



City of Richmond

Memorandum Planning and Development Division Development Applications

To: Mayor and Councillors
From: Wayne Craig
Director, Development
Date: January 4, 2022
File: RZ 18-836123
Re: **Application by Polygon Talisman Park Ltd. to Create the “Residential / Limited Commercial (ZMU47) – Capstan Village (City Centre)” Zone, and to Rezone the Site at 8671, 8731, 8771, 8831/8851 Cambie Road, 8791 Cambie Road/ 3600 Sexsmith Road, and 3480, 3500, 3520, 3540/3560 Sexsmith Road from the “Single Detached (RS1/F)” Zone to the “Residential / Limited Commercial (ZMU47) – Capstan Village (City Centre)” Zone**

The purpose of this memo is provide revised rezoning considerations for the above referenced rezoning application to secure the applicant’s commitment to provide a rooftop demonstration garden for urban agriculture use as discussed at the Council meeting held on December 6, 2021.

The rezoning considerations have been revised accordingly to include registration of a legal agreement to secure the provision of a rooftop demonstration garden (rezoning consideration #26 in attached Revised Attachment DD). The rooftop demonstration garden will be located on the affordable housing building on Lot 1 (South Lot) in the first phase of development for the use of the residents of the building. The rooftop demonstration garden will have a minimum area of 92.9 m² (1,000 ft²) and have access by elevator and stair. The rooftop garden is proposed to be furnished with raised planting beds, a potting table, lighting, hose bib and rainwater collection from the elevator and stair roofs for irrigation. The rooftop demonstration garden will be designed and reviewed as part of the required Development Permit application process.

The applicant has agreed to the attached revised rezoning considerations (Revised Attachment DD).

Should you have any questions, please contact the undersigned at 604-247-4625, or wcraig@richmond.ca.

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

SB:blg

Attachments:

Revised Attachment DD: Red-lined Version of Revised Rezoning Considerations



Address: 8671, 8731, 8771, 8831/8851 Cambie Road, 8791 Cambie Road/3600 Sexsmith Road,
and 3480, 3500, 3520, and 3540/3560 Sexsmith Road

File No.: RZ 18-836123

Prior to final adoption of Richmond Zoning Bylaw 8500, Amendment Bylaw 10198, the developer is required to complete the following:

1. (**Official Community Plan Amendment Bylaw**): Adoption of OCP Bylaw 7100, Amendment Bylaw 10235.
2. (**Ministry of Transportation & Infrastructure - MOTI**): Final MOTI approval must be received.
NOTE: Preliminary MOTI approval for original rezoning proposal is on file and **expired** on June 19, 2021. **MOTI staff have reviewed and accepted the revised proposal, and final approval is required from MOTI.**
3. (**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 # 6234621).
4. (**Consolidation, Subdivision, Dedication and Land Transfer**) Registration of a Subdivision Plan for the subject site and park land ownership transfer, to the satisfaction of the City. Prior to the registration of a Subdivision Plan, the following conditions shall be satisfied:
 - 4.1. (**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 and/or transferred land. Such assurances could include one or more of the following:
 - 4.1.1. a contaminated sites legal instrument (e.g. Certificate of Compliance (COC) or Final Site Determination (FSD) showing no contamination in the dedication lands);
 - 4.1.2. 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
 - 4.1.3. a legal commitment to provide a contaminated sites legal instrument (e.g. Certificate of Compliance (COC) or Final Site Determination (FSD) showing no contamination in the dedication lands), including security therefore in the amount and form satisfactory to the City.
 - 4.2. Road: Dedication of approximately 10,897 m² (2.69 ac.) for road and related purposes, as indicated generally on the Preliminary Subdivision Plan (Schedule 1) and Preliminary Road Functional Plan (Schedule 2). Final extents and amounts to be determined through the required Servicing Agreement* application process, to the satisfaction of the Director of Transportation. Road dedication areas include:
 - 4.2.1. Cambie Road widening (Across 8671 Cambie Road frontage and from West property line of 8731 Cambie Road to Garden City Road): varying width of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along the development frontage. Exact extent to be confirmed through the detailed design SA process to the satisfaction of the City;
 - 4.2.2. Garden City widening (Cambie Road to +/- 70 m northward): varying width (up to 6.53 m) of strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along the development frontage. Exact extent to be confirmed through the detailed design (SA) process to the satisfaction of the City;
 - 4.2.3. Capstan Way widening (Sexsmith Road to Garden City Road): 6.8 m wide strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along the development frontage;

NOTE: Development Cost Charge (DCC) credits may apply.

- 4.2.4. Sexsmith Road widening (Capstan Way to Brown Road): varying width (3.61 m typical) strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along the development frontage;

NOTE: Development Cost Charge (DCC) credits may apply.

- 4.2.5. Odlin Crescent extension (Cambie Road to north property line of 8671 Cambie Road): dedication of entire lot at 8671 Cambie Road;
- 4.2.6. Ketcheson Road extension (Capstan Way to Brown Road extension): a 20 m wide strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalks along both sides of the street;
- 4.2.7. Brown Road extension (Sexsmith Road to Ketcheson Road extension): a 15 m wide strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along the development frontage;
- 4.2.8. New North-South road (Ketcheson Road extension to North property line of Lot 1 (South Lot)): a 20 m wide strip of land dedication required along the entire length to accommodate road elements to the back of the proposed sidewalk along both sides of the street, along with cul-de-sac terminus; and
- 4.2.9. Corner Cuts: minimum 4 m x 4 m corner cuts (measured from the new property lines) required on all corners of intersections where two dedicated roadways intersect.

- 4.3. Lot Consolidation and Subdivision: The creation of the following lots:

- 4.3.1. Four lots for development purposes, as per the Preliminary Subdivision Plan (Schedule 1), including:

- a) Lot 1 (South Lot): 9,630.8 m² (2.38 ac.);
- b) Lot 2 (East Lot): 11,443.1 m² (2.83 ac.);
- c) Lot 3 (West Lot): 12,794.6 m² (3.16 ac.); and
- d) Lot 4 (Central Lot): 4,510.4 m² (1.12 ac.).

- 4.3.2. One (1) lot for park and related purposes: 5,427.5 m² (1.34 ac.).

- 4.4. No Separate Sale of Development Lots: Registration of legal agreements on the four lots created for development purposes for the subject mixed use development proposal, as per the Preliminary Subdivision Plan (Schedule 1), requiring that the lots may not be sold or otherwise transferred separately without prior approval of the City, to ensure that legal agreement and business terms related to financial, legal, development, and other obligations assigned to each of the lots as a result of the subject rezoning are transferred and secured to the satisfaction of the Director of Development and City Solicitor.
- 4.5. Park: Transfer of the approximately 5,427.5 m² (1.34 ac.) lot to the City as a fee simple lot for park and related purposes, which may include, but may not be limited to, a neighbourhood park, and associated features and activities. The primary business terms of the required land transfer, including any environmental conditions, shall be to the satisfaction of the Director, Real Estate Services, the City Solicitor, the Director, Parks Services and the Director of Development. All costs associated with the land transfer shall be borne by the developer. The lands to be transferred are generally indicated on the Preliminary Subdivision Plan (Schedule 1).

NOTE: Development Cost Charge (DCC) credits shall not apply.

NOTE: This land transfer is required to satisfy the developer's CCAP and Zoning Bylaw public open space requirements with respect to the Capstan Station Bonus.

5. (**Public Rights of Passage Statutory-Rights-of-Way - SRWs**) Registration of right-of-ways for the purposes of public passage and utilities to facilitate public access, related landscaping and infrastructure, including:

- 5.1. Public Open Space SRWs, as shown generally on the Park and Public Open Space Key Plan (Schedule 3), of approximately 1,924.7 m² (0.48 ac.), including the provision of the following, to the satisfaction of the City:

- 5.1.1. Mid-Block Trail SRWs: approximately 1,020.8 m² (0.25 ac.) combined area for a landscaped trail for pedestrians and bikes, providing a public trail and recreation connection between Garden City Road, Brown Road and the neighbourhood park.
- a) East: approximately 150.3 m² along the south side of Lot 2 (East Lot) and 150.9 m² along the north side of Lot 1 (South Lot) where it abuts Lot 2 (East Lot);
 - b) West: approximately 221 m² along the south side of Lot 4 (Central Lot); and
 - c) South: approximately 498.6 m² on Lot 1 (South Lot) along the west side of the lot and the north side of the lot where it abuts Lot 4 (Central Lot).
- 5.1.2. Corner Plaza Open Spaces SRWs: approximately 304 m² (0.08 ac) combined area in the form of corner plazas at all of the intersections along the north side of Lot 2 (East Lot) and Lot 3 (West Lot) for the enhancement of intersection corners accommodating landscaping, pedestrian and bike activity, including:
- a) Capstan/Garden City SW corner plaza: approximately 121.4 m²;
 - b) Capstan/Ketcheson SE corner plaza: approximately 73.3 m²;
 - c) Capstan/Ketcheson SW corner plaza: approximately 73.4 m²; and
 - d) Capstan/Sexsmith SE corner plaza: approximately 35.8 m²;
- 5.1.3. Central Open Space SRW: approximately 600 m² (0.15 ac.) along the north side of Lot 4 (Central Lot) for park activity and public open space.

