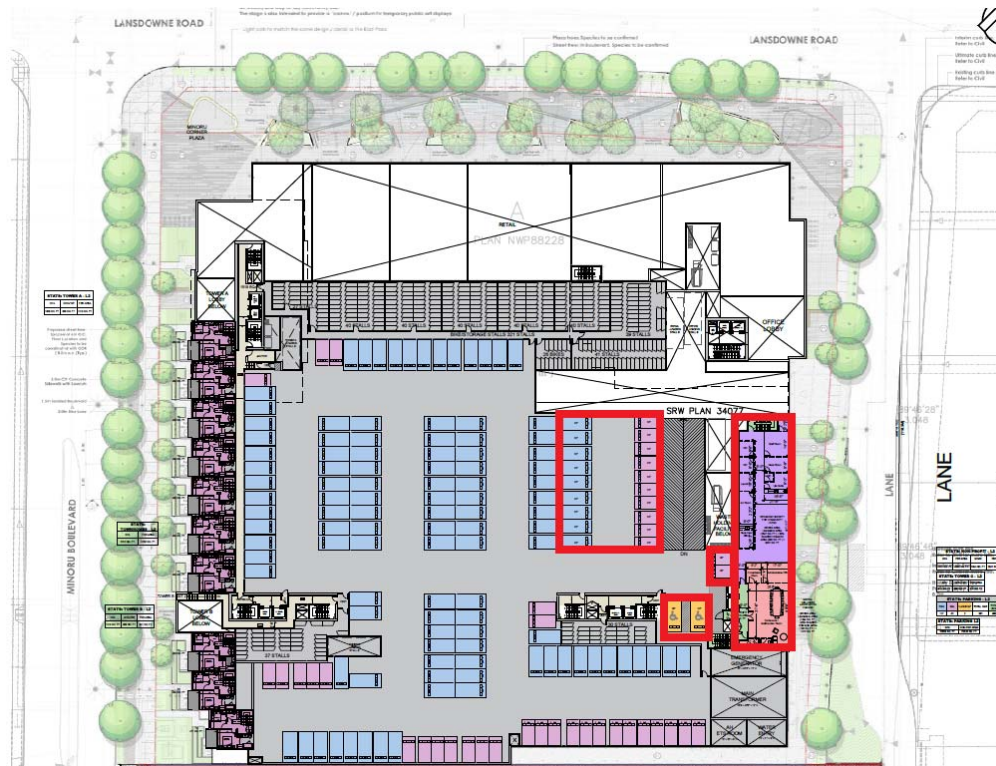
1. “No development” shall be permitted on the subject site, restricting Development Permit* issuance for any building on the subject site, in whole or in part, unless the developer designs the on-site Affordable Non-Profit Social Service Agency Replacement Space to the satisfaction of the City.
2. No Building Permit* shall be issued for a building on the subject site, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless:
 - a) The required on-site Affordable Non-Profit Social Service Agency Replacement Space is incorporated in the Building Permit* drawings/specifications to the satisfaction of the Director of Development, Director of Transportation, and Director of Community Social Development; and
 - b) The developer/owner has provided for the required Tenant Relocation Assistance to the satisfaction of the Director of Community Social Development.
3. As set out in the Occupancy Staging Plan requirements, prior to first occupancy of the building on the subject site, in whole or in part (exclusive of any provisional occupancy permitted exclusively for construction and/or tenant improvement purposes), the developer/owner shall complete the required on-site Replacement Space to the satisfaction of the Director of Development, Director of Transportation, and Director of Community Social Development.

Affordable Non-Profit Social Service Agency Replacement Space: Conceptual Layout

GROUND FLOOR (Lobby shared with the Affordable Rental Housing Building)



SECOND FLOOR (Affordable Non-Profit Social Service units, 2nd floor lobby & designated parking spaces)



RZ 18-807640

Engineering Servicing Agreement Requirements:

A servicing agreement is required to design and construct the following works.

1. Water Works:

- a. Using the OCP Model, there is 435.0 L/s of water available at a 20 psi residual at the Minoru Boulevard frontage, 320.0 L/s of water available at a 20 psi residual at the new north-south road frontage, 359.0 L/s of water available at a 20 psi residual at the Lansdowne Road frontage. Based on your proposed development, your site requires a minimum fire flow of 220 L/s.
- b. At Developer's cost, the Developer is required to:
 - i. Submit Fire Underwriter Survey (FUS) or International Organization for Standardization (ISO) fire flow calculations to confirm development has adequate fire flow for onsite fire protection. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit Stage Building designs.
 - ii. Install approximately 125 m of new 300 mm water main in the new north-south road, complete with hydrants and a blow-off at the south end per City specifications.
 - iii. Install approximately 125 m of new 300 mm water main along Minoru Boulevard from Lansdowne Road to the south property line of the development site. At both Lansdowne Road and the south property line, the water main is to tie-in the existing water mains on both the east and west side of Minoru Boulevard.
 - iv. Remove the existing water main on the east side of Minoru Boulevard along the development frontage.
 - v. Fill and abandon the existing water main on the west side of Minoru Boulevard along the development frontage.
 - vi. Review hydrant spacing on all existing and new road frontages and provide fire hydrants as required to meet City spacing requirements for commercial land use. Fire department approval is required for all fire hydrant installations and relocations.
 - vii. Provide a right-of-way for the water meter and meter chamber, at no cost to the City. Exact right-of-way dimensions to be finalized during the servicing agreement process.
- c. At Developer's cost, the City is to:
 - i. Cut, cap, and remove all existing water service connections and meters to the development site.
 - ii. Reconnect all existing water service connections and hydrant leads to the new water main.
 - iii. Install one new water service connection, meter to be located onsite in a right of way.
 - iv. Complete all tie-ins for the proposed works to existing City infrastructure.

2. Storm Sewer Works:

- a. At Developer's cost, the Developer is required to:
 - i. Perform a capacity analysis to size the proposed storm sewers and drainage conveyances in Minoru Boulevard and the new north-south road. The analysis shall consider both the existing condition and the 2041 OCP condition, and include runoff from the future roads proposed in the OCP. Storm sewers shall be interconnected where possible. Minimum pipe size shall be 600 mm.
 - ii. Install approximately 130 m of new storm sewer in Minoru Boulevard, sized via the required capacity analysis. The new storm sewer shall tie in to the existing storm sewer in the lane south of 5791 Minoru Boulevard, and to the box culvert in Lansdowne Road to the north.
 - iii. Remove the existing storm sewer on the east side of Minoru Boulevard along the development frontage.
 - iv. Fill and abandon the existing storm sewer on the west of Minoru Boulevard along the development frontage.
 - v. Install approximately 130 m of new storm sewer in the new north-south street, sized via the required capacity analysis. The new storm sewer shall tie in to the existing lane drainage to the south of the development site, and to the box culvert in Lansdowne Road to the north.
 - vi. Confirm that the existing temporary storm service in the lane (new north-south road) has been removed. If not, remove.
 - vii. Install one new storm service connection, complete with inspection chamber. Inspection chamber to be located in a right-of-way onsite.
 - viii. Provide an erosion and sediment control plan for all on-site and off-site works, to be reviewed as part of the servicing agreement.

- b. At Developer's cost, the City is to:
 - i. Cut and cap all existing storm service connections to the development site and remove inspection chambers.
 - ii. Reconnect all existing storm connections, catch basins, and lawn basins to the proposed storm sewers.
 - iii. Complete all tie-ins for the proposed works to existing City infrastructure.

3. Sanitary Sewer Works

- a. At Developer's cost, the Developer is required to:
 - i. Ensure that 5840 Minoru Boulevard has uninterrupted sanitary service during and after site preparation and building construction.
 - ii. Discharge the sanitary sewer right-of-way at the common property line of 5760 & 5740 Minoru Boulevard (plan number 34077) after removal of the existing sanitary connection.
- b. At Developer's cost, the City is to:
 - i. Install one new sanitary service connection, complete with inspection chamber. Inspection chamber to be located in a right-of-way onsite.
 - ii. Cut and cap all existing service connections serving the development site, and remove inspection chambers. Note: the existing sanitary connection at the common property line of 5760 & 5740 Minoru Boulevard must be removed and capped at the main prior to start of the site preparation works.

4. Frontage Improvements:

- a. The Developer is required to:
 - i. Provide street lighting along all road frontages according to the following street light types:
 - a) City Streets
 - a. Lansdowne Road (South side of street)
 - i. **IMPORTANT:** The following streetlight type shall apply to all 4 corners @ the Lansdowne/Minoru intersection & all 4 corners @ the Lansdowne/New North-South intersection
 - ii. Pole colour: Grey
 - iii. Roadway lighting @ back of curb: Type 7 (LED) INCLUDING 1 street luminaire, banner arms, and 1 duplex receptacle, but EXCLUDING any pedestrian luminaires, flower basket holders, or irrigation.
 - iv. Pedestrian lighting @ buffer strip between sidewalk and off-street bike path: Type 8 (LED) INCLUDING 2 pedestrian luminaires and 1 duplex receptacle, but EXCLUDING any banner arms, flower basket holders, or irrigation. (NOTE: "Pedestrian luminaires" are intended to light the sidewalk and off-street bike path. Luminaire arms must be set perpendicular to the direction of travel.)
 - b. New North-South Street @ City-owned lane widening along site's east side (West side of street)
 - i. **IMPORTANT:** The streetlight type shall transition north of the Ackroyd/ New North-South Street intersection. For clarity, all 4 corners @ the Ackroyd/ New North-South Street intersection shall be (blue) City Centre Type; HOWEVER, north of the intersection shall be (grey) Type 7.
 - ii. Pole colour: Grey
 - iii. Roadway lighting @ back of curb: Type 7 (LED) INCLUDING 1 street luminaire, banner arms, and 1 duplex receptacle, but EXCLUDING any pedestrian luminaires, flower basket holders, or irrigation.
 - c. Minoru Boulevard (East side of street)
 - i. **IMPORTANT:** The streetlight type shall transition north of the Ackroyd/ Minoru intersection. For clarity, all 4 corners @ the Ackroyd/ Minoru intersection shall be (blue) City Centre Type; HOWEVER, north of the intersection shall be (grey) Type 7 & Type 8.
 - ii. Pole colour: Grey
 - iii. Roadway lighting @ back of curb: Type 7 (LED) INCLUDING 1 street luminaire, banner arms, and 1 duplex receptacle, but EXCLUDING any pedestrian luminaires, flower basket holders, or irrigation.
 - iv. Pedestrian lighting @ buffer strip between sidewalk and off-street bike path: Type 8 (LED) INCLUDING 2 pedestrian luminaires and 1 duplex receptacle, but EXCLUDING any banner arms, flower basket holders, or irrigation. (NOTE: "Pedestrian luminaires" are intended to

light the sidewalk and off-street bike path. Luminaire arms must be set perpendicular to the direction of travel.)

- v. NOTE: Staff must confirm if the Minoru cross-section will include an off-street bike path. Streetlight requirements may change if an on-street bike lane is required.

b) Off-Street Publicly-Accessible Walkways & Opens Spaces

- a. Lansdowne Road (South side of the park) (City owned & City maintained)
 - i. Pole colour: Grey
 - ii. Pedestrian lighting within the park: Type 8 (LED) INCLUDING 1 pedestrian luminaire and 1 duplex receptacle, but EXCLUDING any banner arms, flower basket holders, or irrigation.
- ii. Coordinate with BC Hydro, Telus and other private communication service providers:
 - a) To underground the overhead lines and poles along the new north-south road. All above-ground boxes required to facilitate undergrounding shall be located onsite (as in, not within the public realm).
 - b) To pre-duct for future hydro, telephone and cable utilities along all road frontages.
 - c) To locate/relocate all proposed/existing underground structures (e.g. junction boxes, pull boxes, service boxes, etc.) outside of bike paths and sidewalks.
 - d) Before relocating/modifying any of the existing power poles and/or guy wires within the property frontages.
 - e) To locate/relocate all above ground utility cabinets and kiosks required to service the proposed development and undergrounding works, and all existing above ground utility cabinets and kiosks located along the development's frontages, within the developments site (see list below for examples). A functional plan showing conceptual locations for such infrastructure shall be included in the development process design review. Please coordinate with the respective private utility companies and the project's lighting and traffic signal consultants to confirm the requirements (e.g., statutory right-of-way dimensions) and the locations for the aboveground structures. If a private utility company does not require an aboveground structure, that company shall confirm this via a letter to be submitted to the City. The following are examples of statutory right-of-ways that shall be shown on the functional plan and registered prior to SA design approval:
 - BC Hydro PMT – 4.0 x 5.0 m
 - BC Hydro LPT – 3.5 x 3.5 m
 - Street light kiosk – 1.5 x 1.5 m
 - Traffic signal kiosk – 1.0 x 1.0 m
 - Traffic signal UPS – 2.0 x 1.5 m
 - Shaw cable kiosk – 1.0 x 1.0 m
 - Telus FDH cabinet – 1.1 x 1.0 m

5. General Items:

- a. The Developer is required to:
 - i. Provide, prior to start of site preparation works or within the first servicing agreement submission, whichever comes first, a geotechnical assessment of preload and soil preparation impacts on the existing utilities fronting the development site and provide mitigation recommendations. Particularly, the developer is required to confirm that there will be no impact to the existing asbestos cement (AC) storm sewer and water mains fronting the development site; if there is the potential for impact, then the developer may be required to replace these utilities prior to commencing site preparation activities. Note: the developer is required to upgrade these utilities regardless of whether or not there is impact – it is only the timing of the replacement that will depend on whether there is impact due to the site preparation works.
 - ii. Provide a video inspection report of the existing storm and sanitary sewers along the development's frontages prior to start of site preparation works or within the first servicing agreement submission, whichever comes first. A follow-up video inspection report after site preparation works are complete (i.e. pre-load removal, completion of dewatering, etc.) is required to assess the condition of the existing utilities and provide recommendations. Any utilities damaged by the pre-load, de-watering, or other development-related activity shall be replaced at the Developer's cost.
 - iii. Monitor the settlement at the adjacent utilities and structures during pre-loading, dewatering, and soil preparation works per a geotechnical engineer's recommendations, and report the settlement amounts to the City for approval.
 - iv. Conduct pre- and post-preload elevation surveys of all surrounding roads, utilities, and structures. Any damage, nuisance, or other impact to be repaired at the developer's cost. The post-preload elevation survey shall be incorporated within the servicing agreement design.

- v. Submit a proposed strategy at the building permit stage for managing excavation de-watering. Note that the City's preference is to manage construction water onsite or by removing and disposing at an appropriate facility. If this is not feasible due to volume of de-watering, the Developer will be required to apply to Metro Vancouver for a permit to discharge into the sanitary sewer system. If the sanitary sewer does not have adequate capacity to receive the volume of construction water, the Developer will be required to enter into a de-watering agreement with the City to discharge treated construction water to the storm sewer system.
- vi. Not encroach into City rights-of-ways with any proposed trees, retaining walls, or other non-removable structures.
- vii. Coordinate the servicing agreement design for this development with the servicing agreement(s) for the adjacent development(s), both existing and in-stream. The developer's civil engineer shall submit a signed and sealed letter with each servicing agreement submission confirming that they have coordinated with civil engineer(s) of the adjacent project(s) and that the servicing agreement designs are consistent. The City will not accept the 1st submission if it is not coordinated with the adjacent developments. The coordination letter should cover, but not be limited to, the following:
 - (a) Corridors for City utilities (existing and proposed water, storm sewer, sanitary and DEU) and private utilities.
 - (b) Pipe sizes, material and slopes.
 - (c) Location of manholes and fire hydrants.
 - (d) Road grades, high points and low points.
 - (e) Alignment of ultimate and interim curbs.
 - (f) Proposed street lights design.
- viii. Enter into, if required, additional legal agreements, as determined via the subject development's Servicing Agreement(s) and/or Development Permit(s), and/or Building Permit(s) to the satisfaction of the Director of Engineering, including, but not limited to, site investigation, testing, monitoring, site preparation, de-watering, drilling, underpinning, anchoring, shoring, piling, pre-loading, ground densification or other activities that may result in settlement, displacement, subsidence, damage or nuisance to City and private utility infrastructure.

RZ 18-807640

Transportation Servicing Agreement* Requirements

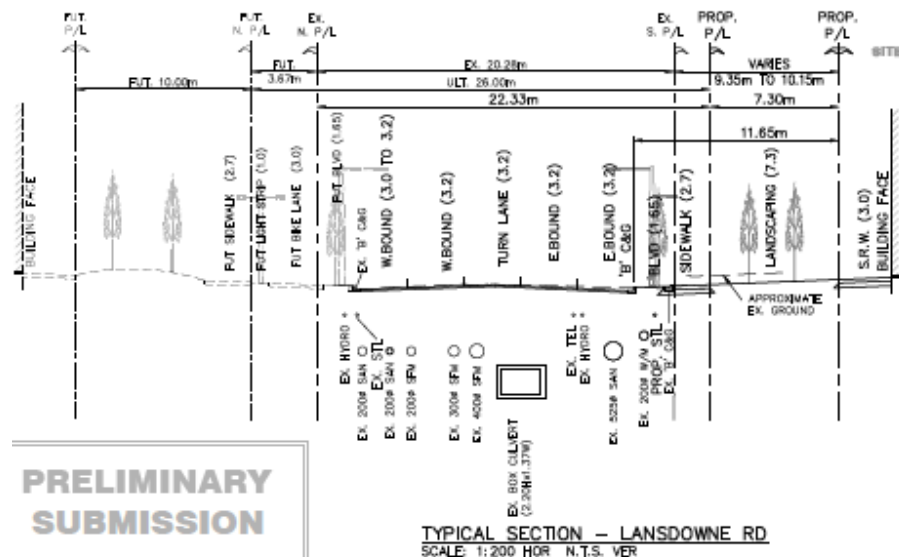
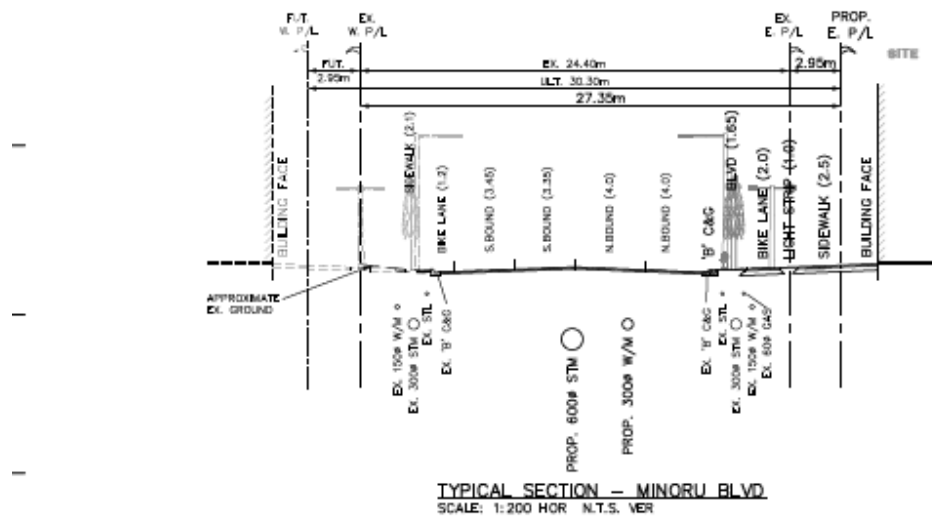
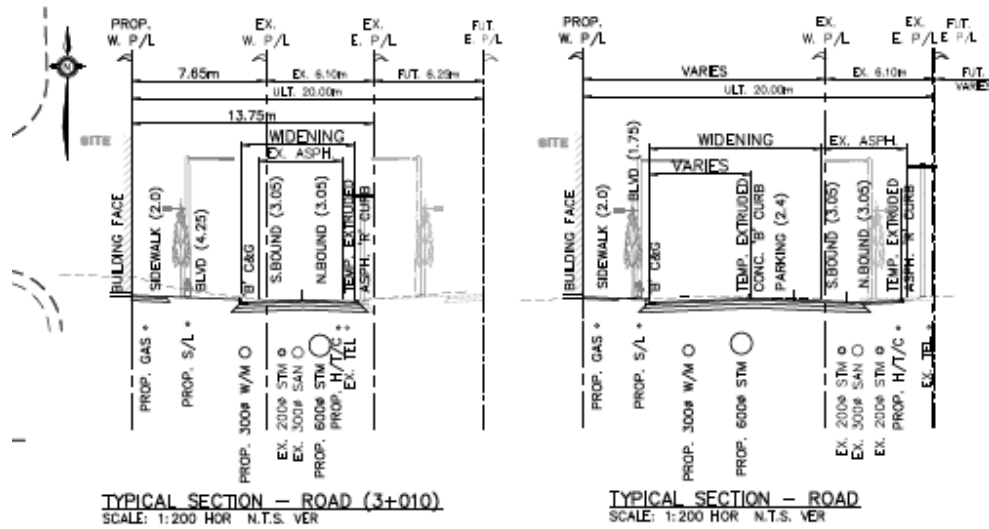
The developer shall be responsible for the design and construction of road and related improvements, to the satisfaction of the Director of Transportation, which works shall include, but may not be limited to, those set out in **Schedule G**.

1. **Road Works:** At a minimum, the developer will be responsible for the design and construction of the following frontage works to the satisfaction of the Director of Transportation, as generally illustrated in the Functional Road Plan – Interim (**Schedule G**). Note that, among other things, the design and construction of the required road improvements shall take into account the Functional Road Plan – Ultimate (**Schedule H**).
 - 1.1. Along the Minoru Road frontage: Road widening to include (from the new property line to west): 2.5m wide sidewalk, 1.0m wide lighting strip/buffer, 2.0m wide off-street bike path, 1.5m wide boulevard, 0.15m wide curb and gutter, and pavement widening to tie to existing
 - 1.2. Along the eastern site frontage: Road widening to include (from the new property line to east): 2.0m wide sidewalk, 1.6m wide boulevard, 0.15m wide curb and gutter, pavement widening (existing curb / road edge along the east side of the lane remains where it is)
 - 1.3. Along the Lansdowne Road frontage: Road widening to include (from the new property line to north): 2.7m wide sidewalk, 1.5m wide boulevard, 0.15m wide curb and gutter, and pavement widening. (Existing landscaped raised median, between Minoru Boulevard and No 3 Road, be removed and converted to accommodate left-turn lane.)
 - 1.4. Intersection upgrades:
 - a) Upgrade of the existing traffic signal at the Minoru Boulevard/Lansdowne Road intersection (to accommodate the required road widening noted above), which shall include, but may not be limited to the following: Upgrade and/or replace signal pole, controller, base and hardware, pole base, detection, conduits (electrical & communications), signal indications, communications cable, electrical wiring, service conductors, traffic cameras, APS (Accessible Pedestrian Signals) and illuminated street name sign(s); and
 - b) Pre-ducting for a future special crosswalk on Minoru Boulevard, approximately mid-point between Lansdowne Road and Elmbridge Way.
2. **City Tree Removal & Relocation:** Through the required Servicing Agreement* (road works), the developer shall be required, at the developer's sole cost, to remove a small existing City tree from the Lansdowne Road median (*Chamaecyparis obtuse*) and relocate it elsewhere in Richmond, as determined to the satisfaction of the Director, Parks Services.

(**Note:** Required compensation for the developer's removal of 7 additional trees from the Lansdowne Road median is addressed elsewhere in these Rezoning Considerations.)