NOTE: These SRW areas are required to satisfy the developer's CCAP and Zoning Bylaw public open space requirements with respect to the Capstan Station Bonus.

- 5.2. The 'Public Open Space SRWs' shall provide for:
- 5.2.1. A public experience, use, and enjoyment of the SRW area as attractive, welcoming, well-lit, safe, and well maintained, as determined to the satisfaction of the City;
 - 5.2.2. 24 hour-a-day, universally accessible, public access, which may include, but may not be limited to, lighting, furnishings, street trees and planting, decorative paving, and signage indicating the SRW area is publicly accessible, to the satisfaction of the City;
 - 5.2.3. Public art;
 - 5.2.4. Public access to fronting residential, public open space, and other on-site uses;
 - 5.2.5. Emergency and service vehicle access, City bylaw enforcement, and any related or similar City-authorized activities;
 - 5.2.6. City utilities, traffic control (e.g., signals), and related equipment;
 - 5.2.7. The owner-developer's ability to close a portion of the right-of-way to public access to facilitate maintenance or repairs to the right-of-way or the fronting uses, provided that adequate public access is maintained and the duration of the closure is limited, as approved by the City in writing in advance of any such closure;
 - 5.2.8. Design and construction of the SRW areas, via Servicing Agreement* processes, at the sole cost and responsibility of the developer, as determined to the satisfaction of the City;
 - 5.2.9. Maintenance of the SRW area at the sole cost of the owner-developer, except as otherwise determined via the Servicing Agreement approval process;
 - 5.2.10. Building encroachments located fully below the finished grade of the right-of-way, provided that such encroachments do not conflict with the design, construction, or intended operation of the right-of-way (e.g., tree planting, accessible grades, underground utilities), as specified in a Development Permit* or Servicing Agreement* approved by the City;
 - 5.2.11. The right-of-ways shall not provide for:

- a) Driveway crossings;
 - b) Vehicle access, except as described above; or
 - c) Building encroachments above the finished grade of the right-of-way;
- 5.2.12. “No development” shall be permitted on the lot where the SRW is located, restricting Development Permit* issuance for any building on the lot where the SRW is located, in whole or in part, unless the permit includes the design of the SRW area, to the City’s satisfaction;
- 5.2.13. No Building Permit* shall be issued for a building on the lot where the SRW is located, in whole or in part, unless the permit includes the design of the SRW area, to the City’s satisfaction; and
- 5.2.14. “No occupancy” shall be permitted of a building on the lot where the SRW is located, restricting final Building Permit* inspection granting occupancy for any building on the lot where the SRW is located, in whole or in part, until the SRW area is completed to the satisfaction of the City and has received, as applicable, a Certificate of Completion and/or final Building Permit* inspection granting occupancy.
- 5.3. Other Right-of-Ways: As determined to the sole satisfaction of the City via the Servicing Agreement*, Development Permit*, and/or Building Permit* processes.
6. (**Farm Soil Recovery**) Enter into a legal agreement to relocate up to a maximum of approximately 15,900 m³ (561,500 ft³) of agricultural soil from a source site area on the subject site (as generally indicated on the Farm Soil Recovery Area diagram /Schedule 4 and excluding invasive plant areas as generally indicated on the Invasive Species Survey and Management Plan /Schedule 5) to the City’s Garden City Lands at 5560 Garden City Road for farm use.
- 6.1. Parks Services to obtain Soil Deposit Permit* for the placement of the soils in the Agricultural Land Reserve (ALR) in consultation with Community Safety and Bylaws staff.
 - 6.2. The soil relocation shall be done in accordance with applicable Agricultural Land Commission (ALC) regulations and approval conditions. The City has ALC approval to develop the Kwantlen Polytechnic University farm area on the Garden City Lands.
 - 6.3. The developer is responsible for the payment of soil tipping fees to the City as be per the rates outlined in the City’s Consolidated Fees - Bylaw 8636 for the Garden City Lands.
 - 6.4. Under the guidance of a Qualified Environmental Professional (QEP), a Phase I Environmental Site Assessment will be conducted to determine if further testing is required as per *Contaminated Sites Regulations* (BC CSR) protocols.
 - 6.5. The soil will be tested for overall soil composition, soil chemistry, and other characteristics required to fully profile the soil for agricultural purposes.
 - 6.6. Any areas identified as containing invasive plants per the report titled Polygon Talisman Park Invasive Species Survey and Management Plan, prepared by QEP McTavish Resource & Management Consultants Ltd., dated December 20, 2020 will remain on the source site and soil from the identified areas will not be relocated to the Garden City Lands.
- NOTE: Commence Invasive Species management as soon as possible, as outlined in the report titled Polygon Talisman Park Invasive Species Survey and Management Plan, prepared by QEP McTavish Resource & Management Consultants Ltd., dated December 20, 2020. Invasive species management should focus on noxious weeds, in areas of the site that will remain undisturbed and/or will become City land, including the Neighbourhood Park area. On-site invasive species management will be linked to the Rezoning Servicing Agreement and Neighbourhood Park development.
- 6.7. Soil testing results will be provided to the developer for third party verification review prior to the developer applying to the City for a soil deposit permit.
 - 6.8. The soil is to be excavated prior to pre-load activities occurring on the source site. When excavation of soil commences, the soil is to be relocated as soon as possible directly to a specified soil deposit area within the

Garden City Lands in coordination with Parks Services. Sub-soil from the source site is to be deposited onto the Garden City Lands prior to the placement of top soil from the source site.

- 6.9. Only uncontaminated soil meeting Agricultural Land (AL) Standards will be accepted by the City to be placed on the Garden City Lands
- 6.10. The developer is responsible for the costs associated with excavating and transporting the soil to the Garden City Lands. Upon receiving and accepting the soil, the City will assume management of the soil and associated costs related to managing the soil on the Garden City Lands. Soil management on the Garden City Lands includes moving the soil within the site, grading and incorporation of soil amendments.
7. (**Capstan Station Bonus - CSB**) Registration of a restrictive covenant and/or alternative legal agreement, to the satisfaction of the City, securing that “no building” will be permitted on the subject site and restricting Building Permit* issuance for the subject site, in whole or in part, until the developer satisfies the terms of the Capstan Station Bonus (CSB) as provided for via the Zoning Bylaw. More specifically, the developer shall satisfy the following requirements:
- 7.1. **Capstan Station Reserve Contribution:** Prior to Building Permit* issuance for the subject site, in whole or in part, the developer shall submit a cash contribution to the Capstan Station Reserve. The preliminary estimated value of the required developer contribution is shown in the following table. The actual value of the developer contribution shall be based on the actual number of dwelling units and the City-approved contribution rate in effect at the time of Building Permit* approval.