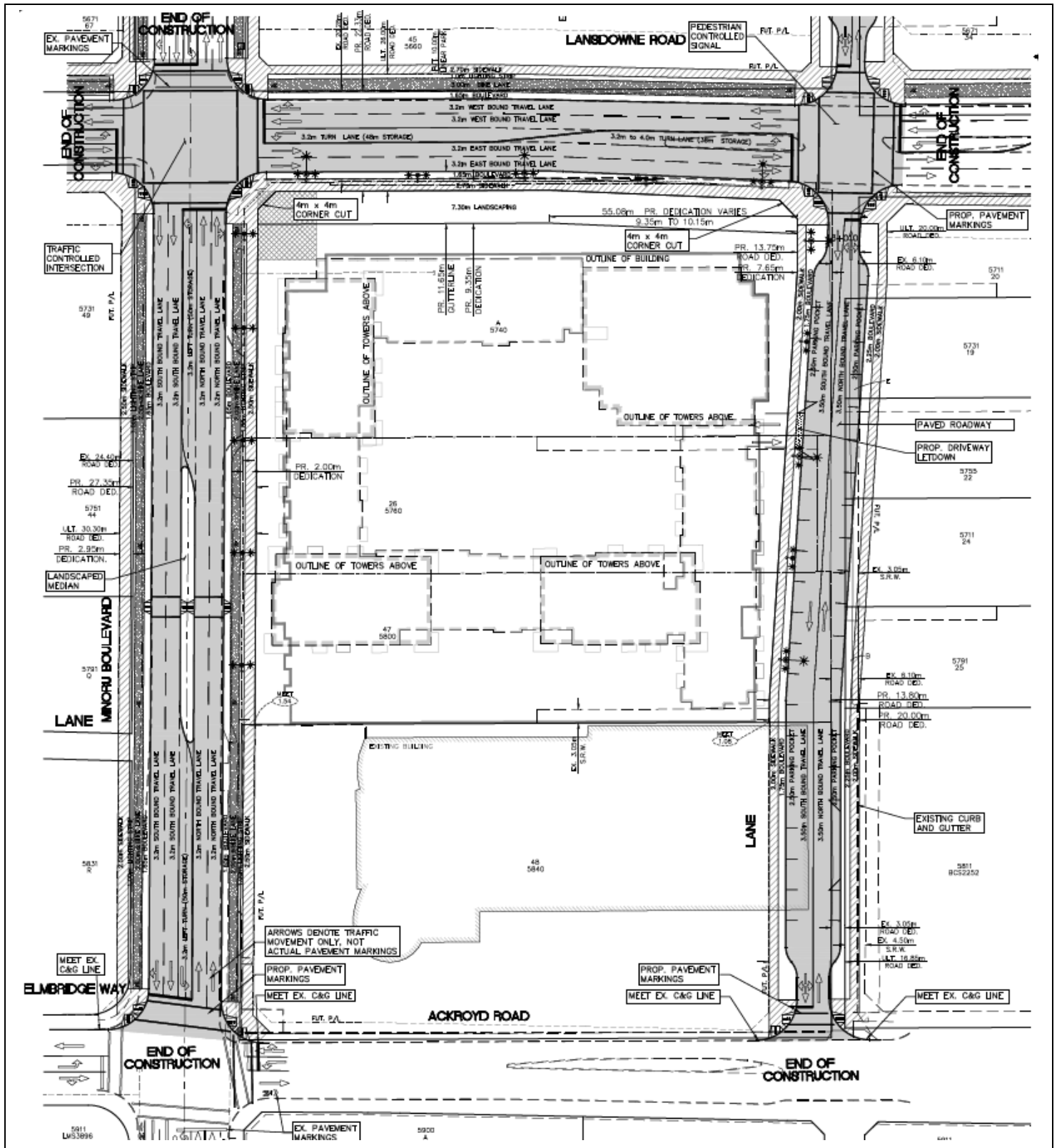
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SCHEDULE H
Functional Road Plan – Ultimate (Excerpt)

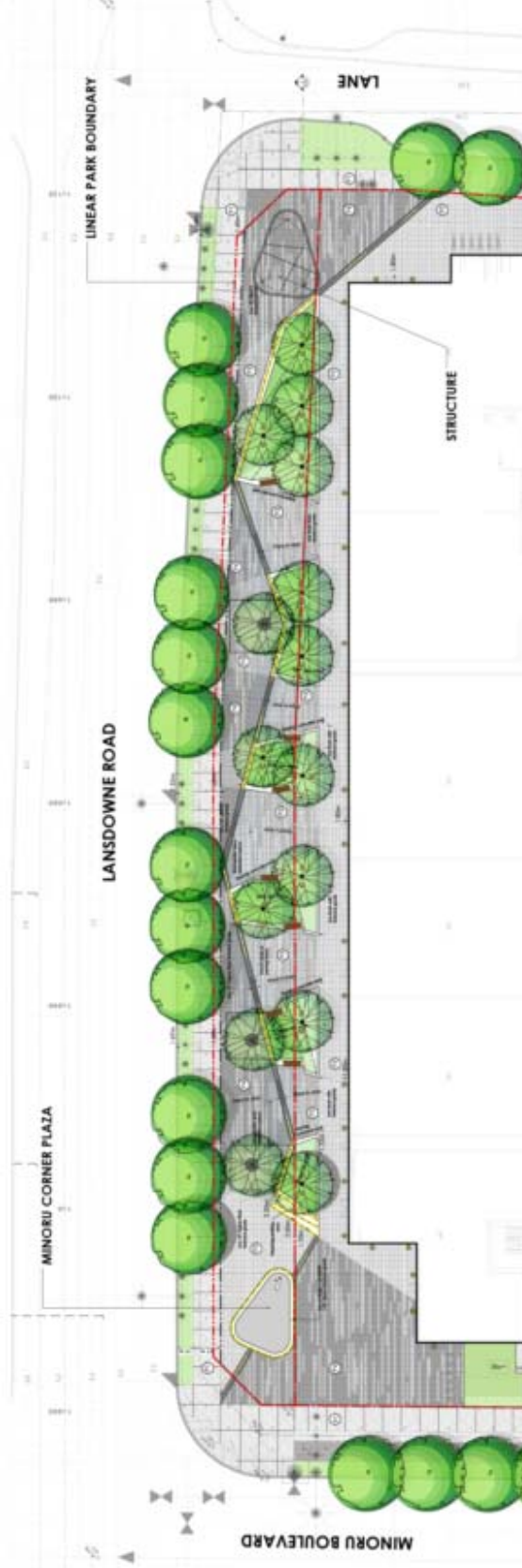
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RZ 18-807640

Parks Servicing Agreement* Requirements



LANSDOWNE LINEAR PARK - OVERALL PLAN

5740, 5760, 5800 Minoru Blvd., Richmond

Richmond, B.C. Canada Issue Date: OCT. 22, 2019

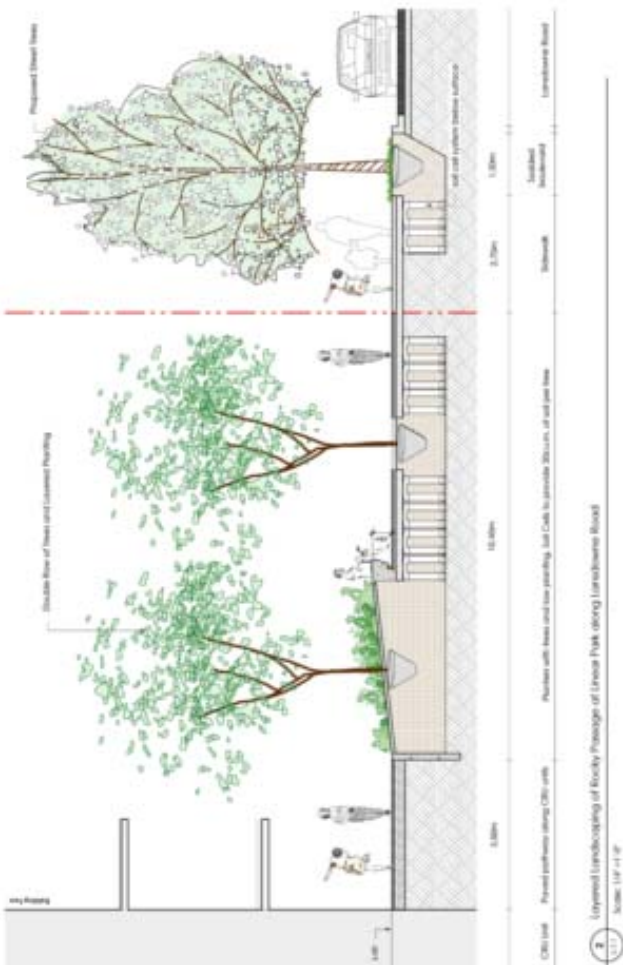
Project Number: 112938

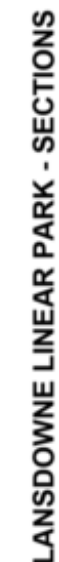
IBI GROUP
ARCHITECTS (CANADA) INC.
 700 - 1285 West Pender Street
 Vancouver BC V6E 4B1 Canada
 Tel: 604 683 8797 Fax: 604 683 0432
 ibigroup.com











5740, 5760, 5800 Minoru Blvd., Richmond
Richmond, B.C. Canada
Project Number 112938
Issue Date: OCT 22, 2019

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**Richmond Official Community Plan Bylaw 7100
Amendment Bylaw 10136 (RZ 18-807640)
5740, 5760 and 5800 Minoru Boulevard**

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Official Community Plan Bylaw 7100, Schedule 2.10 (City Centre Area Plan), as amended, is further amended by:

1.1. In section 2.2 Jobs & Business:

- a) designating the properties located along the east side of Minoru Boulevard, between Ackroyd Road and Alderbridge Way, as:
- i. “Key Mixed-Uses Areas & Commercial Reserve” on the “Jobs & Business Concept Map” on page 2-13;
 - ii. “Mixed-Use Core” on the “Key Commercial Areas Map” on page 2-17; and
 - iii. “Mixed Use” on the “Key Office-Friendly Areas Map” on page 2-18 and revise the last line of the table below the map as follows:

Designation	Maximum Permitted Density	Typical Maximum Building Height	Maximum Floorplate Above 25 m (82 ft.)
Mixed Use	2 – 3 FAR, plus Village Centre Bonus where applicable	35 – 45 m (115 – 148 ft.)	650 m ² (6,997 ft ²), but larger floorplates may be permitted for office buildings

and

- b) designating Lansdowne Road between No. 3 Road and the west side of Minoru Boulevard as “Retail High Streets & Linkages” on the “Pedestrian-Oriented Retail Precincts Map” on page 2-20.
- 1.2. On the Specific Land Use Map: Lansdowne Village, designating Lansdowne Road between No. 3 Road and the west side of Minoru Boulevard as “Pedestrian-Oriented Retail Precincts – High Streets & Linkages”.
- 1.3. In section 4.0 Implementation & Phasing Strategies, replacing policy 4.1(n) with the following:
- “n) Density Bonusing – Affordable Housing & Market Rental Housing
The density bonus approach will be used for rezoning applications in the City Centre that satisfy the requirements of the:
- Richmond Affordable Housing Strategy (i.e. permitting use of the CCAP Affordable Housing Bonus applicable to the development site); or

- OCP market rental housing density bonus provisions (i.e. permitting use of additional density, as specified in the OCP, over and above that permitted by the development site's CCAP Land Use Map Designation).

Furthermore, as determined to the satisfaction of the City, the applicable density bonus may be increased on a site-specific basis for rezoning applications that provide additional affordable housing and/or market rental housing to address community need.”

- 1.4. Making minor text, section numbering, and graphic revisions as necessary to accommodate the identified bylaw amendments and ensure consistency throughout the Plan.
2. This Bylaw may be cited as **“Richmond Official Community Plan Bylaw 7100, Amendment Bylaw 10136”**.

FIRST READING

PUBLIC HEARING

SECOND READING

THIRD READING

ADOPTED



MAYOR

CORPORATE OFFICER



**Richmond Official Community Plan Bylaw 7100
Amendment Bylaw 10137 (RZ 18-807640)
5740, 5760 and 5800 Minoru Boulevard**

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Official Community Plan Bylaw 7100, Schedule 2.10 (City Centre Area Plan), as amended, is further amended by:
 - 1.1. On the “Generalized Land Use Map (2031)” and “Overlay Boundary – Village Centre Bonus Map (2031)”, designating the following area as “Village Centre Bonus”:
That area indicated as “B” on “Schedule A attached to and forming part of Bylaw No. 10137”;
 - 1.2. On the “Specific Land Use Map: Lansdowne Village”:
 - a) designating the following area as “Park”:
That area indicated as “A” on “Schedule A attached to and forming part of Bylaw No. 10137”; and
 - b) designating the following area as “Village Centre Bonus”:
That area indicated as “B” on “Schedule A attached to and forming part of Bylaw No. 10137”; and
 - 1.3. In the “Specific Land Use Map: Lansdowne Village – Detailed Transect Descriptions”, with respect to “Urban Centre (T5)”, inserting a new bullet below “Additional density, where applicable” as follows:
“Village Centre Bonus: 1.0 for the provision of office only”.
2. This Bylaw may be cited as **“Richmond Official Community Plan Bylaw 7100, Amendment Bylaw 10137”**.

FIRST READING

PUBLIC HEARING

SECOND READING

THIRD READING

OTHER CONDITIONS SATISFIED

ADOPTED

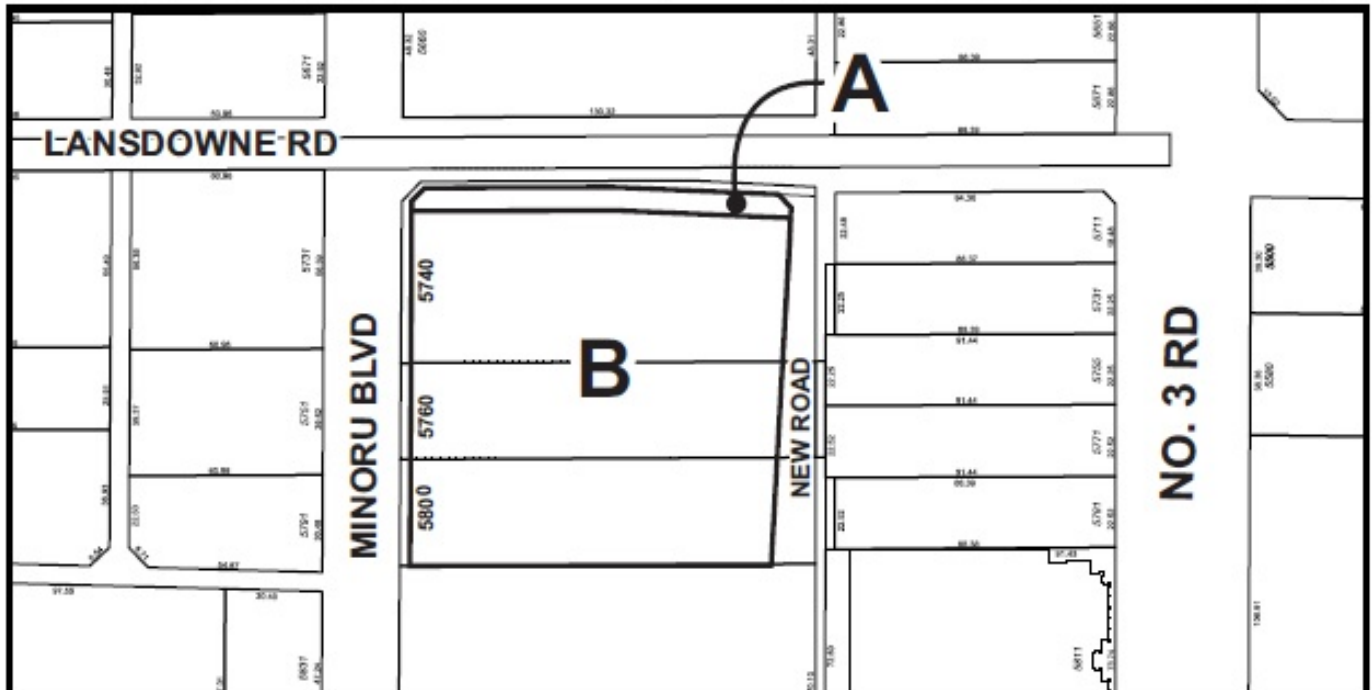
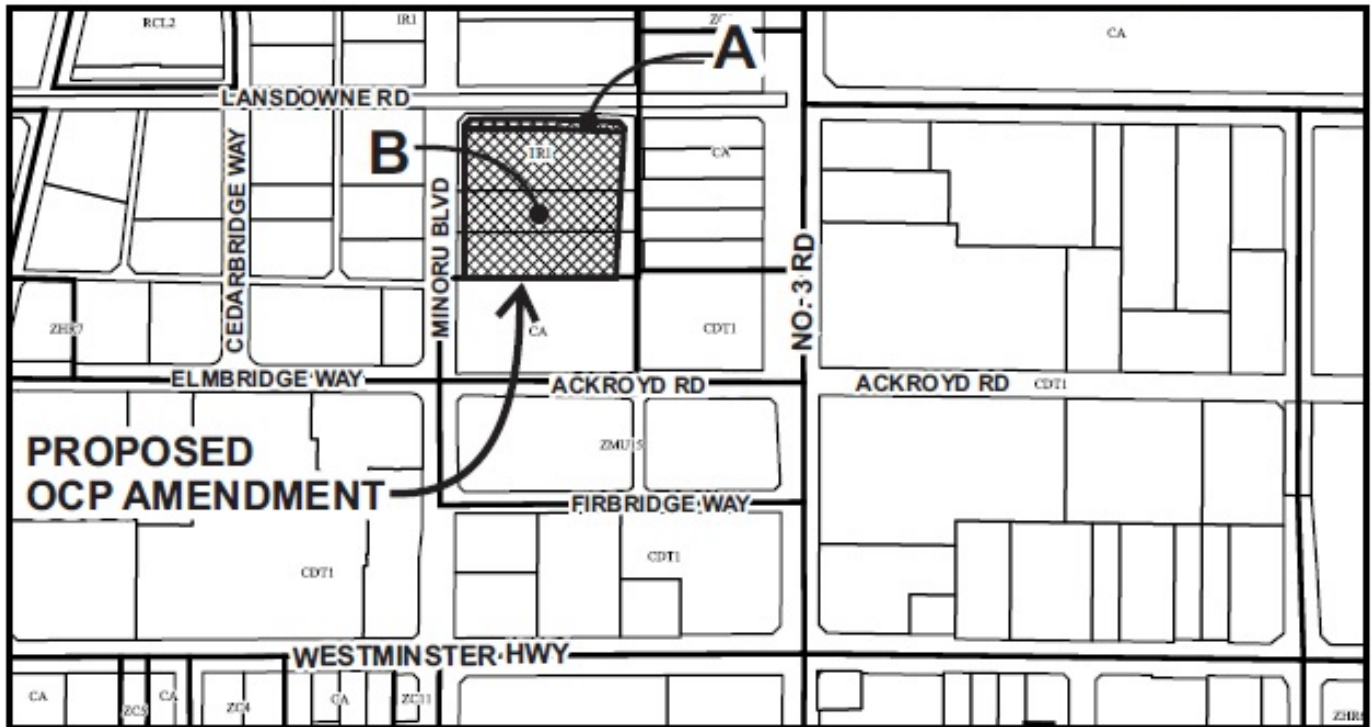


MAYOR

CORPORATE OFFICER



City of Richmond



	<p>OCP Amendment Bylaw 10137 RZ 18-807640</p>	<p>Original Date: 08/09/19 Revision Date: Note: Dimensions are in METRES</p>
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**Richmond Zoning Bylaw 8500
Amendment Bylaw 10138 (RZ 18-807640)
5740, 5760 and 5800 Minoru Boulevard**

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Zoning Bylaw 8500 is amended by inserting the following into Section 20 (Site Specific Mixed Use Zones), in numerical order:

**“20.46 High Density Mixed Use and Affordable Rental Housing (ZMU46) –
Lansdowne Village (City Centre)**

20.46.1 Purpose

The **zone** provides for **commercial, office**, multi-family residential, and compatible **uses** typical of the **City Centre**. Additional **density** is provided to achieve, among other things, **City** objectives related to **community amenity space, affordable housing units**, and **office** within the Village Centre Bonus Area designated by the **City Centre** Area Plan.

20.46.2 Permitted Uses

- amenity space, community
- animal day care
- animal grooming
- broadcasting studio
- child care
- community care facility, minor
- education
- education, commercial
- education, university
- emergency service
- entertainment, spectator
- government service
- health service, minor
- housing, apartment
- housing, town
- library and exhibit
- liquor primary establishment
- manufacturing, custom indoor
- microbrewery, winery and distillery
- neighbourhood public house
- office
- park
- private club
- recreation, indoor
- religious assembly
- restaurant
- retail, convenience
- retail, general
- retail, second hand
- service, business support
- service, financial
- service, household repair
- service, personal
- studio
- veterinary service

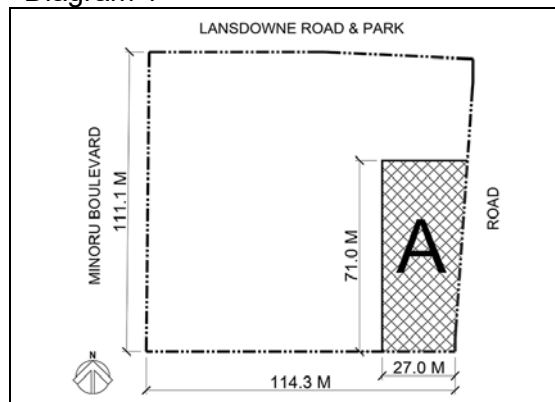
20.46.3 Secondary Uses

- **boarding and lodging**
- **home business**
- **home-based business**

20.46.4 Residential Rental Tenure

1. Not less than 88 **dwelling units**, for use as **affordable housing units** only, located within that portion of the **development site** shown crosshatched and indicated as “A” in Section 20.46.4.1, Diagram 1, shall be **used** only for **residential rental tenure**.

Diagram 1



2. For the purposes of this **zone**, **residential rental tenure** means, in relation to a **dwelling unit** in a multi-family residential **building**, occupancy of a **dwelling unit** governed by a tenancy agreement that is subject to the *Residential Tenancy Act* (BC), as may be amended or replaced from time to time.

20.46.5 Permitted Density

1. The maximum **floor area ratio** is “1.2” together with an additional:
 - a. “0.1” **floor area ratio** for indoor **amenity space** only; and
 - b. “0.1” **floor area ratio** for **community amenity space** only.
2. If the **owner** has provided at least 425.7 m² of **gross leasable floor area** as **community amenity space** under Section 20.46.5.1(b), notwithstanding Section 20.46.5.1, the reference to “1.2” is increased to a higher **floor area ratio** of “2.0” if, prior to first occupancy of the **building**, the **owner**:
 - a. provides not less than 47 **affordable housing units** and the combined **habitable space** of the total number of **affordable housing units** would comprise at least 10% of the residential portion of the 2.0 **floor area ratio**; and
 - b. enters into a **housing agreement** with respect to the **affordable housing units**, and registers the **housing agreement** against title to the **lot** and files a notice in the Land Title Office.

3. If the **owner** has provided **affordable housing units** under Section 20.46.5.2, an additional 0.2 **density bonus floor area ratio** shall be permitted if, prior to first occupancy of the **building**, the **owner**:
 - a. uses the additional 0.2 **density bonus floor area ratio** only for **affordable housing units** and **ancillary uses**, as specified in a Development Permit approved by the **City**; and
 - b. enters into a **housing agreement** with respect to the **affordable housing units**, and registers the **housing agreement** against title to the **lot** and files a notice in the Land Title Office.
4. If the **owner** has provided **affordable housing units** under Section 20.46.5.2 and Section 20.46.5.3, an additional 1.0 **density bonus floor area ratio** shall be permitted, provided that:
 - a. the **lot** is located in the Village Centre Bonus Area designated by the **City Centre Area Plan**;
 - b. the **owner** uses the additional 1.0 **density bonus floor area ratio** only for **office**; and
 - c. the **owner** pays a sum to the **City** (*City Centre Facility Development Fund*) based on 5% of the additional 1.0 **density bonus floor area ratio** multiplied by (i) the “equivalent to construction value” rate of \$7,535 per square metre of **density bonus floor area**, if the payment is made within one year of third reading of the zoning amendment bylaw, or (ii) thereafter, the “equivalent to construction value” rate of \$7,535 per square metre of **density bonus floor area** adjusted by the cumulative applicable annual changes to the Statistics Canada “Non-Residential Building Construction Price Index” for Vancouver, where such change is positive.
5. For the purposes of this **zone**, if the **owner** dedicates not less than 1,210.3 m² of the gross **site** as **road** and transfers not less than 859.2 m² of the gross **site** to the **City** as fee simple for **park** purposes, the calculation of **floor area ratio** shall be based on a net **development site** area of 15,034.3 m².

20.46.6 Permitted Lot Coverage

1. The maximum **lot coverage** is 90% for **buildings**.

20.46.7 Yards & Setbacks

1. Minimum **setbacks** shall be:
 - a. for **road** and **park setbacks**, measured to a **lot line** or the boundary of an area granted to the **City**, via a statutory **right-of-way**, fee simple, or other means, for **road** or **park** purposes: 6.0 m, but may be reduced to 3.0 m if a proper interface is provided as specified in a Development Permit approved by the **City**;
 - b. for interior side yard setbacks: 0.0 m; and
 - c. for parking situated below finished **grade**: 0.0 m.

20.46.8 Permitted Heights

1. The maximum **building height** for **principal buildings** is 35.0 m, but may be increased to 47.0 m geodetic if a proper interface is provided with adjacent **buildings** and areas secured by the **City**, via statutory **right-of-way**, fee simple, or other means, for **park** purposes, as specified in a Development Permit approved by the **City**.
2. The maximum **building height** for **accessory buildings** is 5.0 m.
3. The maximum **height** for **accessory structures** is 12.0 m.

20.46.9 Subdivision Provisions/Minimum Lot Size

1. The minimum **lot area** is 12,500 m².

20.46.10 Landscaping & Screening

1. **Landscaping** and **screening** shall be provided according to the provisions of Section 6.0.

20.46.11 On-Site Parking and Loading

1. On-site **vehicle** and bicycle parking and loading shall be provided according to the standards set out in Section 7.0.
2. Notwithstanding Section 20.46.11.1, for the purposes of this **zone**:
 - a. the minimum number of **vehicle parking spaces** shall be:
 - i) for **community amenity space**: 3.75 spaces per 100.0 m² of **gross leasable floor area**;
 - ii) for **office**: 1.275 spaces per 100.0 m² of **gross leasable floor area**; and
 - iii) for visitors to residential **uses**: 8 spaces;
 - b. the minimum number of **vehicle parking spaces** required for **affordable housing units** may be reduced by up to 25%, if:
 - i) the **owner** has provided **affordable housing units** under Section 20.46.5.2 and Section 20.46.5.3; and
 - ii) the **City** implements transportation demand management measures and the minimum on-site parking requirements are substantiated by a parking study that is prepared by a registered professional engineer and is subject to review and approval of the **City**; and
 - c. for on-site bicycle parking for the residents of the **building**, the minimum number of Class 1 bicycle parking spaces shall be 1.7 spaces per **dwelling unit**, including 10% over-size lockers as specified in a Development Permit approved by the **City**.

20.46.12 Other Regulations

1. Signage must comply with the City of Richmond's *Sign Bylaw 5560*, as it applies to **development** in the Downtown Commercial (CDT1) **zone**.
2. **Telecommunication antenna** must be located a minimum 20.0 m above the ground (i.e., on a roof of a **building**).

3. In addition to the regulations listed above, the General Development Regulations in Section 4.0 and the Specific Use Regulations in Section 5.0 apply.”
2. The Zoning Map of the City of Richmond, which accompanies and forms part of Richmond Zoning Bylaw 8500, is amended by repealing the existing zoning designation of the following area and by designating it:
 - 2.1. **“SCHOOL & INSTITUTION USE (SI)”**
 That area shown cross-hatched and indicated as “A” on “Schedule A attached to and forming part of Bylaw 10138”
 - 2.2. **“HIGH DENSITY MIXED USE AND AFFORDABLE RENTAL HOUSING (ZMU46) – LANSDOWNE VILLAGE (CITY CENTRE)”**
 That area shown cross-hatched and indicated as “B” on “Schedule A attached to and forming part of Bylaw 10138”
3. This Bylaw may be cited as **“Richmond Zoning Bylaw 8500, Amendment Bylaw 10138”**.

FIRST READING

PUBLIC HEARING

SECOND READING

THIRD READING

OTHER CONDITIONS SATISFIED

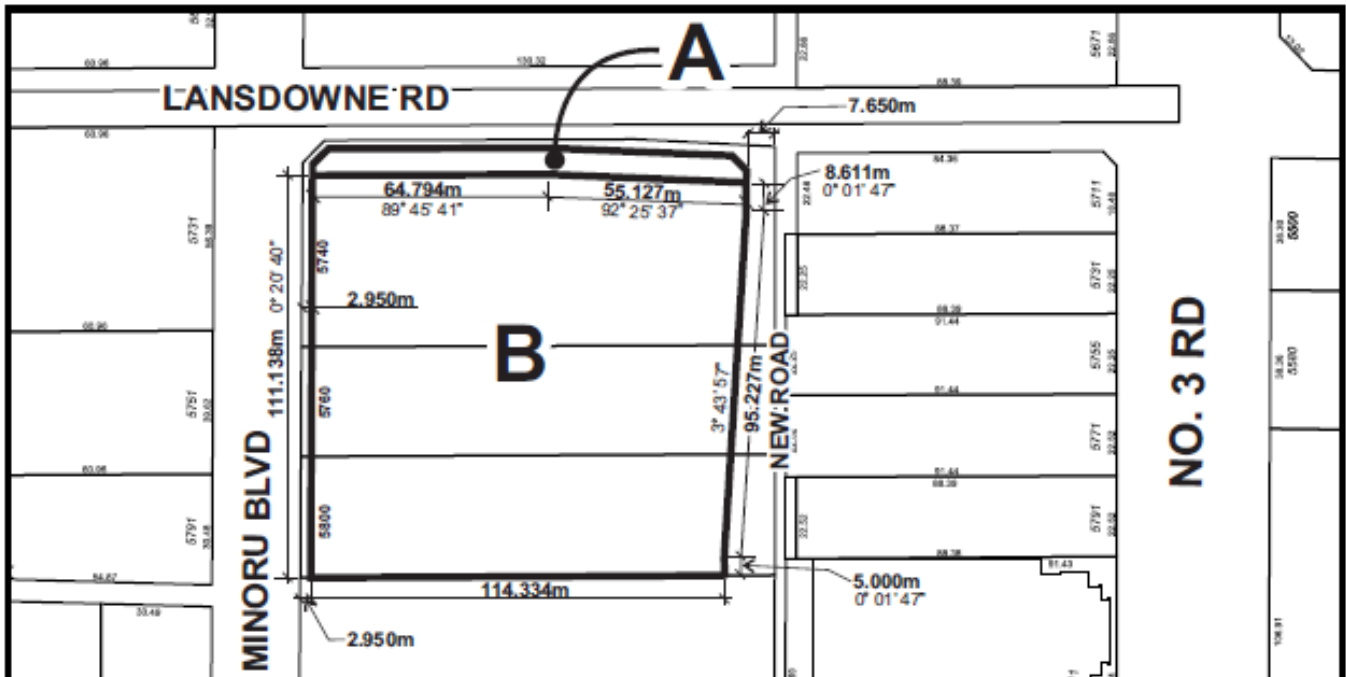
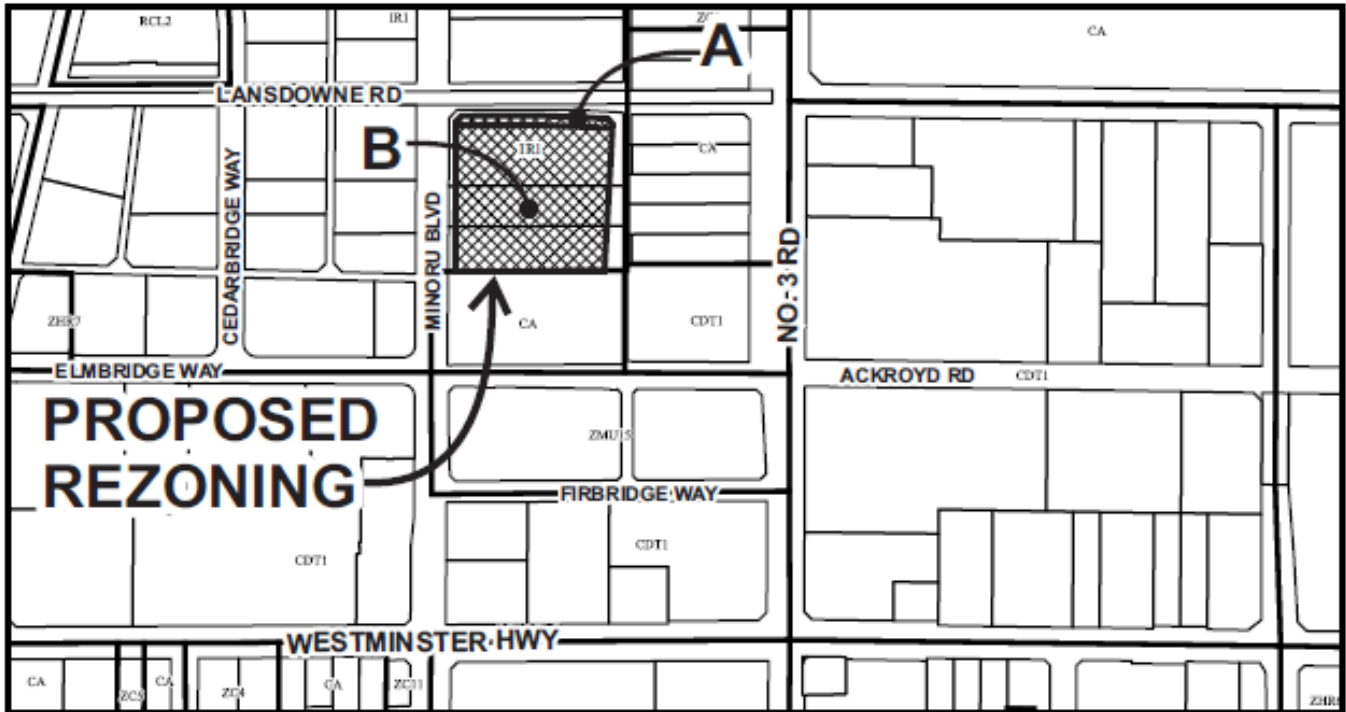
ADOPTED

MAYOR

_____
CORPORATE OFFICER



City of Richmond



Zoning Amendment Bylaw 10138
RZ 18-807640

Original Date: 05/28/19

Revision Date: 11/15/19

Note: Dimensions are in METRES



City of Richmond

Memorandum

Planning and Development Division
Transportation

To: Mayor and Councillors
From: Lloyd Bie, P.Eng.
Director, Transportation

Date: July 6, 2020
File: 10-6360-06-01/2020-Vol 01

Re: Report Back on Temporary Road Changes in Steveston Village for Canada Day

As directed at the June 22, 2020 Council meeting, this memorandum summarizes staff observations and merchant feedback regarding the temporary road changes in Steveston Village implemented on July 1st for Canada Day.

Staff Observations

Staff were on site throughout the day to observe attendance, business operations, and the impacts of the temporary road changes on pedestrian, cyclist and motorist circulation through Steveston Village. Overall, the cool and overcast weather with afternoon showers contributed to a smaller number of visitors compared to recent weekends.

The temporary road changes were implemented without incident and vehicle traffic generally flowed well with the presence of traffic control personnel. Occasional minor but typical delays were observed on Third Avenue between Moncton Street and Chatham Street for northbound motorists at Chatham Street due to left turning vehicles. Sufficient on- and off-street parking was available with ample space available north of Moncton Street. With the one-way system on Bayview Street, the widened temporary pathway better accommodated two-way pedestrian and cyclist traffic. Cyclists typically transited through the area and did not stop; as a result, there was sufficient bike parking.

Feedback from Steveston Businesses

The notice distributed to businesses on June 25, 2020 encouraged merchants to provide post-implementation feedback by noon on July 3rd. A total of five responses were received from businesses, including one sent prior to the implementation of the road changes. One business (located on Moncton Street) was supportive of road closures during weekends and busy times for the summer months while the other four businesses (two on Moncton Street and two on First Avenue) were opposed to any further or extended closures, citing on-street parking loss and increased vehicle circulation due to the one-way operation on Bayview Street.



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Next Steps

While pedestrian and cyclist volumes on Canada Day were lower than typical, staff anticipate increased crowds in Steveston Village as the warmer summer season and re-opening measures progress. Table 1 identifies three options for Council's consideration to address the potential that pedestrian and cyclist volumes will consistently exceed the capacity of existing infrastructure and additional space will be needed to maintain physical distancing guidelines.

Table 1: Options to Maintain Physical Distancing in Steveston Village

Option	Scope
1 Monitor	<ul style="list-style-type: none"> Staff continue to monitor pedestrian, cyclist and motorist operations for crowding When necessary, report back on the need for temporary road changes to add additional space
2 One-Way Moncton St & Bayview St	<ul style="list-style-type: none"> Implement one-way systems on Moncton St and Bayview St on weekends only One-way system on Moncton St will preserve some on-street parking Implementation could be weather-dependent (only when fair weather forecast) Estimated cost per day: \$12,000
3 One-Way Bayview St	<ul style="list-style-type: none"> Implement one-way system on Bayview St on weekends only One-way system on Bayview St only will preserve two-way vehicle movements and all on-street parking on Moncton St Implementation could be weather-dependent (only when fair weather forecast) Estimated cost per day: \$6,000

Staff will be available to discuss the options at the General Purposes Committee to be held July 6, 2020. In the interim, if you have any questions, please contact me at 604-516-9934.



Lloyd Bie, P.Eng.
Director, Transportation

LB:jc

cc: SMT



**Traffic Bylaw No. 5870
Amendment Bylaw No. 10184**

The Council of the City of Richmond enacts as follows:

1. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 8.3 as follows:

8.3 A person must not use or operate a “Jacobs” brake or other type of engine brake on a motor vehicle for any purpose other than as an emergency braking device incidental to the safe operation of the motor vehicle.

2. **Traffic Bylaw No. 5870**, as amended, is further amended by deleting Section 12.13 and replacing it with the following:

12.13 No person shall stop a vehicle in any parking space designated or reserved by a traffic control device for persons with disabilities unless the vehicle displays an accessible parking permit indicating that the vehicle is operated by or transporting a person with disabilities.

3. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.5 as follows:

29.5 No person shall ride a bicycle in a marked crosswalk, unless it is also marked by two lines of intermittent squares (elephant’s feet) on one or both sides of the crosswalk, or it is otherwise signed to permit cycling.

4. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.6 as follows:

29.6 Any person riding a bicycle in a marked crosswalk also marked by two lines of intermittent squares (elephant’s feet) on one or both sides of the crosswalk, or otherwise signed to permit cycling, must yield the right-of-way to any pedestrians in the marked crosswalk.

5. This Bylaw is cited as “**Traffic Bylaw No. 5870, Amendment Bylaw No. 10184.**”

FIRST READING

SECOND READING

THIRD READING

ADOPTED

JUN 22 2020

JUN 22 2020

JUN 22 2020

CITY OF RICHMOND
APPROVED for content by originating dept. <i>LB</i>
APPROVED for legality by Solicitor <i>LB</i>

MAYOR

CORPORATE OFFICER



**Municipal Ticket Information Authorization Bylaw No. 7321
Amendment Bylaw No. 10185**

The Council of the City of Richmond enacts as follows:

1. **Municipal Ticket Information Authorization Bylaw No. 7321**, as amended, is further amended by deleting SCHEDULE B 12A and replacing it with the following:

SCHEDULE B 12A

TRAFFIC BYLAW NO. 5870

Column 1	Column 2	Column 3
Offence	Bylaw Section	Fine
Use of engine brakes on municipal street	8.3	\$250
Failure to drive or operate a Neighbourhood Zero emission Vehicle in lane closest to right hand curb or shoulder	10.7(b)	\$100
Jaywalking	30.1	\$50
Pedestrian crossing a street in a crosswalk in contravention of a traffic control device	30.3	\$50
Failure of vehicle to yield to a pedestrian in a crosswalk	30.5	\$150

2. This Bylaw is cited as "**Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 10185.**"

FIRST READING

SECOND READING

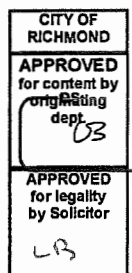
THIRD READING

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JUN 22 2020

JUN 22 2020

JUN 22 2020



MAYOR

CORPORATE OFFICER



**Richmond Official Community Plan Bylaw 7100 and Bylaw 9000
Amendment Bylaw 9892 (CP 16-752923)
6551 No. 3 Road**

The Council of the City of Richmond, in open meeting assembled, enacts as follows:

1. Richmond Official Community Plan Bylaw 9000 is amended at Attachment 1 to Schedule 1, 2041 OCP Land Use Map, for the area marked as “A” on “Schedule A attached to and forming part of Bylaw 9892”, by replacing the existing land use designation of area “A” with “Park”.
2. Richmond Official Community Plan Bylaw 7100, in Schedule 2.10 (City Centre Area Plan), is amended by:
 - 2.1. Replacing page 2-20, including the Pedestrian-Oriented Retail Precincts Map, with “Schedule B attached to and forming part of Bylaw 9892”;
 - 2.2. On page 2-24, entitled 2.3 Mobility & Access – Objective, replacing the last bullet with “Car-Free Measures: encourage measures that support car-free lifestyles through enhanced first-to-last kilometre connectivity, alternative transportation options, and home delivery services and facilities.”
 - 2.3. On page 2-25, entitled 2.3 Mobility & Access, Policies, following 2.3.8(a), inserting the following as 2.3.8(b): “Multi-Modal Mobility Hubs – Establish transportation network nodes that seamlessly integrate multiple travel options, supportive infrastructure, and placemaking strategies to create pedestrian-friendly centres that help to maximize first-to-last kilometre connectivity without need for private motor vehicles.”
 - 2.4. Replacing page 2-27, including the Street Network Map (2031), with “Schedule C attached to and forming part of Bylaw 9892”;
 - 2.5. Replacing page 2-36, including Pedestrian Environment Map (2031), with “Schedule D attached to and forming part of Bylaw 9892”;
 - 2.6. Replacing page 2-38, including the Cycling Network Map (2031), with “Schedule E attached to and forming part of Bylaw 9892”;
 - 2.7. Replacing page 2-42, including the Goods Movement & Loading Map (2031), with “Schedule F attached to and forming part of Bylaw 9892”;

- 2.8. Replacing page 2-44, entitled 2.3.8 Fostering a Car-Free Lifestyle, with “Schedule G attached to and forming part of Bylaw 9892”;
- 2.9. Replacing page 2-46, including the Arts & Culture Map (2031), with “Schedule H attached to and forming part of Bylaw 9892”;
- 2.10. Replacing page 2-50, including the Public Spaces & Places Map (2031), with “Schedule I attached to and forming part of Bylaw 9892”;
- 2.11. Replacing page 2-65, including the Base Level Parks & Open Space Map (2031), with “Schedule J attached to and forming part of Bylaw 9892”;
- 2.12. Replacing page 2-68, including the Neighbourhood Parks Map, with “Schedule K attached to and forming part of Bylaw 9892”;
- 2.13. Replacing page 2-71, including the Pedestrian Linkages Map, with “Schedule L attached to and forming part of Bylaw 9892”;
- 2.14. Replacing page 2-88, including the Public Realm Areas Map, with “Schedule M attached to and forming part of Bylaw 9892”;
- 2.15. Replacing page 2-113, including the Tower Spacing & Floorplate Size Map, with “Schedule N attached to and forming part of Bylaw 9892”;
- 2.16. Replacing page 2-116, including the Preferred Frontage Conditions Map, with “Schedule O attached to and forming part of Bylaw 9892”;
- 2.17. On page 3-1 (3.0 Development Permit Guidelines), following the Sub-Area Guidelines bullet, inserting a new bullet as follows: “Special Precinct Guidelines: Special development standards intended to contribute towards placemaking by encouraging distinct identities supportive of local mobility, ecology, culture, and urban form opportunities”;
- 2.18. On page 3-4, inserting a new Development Permit Special Precinct Key Map as shown in “Schedule P attached to and forming part of Bylaw 9892”;
- 2.19. Following section 3.2 Sub-Area Guidelines, inserting section 3.3.1 Special Precinct 1.0 – Richmond Centre South (Brighthouse Village) as shown in “Schedule Q attached to and forming part of Bylaw 9892”;
- 2.20. Replacing the Generalized Land Use Map (2031) with “Schedule R attached to and forming part of Bylaw 9892”;
- 2.21. Replacing the Specific Land Use Map: Brighthouse Village (2031) with “Schedule S attached to and forming part of Bylaw 9892”;

- 2.22. Making various text and graphic amendments to accommodate the identified bylaw amendments and to ensure consistency with the Generalized Land Use Map (2031) and Specific Land Use Map: Brighthouse Village (2031) as amended; and
- 2.23. On page 2-40 of Richmond Official Community Plan Bylaw 7100, in Schedule 2.10 (City Centre Area Plan), inserting the following as a footnote to the legend to the Parking Bylaw Map:
- “Note: Only for the area generally bounded by No. 3 Road, Cook Road, Murdoch Avenue, Minoru Boulevard, and the minor street north of Richmond City Hall, the *Basic Parking Rate Reductions* and *Additional Parking Rate Reductions Dependent on Transportation Demand Measures* shall be increased to permit a minimum rate of 0.375 spaces per dwelling for affordable housing and 0.6 spaces per dwelling for market rental housing (secured with legal agreements).”
3. This Bylaw may be cited as **“Richmond Official Community Plan Bylaw 7100 and Bylaw 9000, Amendment Bylaw 9892”**.