TABLE 1

Phase	No. of Dwellings <i>Preliminary estimate</i>	CSB Contribution Rate <i>Effective to Sep 30, 2021</i>	CSB Voluntary Contribution <i>Preliminary estimate</i>
1	276	\$9,026.20 /dwelling	\$2,491,231.20
2	162		\$1,462,244.40
3	359		\$3,240,405.80
4	544		\$4,910,252.80
Total	1,341		\$12,104,134.20

- 7.2. **CSB Minimum Public Open Space Contribution:**

7.2.1. Prior to the final reading of the Rezoning Bylaw, granting of at least 8,519 m² (2.11 ac.) of publicly-accessible open space to the City, in a combination of fee simple, dedication and/or Public Rights of Passage Statutory Right-of-Way (SRW), including:

TABLE 2

Capstan Station Bonus (CSB) Public Open Space Features		CSB Voluntary Public Open Space Contribution		
		Dedication (Road)	Fee Simple Lot (Park)	SRW
A	Capstan/Ketcheson SW corner plaza	-	-	73.4 m ² (0.02 ac)
	Capstan Way additional widening	445 m ² (0.11 ac)	-	-
B	Capstan/Garden City SW corner plaza	-	-	121.4 m ² (0.03 ac)
	Capstan/Ketcheson SE corner plaza	-	-	73.3 m ² (0.02 ac)
	Capstan Way additional widening	353.3 m ² (0.09 ac)	-	-
C	Capstan/Sexsmith SE corner plaza	-	-	35.8 m ² (0.01 ac)
	Sexsmith Road additional widening	368.5 m ² (0.09 ac)	-	-
D	Mid-block Trail SRW – NE	-	-	150.3 m ² (0.04 ac)
	Mid-block Trail SRW – SE	-	-	150.9 m ² (0.04 ac)
E	Mid-block Trail SRW – S and SW	-	-	498.6 m ² (0.12 ac)
	Mid-block Trail SRW – NW	-	-	221 m ² (0.06 ac)
	Central open space	-	-	600 m ² (0.15 ac)
F	Neighbourhood Park	-	5,427.5 m ² (1.34 ac)	-
	Sub-Total	1,167 m² (0.29 ac)	5,427.5 m² (1.34 ac)	1,924.7 m² (0.48 ac)
	Total	8,519 m² (2.11 ac)		

7.2.2. Prior to Building Permit* issuance for the subject site, in whole or in part, the developer shall provide to the City publicly-accessible open space to the City, in a combination of fee simple, dedication and/or Public Rights of Passage Statutory Right-of-Way (SRW), at a rate of 5.0 m² (53.82 ft²) for each dwelling unit exceeding **1,341 dwelling units**.

8. (**Village Centre Bonus - VCB**): Submission of a voluntary developer cash contribution to secure the developer's commitment to satisfy Village Centre Bonus requirements contained in the ZMU47 zone with respect to the developer's lands in general and Lot 2 (West Lot) in particular.

8.1. **VCB Amenity Contribution**: Submission of a voluntary developer cash contribution, in the amount of \$316,450.90, divided equally, to Richmond's Leisure Facilities Reserve Fund – City Centre Facility Development Sub-Fund and Richmond's Child Care Reserve, in lieu of constructing community amenity space on-site, as determined based on a construction-value amenity transfer rate of \$750/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 ZMU47 zone, as indicated in the table below.

In the event that the contribution is not provided within one year of the application receiving third reading of Council (Public Hearing), the Construction-Value Amenity Transfer Contribution Rate (as indicated in the table below) 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.

TABLE 3

	Maximum Permitted VCB Bonus Floor Area as per the ZMU47 Zone	VCB Community Amenity Space Area (5% of Bonus Area)	Construction-Value Amenity Transfer Contribution Rate	Minimum Voluntary Developer Cash Contribution
Total	783.98 m ² (8,438.69 ft ²)	39.20 m ² (421.93 ft ²)	750.00 /ft ²	\$316,450.90

9. (**Community Planning**) The City's acceptance of the developer's voluntary contribution in the amount of **\$305,220.54** towards future City community planning studies, as set out in the City Centre Area Plan, based on \$0.30/ft² and the maximum permitted buildable floor area under the proposed ZMU47 zone (excluding affordable housing and market rental housing), as indicated in the table below.

TABLE 4

Use	Maximum Permitted Floor Area as per ZMU47 Zone	Applicable Floor Area After Exemption (1)	Minimum Contribution Rates (1)	Minimum Voluntary Contribution
Residential	117,543.00 m² (1,265,222.28 ft²)	93,735.72 m² (1,008,962.89 ft²)	\$0.30 /ft ²	\$302,688.87
Non-Residential	784 m ² (8,438.91 ft ²)	784 m ² (8,438.91 ft ²)	\$0.30 /ft ²	\$2,531.67
Total	114,763. 87 m² (1,235,307.05 ft²)	94,564.39 m² (1,017,882.67 ft²)	\$0.30 /ft²	\$305,220.54

10. (**Parking Strategy**) City acceptance of the developer's offer to voluntarily contribute towards various transportation-related improvements and secure parking for various uses in compliance with Zoning Bylaw requirements with respect to Parking Zone 1 (Capstan Village) and transportation demand management (TDM) parking reductions.

NOTE: It is the understanding of the City that the subject development will be constructed concurrently with the Capstan Canada Line Station. In light of this, the developer is not required to implement a transitional parking strategy. Zoning Bylaw "Parking Zone 1" rates shall apply, except where other requirements are stated in the ZMU47 zone and/or these Rezoning Considerations.

10.1. **Commercial and Visitor Parking** at Lot 2 (East Lot): Registration of a restrictive covenant(s) and/or alternative legal agreement(s) on title to Lot 2 (East Lot) restricting the use of parking provided on-site for all uses except resident uses. More specifically, commercial and visitor parking requirements for the lot shall include the following.

10.1.1. Commercial and Visitor Parking shall mean any parking spaces needed to satisfy Zoning Bylaw requirements, as determined through the Development Permit*, including businesses and commercial tenants, their employees, visitors, customers, and guests and residential visitors.

- 10.1.2. Commercial and Visitor Parking shall be shared and shall not be designated, sold, leased, reserved, signed, or otherwise assigned by the owner/operator for the exclusive use of employees, specific persons, specific businesses and/or specific units.
- 10.1.3. Commercial and Visitor Parking shall not include tandem parking and must include a proportional number of handicapped parking spaces and regular size parking spaces as per the Zoning Bylaw.
- 10.1.4. 10% of commercial parking must be equipped with electric vehicle charging equipment, as per OCP DP Guidelines and legal agreement registered on title with respect to the subject rezoning.
- 10.1.5. “No development” shall be permitted, restricting Development Permit* issuance for a building on the lot, in whole or in part, until the developer provides for the required commercial and visitor parking and related features.
- 10.1.6. No Building Permit* shall be issued for a building on the lot, in whole or in part, until the developer provides for the required commercial and visitor parking and a letter of confirmation is submitted by the architect assuring that the facilities satisfy the City’s objectives.
- 10.1.7. “No occupancy” shall be permitted, restricting final Building Permit inspection granting occupancy for any building on the lot, in whole or in part, until the required commercial and visitor parking and related features are completed and have received final Building Permit inspection granting occupancy.
- 10.2. Enhanced Bicycle Facilities at Lot 1 (South Lot), Lot 2 (East Lot) and Lot 4 (Central Lot):
 - 10.2.1. The developer/owner shall, at its sole cost, design, install, and maintain on the lot, to the satisfaction of the City as determined via the Development Permit*:
 - a) “Class 1” Bike Storage at Lot 1 (South Lot): provided at an increased rate of 2 Class 1 bicycle spaces per unit for the Market Rental Housing and Affordable Housing.
 - b) “Class 1” Family Bike Storage: 10% of the required Class 1 bicycle spaces for all residential units provided in the form of over-sized lockers for family bike storage (e.g., bike trailers). “Class 1” Over-Sized Bicycle Locker” means an over-sized locker for long-term secured storage of bicycles, with a minimum dimension of 1.2 m wide and 3.0 m long (which will accommodate multiple bicycles of a single household to be stored within locker).
 - c) Bicycle maintenance and repair facility: one bicycle maintenance and repair facility for the shared use of all of the residents of all buildings on the lot, including bicycle repair stand (with tools); foot pump, and faucet, hose and drain for bicycle washing. A note is required on the Development Permit* and Building Permit*. Appropriate signage is required.
 - 10.2.3. “No development” shall be permitted, restricting Development Permit* issuance for any building on the lot, until the developer provides for the required enhanced bicycle facilities.
 - 10.2.4. No Building Permit* shall be issued for a building on the lot, in whole or in part, until the developer provides for the required enhanced bicycle facilities and a letter of confirmation is submitted by the architect assuring that the facilities satisfy all applicable City’s requirements.
 - 10.2.5. “No occupancy” shall be permitted, restricting final Building Permit inspection granting occupancy for any building on the lot, in whole or in part, until the required enhanced bicycle facilities are completed and have received final Building Permit inspection granting occupancy.
- 10.3. Bicycle-share Membership Program at Lot 1 (South Lot), Lot 2 (East Lot) and Lot 4 (Central Lot):

Registration of a legal agreement on title to ensure the execution and completion of a bicycle-share program, including the following method of administration and terms:

 - 10.3.1. Affordable Housing and Market Rental Housing Residents: Provide one year of bicycle-share service membership for 100% of the market rental housing (154 units), and 100% of the affordable housing (156 units) located on the lot.

- 10.3.2 Letter of Credit provided to the City for 100% of bicycle-share service membership program value in the amount of \$50,000;
- 10.3.3. Administration by bicycle-share service, housing society or management company. The owner is not responsible for the monitoring of use of bicycle-share service membership but only noting number of “subscribed” users to the program, until full unit count is exhausted over a period of one year;
- 10.3.4. If the bicycle-share service membership program is not fully subscribed within one year, the program is to be extended until the equivalence of the costs of the full one year bicycle-share service membership program has been exhausted. Should not all bicycle-share service memberships be utilized by the end of the second year, the remaining funds equivalent to the value of the unsubscribed memberships are to be transferred to the City of Richmond for alternate transportation demand management measures at the City’s discretion.
- 10.3.5. The availability and method of accessing the bicycle-share service memberships is to be clearly explained in the tenancy agreements.
- 10.4. Transit Pass Program at Lot 1 (South Lot), Lot 2 (East Lot), and Lot 4 (Central Lot): Registration of a legal agreement on title to ensure the execution and completion of a transit pass program, including the following method of administration and terms:
 - 10.4.1. Residents: Provide one year of two-zone monthly transit passes for 25% of the market strata residential (122 of 487 units), and 100% of the market rental housing (154 units). Provide two years of two-zone monthly transit passes for 100% of the affordable housing (156 units) located on the lot.
 - 10.4.2 Letter of Credit provided to the City for 100% of transit pass program value;
 - 10.4.3. Administration by TransLink, housing society or management company. The owner is not responsible for the monitoring of use of transit passes but only noting number of “subscribed” users to the program, until full unit count is exhausted over a period of one year;
 - 10.4.4. If the transit pass program is not fully subscribed within one year, the program is to be extended until the equivalence of the costs of the full one year transit pass program has been exhausted. Should not all transit passes be utilized by the end of the second year, the remaining funds equivalent to the value of the unsubscribed transit passes are to be transferred to the City of Richmond for alternate transportation demand management measures at the City’s discretion.
 - 10.4.5. The availability and method of accessing the two-zone transit passes is to be clearly explained in the tenancy and sales agreements.
- 10.5. Car-Share Parking, Vehicles and Membership at Lot 1 (South Lot), Lot 2 (East Lot) and Lot 4 (Central Lot): Registration of a legal agreement on title requiring that no development shall be permitted on Lot 1 (South Lot), Lot 2 (East Lot) and/or Lot 4 (Central Lot), restricting Development Permit* issuance until the developer provides for parking for the lot’s required proportion of six (6) car-share vehicles (2 on Lot 1, 2 on Lot 2 and 2 on Lot 4), together with electric vehicle (EV) charging stations, car-share vehicles, contractual arrangements with a car-share operator, and car-share service membership, all to the satisfaction of the City. More specifically, the car-share parking and vehicle requirements shall include the following:
 - 10.5.1. The car-share parking spaces shall be located together on the ground floor of the lot where they will be with safe, convenient, universally-accessible, and provide for 24/7 public pedestrian and vehicle access.
 - 10.5.2. The car-share spaces shall be provided as part of residential visitor parking requirements.
 - 10.5.3. The car-share spaces shall be equipped with electric vehicle (EV) quick-charge (240 V) charging stations for the exclusive use of car-share vehicles parked in the required car-share spaces.
 - 10.5.4. Users of the car-share spaces shall not be subject to parking fees, except as otherwise determined at the sole discretion of the City.
 - 10.5.5. “No development” shall be permitted on the lot, restricting Development Permit* issuance, until the developer:

- a) Designs the lot to provide for the required car-share facility, including car-share parking spaces, 24/7 public access for vehicles and pedestrians, and related features (e.g., EV 240V chargers, signage).
 - b) Secures the car-share facility on the lot via a statutory right-of-way(s) and easement(s) registered on title and/or other legal agreements.
 - c) Provides a car-share security Letter of Credit (LOC) to the City to secure the developer's commitment to provide the two (2) car-share vehicles on the lot, the value of which shall be the estimated retail value of the car-share vehicles at the time of purchase or as otherwise determined to the satisfaction of the Director of Transportation and Director of Development. The car-share security is to be returned to the developer, without interest, upon developer submitting confirmation that required car-share vehicle(s) have been provided to the car-share operator. If the developer fails to provide the two (2) car-share vehicles for the lot within two years of "occupancy", the remaining car-share security 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 funds shall be used going forward.
 - 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 facility is not operated for car-share purposes as intended via the subject rezoning application (e.g., 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.
- 10.5.6. No Building Permit* shall be issued for a building on the lot, in whole or in part, until the developer provides for the required car-share facility.
- 10.5.7. "No occupancy" shall be permitted on the lot, restricting final Building Permit inspection granting occupancy for any building, in whole or in part, until the developer:
- a) Completes the required car-share facility on the lot and it has received final Building Permit inspection granting occupancy.
 - b) Enters into a contract with a car-share operator for the operation of the car-share spaces on the lot for a minimum term of three (3) years, which contract shall include, that:
 - i) The developer provides one (1) car-share vehicle on the lot at no cost to the operator;
 - ii) The developer provides up to an additional one (1) car-share vehicle at no cost to the operator, subject to car-share usage demand, to the satisfaction of the Director of Transportation. To determine if there is sufficient demand for additional car(s), information is to be provided by the operator to the City on the usage of the car-share vehicle(s) on a yearly basis; and
 - iii) The required car-share facility and vehicle(s) will be 100% available for use upon Building Permit inspection granting occupancy of the first building on the lot, in whole or in part (excluding parking intended as an ancillary use to non-parking uses), unless otherwise determined to the satisfaction of the car-share operator and the City.
- 10.5.8. Car-share Membership Program at Lot 1 (South Lot), Lot 2 (East Lot) and Lot 4 (Central Lot): Registration of a legal agreement on title to ensure the execution and completion of a car-share membership program, including the following method of administration and terms:
- a) Affordable Housing and Market Rental Housing Residents: Provide one year of car-share service membership for 100% of market rental housing (154 units), and 100% of the affordable housing (156 units) located on the lot.
 - b) Letter of Credit provided to the City for 100% of car-share membership program value in the amount of \$35,000;

- c) Administration by car-share service, housing society or management company. The owner is not responsible for the monitoring of use of car-share membership but only noting number of “subscribed” users to the program, until full unit count is exhausted over a period of one year;
- d) If the car-share membership program is not fully subscribed within one year, the program is to be extended until the equivalence of the costs of the full one year car-share membership program has been exhausted. Should not all car-share memberships be utilized by the end of the second year, the remaining funds equivalent to the value of the unsubscribed car-share memberships are to be transferred to the City of Richmond for alternate transportation demand management measures at the City’s discretion.
- e) The availability and method of accessing the car-share memberships is to be clearly explained in the tenancy agreements.

11. (**Tandem Parking**) Registration of a legal agreement(s) on title, ensuring that:

- 11.1. Resident Parking: Where two parking spaces are provided in a tandem arrangement for the use of resident parking, as per the Zoning Bylaw, both parking spaces must be assigned to the same dwelling unit; and
- 11.2. Elsewhere: Tandem parking shall be prohibited for all other purposes including, but not limited to, parking for residential visitors and commercial uses.
- 11.3. Affordable Housing and Market Rental Housing: Tandem parking shall be prohibited for parking for affordable housing and market rental housing.

12. (**Electric Vehicles - EV**) Charging Infrastructure for Vehicles & “Class 1” Bicycle Storage: Registration of legal agreement(s) on the subject site requiring that the developer/owner provides, installs, and maintains electrical vehicle (EV) charging infrastructure within the building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot), and Lot 4 (Central Lot) for the use of the building’s residents, commercial tenants, and others as determined to the satisfaction of the City through a approved Development Permits*. More specifically, the minimum permitted rates for EV charging infrastructure shall be as indicated in the following table or as per the Official Community Plan or Zoning Bylaw rates in effect at the time of Development Permit* approval , whichever is greatest.