FIRST READING

PUBLIC HEARING

SECOND READING

THIRD READING

OTHER CONDITIONS SATISFIED

ADOPTED

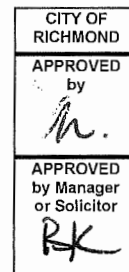
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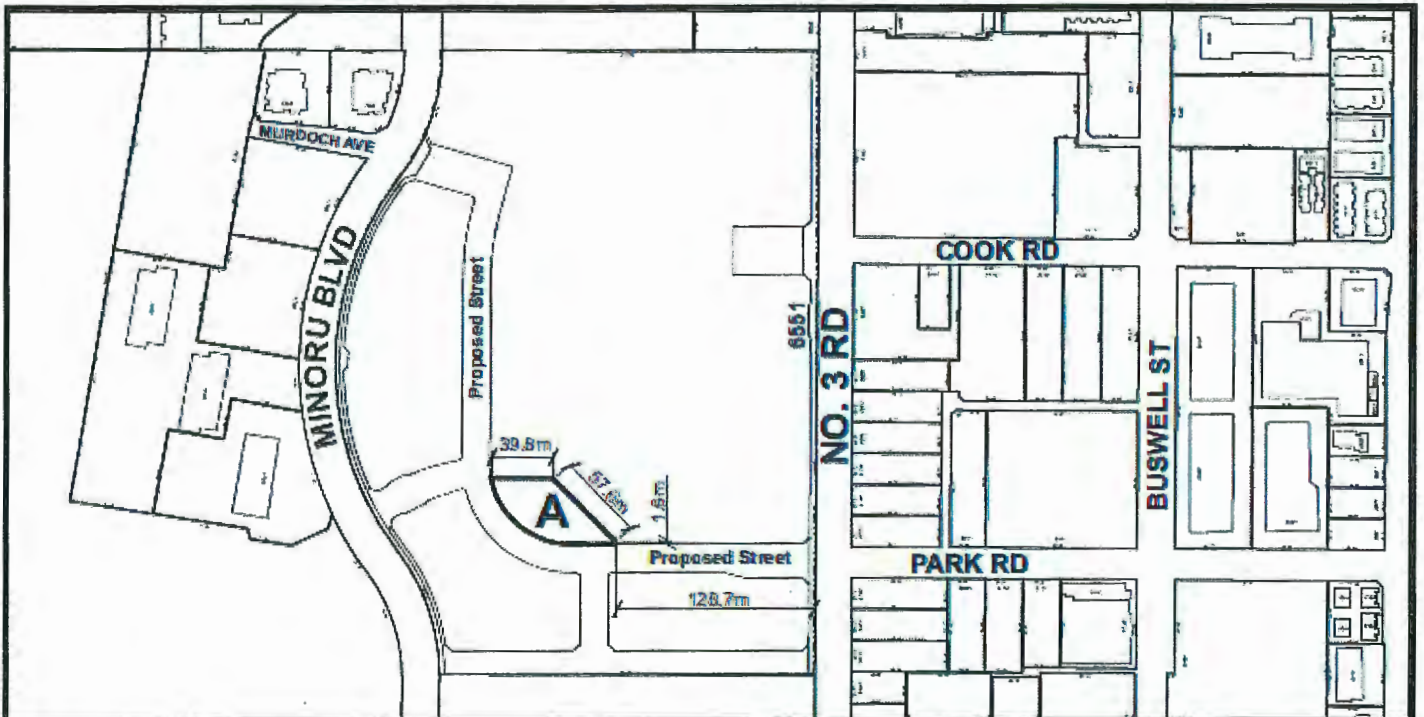
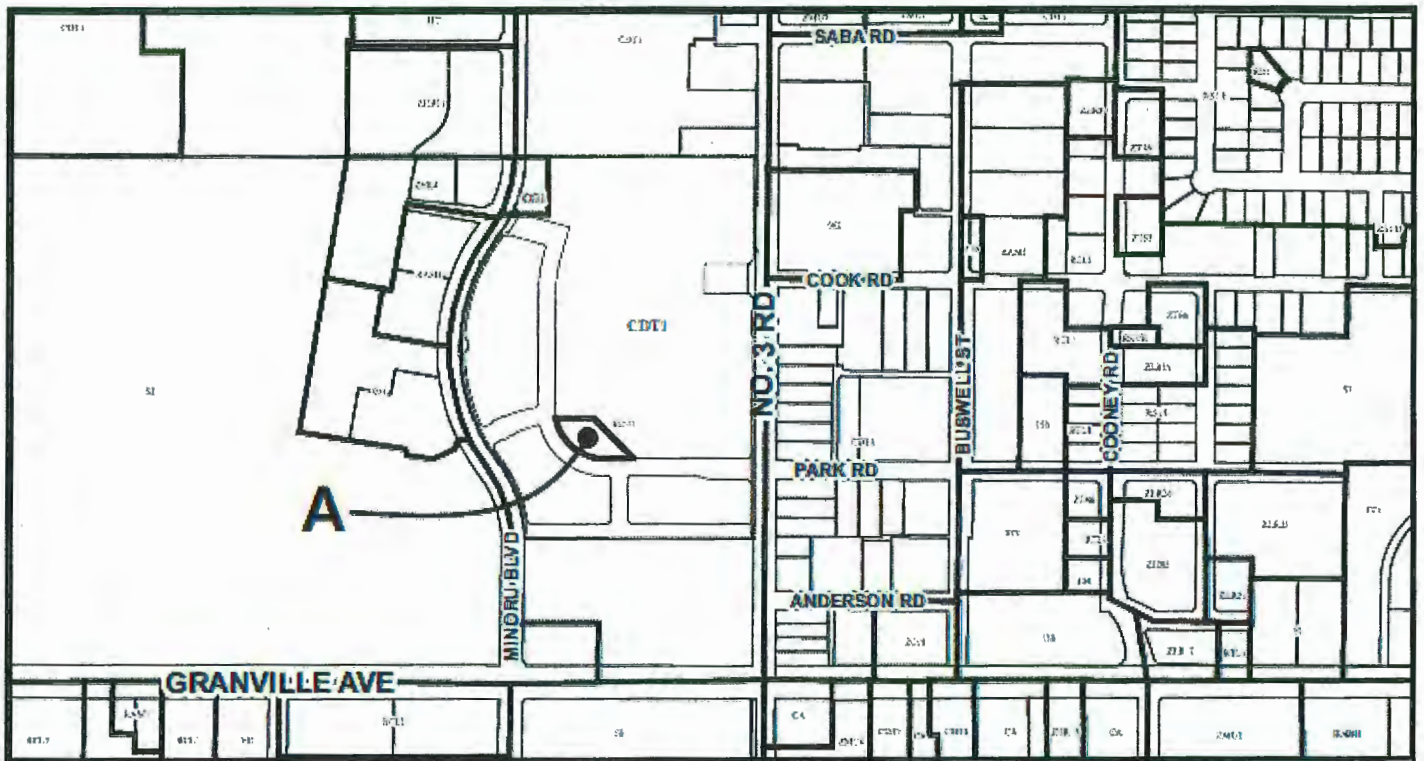
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MAYOR_____
CORPORATE OFFICER



OCP Amendment Bylaw 9892 (CP 16-752923)

Original Date: 09/12/18

Revision Date:

Note: Dimensions are in METRES

2.2.3(d) Pedestrian-Oriented Retail Precincts

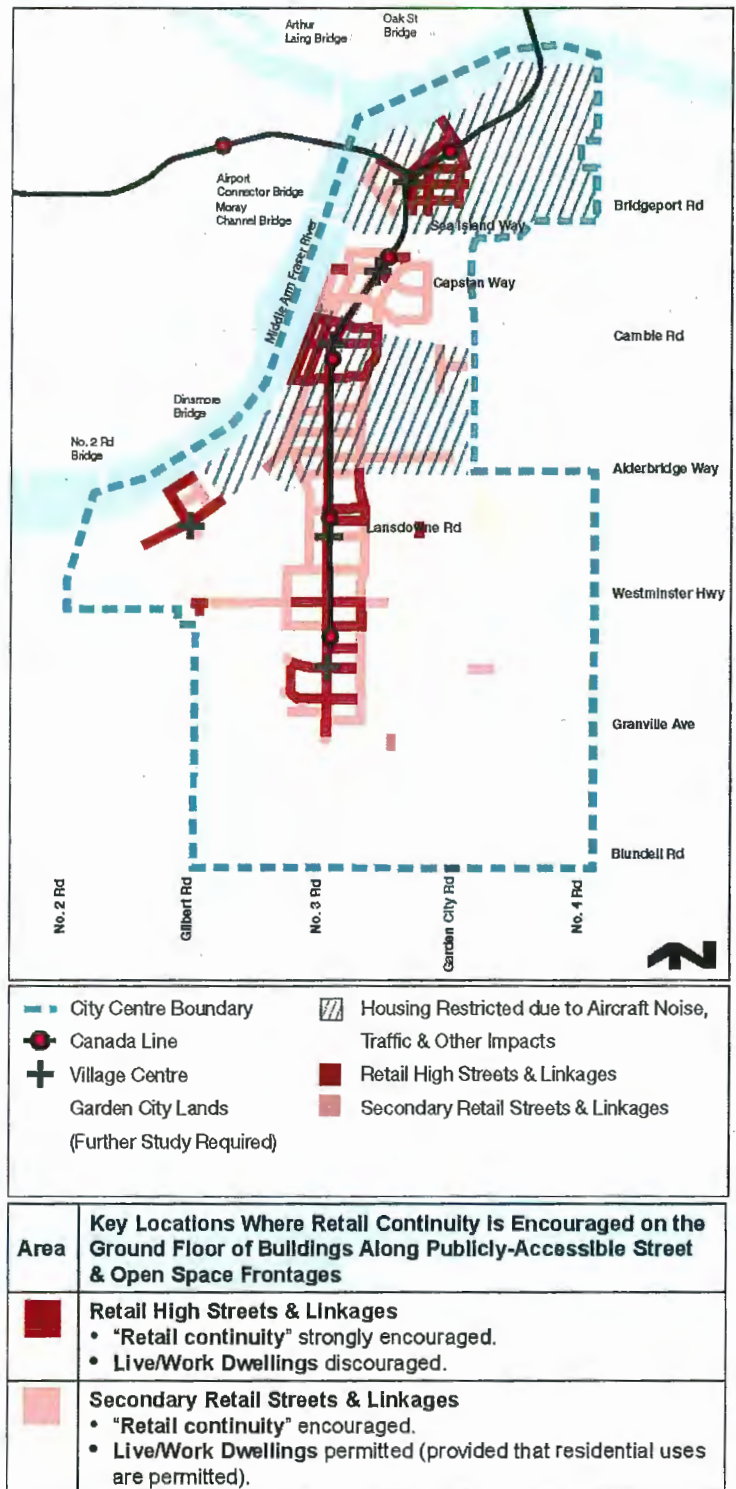
Lively, urban retail areas require “retail continuity”: the continuity of a substantial amount of ground floor frontages that are attractive, pedestrian-oriented, rich in detail, and engaging – in other words, frontages that encourage people to walk and linger, and include:

- a diversity of activities (e.g., shops and restaurants);
- a high degree of transparency enabling interaction between activities inside the building and the fronting sidewalk or open space (e.g., display windows and views into shop interiors);
- small unit frontages, typically no more than 10 m (33 ft.) wide, each with its own entry;
- multi-tenant building entries, hotels, and large commercial units with ground floor frontage widths of no more than 10 m (33 ft.), unless special measures are employed to maintain retail continuity;
- office and similar uses situated above the ground floor;
- pedestrian weather protection;
- pedestrian-oriented and scaled signage and lighting;
- public art, seating, and other public amenities;
- quality, durable materials and construction.

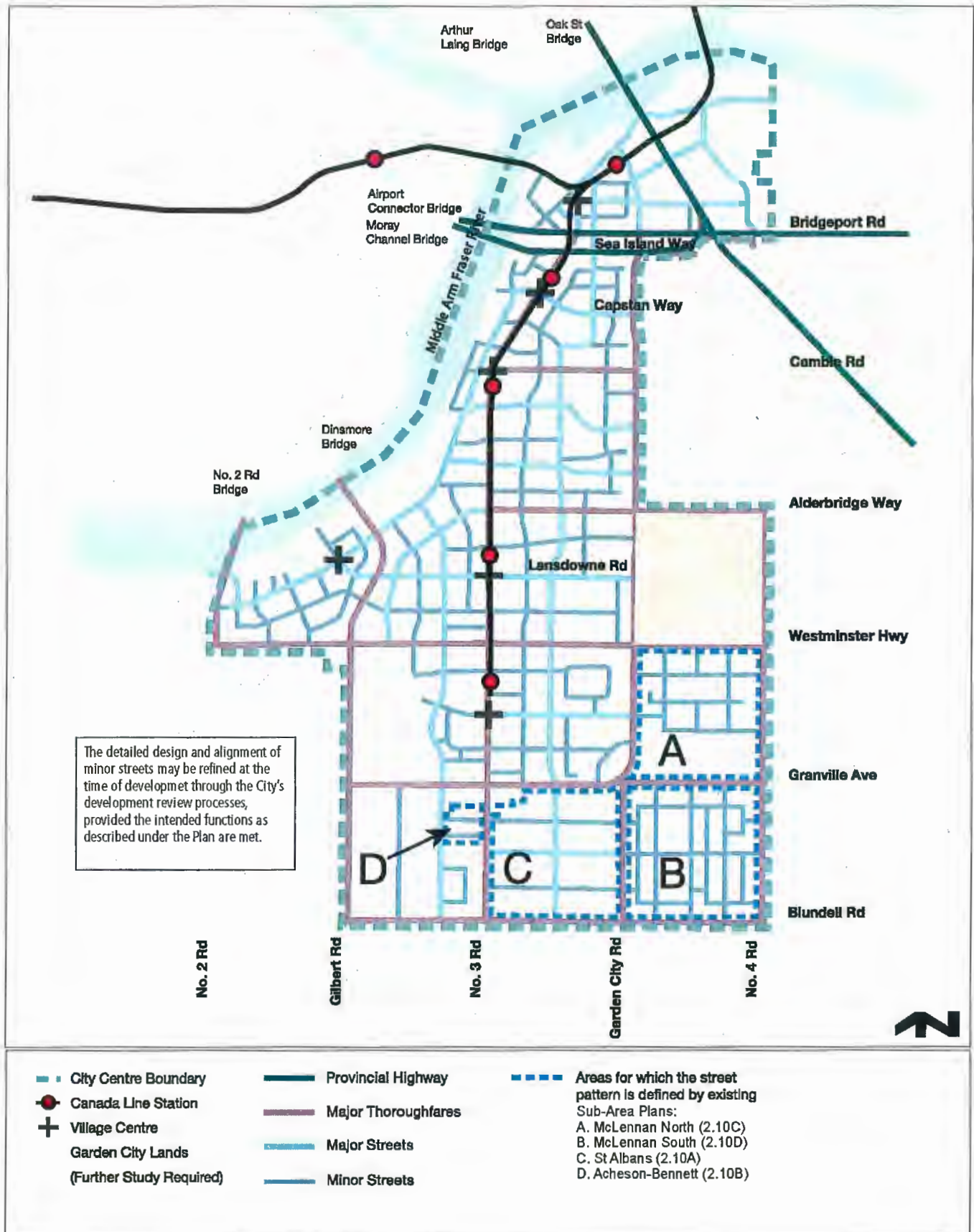
In addition, a successful retail area requires commercial units that can accommodate and adapt to the needs of a variety of businesses over time. To help achieve this, commercial retail units should have a depth of:

- typical - 18 m (59 ft.) or more;
- minimum - 9 m (30 ft.).

Pedestrian-Oriented Retail Precincts Map



Street Network Map (2031)



Walking Features

Street Network

- Every street is walkable and has a sidewalk, a minimum of 2.0 m (6.5 ft.) wide and preferably 2.5 m (8.2 ft.) wide, with street trees, boulevards and pedestrian lighting.
- Shorter city blocks, narrower street crossings and conveniently timed pedestrian signals.
- Increased curbside parking on minor streets acts as a buffer from adjacent vehicle traffic.
- A wayfinding system to guide pedestrians to key destinations.
- An enhanced pedestrian-cyclist crossings at selected locations, particularly near schools.

Streetscape

- A creative, fun and welcoming environment for pedestrians via landscaping, artwork, attractive street furniture, open spaces, gathering places, and resting areas.
- Orient ground level businesses to pedestrian access from the sidewalk.
- Continuous store awnings provide weather protection.

Transit Villages & Connections

- Transit schedules and route information available at transit stations and bus stops.
- Fully accessible transit stops conveniently located and easily recognizable with sufficient space for waiting passengers.
- Covered walkways provided between transit stops and village centres.

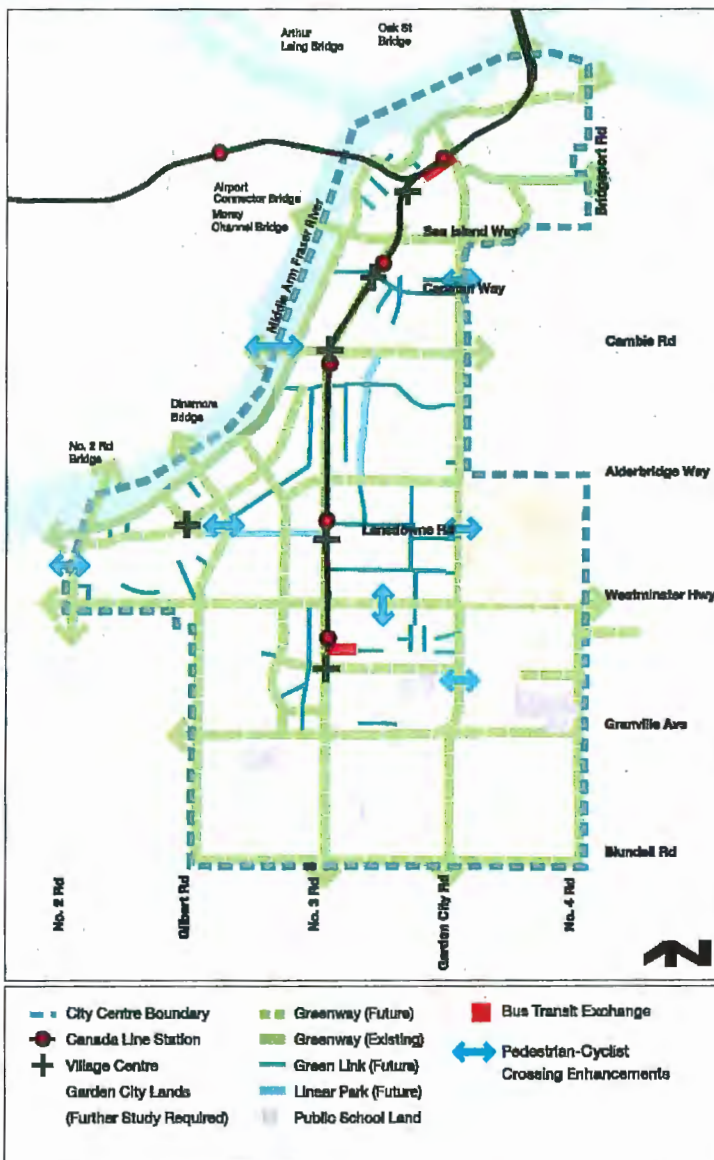
Urban Greenways & Trails

- Enhanced streetscape features along urban greenways and within pedestrian precincts around transit villages.
- Improved trails along the dyke and new links across water boundaries (e.g., Middle and North Arms of the Fraser River).

Accessibility

- Enhanced use of universal accessible design features such as accessible pedestrian signals and tactile wayfinding.
- Lighting along trail networks where feasible.
- Priority given to pedestrian access and safety through parking lots.
- Installation of ramps at all intersections.

Pedestrian Environment Map (2031)



Cycling Network Features	
Accommodation on Street Network	
<ul style="list-style-type: none"> • Provide signage and pavement markings to clearly delineate cycling facilities from other street components. • Minimize potential conflicts and safely accommodate multiple road users such as transit service and cycling. • Enhanced pedestrian-cyclist crossings at selected locations, particularly near schools. 	
Designated Cycling Routes	
<ul style="list-style-type: none"> • Designated routes feature signage, pavement markings and bicycle-friendly traffic signals. • Designated bike lanes on major thoroughfares and some major streets with a typical width of 1.5 m to 1.8 m (5 ft. to 6 ft.). • Cycling routes are physically separated from vehicle traffic on major thoroughfares and major streets where feasible. • Shared wide curb lanes on some major streets and on minor streets with typical width of 4.3 m (14.1 ft.). • Bicycle-friendly routes feature pavement markings, signage and signal loop detectors but road is not widened. 	
Trails & Bridges	
<ul style="list-style-type: none"> • Integration of on-street cycling network with off-street trails and pathways including the Canada Line Bridge over the North Arm of the Fraser River. • Off-street pathways have typical width of 3.0 m to 4.0 m (10 ft. to 13.1 ft.). • Proposed new pedestrian/cycling bridge from the west end of Cambie Road to Sea Island. 	
End-of-Trip Facilities	
<ul style="list-style-type: none"> • Secure end-of-trip facilities (bike racks, lockers, cages) at civic sites, parks, transit villages, and activity centres. • Bylaw requirement for all new developments to provide short-term and long-term secure bicycle parking. 	
Integration with Transit	
<ul style="list-style-type: none"> • Bicycle accommodation on the Canada Line and all buses during all hours of operation. • Bike racks and bike lockers at all rapid transit stations and transit exchanges. 	
Promotion & Education	
<ul style="list-style-type: none"> • Safe cycling courses for adults and children. • Area-wide event to promote cycling for all trips. • Education and enforcement programs to encourage sharing the road among motorists and cyclists. 	

Cycling Network Map (2031)



Goods Movement & Emergency Services Features

Goods Movement Corridors

- Major thoroughfares and streets act as the primary goods movement corridors with minor streets and lanes providing access for local deliveries and loading.
- Support other modes of goods movement such as rail in the Bridgeport area and the potential for short-sea shipping routes along the Fraser River.

Loading Locations

- Provide off-street loading docks within parking areas for zones of high trucking activity.
- Construction loading zones provided where feasible to facilitate pick up and drop off of construction materials and minimize traffic disruption.
- Service lanes and mews are the preferred on-street locations.
- Limited to areas adjacent to on-street parking on minor streets.
- Available on some major streets in off-peak periods but not permitted on major thoroughfares.

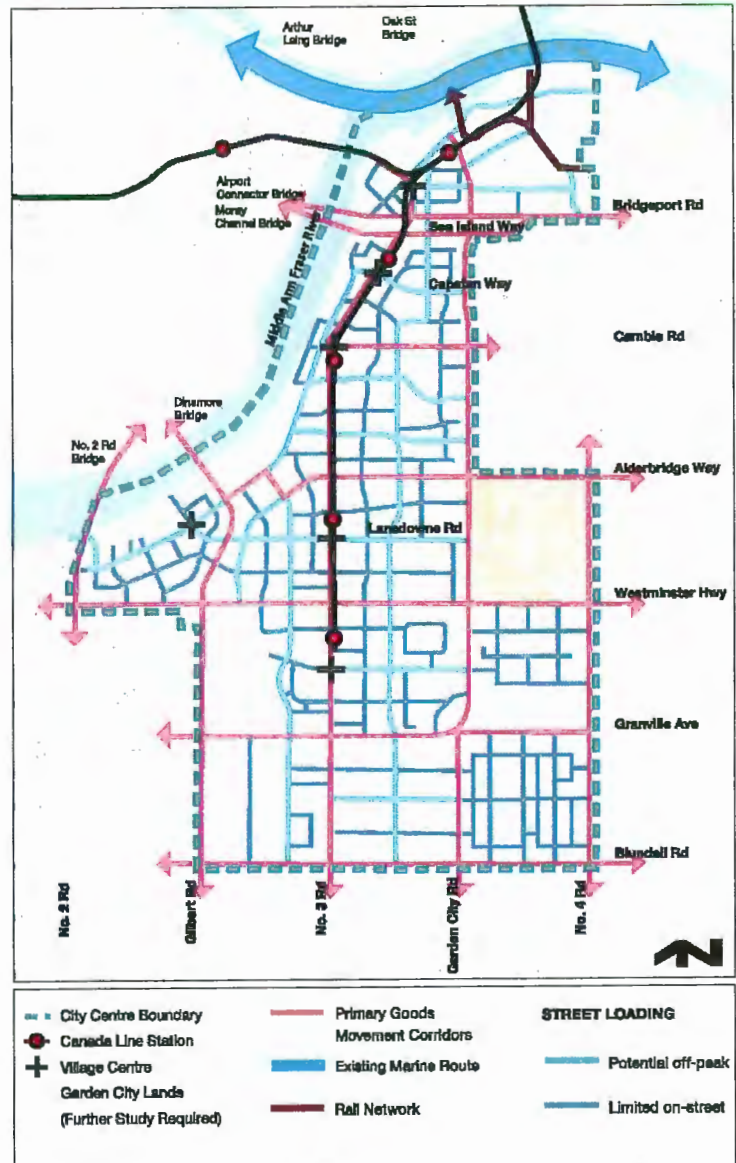
Emergency Services

- Priority is given to emergency service access and timely response.
- Major thoroughfares and some major and minor street intersections incorporate traffic signal pre-emption capability.
- Parking regulations ensure that lanes and mews are kept accessible for emergency vehicles.
- Consider response time requirements for emergency services when identifying priority routes.