TABLE 5

User/Use	Energized Outlet – Minimum Permitted Rates	
	Vehicle Parking (1)	“Class 1” (Secured) Bike Storage (2)
Market Residential (i.e. resident parking & bike storage)	(as per zoning bylaw)	1 per each 10 bikes or portion thereof in a bike storage room or locker (which Energized Outlet shall be located to facilitate shared use with bikes in the room/locker)
Market Rental and Affordable Housing (i.e. resident parking & bike storage)		
Non-Residential (i.e. commercial)	1 per 10 parking spaces (as per OCP)	
Market Rental and Affordable Housing Visitors	1 per parking space (as per TDMs)	N/A
Car-Share	1 per parking space (as per TDMs)	N/A

- (1) “Vehicle Parking” “Energized Outlet” shall mean all the wiring, electrical equipment, and related infrastructure necessary to provide Level 2 charging (as per SAE International’s J1772 standard) or higher to an electric vehicle.
- (2) “Class 1 (Secured) Bike Storage” “Energized Outlet” shall mean an operational 120V duplex outlet for the charging of an electric bicycle and all the wiring, electrical equipment, and related infrastructure necessary to provide the required electricity for the operation of such an outlet.

13. (**District Energy Utility - DEU**): Registration of a restrictive covenant and Statutory Right-of-Way and/or alternative legal agreement(s), to the satisfaction of the City, securing the owner’s commitment to connect to District Energy Utility (DEU) and granting the statutory Right-of-Way(s) necessary for supplying the DEU services to the building(s), which covenant and Statutory Right-of-Way and/or legal agreement(s) will include, at minimum, the following terms and conditions:

- 13.1. 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.
- 13.2. 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:
 - 13.2.1. 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
 - 13.2.2. 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;
- 13.3. 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.
- 13.4. 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:
 - 13.4.1. the building is connected to the DEU;
 - 13.4.2. 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
 - 13.4.3. 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.
- 13.5. 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:
 - 13.5.1. the City receives a professional engineer's certificate stating that the building has the capability to connect to and be serviced by a DEU;
 - 13.5.2. 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;
 - 13.5.3. 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;
 - 13.5.4. 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
 - 13.5.5. 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.

- 13.6. 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:
- 13.6.1. 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
 - 13.6.2. 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).
14. (**Affordable Housing**) The City's acceptance of the developer's offer to voluntarily contribute affordable housing, in the form of low-end market rental (LEMR) units, constructed to a turnkey level of finish in the first phase of development, on Lot 1 (South Lot), 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 each lot to secure the affordable housing units. The form of the Housing Agreements and Covenants shall be agreed to by the developer and the City prior to final adoption of the subject rezoning; after which time, only the Housing Covenants 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 Lot 1 (South Lot) and other non-materials changes resulting thereof and made necessary by the Lot 1 (South Lot) Development Permit* approval requirements, as determined to the satisfaction of the Director of Development and Director, Community Social Development. The terms of the Housing Agreements and Covenants shall indicate that they apply in perpetuity and provide for, but will not be limited to, the following requirements.
- 14.1. The required minimum floor area of the affordable (low-end market rental) housing shall be equal to a combined habitable floor area of at least 10,488.53 m² (112,897.61 ft²), excluding standard Floor Area Ratio (FAR) exemptions, as determined based on 10% of the total maximum residential floor area, excluding market rental housing residential floor area, of 104,885.31 m² (1,128,976.12 ft²) proposed on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot) under the ZMU47 zone; and
 - 14.2. The developer shall, as generally indicated in the table below:
 - 14.2.1. 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 Market Rental (LEMR) housing, unless otherwise agreed to by the Director of Development and Director, Community Social Development; and
 - 14.2.2. Achieve the Project Targets for unit 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*.

TABLE 6

Unit Type	Affordable Housing Strategy Requirements (1)			Project Targets (2)	
	Min. Unit Area	Max. LEMR Rent	Max. Household Income	Unit Mix	BUH
Studio	37 m ² (400 ft ²)	\$811/month	\$34,650 or less	12% (18 units)	100%
1-Bedroom	50 m ² (535 ft ²)	\$975/month	\$38,250 or less	37% (58 units)	100%
2- Bedroom	69 m ² (741 ft ²)	\$1,218/month	\$46,800 or less	30% (47 units)	100%
3-Bedroom	91 m ² (980 ft ²)	\$1,480/month	\$58,050 or less	21% (33 units)	100%
Total	10,488.53 m² (112,897.61 ft²)	N/A	N/A	100% (156 units) 10,488.57 m² (112,898 ft²)	100%

(1) Values adopted by Council on July 24, 2017. May be adjusted periodically, as provided for under City policy.

(2) Project Targets may be revised through an approved Development Permit* process provided that the total area comprises at least 10% of the subject development's total residential building area.

- 14.3. The affordable housing units shall be distributed /located on Lot 1 (South Lot) as determined to the satisfaction of the Director of Development and Director, Community Social Development through an approved Development Permit*. Dispersed or clustered unit configurations may be considered; however,

dispersed units are generally encouraged unless a non-profit operator (that requires a clustered unit arrangement) is involved with a development.

NOTE: The applicant has indicated to the City that it plans to pursue an agreement with a non-profit organization to manage the development's required LEMR units on Lot 1 (South Lot). To support this partnership, the City is willing to accept clustering of the required units and, in light of this, recommends clustering of other building features intended for the exclusive use of the affordable housing tenants (e.g., parking and Class 1 bike storage). Prior to Development Permit* approval, the applicant is requested to submit, for consideration by the City, a memorandum of understanding with a non-profit operator(s) demonstrating, among other things, support for the developer's proposed clustered affordable housing unit arrangement on Lot 1 (South Lot).

- 14.4. Occupants of the affordable housing units shall, to the satisfaction of the City (as determined prior to Development Permit* approval), enjoy full and unlimited access to and use of all on-site indoor amenity spaces provided for residents of the building and outdoor amenity spaces provided on the lot as per OCP, City Centre Area Plan, and Development Permit* requirements, at no additional charge to the affordable housing tenants (i.e. no monthly rents or other fees shall apply for the casual, shared, or exclusive use of any amenities).
- 14.5. On-site parking, "Class 1" bike storage, and related electric vehicle (EV) charging stations shall be provided for the use of affordable housing occupants as per the OCP, Zoning Bylaw, and approved Development Permit* at no additional charge to the affordable housing tenants (i.e. no monthly rents or other fees shall apply for the casual, shared, or exclusive use of the parking spaces, bike storage, EV charging stations, or related facilities by affordable housing tenants), which features may be secured via legal agreement(s) on title prior to Development Permit* issuance on a lot-by-lot basis or as otherwise determined to the satisfaction of the City.
- 14.6. The affordable housing units, related uses (e.g., parking, garbage/recycling, hallways, amenities, lobbies), and associated landscaped areas shall be completed to a turnkey level of finish, at the sole cost of the developer, to the satisfaction of the Director, Community Social Development.
- 14.7. "No development" shall be permitted, restricting Development Permit* issuance for any building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot), and Lot 4 (Central Lot) in whole or in part, until the developer, to the City's satisfaction:
 - 14.7.1. Designs the lot to provide for the affordable housing units and ancillary spaces and uses;
 - 14.7.2. If applicable, amends or replaces the Housing Covenant to accurately reflect the specifics of the affordable housing units and ancillary spaces and uses as per the approved Development Permit*; and
 - 14.7.3. As required, registers additional legal agreements on title to the lots to facilitate the detailed design, construction, operation, and/or management of the affordable housing units and/or ancillary spaces and uses (e.g., parking) as determined by the City via the Development Permit* review and approval processes.
- 14.8. No Building Permit* shall be issued for a building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part, until the developer provides for the required affordable housing units and ancillary spaces and uses to the satisfaction of the City.
- 14.9. "No occupancy" shall be permitted, restricting final Building Permit inspection granting occupancy for any building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part, until, on a lot-by-lot basis, the required affordable housing units and ancillary spaces and uses are completed to the satisfaction of the City and have received final Building Permit inspection granting occupancy.
15. (**Market Rental Housing**) Entering into a Market Rental Agreement and registration of a Covenant for the provision of market rental housing in the first phase of development, on Lot 1 (South Lot) **and in subsequent phases on Lot 2 (East Lot), Lot 3 (West Lot), and Lot 4 (Central Lot)**, to the satisfaction of the City. The terms shall indicate that they apply in perpetuity and provide for, but will not be limited to, the following requirements.