Planning & Policy

- Maintain liaison with the Provincial Emergency Program to protect local disaster response routes as part of the regional network.
- Restrict unnecessary dangerous goods movement in City Centre.
- Seek to minimize response times when planning the site of future emergency service facilities.
- On-going liaison with stakeholders (e.g., trucking industry) to enhance goods movement.

Goods Movement & Loading Map (2031)



2.3.8 Fostering a Car-Free Lifestyle

The key success indicator for fostering a car-free lifestyle is:

An improved shift to sustainable travel modes resulting from the enhanced convenience, flexibility, attractiveness, and integration of alternative transportation options within the urban fabric.

Challenges

- People often make multi-purpose trips or need to carry bulky items, which can make giving up a car difficult.
- People may need their cars for work.
- Some activities can be difficult to access without a car (e.g., skiing, team sports, child care).
- It can be challenging to introduce new travel options in developed, high density areas.

The principles of transit-oriented development and complete communities together with the complementary policies and key directions for each component of the transportation system jointly seek to foster a “car-free” lifestyle as a viable option for City Centre households over time.

Ideally, with more choices, it will be possible and even desirable for residents to have only one or perhaps no private car at all. If an effective range of mobility choices, infrastructure, services, and supporting initiatives are in place, the car-free lifestyle becomes feasible and public investments in the Canada Line and the transit system, as well as the City’s commitment to sustainability, are maximized.

Strategies

- Implement measures, such as multi-modal mobility hubs, to encourage people to walk, cycle, and take transit.
- Foster attractive, pedestrian-friendly, transit-orient, urban villages.
- Ensure convenient access to alternative travel options and superior first-to-last kilometre connectivity.
- Encourage customer service and residential development models that make it easier to shop and do day-to-day activities without a car.



Checklist for a Car-Free Lifestyle	
Transit Villages	<ul style="list-style-type: none"> • Compact, mixed use development that enables easy walking to convenient transit linkages. • The daily needs of City Centre residents and workers are within reach of walking and transit.
Access to Transportation Options	<ul style="list-style-type: none"> • Enable people to conveniently access multiple travel modes when needed so that owning a motor vehicle is not necessary. • Encourage all developments to support car-free lifestyles by supporting transit, car- and bike-share, ride hailing, taxis, autonomous cars, and multi-modal mobility hubs. • Encourage retail and other destination-type uses to provide priority space for travel modes that support car-free lifestyles.
Access to Retail Goods and Services	<ul style="list-style-type: none"> • Encourage retail uses to provide home pick-up and delivery services, ideally at no or minimal cost. • Encourage retailers to schedule delivery and pick-up at times when residents are most likely to be at home and traffic volumes are low (e.g., evenings). • Encourage retailers and other service providers (e.g., furniture movers) to avoid the use of large vehicles that are difficult to accommodate in dense urban areas. • Encourage co-ordinated delivery services for multi-tenant retail developments. • Ensure that sidewalks and pathways have sufficient width to accommodate pedestrian modes including scooters and handcars.
Home Delivery & Pick-Up Services	<ul style="list-style-type: none"> • Encourage residential developments to provide spaces for concierge services to enable home deliveries and pick-up (e.g., groceries, drycleaning, etc.). • Ensure sufficient common space/secure areas for the temporary storage of goods to be picked-up and deliveries until the owner arrives home. • Ensure that loading areas are publicly accessible for larger delivery trucks and publicly accessible. • Provide on-street loading zones, where feasible, to allow for home delivery/pick-up in higher density projects without off-street parking or service lanes are not readily available.

Multi-Modal Mobility Hubs

Purpose: multi-modal mobility hubs are key transportation network nodes designed to seamlessly integrate multiple travel modes, supportive infrastructure, and placemaking strategies with the aim of creating pedestrian-oriented centres that help to maximize first-to-last kilometre connectivity.

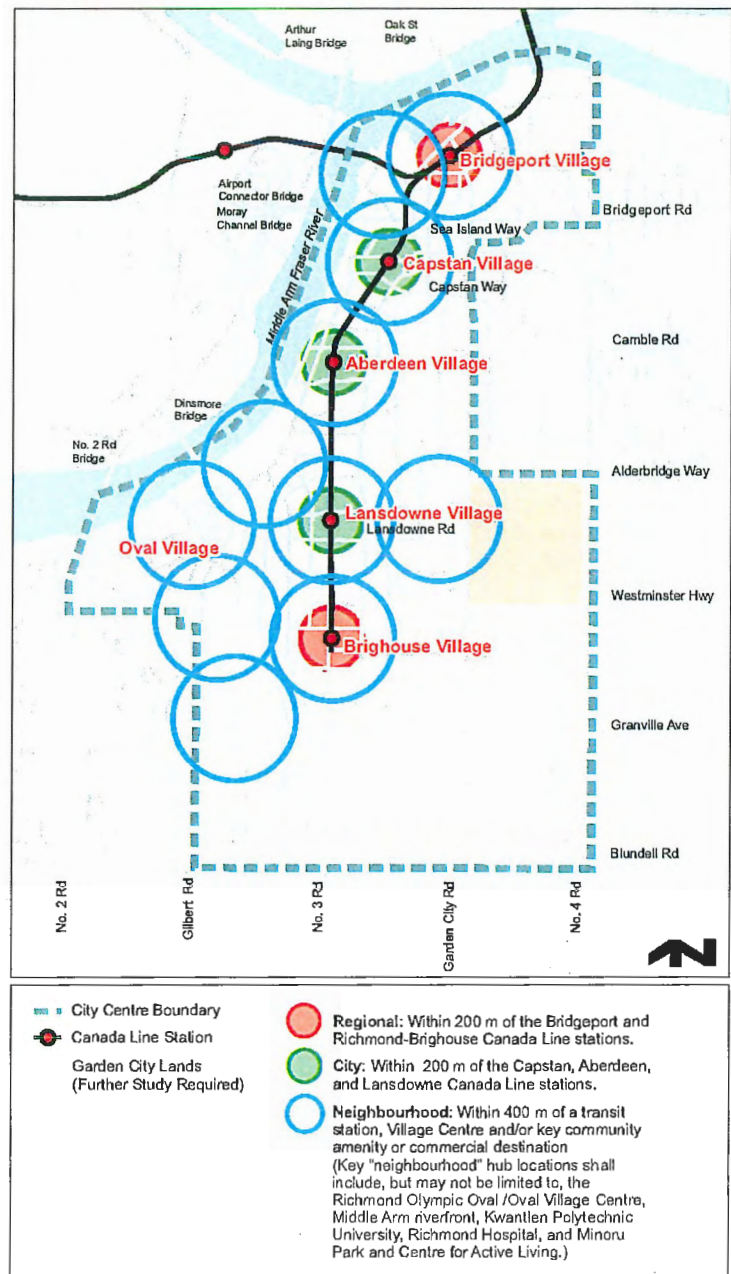
Features: effective mobility hubs require an integrated suite of pedestrian-friendly, transportation and related features, which may include, but may not be limited to:

- public transit stops for rail, bus, community shuttle, and HandyDart with supporting amenities such as shelters and real-time arrival information;
- bike- and car-share facilities;
- taxi and ride-hailing services;
- secure bike storage and repair services;
- kiss-and-ride;
- shops and services;
- Wi-Fi, weather protection, seating, wayfinding signage, public washrooms, and special features such as public art;
- personal safety and security features (e.g., Crime Prevention through Environmental Design measures).

Development Approach: successful mobility hubs are integrated with the urban fabric and responsive to surrounding land uses and evolving community needs. This requires a strategic development approach that:

- encourages site-specific mobility programming tailored to the distinct needs of users in “regional”, “city”, and “neighbourhood” locations;
- offers flexible, cost-effective design options that support the establishment of hubs in high-demand, high density locations;
- can readily adapt to growth and increasing demands for new and emerging technologies and travel options (e.g., bike-share, ride hailing, and autonomous vehicles);
- employs placemaking strategies supportive of attractive, safe, and pedestrian-friendly facilities that complement the quality and character of the public realm.

Multi-Modal Mobility Hub Map



Alternative Mobility Hub Strategies

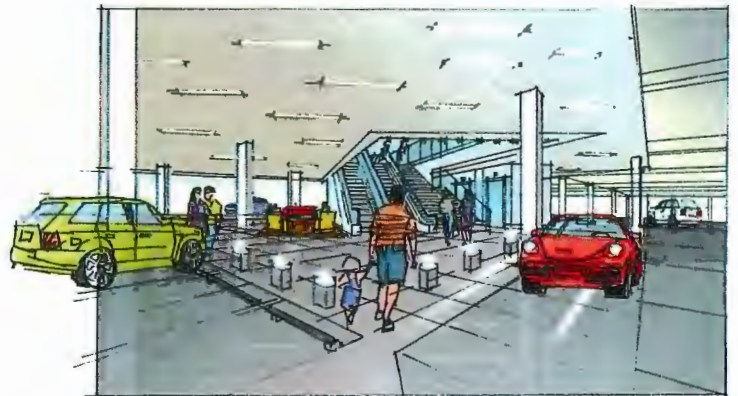
Multi-modal mobility hubs are places of connectivity that help to bridge the gap between high-frequency transit and each person’s origin and destination by co-locating an integrated suite of mobility services, amenities, and technologies with a concentration of employment, housing, shopping, and/or recreation uses.

Mobility hub designs may vary based on user needs and location-specific opportunities. Development strategies may include, but may not be limited to:

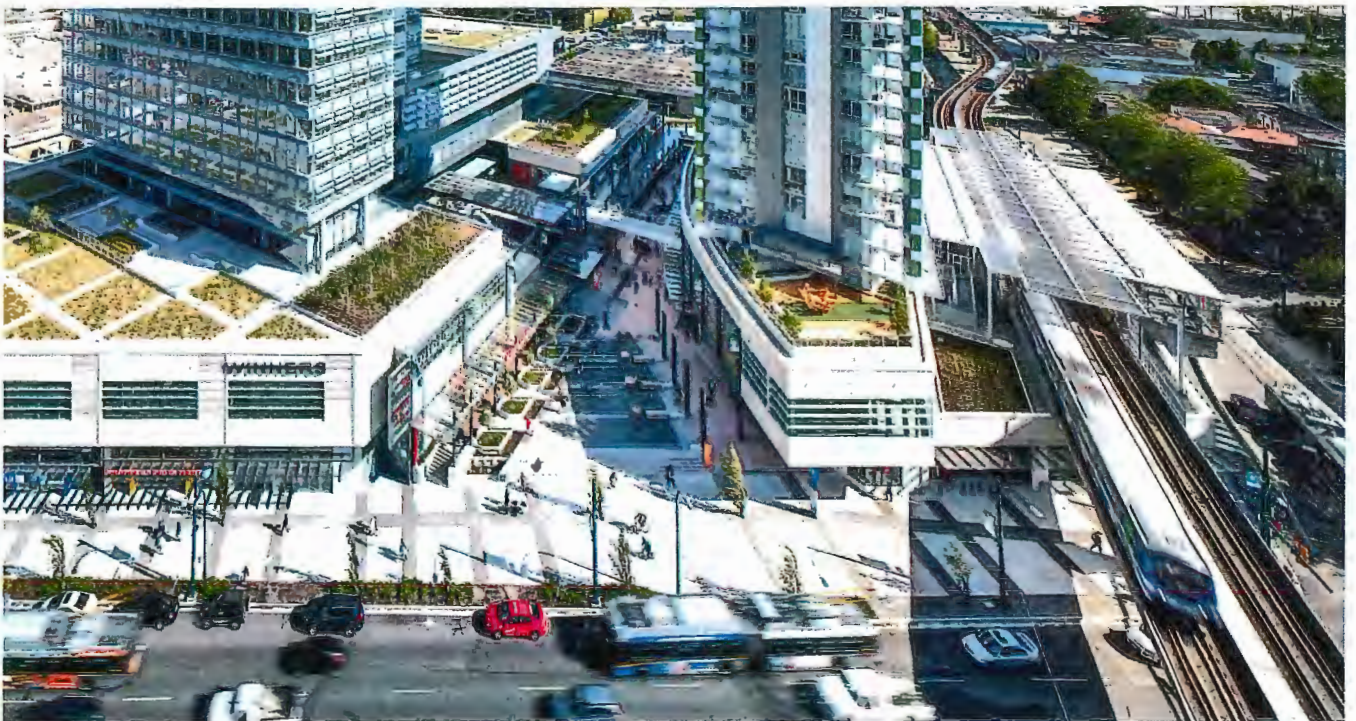
- the street-level clustering of transportation amenities and complementary urban uses on one or several adjacent sites;
- a stand-alone hub that concentrates transportation amenities in a purpose-built facility in proximity to complementary urban uses; or
- a hybrid approach that integrates transportation amenities with complementary urban uses in the form of a high-amenity, transit-oriented, mixed use development.



Clustered, street-level transportation amenities.
Source: Hamburger Hochbahn AG



CF Richmond Centre – Proposed mobility hub integrated with underground parking and convenient public access to grade.



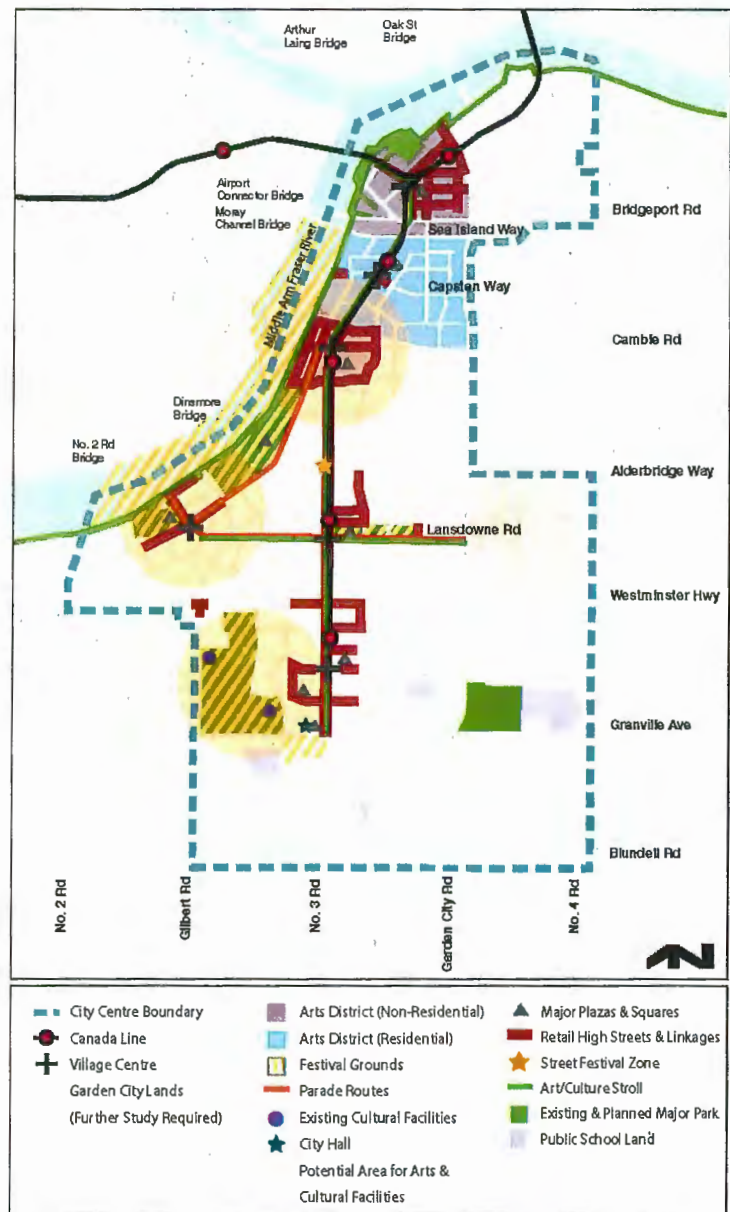
Marine Gateway and the Marine Drive Canada Line Station, Vancouver. Photo: Andrew Latreille / Courtesy: Perkins+Will

OBJECTIVE:

Provide a framework for the City Centre as a “**thriving and creative community**” that is empowered, engaged and diverse, and where arts, culture, and heritage are inextricably linked with and support:

- **a strong community voice and engaged community** that enhances the relevance and responsiveness of urban and economic development, planning, and governance;
- **placemaking**, with a mosaic of appealing, lively, and distinctive urban villages, vibrant public spaces, festivals, events, and activities;
- **an increased creative capacity** which enriches the quality of life and attracts progressive business opportunities which support:
 - the arts, heritage and cultural practitioners;
 - the identification, conservation, and interpretation of heritage resources;
 - spaces for residents and visitors to work and participate in arts, culture and heritage activities;
- **an enhanced enjoyment** of the urban realm and respect for and connectivity among citizens and cultures.

Arts & Culture Map (2031)



2.4.1(b) Places to Gather & Celebrate

Public open space and streetscape will play a key role in supporting interaction within the City Centre linking people, buildings & activities. Public spaces are important "mixing places" for community residents, artists & visitors and serve as "stages" for showcasing the work of local artists.

Celebrations form an important part of vibrant urban living & provide opportunities for residents & visitors to come together bringing understanding and a sense of belonging. Many celebrations are intentionally small and community focused. In other cases however, the intent is to invite the City, the region and the world, which requires special accommodation and co-location with City facilities and private developments.

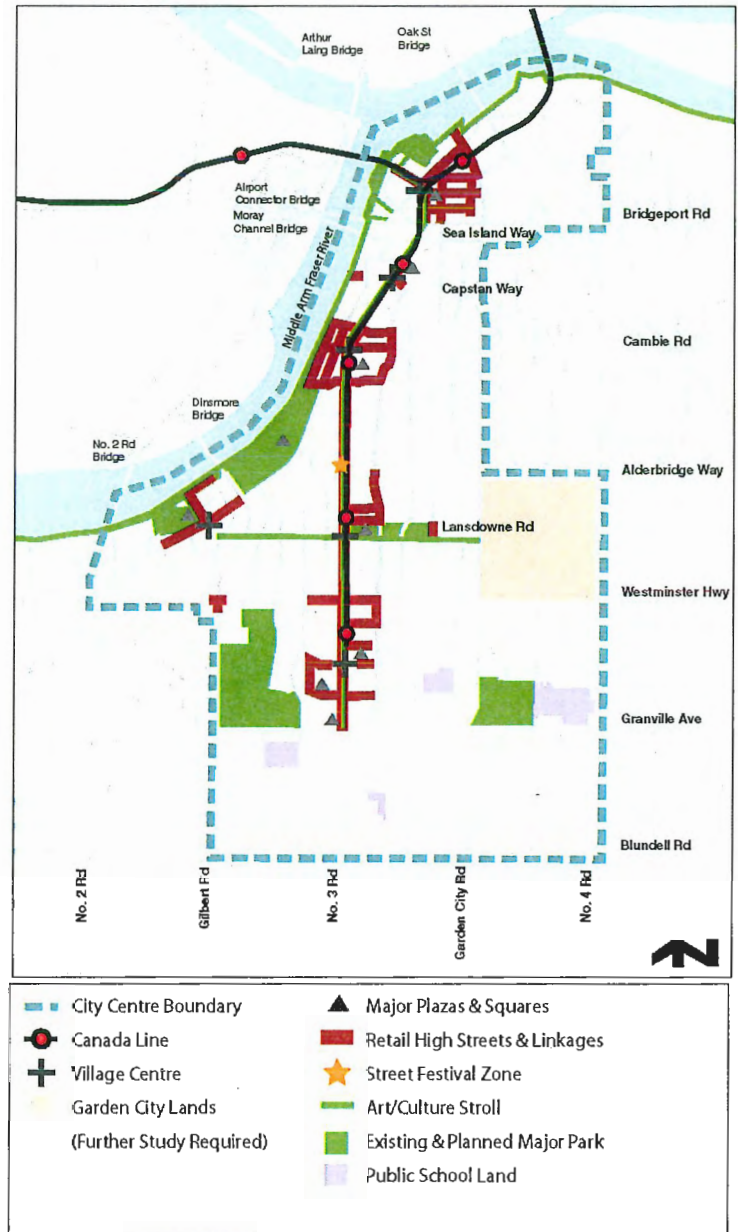
Challenges/Opportunities

With the Canada Line, the Oval Plaza & the Middle Arm Park in the development phase, the infrastructure to provide facilities to host events can be built into the design of the spaces instead of having to adapt spaces and bring in infrastructure for each event.

Proposed Strategy

- Prepare a festival/events plan including appropriately designed spaces and parade routes.
- Design spaces that ensure staging, view corridors, seating areas, power supply & lights that can flexibly accommodate events of different sizes & styles of community gatherings and festivals.
- Ensure the provision of public and private open spaces that are designed as people gathering and mixing spaces including elements such as conversation areas, public art, busker and performance space and informal play areas.

Public Spaces & Places Map (2031)



OBJECTIVE:

Provide a framework for a **complete parks and open space system** that will:

- provide the quantity of park and open space required to address social, recreational, and cultural needs;
- incorporate a rich diversity of experiences and landscapes that reflect the identity of the community and are rooted in local culture and environment;
- ensure an equitable distribution of parks and open space of each type;
- mitigate the environmental impacts of increasing urbanization and continually support the health of the urban environment;
- respond to the higher densities in the City Centre with a greater diversity of programming in each park and appropriate design and materials.

Strategic Investment for City Acquisition of Open Space

In order to optimize public resources, the strategic approach to the acquisition of City owned parks and open space is to secure investments rapidly. In the period ending in 2031, when the greatest growth and the greatest increase in land values is anticipated, 75% of the total land required to build-out will have been acquired.

Base Level Parks & Open Space Map (2031)



* The Base Level Open Space Standard will be augmented in Capstan Village by publicly accessible areas secured for public park and related uses in respect to the Capstan Station Bonus.

	Year 2006	Year 2031	Build-out
Population	40,000	90,000	120,000
Quantity of Open Space	76.5 ha (189 ac.)	118.4 ha (292.5 ac.)	157.8 ha (390 ac.)
Ratio of Acreage to Population	4.75/1,000	3.25/1,000	3.25/1,000
Quantity of Additional Open Space	0	41.9 ha (103.5 ac.)	39.5 ha (97.5 ac.)

2.6.1 Neighbourhood Parks

Neighbourhood parks comprise 40% of the open space system and primarily serve the local needs of the immediate residential or commercial neighbourhood. Parks will determine the types which include:

Residential Village Parks

Location: To serve residents within a 400 m (1,312 ft.) radius without crossing arterial roads or major streets.

Program: Social gatherings, informal recreation, environmental features &/or local storm water management features.

Site Features: 0.6 to 3.2 ha (1.5 ac. to 8 ac.), 40% urban forest &/or eco-amenity, 50% frontage on streets, south exposure with access to sunlight, outdoor fitness amenities, sport courts, playgrounds, community gardens, seating/gathering area.

Commercial Village Parks

Location: To serve businesses within a 400 m (1,312 ft.) radius without crossing arterial roads or major streets.

Program: Daytime & evening gathering, social & cultural programming, informal recreation, urban character.

Site Features: 0.2 to 1.6 ha (0.5 ac. to 4 ac.), 30% urban forest, 50% frontage on streets, south exposure with access to sunlight, hard surface and seating areas, sport courts, soft landscape areas.

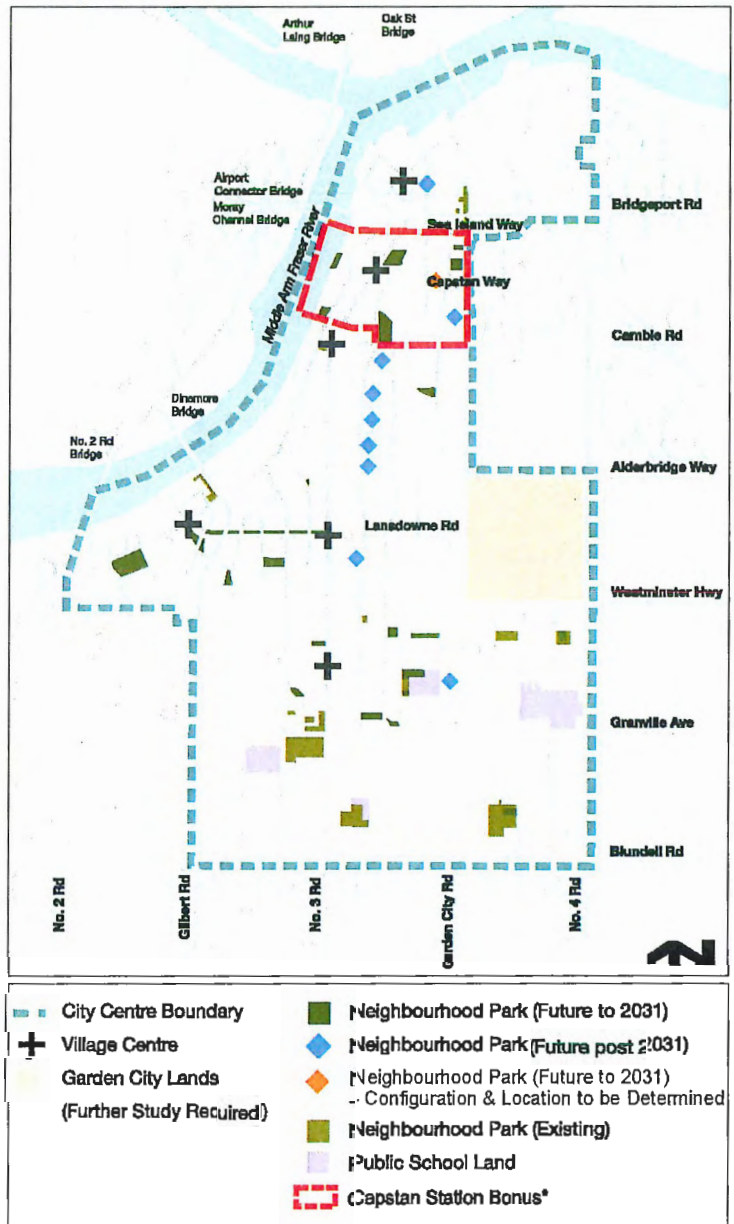
Urban Plazas

Location: At prominent cross-roads within a village.

Program: Daytime & evening gathering, social & cultural programming, urban character.

Site Features: Less than 0.2 ha (0.5 ac.), 50% frontage on streets, south exposure with access to sunlight, hard surface and seating areas, soft landscape features.

Neighbourhood Parks Map



* The Base Level Open Space Standard will be augmented in Capstan Village by publicly accessible areas secured for public park and related uses in respect to the Capstan Station Bonus.

Additional Study

Urban Agriculture Strategy – to better understand effective ways of integrating urban agriculture within public open spaces and on private property.

2.6.3(c) Pedestrian Linkages

The 2010 Richmond Trail Strategy provides the vision to guide continued development of the greenway system in City Centre. The intent is to *“provide a variety of exciting opportunities for walking, rolling and cycling that will link people to each other, to their community, and to Richmond’s unique natural and cultural heritage”*.

Greenways

Location: Along major streets and important recreational corridors.

Program: Link multiple destinations (e.g. between major open spaces and other significant destinations) and connect natural areas.

Site Features: Min. 10 m (33 ft.) wide, separate pedestrian and cycling paths, rest areas with street furnishings, public art, signage & wayfinding, integrated with wetlands & storm water features, hedgerows, significant tree planting.

Linear Parks

Location: Along key streets to create significant recreational and environmental corridors linking the waterfront to the heart of the downtown.

Program: Combined neighbourhood park and greenway functions to encourage movement through the neighbourhood (walking, jogging) and incorporating social and physical activity nodes.

Site Features: 30 to 40 m (100 to 131 ft.) wide, high quality landscape, broad pedestrian promenade, playgrounds, sports courts, water features, significant tree planting and multi-layered planting, site furnishings, public art.

Green Links

Location: Along lanes and mews, through or between developments (which may include indoor routes).

Program: Provide connections within neighbourhoods to support a walkable urban environment, and to support ecological areas.

Site Features: Min. 6 m (20 ft.) to 20 m (65 ft.) wide, broad sidewalks with special paving at nodes and intersections, rest areas with street furniture, street trees and multi-layered planting, pedestrian scale street lighting, wayfinding, community art.

Pedestrian Linkages Map



Additional Study

Storm Water Management Strategy – to develop methods to better address stormwater and permeability in parks, greenways and streets.

OBJECTIVE:

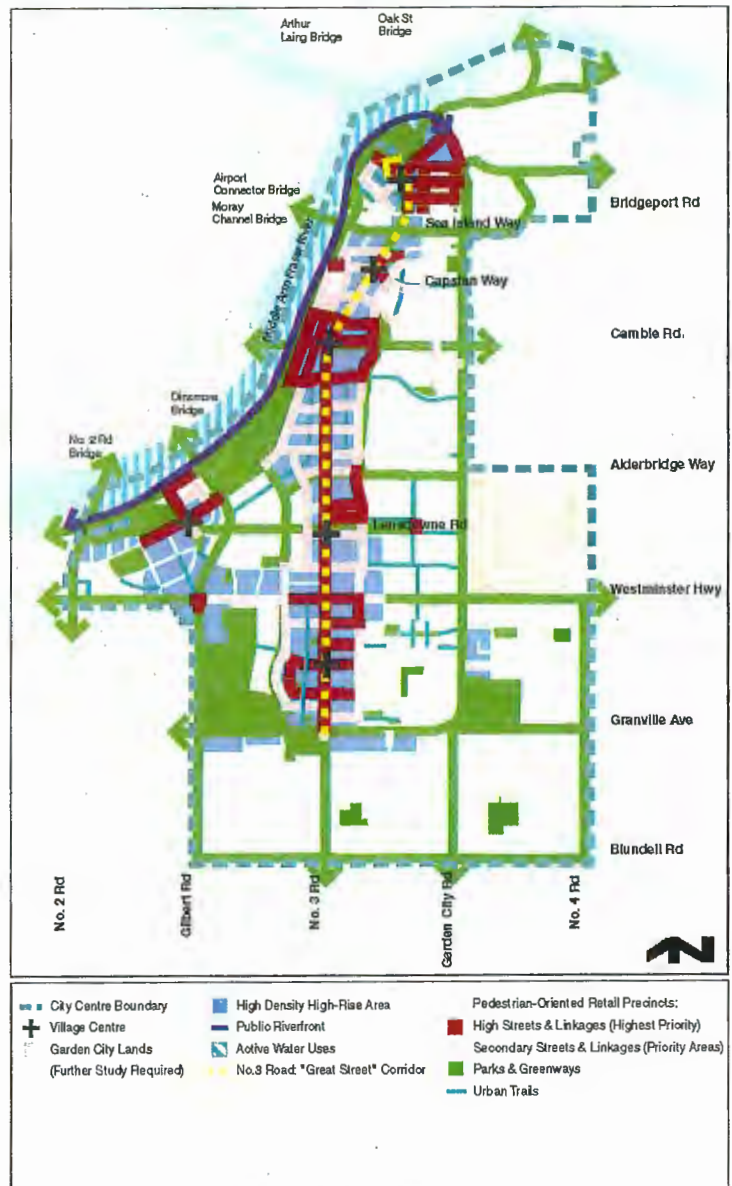
Provide a framework for a “**lively community**” that is rooted in a “culture of walking and cycling” and a collaborative, interdisciplinary approach to city building that is:

- diverse;
- engaging;
- attractive;
- safe;
- healthy;
- human-scaled.

“... A good city can be compared to a good party-people stay for much longer than really necessary because they are enjoying themselves.”

Public Spaces and Public Life, City of Adelaide:
2002. City of Adelaide, Gehl Architects ApS, 2002.

Public Realm Areas Map



"Taming Tall Buildings": Part 2 Tower Spacing, Floorplate Size & Development Site Size

Richmond's OCP encourages a maximum tower floorplate size of 600 m² (6,459 ft²) and a minimum distance between towers of 24 m (79 ft.).

While these guidelines have been effective in encouraging a staggered distribution of point tower forms, new challenges are emerging, including a need for:

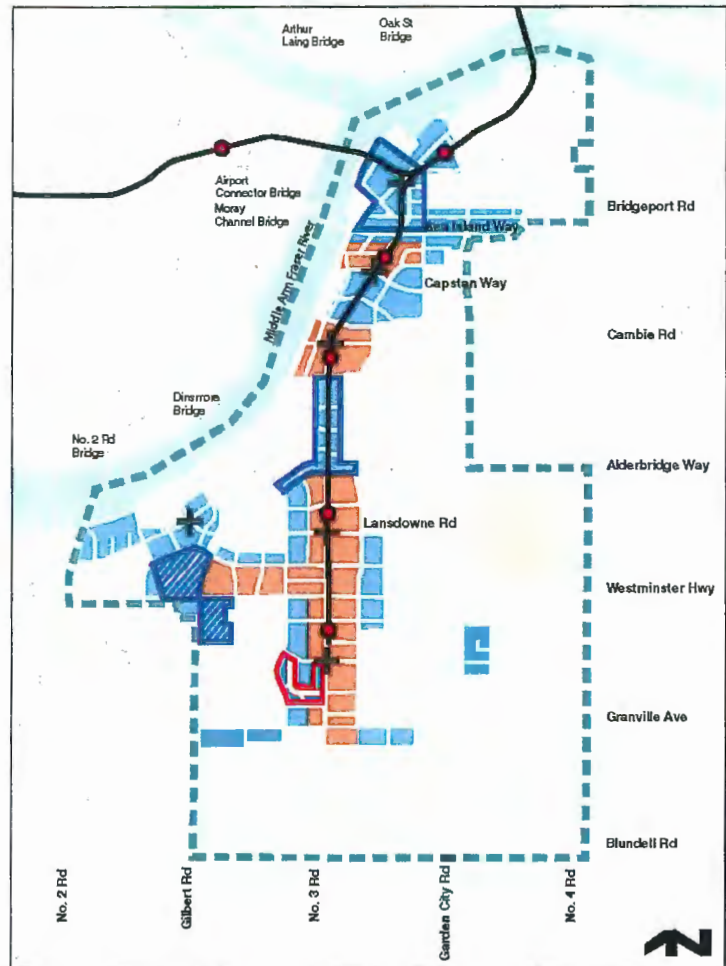
- larger floorplates that better reflect actual City Centre residential development practices (i.e., typically 650 m² (6,997 ft²)) and anticipated non-residential market needs;
- larger gaps between towers in some areas to reduce private view blockage, sunlight blockage, and the impression of a "wall" of buildings.

In addition, a minimum development site size for tower development is encouraged. This is intended to make clear that while a development site may be designated for building heights greater than 25 m (82 ft.) (i.e., towers), this form is discouraged where it may impact adjacent sites or affects the livability or attractiveness of the public realm.

Minimum tower development site size (i.e., for buildings taller than 25 m (82 ft.)):

- Width: 45 m (148 ft.);
- Depth: 40 m (131 ft.);
- Area:
 - a) For less than 3 FAR: 4,000 m² (1 ac.);
 - b) For 3 FAR or more: 2,500 m² (0.6 ac.).

Tower Spacing & Floorplate Size Map



City Centre Boundary	+	Village Centre
Canada Line Station		Garden City Lands
		(Further Study Required)

Tower Spacing: Typical Minimum*			
Above 25 m (82 ft.)		Above 30.5 m (100 ft.)	
	24 m (79 ft.)		24 m (79 ft.)
	35 m (115 ft.)		35 m (115 ft.)
* Between towers on a single development site or adjacent development sites. Towers setbacks to interior property lines or to the centre line of abutting dedicated City lanes should be a minimum of 50% of the Typical Minimum Spacing, except where it can be demonstrated to the satisfaction of the City that a reduced setback will not impact the livability of a neighbouring site or its ability to develop.			
NOTE: If tower development occurs outside the areas indicated here, the minimum spacing shall be 35 m (115 ft.).			
Tower Floorplate Size: Typical Maximum			
	For office: 1,800 m ² (19,376 ft ²) above 25 m (82 ft.) For other uses: 650 m ² (6,997 ft ²) above 25 m (82 ft.)		
	For hospital: 1,800 m ² (19,376 ft ²) above 25 m (82 ft.) For other uses: 650 m ² (6,997 ft ²) above 25 m (82 ft.)		
	650 m ² (6,997 ft ²) above 25 m (82 ft.), EXCEPT may be increased to 1,200 m ² (13,000 ft ²) above 30.5 m (100 ft.) where the Typical Minimum Tower Spacing is provided		
Elsewhere	650 m ² (6,997 ft ²) above 25 m (82 ft.)		

2.10.2(a) Attractive, Accessible Street Frontages

The frontage of a development site is the area between the building and the curb of the fronting public street (or the boundary of a park). How this area is designed is critical to the pedestrian experience and the liveliness of the public realm – but in the City Centre, the design of this space is complicated by Richmond's flood management policy that generally requires a minimum habitable floor elevation of 2.9 m (9.5 ft.) geodetic – which in many places is as much as 1.5 m (4.9 ft.) above the grade of the fronting street.

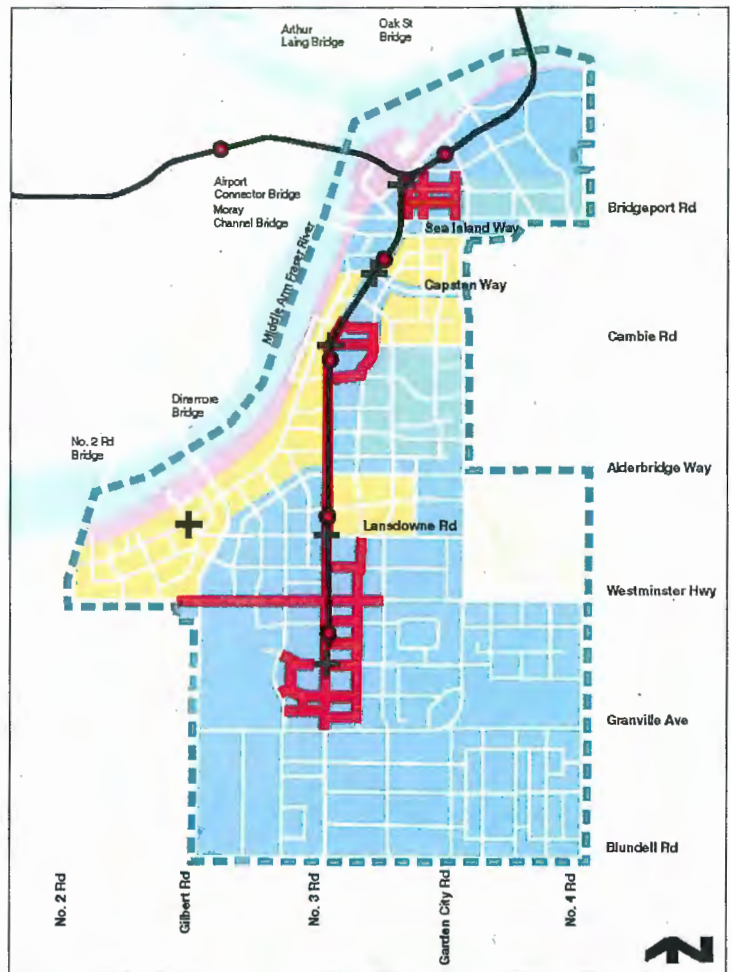
Challenge/Opportunity

The grade differential between the street and the minimum habitable floor elevation can enhance privacy for street-fronting dwellings; however, it can also impede pedestrian access, impair retail viability, and present other urban design challenges (e.g., concealing parking).

Proposed Strategy

- Raise riverfront areas to the level of the dyke or higher.
- Raise grades to 2.6 m (8.5 ft.) geodetic or higher wherever possible (e.g., transit plazas, new streets and parks, large sites).
- Relax minimum habitable floor elevations for select retail and industrial areas to 0.3 m (1.0 ft.) above the crown of the fronting street.
- Elsewhere, employ a variety of alternative frontage treatments, alone or in combination.

Preferred Frontage Conditions Map



City Centre Boundary	Riverfront
Canada Line	Major Redevelopment Areas
Village Centre	Key Retail Exempt Areas
Garden City Lands	Industrial Exempt Areas
(Further Study Required)	General

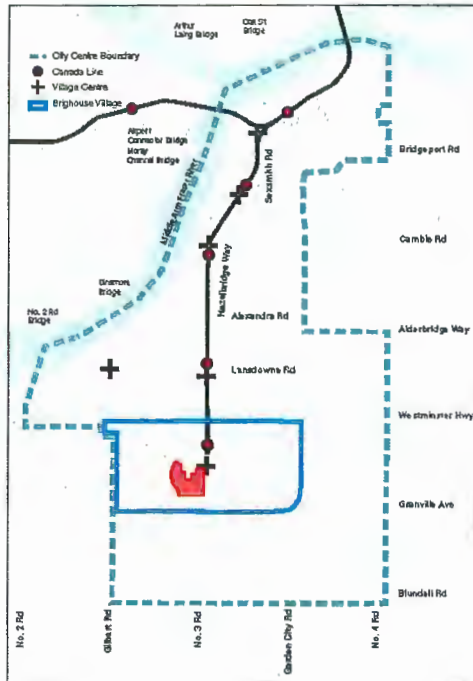
Typical Area Descriptions & Minimum Recommended Elevations (Geodetic)

Riverfront	<ul style="list-style-type: none"> • Parks & Streets: 4 m (13.1 ft.) (i.e., dyke crest). • Habitable Floor Elevation: 4 m (13.1 ft.).
Major Redevelopment Areas	<ul style="list-style-type: none"> • Parks & Streets: 2.6 m (8.5 ft.). • Habitable Floor Elevation: 2.9 m (9.5 ft.) minimum.
Key Retail Exempt Areas	<ul style="list-style-type: none"> • Parks & Streets: Existing grade maintained. • Street-Fronting Commercial Habitable Floor Elevation: 0.3 m (1.0 ft.) above the crown of the fronting street. • Residential Habitable Floor Elevation: 2.9 m (9.5 ft.).
Industrial Exempt Areas	<ul style="list-style-type: none"> • Parks & Streets: Existing grade maintained. • Industrial Habitable Floor Elevation: 0.3 m (1.0 ft.) above the crown of the fronting street. • Non-Industrial Habitable Floor Elevation: 2.9 m (9.5 ft.).
General	<ul style="list-style-type: none"> • Parks & Streets: Existing grade maintained, but may be raised where this is feasible and it enhances livability, form of development, etc. • Habitable Floor Elevation: 2.9 m (9.5 ft.).

3.3 Special Precinct Guidelines

3.3.1 Special Precinct 1.0

Richmond Centre South (Brighthouse Village)



This special precinct is envisioned as an animated, high density, high-rise, mixed use, urban place comprised of four distinct character areas:

- Two commercial "High Streets" offering a lively mix of pedestrian-friendly, public/private, outdoor/indoor, places to shop and play; and
- Two "Green Streets" bridging between the busy downtown and adjacent residential, civic, and park uses.

Predominant Land Uses:

- Mixed Residential/Commercial, including stand-alone affordable housing buildings

Key Land Use Restrictions:

- Pedestrian-Oriented Retail
Precinct designation requires small commercial units along designated frontages

Maximum Net Density:

- 3.15 FAR, including affordable housing

Maximum Typical Height:

- 45 m (148 ft.)

High Streets



A. No. 3 Road

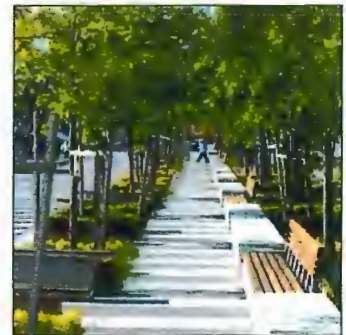


B. Park Road

Green Streets



C. Minoru Boulevard



D. Civic Promenade



Possible massing at 3.15 FAR (including affordable housing) showing the precinct's distinctive high-rise courtyards, accommodating large, family-friendly rooftop outdoor spaces, framed by slim towers that fan out from an animated pedestrian-oriented retail high street and central public plaza.