- 15.1. The required minimum floor area of the market rental housing building shall be equal to a combined habitable floor area of at least **12,343.01 m² (132,859.05 ft²)**, excluding standard Floor Area Ratio (FAR) exemptions, as per the OCP Market Rental Policy and the ZMU47 zone.
- 15.2. All market rental housing units shall be maintained under single ownership (within one air space parcel or one strata lot) **on a lot-by-lot basis**.
- 15.3. Occupants of the units subject to the market rental agreement shall enjoy full and unlimited access to and use of all on-site indoor amenity spaces provided for residents of the building and outdoor amenity spaces provided on the lot as per OCP, City Centre Area Plan, and Development Permit* requirements.
- 15.3. Occupants of the units subject to the market rental agreement shall enjoy full and unlimited access to and use of **the following at no additional charge (i.e. no monthly rents or other fees shall apply for the casual, shared, or exclusive use)**:
- 15.3.1. All indoor amenity spaces and outdoor amenity spaces provided for residents of the building as per OCP, City Centre Area Plan, and Development Permit* requirements.
- 15.3.2. All parking, “Class 1” bike storage, and related electric vehicle (EV) charging stations provided for the use of market rental housing occupants as per the OCP, Zoning Bylaw, and approved Development Permit* requirements.
- 15.4. The terms of the market rental agreement shall indicate that they apply in perpetuity and provide for the following:
- 15.4.1. Ensure that Basic Universal Housing features shall be provided in a minimum of 100% of the market rental housing units in accordance with the OCP Market Rental Policy.
- 15.4.2. Achieve following the Unit Mix or as otherwise determined to the satisfaction of the Director of Development through an approved Development Permit*.

TABLE 7

Unit Type	Lot 1 (South Lot)	Lot 2 (East Lot)	Lot 3 (West Lot)	Lot 4 (Central Lot)	BUH
Studio	5% (6 units)	6% (1 units)	6% (1 units)	6% (1 units)	100%
1-Bedroom	39% (46 units)	35% (6 units)	35% (6 units)	35% (6 units)	100%
2- Bedroom	56% (68 units)	59% (10 units)	59% (10 units)	59% (10 units)	100%
3-Bedroom	-	-	-	-	-
Total	100% (120 units) (8,735.12 m²)	100% (17 units) (1,202.63 m²)	100% (17 units) (1,202.63 m²)	100% (17 units) (1,202.63 m²)	100%

- 15.5. “No development” shall be permitted, restricting Development Permit* issuance for a building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part, until the developer:
- 15.4.1. Designs the lot to provide for the market rental housing units and ancillary spaces;
- 15.4.2. If applicable, amends or replaces the Housing Covenant to accurately reflect the specifics of the market rental housing units and ancillary spaces as per the approved Development Permit*.
- 15.6. No Building Permit* shall be issued for a building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part, until the developer provides for the required market rental housing units and ancillary spaces.
- 15.7. “No occupancy” shall be permitted, restricting final Building Permit inspection granting occupancy for any building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part, until the required market rental housing units and ancillary spaces are completed and have received final Building Permit inspection granting occupancy.
16. (**Public Art**) City acceptance of the developer’s offer to voluntarily contribute towards Public Art, the terms of which voluntary developer contribution shall include:
- 16.1. Prior to final adoption of the rezoning bylaw, the developer shall provide for the following:

16.1.1. Submission of a Public Art Plan that:

- a) Includes the entirety of the subject site comprising Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot), together with related City park, public open space, and public road, as determined to the City's satisfaction;
- b) Is prepared by an appropriate professional and based on the Richmond Public Art Program, City Centre Public Art Plan, and any relevant supplementary public art and heritage planning undertaken by the City for Capstan Village, to the satisfaction of the Director of Development and Director, Arts, Culture, and Heritage Services (including review(s) by the Public Art Advisory Committee and presentation for endorsement by Council, as required by the Director, Arts, Culture, and Heritage Services); and
- c) Is based on the full value of the developer's voluntary public art contribution (at least **\$901,943.26**), based on a minimum rate of \$0.89/ft² for residential uses and \$0.47/ft² for non-residential uses and the maximum buildable floor area permitted under the subject site's proposed ZMU47 zone, excluding affordable housing and market rental housing, as indicated in the table below.

16.1.2. Registration of legal agreement(s) on title to facilitate the implementation of the Public Art Plan.

TABLE 8

	Maximum Permitted Floor Area as per ZMU47 Zone	Applicable Floor Area After Exemption (1)	Minimum Contribution Rates (1)	Minimum Voluntary Contribution
Residential	117,543.00 m ² (1,265,222.28 ft ²)	93,735.72 m ² (1,008,962.89 ft ²)	\$0.89 /ft ²	\$897,976.98
Non-Residential	784 m ² (8,438.91 ft ²)	784 m ² (8,438.91 ft ²)	\$0.47 /ft ²	\$3,966.29
Total	118,327.00 m² (1,273,661 ft²)	94,519.72 m² (1,017,401.80 ft²)	Varies	\$901,943.26

(1) As per City policy, floor area excludes the development's 11,464.33 m² (123,401 ft²) affordable housing building and **12,343 m² (132,859 ft²)** market rental housing building.

(2) The Council-approved contribution rates in effect at the time of writing these Rezoning Considerations.

16.2. "No development" shall be permitted, restricting Development Permit* with respect to Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), until the developer:

16.2.1. Enters into any additional legal agreement(s) required to facilitate the implementation of the City-approved Public Art Plan, which may require that, prior to entering into any such additional agreement, a Detailed Public Art Plan is submitted by the developer and/or an artist(s) is engaged (as generally set out in the legal agreement entered into and the Public Art Plan submitted prior to final adoption of the rezoning bylaw), to the City's satisfaction; and

16.2.2. Submits a Letter of Credit and/or cash contribution (as determined at the sole discretion of the City) to secure the developer's implementation of the Public Art Plan, the total value of which shall be at least **\$901,943.26**, including 5% as a cash contribution in the amount of **\$45,097.16** towards Public Art administration, and a Public Art security Letter of Credit in the amount of **\$856,846.10**.

16.3. "No occupancy" shall be permitted, restricting final Building Permit inspection granting occupancy of a building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and/or Lot 4 (Central Lot), in whole or in part for each lot to the City's satisfaction, for which the City-approved Public Art Plan requires the developer's implementation of a public artwork(s) until:

16.3.1. The developer, at the developer's sole expense, commissions an artist(s) to conceive, create, manufacture, design, and oversee or provide input about the manufacturing of the public artwork, and causes the public artwork to be installed on City property, if expressly permitted by the City, or within a statutory right-of-way on the developer's lands (which right-of-way shall be to the satisfaction of the City for rights of public passage, public art, and related purposes, in accordance with the City-approved Public Art Plan);

16.3.2. The developer, at the developer's sole expense and within thirty (30) days of the date on which the public art is installed, executes and delivers to the City a transfer of all of the developer's rights, title,

and interest in the public artwork to the City if on City property or to the subsequent Strata or property owner if on private property (including transfer of joint world-wide copyright) or as otherwise determined to be satisfactory by the City Solicitor and Director, Arts, Culture, and Heritage Services; and

NOTE: It is the understanding of the City that the artist's rights, title, and interest in the public artwork will be transferred to the developer upon acceptance of the artwork based on an agreement solely between the developer and the artist. These rights will in turn be transferred to the City if on City property, subject to approval by Council to accept the transfer of ownership of the artwork.

- 16.3.3. The developer, at the developer's sole expense, submits a final report to the City promptly after completion of the installation of the public art in respect to the City-approved Public Art Plan, which report shall, to the satisfaction of the Director of Development and Director, Arts, Culture, and Heritage Services, include:
- Information regarding the siting of the public art, a brief biography of the artist(s), a statement from the artist(s) on the public art, and other such details as the Director of Development and Director, Arts, Culture, and Heritage Services may require;
 - A statutory declaration, satisfactory to the City Solicitor, confirming that the developer's financial obligation(s) to the artist(s) have been fully satisfied;
 - The maintenance plan for the public art prepared by the artist(s); and
 - Digital records (e.g., photographic images) of the public art, to the satisfaction of the Director of Development and Director, Arts, Culture, and Heritage Services.
17. (**Flood Construction**) Registration of a flood indemnity covenant(s) on title, as per Flood Plain Designation and Protection Bylaw No. 8204, Area "A" (i.e. as per bylaw 8204, minimum flood construction level of 2.9 m GSC, with exemptions permitting commercial use at sidewalk level and residential use at 0.3 m above highest adjacent crown of road).
18. (**Aircraft Noise**) Registration of the City's standard aircraft noise sensitive use covenants on title to Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot), as applicable to sites with aircraft noise sensitive uses. The owner-developer shall notify all initial purchasers of the potential aircraft noise impacts. Furthermore, on a phase-by-phase basis, prior to each Development Permit* and Building Permit* issuance, the owner-developer shall submit a report(s) and/or letter(s) of assurance prepared by an appropriate registered professional, which demonstrates that the interior noise levels and thermal conditions 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 dwelling units must achieve CMHC standards follows:

TABLE 9

Portions of Dwelling Units	Noise Levels (decibels)
Bedrooms	35 decibels
Living, dining, recreation rooms	40 decibels
Kitchen, bathrooms, hallways, and utility rooms	45 decibels

19. (**Mixed-Use Noise**) Registration of a legal agreement on title that identifies the building as a mixed use building, and indicating that they are required to mitigate unwanted noise and demonstrate that the building envelope is designed to avoid noise generated by the internal non-residential use from penetrating into residential areas on-site and on neighbouring sites that exceed noise levels allowed in the City's Noise Bylaw and noise generated from rooftop HVAC units will comply with the City's Noise Bylaw.
20. (**View and Other Development Impacts**) Registration of a legal agreement on title to Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot), stipulating that the development is subject to potential impacts due to other development that may be approved within the City Centre including without limitation, loss of views in any direction, increased shading, increased overlook and reduced privacy, increased ambient noise and increased levels of

night-time ambient light, and requiring that the owner provide written notification of this through the disclosure statement to all initial purchasers, and erect signage in the initial sales centre advising purchasers of the potential for these impacts.

21. **(Tree Removal, Replacement & Relocation)** Removal and protection of on-site and off-site trees, providing tree replacement and tree survival securities entering into legal agreement(s) to the satisfaction of the City (as generally indicated on the Preliminary Tree Management Plan /Schedule 6), including:

- 21.1. **On-Site Tree Removal Bird and Wildlife Considerations:** Provide to the City a Wildlife/Bird Inventory and an up to date Nesting Bird Survey prior to issuance of any T3 permit(s) to facilitate the proposed removal of remaining onsite trees. The QEP is to provide confirmation that the removal of the onsite trees specific to a T3 permit application will not impact wildlife, birds, or their nests. The inventory and nesting surveys should be timed such that there is as small of a time lag as possible between the date that they are completed and the date that the tree removal works are scheduled for. The City's Tree Protection, Planning and Environment groups should be provided copies of the surveys for review prior to tree permit issuance.
- 21.2. **On-Site Tree Planting Security:** Enter into a legal agreement and submission of Landscape Security (Letter of Credit) in the amount of \$154,500, to secure the developer's planting and maintenance (for a period of one year) of 206 replacement trees on the subject site (based on a 2:1 rate for the removal of 103 existing bylaw-size trees from the site) and a value of \$750 for the planting of each replacement tree. This includes the removal of 74 trees from the development and internal road areas (tag# 36, 47, 114, 117-118, 123-177, 179, 183, 186, 192, 390-391, 393-394, 396, D, E, F) and the removal of 29 trees from the proposed City Neighbourhood Park area (tag # 16-18, 20, 26, 68-72, 74 75, 78-82, 307-311, 313, 316, 326, 329, 334, 337, 343). This security will be applied towards future tree replacement on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot) as part of the landscape plans for the developer's Development Permit* applications, which plans will be secured with the City's standard Development Permit* landscape Letter of Credit.

Execution of legal agreement regarding use and return of the Landscape Security, to the satisfaction of the City, including but not limited to the following:

- 21.2.1. Landscape Security returned to the developer, without interest, at Development Permit* issuance, at a rate of \$750 for each of the required 206 replacement trees included in a Development Permit* regarding Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot); and
- 21.2.2. If the required 206 replacement trees cannot be accommodated on-site in the Development Permit* applications, the City, in its sole discretion, cash the Landscape Security and utilize the funds as a cash-in-lieu contribution to the City's Tree Compensation Fund for off-site tree planting to the value of \$750 per replacement trees not accommodated on-site. If the developer fails to obtain all Development Permits* for all phases of the development before the 10th anniversary of rezoning bylaw adoption, the outstanding replacement trees will be deemed to not have been accommodated.

21.2.A. **On-Site Tree Protection:**

- 21.2.A.1. **Arborist Contract:** Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any work conducted within the tree protection zone of the 12 on-site trees to be protected (tag# 35-46). The contract should include the scope of work to be undertaken, including the proposed number of site monitoring inspections and a provision for the Arborist to submit a post-construction assessment report to the City for review.
- 21.2.A.2. **Tree Protection Fencing:** Installation of appropriate tree protection fencing around all trees to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.

- 21.2.B. **On-Site Tree Relocation:** Enter into a legal agreement and submission of a tree survival security (Letter of Credit) in the amount of \$5,000, to secure the required relocation of one tree within the subject site to another location within the proposed neighbourhood park, at the developer's sole cost. Developer to coordinate tree relocation with City Parks staff to a location within the proposed neighbourhood park to the sole satisfaction of the City. All tree relocation works are to be undertaken under the direct supervision of the Developer's

certified arborist. The tree to be relocated is an approximately 12.5cm calliper Norway Maple (tag# 502) undersized tree. Subject to tree survival, the security is to be released 90% at completion of tree relocation works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of two replacement trees elsewhere in Richmond (based on a cost per replacement tree determined to the sole satisfaction of the City).

21.3. Off-Site and Neighbourhood Park City and Neighbouring Trees:

21.3.1. Neighbouring Tree Survival Security: Enter into a legal agreement and submission of a tree survival security (Letter of Credit) in the amount of \$85,000, to secure the required protection of all trees on neighbouring properties (including tag# 27-34, 196), at the developer's sole cost, through the project's Development Permit* processes. Subject to tree survival, the security is to be released 90% at completion of Development Permit works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).

NOTE: As noted in the Preliminary Tree Management Plan (Schedule 6), the arborist has identified potential root zone conflict areas between required roads and existing neighbouring trees, which must be resolved through either through the developer receiving the neighbouring property owners permission and tree removal permit issuance, or detail design through the required SA process to ensure the critical root zones of off-site trees are adequately protected in the interim until the required roads widened to ultimate width when neighbouring properties are redeveloped in the future.

21.3.2. City Tree Survival Security:

- a) Sexsmith Road and Cambie Road: Enter into a legal agreement and submission of a tree survival security (Letter of Credit) in the amount of \$260,000, to secure the required protection of 32 existing City trees along the subject site's Sexsmith Road and Cambie Road frontages (tag# 1, 3, 14, 15, 48, 49, 51-57, 59-65, 66, 180, 181, 184, 185, 197-200, 330, 332, 333), at the developer's sole cost, through the project's Development Permit* processes. Subject to tree survival, the security is to be released 90% at completion of Development Permit works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).
- b) Neighbourhood Park: Enter into a legal agreement and submission of a tree survival security (Letter of Credit) in the amount of \$430,000, to secure the required protection of 54 existing trees located within the proposed neighbourhood park (tag# 19, 21-25, 67, 73, 76, 77, 83-93, 93A, 94, 95, 99, 100, 301-306, 312, 314, 315, 317-325, 327, 328, 331, 335, 336, 338-340, undersized tree 501, relocated undersized tree 502). Subject to tree survival, the security is to be released 90% at completion of City neighbourhood Park Servicing Agreement works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of two replacement trees elsewhere in Richmond (based on a cost per replacement tree determined to the sole satisfaction of the City).

NOTE: As noted in the Preliminary Tree Management Plan (Schedule 6), the arborist has identified potential root zone conflict areas between required road works and ten existing City trees (tag# 1, 3, 180, 181, 184, 185, 197, 198, 199, 200), which must be resolved through detail design as part of the required SA process. All efforts must be made to design and work around these trees. If the potential conflicts cannot be addressed the retention of these trees will need to be reviewed.

NOTE: Submission of a separate tree survival security (Letter of Credit) in the amount of \$250,000, is required through the project's Servicing Agreement* processes to secure the required protection of

34 existing City trees, including the relocation of 14 existing street trees along the south side of Capstan Way to facilitate required road widening (tag# 101-110, 113, 115, 119, 120), and the protection of 20 existing trees in the Garden City Road median (tag# 363-382), at the developer's sole cost, through the development's required Servicing Agreement (SA)* review/approval processes (secured with the SA* Letter of Credit), as determined to the sole satisfaction of the Director, Parks Services. In the event that the City determines that the fourteen (14) City street trees cannot be relocated, the developer shall be required to make a cash-in-lieu contribution for the planting of replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).