“Schedule Q attached to and forming part of Bylaw 9892”

Special Precinct 1.0	High Streets		Green Streets	
	A. No. 3 Road	B. Park Road	C. Minoru Boulevard	D. Civic Promenade
Richmond Centre South (Brighthouse Village)				
A. Typical Distribution of Uses	<ul style="list-style-type: none">Underground: Parking.Ground: Pedestrian-oriented retail & limited lobbies.Above: Residential.		<ul style="list-style-type: none">Underground: Parking.Ground: Townhouses & limited lobbies.Above: Residential.	<ul style="list-style-type: none">Underground: Parking.Ground: Lobbies & limited pedestrian-oriented retail.Above: Residential.
B. Maximum City Block Size	<ul style="list-style-type: none">As defined by the Plan's proposed public street and pedestrian linkages networks, together with lanes and mews as required to achieve a roughly 100 m (328 ft.) circulation grid.			
C. Minimum Net Development Site	<ul style="list-style-type: none">2.8 ha (7.0 ac).			
D. Net Development Site Coverage	<ul style="list-style-type: none">90% max. exclusive of streets & open spaces secured for public access with Statutory Right-of-Ways (SRW).			
E. Maximum Building Height	<ul style="list-style-type: none">45 m (148 ft.).			
F. Towers: <ul style="list-style-type: none">Tower Spacing	<ul style="list-style-type: none">35 m (115 ft.) min, above 30.5 m (100 ft.).	<ul style="list-style-type: none">24 m (79 ft.) min, above 30.5 m (100 ft.).	<ul style="list-style-type: none">35 m (115 ft.) min, above 30.5 m (100 ft.), EXCEPT that spacing may be reduced to 24 m (79 ft.) to reinforce Park Road gateway locations.	
<ul style="list-style-type: none">Tower Width	<ul style="list-style-type: none">20.0 m (65.6 ft.) max. (across the tower's narrow dimension) above 30.5 m (100 ft.).			
<ul style="list-style-type: none">Tower Floorplate	<ul style="list-style-type: none">650 m² (6,997 ft²) above 25 m (82 ft.), EXCEPT may be increased to 1,200 m² (13,000 ft²) above 30.5 m (100 ft.) where (i) the recommended Tower Spacing is provided, (ii) larger floorplates do not impact key public spaces, and (ii) larger floorplates contribute towards larger, more family-friendly, rooftop (outdoor) amenity spaces.			
G. Habitable Floor Elevation	<ul style="list-style-type: none">Retail & Lobbies: 0.3 m (1.0 ft.) above the crown of the fronting street.	<ul style="list-style-type: none">Retail & Lobbies: 0.3 m (1.0 ft.) above the crown of the fronting street.	<ul style="list-style-type: none">Lobbies: 0.3 m (1.0 ft.) above the crown of the fronting street.	<ul style="list-style-type: none">Retail & Lobbies: 0.3 m (1.0 ft.) above the crown of the fronting street.Other residential: 2.9 m (9.5 ft.) GSC.
H. Minimum Setbacks	<ul style="list-style-type: none">Underground: NilElsewhere: 6.0 m (19.7 ft.) to lot line & greater at lobbies/primary entrancesFlex Zone: Setbacks may be reduced by:<ul style="list-style-type: none">i) 1/3 for 50% of the ground floor frontage if compensated for with public plaza of equivalent size;ii) 1/2 for 50% of the upper floor frontage.	<ul style="list-style-type: none">Underground: Nil.Plaza: 1.5 m (4.9 ft.) to SRW boundary.Street: 7.5 m (24.6 ft.) east of plaza & 5.5 m (18.0 ft.) elsewhere measured to curb face (i.e. setback includes sidewalk & parking).Flex Zone (east of plaza only): Setbacks may be reduced by 2.0 m (6.6 ft.) for 20% of ground floor & 50% of upper floor frontages.	<ul style="list-style-type: none">Underground: Nil.Elsewhere: 4.5 m (14.8 ft.) to the lot line or 2.0 m (6.6 ft.) to the back of the sidewalk (whichever is greater), EXCEPT greater at lobbies & primary entrances.	<ul style="list-style-type: none">Underground: Nil.Tower: 2.0 m (6.6 ft.) to lot line, EXCEPT setback may be reduced to 0.5 m (1.6 ft.) above the ground floor.Pedestrian-Oriented Retail: 0.5 m (1.6 ft.) to lot line.Elsewhere: 6.0 m (19.7 ft.) to lot line.Note: Sidewalk SRW encroaches into lot by 0.5 m (1.6 ft.).
I. Build-to-Lines	<ul style="list-style-type: none">Setbacks should typically be treated as build-to-lines.High Street "Flex Zones" are intended to contribute towards more varied & animated public spaces & built forms.			
J. Preferred Frontage Treatments	<ul style="list-style-type: none">"Shopfront & Awning".	<ul style="list-style-type: none">"Shopfront & Awning".	<ul style="list-style-type: none">"Stoops & Porches"."Lawn & Garden".	<ul style="list-style-type: none">"Lawn & Garden".
K. Landscape Considerations	<ul style="list-style-type: none">A broad sidewalk framed by large trees, public seating, and amenities enhance No. 3 Road as premier retail avenue & key civic space.	<ul style="list-style-type: none">Narrow sidewalks, a public plaza & special boulevard & Flex Zone features confer an intimate scale & vibrant retail character.	<ul style="list-style-type: none">A park-like street is enhanced & expanded with terraced planting & landscape features that convey a garden-like character to the built form.	<ul style="list-style-type: none">A narrow, pedestrian-oriented City street lined with lushly-planted courtyard gardens.
L. Built Form Considerations	<ul style="list-style-type: none">Continuous retail enhanced by a bold, articulated & diverse architectural expression creates a signature image for No. 3 Road.	<ul style="list-style-type: none">Intimate scale & articulated mixed-use buildings contribute towards a distinct local retail experience.	<ul style="list-style-type: none">Dynamic, terraced streetwall buildings punctuated by widely spaced, slim towers & gateway features.	<ul style="list-style-type: none">Recessed streetwall buildings punctuated by widely spaced, slim towers set close to the sidewalk.
	<ul style="list-style-type: none">Form & character of stand-alone affordable housing buildings must be to the same level of quality as other uses.			

3.3.1 Special Precinct 1.0

Richmond Centre South (Brighthouse Village)

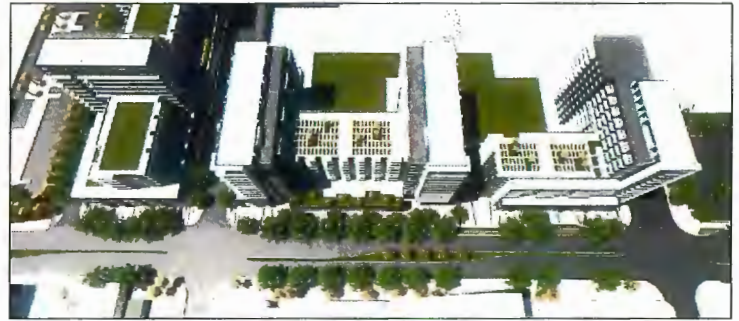
Development Features:

1. **Streetwalls:** Layered streetwalls, ranging in height from 5.0 m (16.4 ft.) to 30.5 m (100 ft.), break down the building mass vertically and horizontally and, together with variations in articulation, colour, materials, and fenestration, impart a vibrancy and fine grain to the streetscape.
2. **Flex Zone:** Varied setbacks and upper floor projections add to the street's visual interest and define large/small outdoor spaces and plazas for public/private uses (e.g., dining), socializing, play, public art, seating, and public amenities.
3. **Towers:** Slim, regular tower slabs set perpendicular to the street imparts an order to the streetscape.
4. **Gateway Features:** An articulated tower at the Cook Road corner visually reinforces this location as the Village centre, while reduced building height at the site's south end opens up views to Richmond City Hall and its significant trees.
5. **Retail Ground:**
 - Permeability and legibility are enhanced with a hierarchy of building entrances and transparent storefront glazing to active retail interiors.
 - A continuous animated retail frontage lines the high street, including frequent individual shop entrances, varied styles of fixed/operable display windows, and multi-tenant retail entrances enhanced with forecourts and pedestrian amenities.
 - Residential lobbies must be limited and must enhance the retail street with landscaped features and amenities.
6. **Landscape:** A high quality, elegant hardscape is enhanced with trees, planters, street furniture, public art, and special features.

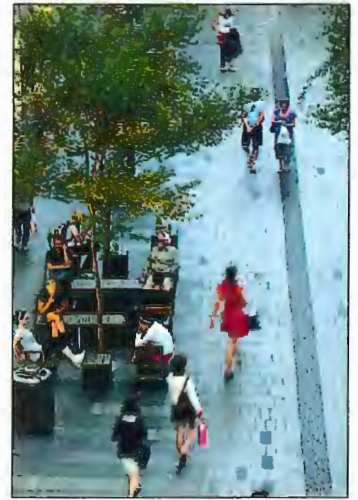
High Streets

A. No. 3 Road

Richmond Centre South (Brighthouse Village) is intended to contribute towards No. 3 Road's development as a “great street” and Richmond's preeminent retail avenue through the combination of a bold streetwall, varied architectural expression, landmark features, and continuous pedestrian-oriented shops, amenities, public art, and landscaping.



Regular Pattern of Slim Towers



Active Retail Flex Zone & High-Amenity Landscape



Varied Heights & Setbacks

3.3.1 Special Precinct 1.0

Richmond Centre South (Brighthouse Village)

Development Features:

1. **Streetwalls:** A stepped form unifies Park Road and ties together 3 sub-areas:
 - *South Leg:* A 2-storey façade lines both sides of the street, stepping up to mid-rise and tower forms behind.
 - *Plaza:* The south leg’s streetwall is extended in a bold arc that defines the plaza’s south side, reinforced by horizontal balconies and articulations.
 - *North Leg:* As the street narrows the streetwall rises, creating a sense of enclosure that is reinforced by the building’s lively vertical expression.
2. **Flex Zone:** Along the South Leg, the public sidewalk is expanded with a public/private zone suitable for café seating and retail displays, while upper floor projections add visual interest.
3. **Towers:** Slim towers fan out around the high street and plaza to enhance daylight and create a distinctive skyline feature.
4. **Retail Ground:** Continuous small-scale shops line the high street. Residential lobbies are limited and provide small forecourts and public amenities (e.g., art, seating) that enhance the high street.
5. **Community “Living Room”:** A flexible, year-round, outdoor space for dining, shopping, socializing, relaxing, entertaining, and playing, comprising:
 - At least 2,023.4 m² (0.5 ac) in size;
 - Hard/soft landscaping and special features supporting year-round use;
 - Multi-modal mobility hub integrated with underground parking/services;
 - Animated retail/restaurant edges; and
 - Public art, seating, and amenities.
6. **Back-of-House:** Necessary service uses and above-grade parking along the North Leg are made pedestrian-friendly and visually engaging with high quality materials, artful design features, and special street design features (e.g., catenary lighting, curb-less design).

High Streets

B. High Streets: Park Road

Richmond Centre South (Brighthouse Village) is intended to contribute towards the establishment of a distinct downtown marketplace through a combination of intimate streetscapes, small-scaled shops, residential above, and a vibrant community “living room” in the form of a large central plaza.



Community “Living Room” Plaza



Dynamic Back-of-House Uses along North Leg



South Leg with Cafe-Friendly Flex Zone

3.3.1 Special Precinct 1.0

Richmond Centre South (Brighthouse Village)

Development Features:

1. **Streetwall:** A highly articulated, low-rise streetwall (4 storeys typical) enhances the distinctive arc of Minoru Boulevard. Mid-rise forms are generally set well back from the street. Townhouses with stoops, in combination with tower lobbies, forecourts, and special entry features (e.g., public seating, glass canopies, and water features) provide for an appealing, pedestrian-friendly streetscape.
2. **Towers:** Slim, widely spaced towers punctuate the streetwall and extend to grade to vary the rhythm of the streetwall.
3. **Vertical Garden:**
 - Building articulations, podium and mid-rise rooftops, balconies, and terraces support a varied and visually appealing pattern of trees, planting, and landscape features that impart a “vertical garden” character and can be enjoyed by building occupants and from nearby buildings and the street.
 - A varied palette of trees and plants provides for year-round colour and visual interest, contributes towards the downtown’s urban forest, and offers wildlife and pollinator habitat.
 - Garden designs provide for ease of maintenance (to avoid overburdening building residents and ensure the health and longevity of the landscape) by including features that allow for lower maintenance and easy access and upkeep.
4. **Gateway Features:** Entrances to the precinct’s Park Road high street are marked at Murdoch Avenue and Minoru Gate with broad walkways framed by a double row of trees and special architectural features that take into consideration, among other things, views along Minoru Boulevard.

Green Streets

C. Minoru Boulevard

Richmond Centre South (Brighthouse Village) is intended to enhance Minoru Boulevard as a key route linking the public and neighbours with park and civic amenities by making the landscape the predominant feature of the development’s architectural expression.



Family-Friendly Rooftop Courtyards



Vertical Gardens



Pedestrian-Oriented Urban Townhouses



Slim Towers & Gateway Features

3.3.1 Special Precinct 1.0

Richmond Centre South (Brighthouse Village)

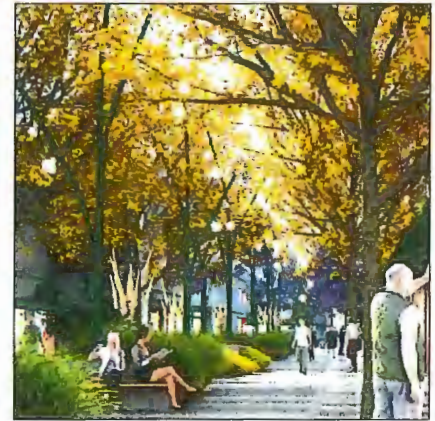
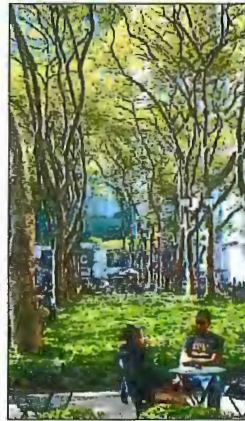
Development Features:

1. **Streetwalls:** An elegant, low-rise streetwall (3 storeys typical) is recessed to provide a backdrop for public gardens. Mid-rise forms are set well back from the street.
2. **Towers:** Slim, “light”, refined towers:
 - Are widely spaced to maximize views and daylight towards the north;
 - Pull close to the sidewalk (in front of the recessed streetwall) to vary the rhythm of the streetscape and frame the garden spaces;
 - Extend to grade on slim columns and/or in the form of glassy lobbies that are designed to visually blur the line between indoors and out; and
 - Are articulated above grade with projecting balconies, cantilevered roofs, and similar features above the sidewalk (secured by SRW) to impart texture, varied expression, and a finer grain.
3. **Public Gardens:** A variety of planting forms, including informal groupings of trees and indigenous plants and shrubs, changes in grade, water, and related landscape features complement the adjacent City Hall landscape, visually expand the public realm, make the gardens and fronting walkways attractive year-round, contribute towards the downtown’s urban forest, and provide for wildlife/pollinator habitat.
4. **Ground Floor Uses:**
 - Lobbies and public gardens preferred.
 - Restaurant/retail uses are encouraged near No. 3 Road, together with outdoor seating/dining within the “public garden” area.
 - Townhouses and amenity space are discouraged. Parking entrances and services uses must be minimized and are discouraged near City Hall.

Green Streets

D. Civic Promenades

Richmond Centre South (Brighthouse Village) is intended to enhance Richmond’s civic precinct, including City Hall, its plaza, significant trees, and linkages with Minoru Park, by contributing towards the street’s development as a park-like, pedestrian promenade.



Public Promenade & Amenities



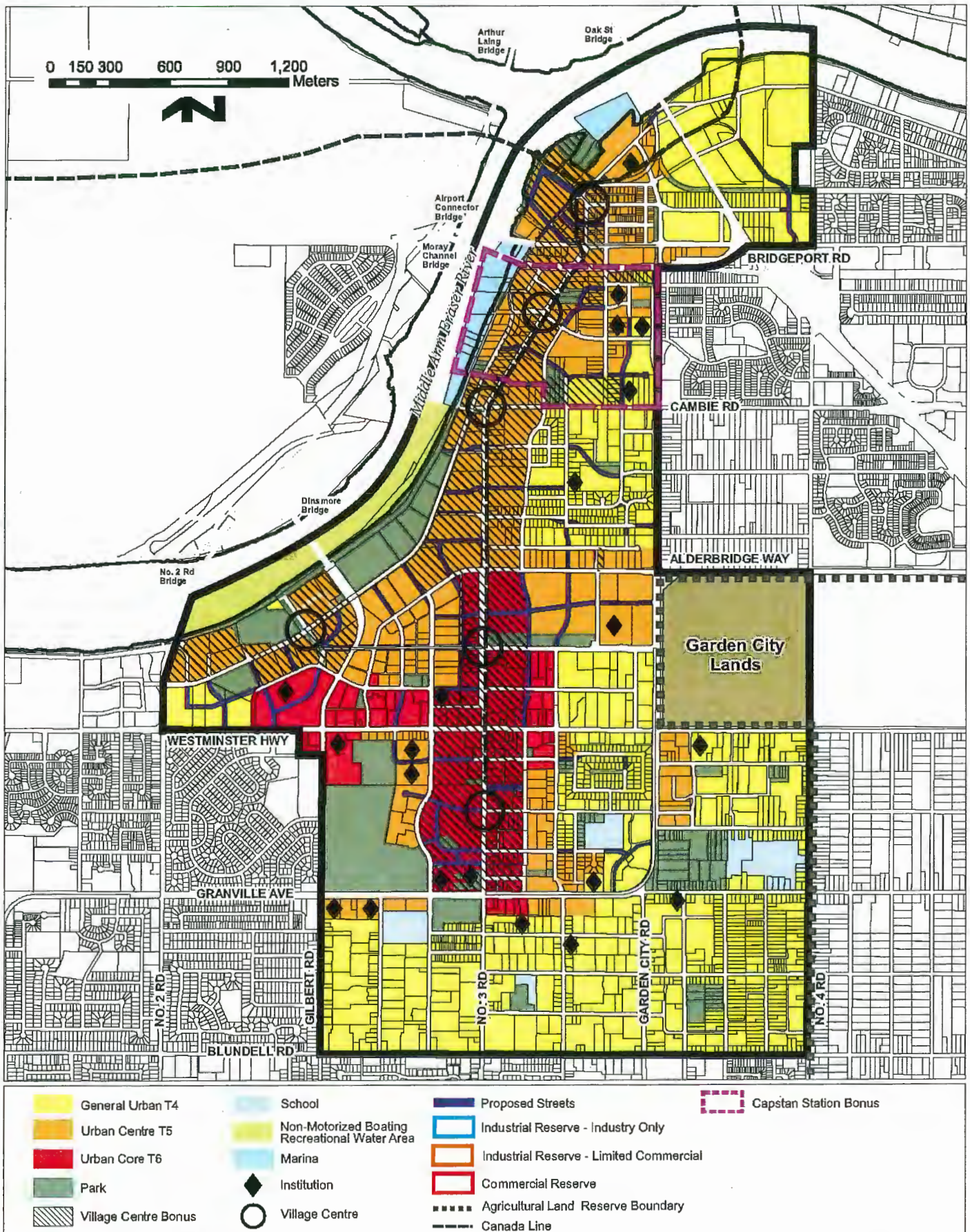
Slim Towers & Indoor/Outdoor Lobbies



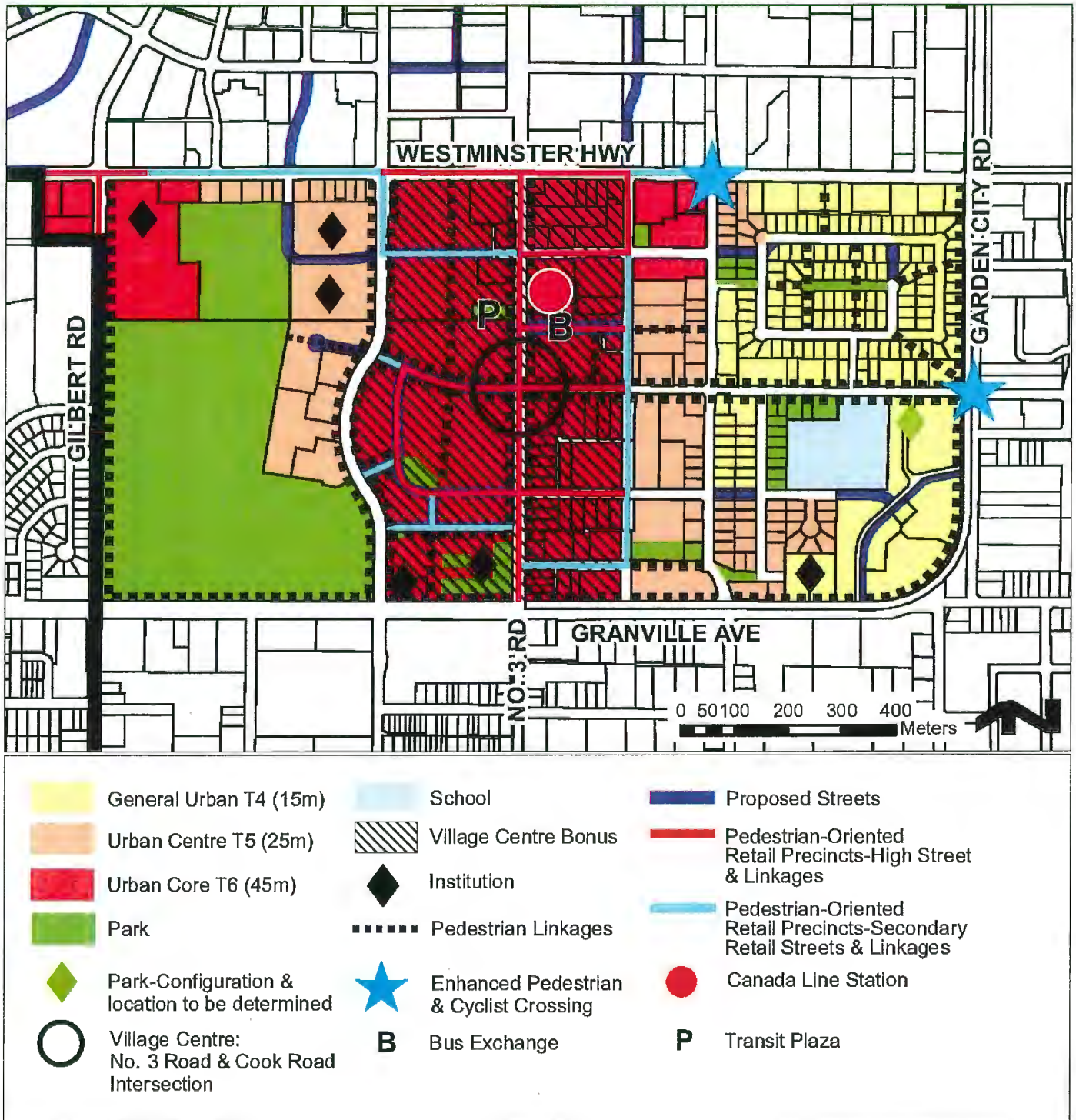
Low-Rise Streetwall set back along the Promenade

“Schedule Q attached to and forming part of Bylaw 9892”

Generalized Land Use Map (2031)



Specific Land Use Map: Brighthouse Village (2031)





**Development Permit Panel
Wednesday, June 24, 2020**

Time: 3:30 p.m.
Place: Council Chambers
Richmond City Hall
Present: Joe Erceg, Chair
Cecilia Achiam, General Manager, Community Safety
Milton Chan, Director, Engineering

The meeting was called to order at 3:30 p.m.

Minutes

It was moved and seconded

That the minutes of the meeting of the Development Permit Panel held on June 10, 2020 be adopted.

CARRIED

- 1. GENERAL COMPLIANCE – REQUEST BY CHRISTOPHER BOZYK ARCHITECTS LTD. FOR A GENERAL COMPLIANCE RULING AT 4331 VANGUARD ROAD (FORMERLY 4331 AND 4431 VANGUARD ROAD)**
(File Ref. No.: DP 17-782793) (REDMS No. 6463441)

APPLICANT: Christopher Bozyk Architects Ltd.

PROPERTY LOCATION: 4331 Vanguard Road (formerly 4331 and 4431 Vanguard Road)

INTENT OF PERMIT:

To consider the attached plans to change the location of the proposed green wall feature and add new sustainability features to be in General Compliance with the approved Development Permit (DP 17-782793).

Development Permit Panel

Wednesday, June 24, 2020

Applicant's Comments

Ernst Loots, Christopher Bozyk Architects, Ltd., with the aid of a visual presentation (copy on file, City Clerk's Office), briefed the Panel on the proposed changes to the approved Development Permit (DP 17-782793), highlighting the following:

- the green wall on the south elevation of the building which frames the building entrance is proposed to be relocated on the west elevation at a reduced size in order to be consistent with the corporate standard of the building occupant;
- the approved Development Permit for the project includes significant sustainability features, including, among others, a green roof, collection and storage of storm water for use in on-site irrigation and car wash facility, and installation of rooftop solar panels;
- to compensate for the reduction of the size of the green wall, the applicant is proposing an apiary on the west side of the site and two publicly accessible Level 2 electric vehicle (EV) charging stations which will be servicing four parking stalls; and
- the relocated green wall would now be more visible from the showroom of the building.

Staff Comments

Wayne Craig, Director, Development, noted that staff support the addition of the apiary and the two EV charging stations which offset the minor reduction of the size of the green wall.

Gallery Comments

None.

Correspondence

None.

Panel Decision

It was moved and seconded

That the attached plans to change the location of the proposed green wall feature and add new sustainability features be considered to be in General Compliance with the approved Development Permit (DP 17-782793).

CARRIED

Development Permit Panel

Wednesday, June 24, 2020

2. **DEVELOPMENT PERMIT 18-797127** (REDMS No. 6472575)

APPLICANT: Wensley Architecture Ltd.

PROPERTY LOCATION: 8131 Westminster Highway

INTENT OF PERMIT:

Permit the construction of a high-rise mixed-use development containing approximately 436 m² (4,695 ft²) of commercial space, 641 m² (6,904 ft²) of office space, and 134 dwellings (including 13 affordable housing units) at 8131 Westminster Highway on a site zoned "Downtown Commercial (CDT1)".

Applicant's Comments

Barry Weih, Wensley Architecture, with the aid of visual presentation (copy on file, City Clerk's Office) provided the site context and other background information on the proposed development, highlighting the following:

- there will be lane dedication for the new City lane to be constructed along the west and north frontages of the site;
- the project will achieve LEED "Silver" equivalency;
- the tiered project includes a three-storey podium, a mid-level section and a tower portion;
- the main floor includes the garbage and recycling area, parking area, retail and entrance to residential units fronting Westminster Highway;
- the main residential entrance is shared by the market residential units and 13 affordable housing units;
- the majority of affordable housing units have two and three bedrooms and are distributed throughout the building;
- the outdoor amenity areas located on the fourth and eighth floor levels provide a variety of outdoor activities for residents;
- the proposed architectural design and building materials are of high quality, including the decorative metal screens that provide screening to the parkade; and
- retail store fronts with decorative canopy enhance the pedestrian experience along Westminster Highway.

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Michael Patterson, P+A Landscape Architecture, briefed the Panel on the main landscape features of the project, noting that (i) a double row of trees are provided along the Westminster Highway frontage, (ii) trees along the west lane define the residential entrance and bicycle racks are located adjacent to trees, (iii) the outdoor amenity area on the fourth floor is family-oriented and provides exercise and active play opportunities, (iv) the eighth floor level outdoor amenity area provides a passive sundeck area facing south and an active family play area on the north side, (v) outdoor deck areas are proposed on the penthouse level, and (vi) a variety of planting materials are proposed for landscaping in the project and are layered to provide seasonal interest.

In reply to a query from the Panel, Mr. Patterson confirmed that an irrigation system is provided for trees on the landscaped roof decks as well as for street trees.

Staff Comments

Mr. Craig noted that (i) 73 percent of units overall and 92 percent of the affordable housing units have two and three bedrooms, significantly exceeding the City's Official Community Plan (OCP) and Affordable Housing Strategy guidelines, (ii) there is a significant Servicing Agreement associated with the project for the construction of the lane adjacent to the development, (iii) the project has been designed to achieve the City's aircraft noise standards and noise mitigation related to noise impacts related to the Canada Line, (iv) the project has been designed to be District Energy Utility (DEU) ready, and (v) all residential parking stalls and 10 percent of shared visitor and commercial parking spaces will be provided with energized electric vehicle (EV) charging outlets.

In reply to a query from the Panel, Mr. Craig advised that the developer has chosen to take advantage of the density bonus that the City provides to encourage the provision of affordable housing.

Gallery Comments

None.

Correspondence

Derrick Chang, 8081 Westminster Highway, expressed concern regarding potential traffic congestion in the area, shadowing of the project, and construction-related concerns.

In reply to Mr. Chang's concerns, Mr. Craig advised that (i) the project was reviewed by the City's Transportation Department and noted that the lane improvements and existing road improvements can support traffic on the site, (ii) the shadow analysis provided by the applicant indicates that shadowing to the west is limited to early morning hours, and (iii) the applicant will be required to provide a construction parking and management plan should the application move forward to Building Permit stage and adhere to the City's Noise Bylaw during construction hours.

Development Permit Panel

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In addition, Mr. Craig noted that the subject development is located approximately 41 meters from the adjacent tower to the west, which exceeds the City's tower separation guidelines.

Panel Discussion

The Panel expressed support for the project and appreciated the provision of affordable housing units and construction of a new City lane.

Panel Decision

It was moved and seconded

That a Development Permit be issued which would permit the construction of a high-rise mixed-use development containing approximately 436 m² (4,695 ft²) of commercial space, 641 m² (6,904 ft²) of office space, and 134 dwellings (including 13 affordable housing units) at 8131 Westminster Highway on a site zoned "Downtown Commercial (CDTI)".

CARRIED

3. DEVELOPMENT PERMIT 19-858597

((REDMS No. 6245695))

APPLICANT: 0855855 B.C. Ltd.

PROPERTY LOCATION: 9820 Alberta Road

INTENT OF PERMIT:

1. Permit the construction of six townhouse units at 9820 Alberta Road on a site zoned "Town Housing (ZT60)- North McLennan (City Centre)"; and
2. Vary the provision of Richmond Zoning Bylaw 8500 to reduce the minimum east side yard setback from 3.0 m to 2.25 m.

Applicant's Comments

Eric Law, Eric Law Architects, with the aid of a visual presentation (copy on file, City Clerk's Office), provided background information on the proposed development, highlighting the following:

- a shared driveway on the neighbouring property to the east provides access to the proposed development;
- the siting, orientation and design of the two townhouse buildings make them compatible with neighbouring townhouse developments;
- one convertible unit is proposed with space provided for future installation of an elevator; and

5.

Development Permit Panel

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- a five-foot wide sidewalk provides pedestrian access from Alberta Road to the townhouse units.

Denitsa Dimitrova, PMG Landscape Architects, briefed the Panel on the main landscape features of the project, noting that (i) the existing on-site tree at the northwest corner of the site and the off-site tree adjacent to the southwest corner of the site will be retained and protected, (ii) the streetscape will be enhanced by a low transparent fence along the site frontage, (iii) a six-foot fence will be installed along the west and south property lines to provide privacy to neighbours, (iv) the outdoor amenity areas of the subject development and the neighbouring property to the east will be combined for shared use of the two developments, (v) the subject development will provide two types of play equipment, a picnic table, and open lawn area for the shared outdoor amenity area, (vi) each private yard will be separated by a six-foot high privacy fence, and (vii) permeable paving treatment is proposed for the two visitor parking stalls.

In reply to queries from the Panel, Ms. Dimitrova acknowledged that (i) the outdoor amenity area for the neighbouring property to the east to be shared with the subject development is already existing, and (ii) a bench is proposed near the mail kiosk and a bike rack will be provided adjacent to the internal drive aisle of the proposed development.

In reply to queries from the Panel, Mr. Craig noted that the proposed variance to the east side yard setback will result in better separation between the subject site and adjacent development to the west and as well as increase site permeability.

Staff Comments

Mr. Craig noted that (i) the proposed east side yard setback variance was identified at rezoning stage, and (ii) there will be a Servicing Agreement associated with the project for frontage works and site servicing along Alberta Road.

In reply to query from the Panel, Mr. Craig stated that the proposed setback variance only applies to the northern townhouse building of the subject development located along Alberta Road.

Gallery Comments

A Richmond resident and owner of Unit 2, 9800 Alberta Road, stated that he lives in the townhouse building immediately adjacent to the west of the subject site. He queried about (i) the potential impact of the proposed east side yard setback variance to the adjacent townhouse building, (ii) the height of the proposed fence along the subject site's west property line which could reduce the visual connection between the two adjacent developments, (iii) the potential for pedestrian connectivity between the subject site and the adjacent development to the west, and (iv) the size and potential impact of trees to be planted along the western edge of the subject site on sun exposure to the adjacent townhouse building.

Development Permit Panel

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In reply to the queries, the Chair noted that the proposed setback variance will increase the separation between the north building of the subject development and the townhouse building to the west. In addition, Ms. Dimitrova confirmed that (i) a six-foot high wood fence with a two-foot high transparent upper portion is proposed to be installed along the west property line of the subject site, (ii) there is no provision for pedestrian connectivity between the two adjacent developments, and (iii) small and medium-sized deciduous trees are proposed to be planted along the west property line of the subject site.

Correspondence

None.

Panel Decision

It was moved and seconded

That a Development Permit be issued which would:

1. *permit the construction of six townhouse units at 9820 Alberta Road on a site zoned "Town Housing (ZT60)- North McLennan (City Centre)"; and*
2. *vary the provision of Richmond Zoning Bylaw 8500 to reduce the minimum east side yard setback from 3.0 m to 2.25 m.*

CARRIED

4. Date of Next Meeting: July 15, 2020

5. Adjournment

It was moved and seconded

That the meeting be adjourned at 4:30 p.m.

CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Development Permit Panel of the Council of the City of Richmond held on Wednesday, June 24, 2020.

Joe Erceg
Chair

Rustico Agawin
Committee Clerk

Schedule 1 to the Minutes of the
Development Permit Panel
meeting held on Wednesday,
June 24, 2020.

From: Derrick Chang <dfc01@aol.com>
Sent: June 24, 2020 12:14 PM
To: CityClerk
Subject: 8131 Westminster - June 24th hearing

Importance: High

Categories: Rustico (DPP & ADP)

To Development Permit Panel	
Date:	JUNE 24, 2020
Item #	2
Re:	DP 18-797127

To whom this may concern,

I reside in the Richmond Landmark, located at 8081 Westminster Hwy and have the following concern regarding the adjacent proposed development at 8131 Westminster:-

- Traffic congestion and impact; (any traffic impact analysis or report?)
- Shadowing effect from the project; (any shadow study?)
- The project rendering is deceiving as it did not show the close proximity to our building.

Furthermore, there are quite a few elderlies who reside in 8081 Westminster and are concern about the noise & dust mitigation during the construction as well as road closures.

Sincerely,
Derrick Chang



To: Richmond City Council
From: Joe Erceg
Chair, Development Permit Panel
Date: June 30, 2020
File: DP 17-768248
DP 19-876699
DP 17-782793
Re: **Development Permit Panel Meetings Held on May 29, 2019 and April 29, 2020 and June 24, 2020**

Staff Recommendation

1. That the recommendation of the Panel to authorize the issuance of:
 - a) a Development Permit (DP 17-768248) for the property at 6551 No. 3 Road; and
 - b) a Development Permit (DP 19-876699) for the property at 6899 Pearson Way;be endorsed, and the Permit so issued; and
2. That the recommendation of the Panel to authorize the approval of changes to the design of the Development Permit (DP 17-782793) issued for the property at 4331 Vanguard Road (formerly 4331 and 4431 Vanguard Road) be endorsed, and the changes be deemed to be in General Compliance with the Permit.

Joe Erceg
Chair, Development Permit Panel
(604-276-4083)

WC/SB:blg

Panel Report

The Development Permit Panel considered the following items at its meetings held on, May 29, 2019 and April 29, 2020 and June 24, 2020.

DP 17-768248 – GBL ARCHITECTS – 6551 NO.3 ROAD
(May 29, 2019)

The Panel considered a Development Permit (DP) application to permit the development of a two-phase, high rise, mixed-use development and the construction of the development's first phase including the removal and replacement of part of the existing CF Richmond Centre shopping mall with a combination of mall-oriented and street-oriented commercial uses, 1,166 dwellings (including 79 affordable housing units), and new streets and public open space on a site zoned "Downtown Commercial (CDT1)". Variances are included in the proposal for reduced front yard setbacks for balconies, towers and underground parking in Phase 1, reduced parking for affordable housing residents in Phase 1, and reduced parking for affordable housing residents and market rental housing residents in Phase 2.

In reply to a Panel query, staff noted that: (i) there is a setback variance for balconies on Levels 3 through 14 at the corner of Minoru Boulevard and Murdoch Avenue that will not impact pedestrian circulation on the site; (ii) there are different setback variances proposed at Level 1 and at Levels 2 to 14 of the affordable and market housing towers adjacent to the proposed east-west City street on the south edge of the subject development; (iii) the proposed setback variances for the parking structure located below finished grade along the site's Minoru Boulevard frontage and the proposed City street are consistent with the standard approach to City Centre development where parking is provided below finished grade; and (iv) the two proposed parking variances for Phases 1 and 2 affordable housing and market rental housing residents are supported by a traffic impact assessment submitted by the applicant and are consistent with the information provided during the Official Community Plan (OCP) amendment process.

Architect, Joey Stevens, of GBL Architects, accompanied by David Chamness, of Callison RTKL Inc.; Kris Snider, of HEWITT; and Landscape Architect, Christopher Mramor, of PFS Studios, provided a brief presentation, noting that:

- The existing parkade, the vacant portion of the South Mall and most of the surface parking area will be demolished to allow the construction of the proposed mixed-use development which will be done in two phases.
- The subject Development Permit application includes the proposed development for Phase 1 and a conceptual design for Phase 2.
- New streets and pedestrian linkages are proposed to provide vehicular and pedestrian connections from No. 3 Road to Minoru Boulevard.
- Phases 1 and 2 will each have a stand-alone affordable housing building.
- Parking to be provided for the project is mostly underground, except for Building 1A which provides above grade parking.
- Street frontages include the Park Road "high street", "green streets", gateways and family-friendly outdoor and indoor amenity spaces which are part of the Development Permit Guidelines developed through the OCP amendment process.

- Each streetscape is designed differently to respond to its context and use.
- The Park Road Plaza includes key characteristics of a successful urban plaza, i.e., accessible, well activated and animated, able to accommodate users, provision for a variety of spaces, and well programmed spaces are incorporated into the central plaza's design.
- The Phase 1 Mobility Hub: (i) is centrally located adjacent to the Park Road Plaza; (ii) serves as a point of connection for customers, residents, and visitors for various modes of transportation, including car-share and bike share facilities, ride-hail/taxi drop-off and pick-up, and waiting areas for community shuttle services; (iii) provides public services and related public amenities including secured bicycle storage, electric vehicle charging stations, weather protection, escalators, customer lounge, seating areas, and signage; and (iv) its modern and transparent structure allows open sightlines, visibility to multi-modal connections and daylight penetration into the structure.
- The Park Road "high street" design provides variation in building facades, incorporates Public Art, and allows retail spaces to spill out onto the sidewalk areas.
- The "green street" design along Minoru Road and the new east-west road consist predominantly of residential lobbies, townhouses, terrace gardens and amenity spaces.
- Residential towers at the gateway locations are generally slim, stepped and widely spaced.
- Outdoor amenity spaces in Phase 1 buildings: (i) are located on various levels and are family-oriented in character; (ii) programming provides opportunities for children's play, exercise, socializing, relaxing, outdoor dining, and gardening, among others; and (iii) are well connected to each other and are located close to indoor amenity areas.
- An inaccessible green roof is provided on Building 1A.

In reply to a Panel query, the design team reviewed the vehicular and pedestrian routes to access the stand-alone affordable housing building in Phase 1, location of dedicated parking and exclusive indoor amenity space for affordable housing residents, and access to the adjacent shared outdoor amenity space which could be used by affordable housing residents.

In reply to further Panel queries, the design team noted that: (i) the exclusive indoor and shared outdoor amenity spaces that affordable housing occupants could use include outdoor play spaces and provision for indoor play opportunities for children; (ii) the applicant is coordinating with the non-profit affordable housing operator regarding programming for the dedicated indoor amenity space for affordable housing residents; (iii) the shared outdoor amenity space adjacent to the exclusive indoor amenity space for affordable housing occupants is family-oriented and includes a games terrace and a children's play area; (iv) the proposed parking variance for affordable housing units was reviewed and supported by the affordable housing operator based on their experience managing affordable housing projects in the Lower Mainland; (v) three low carbon energy plants will be located in different rooftop locations within the proposed development; (vi) the energy plants will be transferred to the City to facilitate the development's future connection to a City District Energy Utility (DEU) facility; (vii) a solid and louvered roof and a visually permeable decorative screen are proposed to provide screening and acoustic barrier for rooftop mechanical equipment on Building 1C; (viii) some improvements to the roof of the existing mall will be done to enhance views from surrounding towers; (ix) the public artworks on the north leg of Park Road which provide screening to parking uses will be subject to a separate application process; (x) the retail spaces surrounding the Park Road plaza, the Mobility Hub, the water feature and year-round events will activate and animate the Park Road plaza; and (xi) exhaust vents for restaurants will be located away from residential units.

In reply to queries from the Panel regarding the proposed sustainability features for the project, the design team confirmed that: (i) the project has been designed to achieve LEED Silver equivalency and a 50 percent window-to-wall ratio; (ii) significant landscaping is proposed for upper level outdoor amenity spaces; (iii) existing surface parking will be replaced with landscaped areas and permeable surfaces; (iv) electric vehicle charging will be provided for all residential and two percent of commercial parking stalls; (v) the Mobility Hub provides integrated mobility services and connectivity to various modes of transportation; and (vi) solar panels are not proposed for the project and an inaccessible green roof is provided on Building 1A.

In reply to a query from the Panel, staff noted that the layby provided adjacent to the park plaza could accommodate TransLink mini-bus shuttle service.

Staff advised that the extensive Servicing Agreement associated with the Phase 1 development includes: (i) frontage works along Minoru Boulevard; (ii) the construction of the west half of the new east-west road, the new north-south connector road, and the Minoru Gate and Murdoch Avenue extensions; and (iii) sidewalk improvements along the west side of No. 3 Road near the Brighthouse Canada Line Station to enhance the pedestrian connection through the mall galleria.

In addition, staff noted that the proposed comprehensive Transportation Demand Management (TDM) measures for the subject Development Permit application include: (i) the proposed Phase 1 Mobility Hub and its associated transportation-related public amenities; (ii) participation and funds provided by the applicant for bike-share and car-share membership for affordable housing tenants; and (iii) a comprehensive transit pass program for occupants of affordable and market housing as well as for commercial tenants.

Staff further noted that: (i) 20 percent of market units and 100 percent of affordable housing units are designed to achieve Basic Universal Housing (BUH) standards; (ii) 50 percent of the units in Phase 1 have two to three bedrooms; (iii) the project has been designed to achieve the City's aircraft noise standard; and (iv) there will be no driveway access to the parkade from No. 3 Road to Minoru Boulevard on the new Park Road and Minoru Gate extensions through the site.

Rahim Janmohamed, of 9924 Ashwood Drive, owner and operator of Shoppers Drug Mart at CF Richmond Centre, addressed the Panel regarding the Development Permit application, expressing support for the project, noting that it will be a welcome addition to the community.

Correspondence was submitted to the Panel regarding the Development Permit application.

Staff noted that correspondence from Ronald Pope (on behalf of Pope Estates Inc.), of 6651 Minoru Boulevard, expresses concerns related to the setback variance for the below grade parking structure and the two parking relaxations for the affordable housing units and the market rental units.

In reply to a Panel query, staff confirmed that the proposed parking variance was supported by a parking study submitted by the applicant and consistent with information provided during the OCP amendment process.

Staff noted that correspondence from Jaime Pestano, of 7388 Gollner Avenue indicates a desire to see a multi-purpose arena constructed as part of the proposed development.

The Panel expressed support for the project, noting that: (i) the applicant had worked with staff for an extensive period of time for the large and extensive project; (ii) the project is well thought out and a great addition to the community; (iii) the amendment to the OCP was well used by the applicant in coordination with City staff; and (iv) the east-west connections through the project, including pedestrian linkages from the shopping centre to the Brighthouse Canada Line Station are a significant feature of the project.

The Panel recommends the Permit be issued.

DP 19-876699 – OVAL 8 HOLDINGS LTD. – 6899 PEARSON WAY
(April 29, 2020)

The Panel considered a Development Permit (DP) application to permit the construction of a child care facility on a site zoned “High Rise Apartment and Olympic Oval (ZMU4) – Oval Village (City Centre)”. The proposal includes variances to decrease the minimum rear (northeast) setback from 3 m to 0.4 m; decrease the minimum side (northwest) setback abutting 6811 Pearson Way from 3 m to 0.4 m; increase the maximum lot coverage for buildings from 45% to 55%; remove the requirement for an on-site loading bay; and increase the maximum height of a fence from 2.4 m to 3.9 m.

Architect, Brian Wakelin, of Public Architecture and Communication, provided a brief presentation, noting that:

- The proposed child care facility is part of several amenities provided in the overall “River Green” development.
- The design of the one-storey building and proposed landscaping reflects the area’s historical built form and landscape and considers its site context, including the adjacent Environmentally Sensitive Area (ESA) to the east of the subject site.
- The proposed child care facility is intended for two distinct children’s age groups and informs the programming of the indoor and outdoor spaces of the facility.
- The railroad heritage of the area is expressed in the proposed landscaping along the River Road frontage, including commemorating the railroad.
- The children’s play area in the courtyard will receive adequate sun exposure.
- Children’s drop-off areas are located at the front of the building’s main entrance on the west side and in the underground parkade which is accessed on the north side.
- An elevator will provide accessibility from the Pearson Way sidewalk and the underground parkade to the main floor of the building.
- There is connectivity between the subject site and the adjacent ESA and the boardwalk to the east and continuity of the street wall of the subject site and Lot 12 to the west.
- The children’s play area provides various play opportunities appropriate for the two children’s age groups.
- The project aims to achieve a sustainability target of LEED Silver Equivalency certification.

In reply to a Panel query, Mr. Wakelin acknowledged that the proposed height variance of the proposed fence on the east side was requested to comply with child care facility regulations.

Staff noted that: (i) there is a Servicing Agreement for frontage works associated with the project along Pearson Way; (ii) staff support the proposed variances which are the result of the site context, the project's interface with the City-owned wooded lot to the northeast, the constrained site size, and the provision of an on-site loading bay on the access easement on the adjacent site to the north; (iii) the child care facility will be transferred by the developer to the City prior to the occupancy of the adjacent development to the north; (iv) the project will be connected to the Oval Village District Energy Utility (DEU); and (v) the project design has been reviewed by the City's child care and facilities staff and Vancouver Coastal Health staff to confirm child care licensing requirements.

In reply to a Panel query, staff confirmed that the proposed variances are consistent with the master planning of the overall River Green development.

No correspondence was submitted to the Panel regarding the Development Permit application.

The Panel recommends the Permit be issued.

GENERAL COMPLIANCE TO DP 17-782793 – CHRISTOPHER BOZYK ARCHITECTS LTD. – 4331 VANGUARD ROAD (FORMERLY 4331 AND 4431 VANGUARD ROAD)
(June 24, 2020)

The Panel considered an application for changes to the location of the proposed green wall feature and to add new sustainability features, to be in General Compliance with approved Development Permit (DP 17-782793).

Ernst Loots, of Christopher Bozyk Architects, Ltd., provided a brief presentation, including:

- The green wall on the south elevation of the building which frames the building entrance is proposed to be relocated on the west elevation at a reduced size in order to be consistent with the corporate standard of the building occupant.
- The approved Development Permit for the project includes significant sustainability features, including, among others, a green roof, collection and storage of storm water for use in on-site irrigation and car wash facility, and installation of rooftop solar panels.
- To compensate for the reduction of the size of the green wall, the applicant is proposing an apiary on the west side of the site and two publicly accessible Level 2 electric vehicle (EV) charging stations which will be servicing four parking stalls.
- The relocated green wall would now be more visible from the showroom of the building.

Staff support the addition of the apiary and the two EV charging stations which offset the minor reduction of the size of the green wall.

No correspondence was submitted to the Panel regarding the General Compliance application.

The Panel recommends that the revisions be approved.