- 21.3.3. Tree Survival Security Agreements: Execution of legal agreements with respect to each tree survival security regarding use and return of each security, to the satisfaction of the City.
- 21.3.4. Arborist Contract: Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any work conducted within the tree protection zone of the Neighbouring and City trees to be protected. The Contract should include the scope of work to be undertaken, including the proposed number of site monitoring inspections and a provision for the Arborist to submit a post-construction assessment report to the City for review.
- 21.3.5. Tree Protection Fencing: Installation of appropriate tree protection fencing around all trees to be retained as part of the development prior to any construction activities, including building demolition, occurring on-site.

NOTE: This includes installation of construction hoarding around entire perimeter of proposed City neighbourhood park prior to any construction activities occurring onsite, including preloading, for public safety and tree protection purposes.

- 21.3.6. City Tree Removal Compensation: The City's acceptance of the developer's voluntary contribution in the amount of \$40,000 towards the City's tree compensation fund for tree planting elsewhere in the City in compensation for the removal of 33 existing City trees (tag# 11, 50, 58, 96-98, 111, 112, 116, 121, 122, 182, 341, 342, 344-362).

- 22. (**Development Permit* - DP**) Submission and processing of a Development Permit* for Lot 1 (South Lot) completed to a level deemed acceptable by the Director of Development, including working with a Qualified Environmental Professional (QEP) to address bird safety adjacent to the proposed neighbourhood park.
- 23. (**Phasing Agreement**) Registration of a restrictive covenant(s) and/or alternative legal agreement(s) on title, to the satisfaction of the City, securing that "no development" will be permitted on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot) or Lot 4 (Central Lot) and restricting Development Permit* issuance (together with various Building Permit* and occupancy restrictions, as determined to the satisfaction of the City), unless the developer satisfies the following requirements:

- 23.1. Development Sequencing Requirements: Development must proceed on the following basis:

- 23.1.1. General: The development shall include a maximum of four (4) phases (i.e. Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot), and Lot 4 (Central Lot)), the comprehensive design and development of which shall be approved through four (4) Development Permits*, unless otherwise determined to the satisfaction of the Director of Development.

- 23.1.2. Development Permit*: The order in which development of the phases proceeds shall be Lot 1 (South Lot) first, then Lot 4 (Central Lot), then Lot 2 (East Lot), and Lot 3 (West Lot); prior to adoption of the subject rezoning, a Development Permit* application for Lot 1 (South Lot) must be submitted by the developer and completed to a level deemed acceptable by the Director of Development.

- 23.2. Servicing Agreement (SA) – Transportation, Engineering, and Park Requirements: The required works shall be undertaken via a maximum of five (5) Servicing Agreements*. The City, at its discretion, may permit one or more of the Servicing Agreements* to be broken into "parts" (i.e. smaller, topic-specific SAs) such that, for example, Park works are administered independently of transportation works, provided that the content and completion of all such "parts" complies with the requirements set out below, as determined to the satisfaction

of the City. The sequencing of transportation works is generally indicated on the attached Preliminary SA Phasing Plan /Schedule 7.

23.2.1. Servicing Agreement* (SA) Sequencing:

- a) The “Lot 2 (East Lot) and Lot 4 (Central Lot) SA”, and “Lot 3 (West Lot) SA” may proceed together or independently, but may not proceed ahead of the “Neighbourhood Park SA”, “Barn Owl Hunting Habitat Enhancement SA” and “Rezoning SA”.
- b) The developer must enter into the “Barn Owl Hunting Habitat Enhancement SA”, “Neighbourhood Park SA” and “Rezoning SA” in advance of entering into either of the other two Servicing Agreements and complete the “Barn Owl Hunting Habitat Enhancement SA”, “Neighbourhood Park SA” and “Rezoning SA” in advance of completing either of the other two Servicing Agreements; however, the developer may proceed with one or both of the other two Servicing Agreements, in whole or in part, concurrently with the “Barn Owl Hunting Habitat Enhancement SA”, “Neighbourhood Park SA” and “Rezoning SA”.

23.2.2. Barn Owl Hunting Habitat Enhancement Servicing Agreement*: The rezoning bylaw with respect to RZ 18-836123 shall not be adopted until the developer enters into the “Barn Owl Hunting Habitat Enhancement SA” (secured with a Letter of Credit in the amount of \$205,000), to the City’s satisfaction.

- a) All required works must be completed prior to final Building Permit inspection granting occupancy of the first building on Lot 2 (East Lot), Lot 3 (West Lot), or Lot 4 (Central Lot) in whole or in part.
- b) Habitat Enhancement Works shall include:
 - i) Detailed assessment prepared by a Qualified Environmental Professional (QEP) of the extent of invasive species impacts on the three enhancement sites and detailed designs for the restoration of the impacted areas. Scope of invasive species management will target the removal of Himalayan Blackberry and Reed Canary Grass. Knotweed already identified on the no access property will be addressed separately through the City’s Knotweed management programs;
 - ii) Coordination with the City’s Parks Operations on management of the invasive species identified in the required QEP detailed assessment. Developer is to cover 40% (up to a maximum of \$90,000) of the cost of invasive species removal with the remainder coming from Park’s operational budgets for the three City owned sites.
 - iii) Restoration of the areas impacted by invasive species removal with the installation of grassland habitat with some shrub, boulder and log habitat features, as described in the detailed designs for the restoration developed by the QEP. The boulders and logs will be supplied by Parks. The developer is solely responsible for all the costs associated with the seed mix, planting, and the labour to install the new habitat, including boulders and logs; and
 - iv) After initial invasive species management and successful habitat installation has been completed (inspection requested by developer) and accepted by the City, the developer is responsible for retaining a QEP and providing one year of monitoring and maintenance.

23.2.3. Rezoning Servicing Agreement*: The rezoning bylaw with respect to RZ 18-836123 shall not be adopted until the developer enters into the “Rezoning SA” (secured with a Letter of Credit), to the City’s satisfaction.

- a) All required works must be completed prior to final Building Permit inspection granting occupancy of the first building on Lot 1 (South Lot), Lot 2 (East Lot), Lot 3 (West Lot), or Lot 4 (Central Lot), in whole or in part.
- b) Open Space Works shall include:

- i) “Mid-Block Trail SRWs” along the west and north property lines of Lot 1 (South Lot), connecting to Garden City Road, new North-South road, and the neighbourhood park.
- ii) “Mid-Block Trail SRW Emergency Access Route” along the north property line of Lot 1 (South Lot) and the south property line of Lot 2 (East Lot).

NOTE: Development Cost Charges (DCC) credits shall NOT apply.

NOTE: The developer shall be responsible for the design and construction, at the developer’s sole cost, of the network of park and public open space improvements for which design/construction shall be subject to “Parks SA Requirements” (generally indicated in the attached Park Concept Plan /Schedule 8 and the Park and Public Open Space Key Plan / Schedule 3), as determined to the City’s satisfaction.

- c) Tree Management Works shall include: Protection and relocation of off-site City trees, protection of trees designated for retention in the neighbourhood park area, providing tree survival securities, and entering into legal agreement(s) to the satisfaction of the City (as generally indicated on the Preliminary Tree Management Plan /Schedule 6).

NOTE: This includes installation of construction hoarding around entire perimeter of proposed City neighbourhood park prior to any construction activities occurring onsite, including preloading, for public safety and tree protection purposes.

- d) Road Works shall include:
 - i) Cambie Road: ultimate standards to the new property line along neighbourhood park frontage.
 - ii) Garden City Road:
 - Ultimate standards to the back of the sidewalk along neighbourhood park and Lot 1 (South Lot) frontage.
 - Full road widening (including curb and gutter) and interim 2 m wide off-road bike path and interim 2 m wide sidewalk along Lot 2 (East Lot) frontage.
 - iii) Capstan Way: full road widening (including curb and gutter) and ultimate standards to the back of the sidewalk along Lot 2 (East Lot) and Lot 3 (West Lot) frontages.
 - iv) Odlin Crescent extension: ultimate standards from Cambie Road to north property line of 8671 Cambie Road, except along the east side, construct up to and including curb and gutter and transition to the private property to the east, including a new raised median and right-in/right-out diverter on Cambie Road.
 - v) Ketcheson Road extension:
 - Full road widening (including curb and gutter on both sides of the road) from Capstan Way to North-South road, interim 2 m wide sidewalk on one side of the street along Lot 2 (East Lot) frontage.
 - Interim emergency vehicle access from North-South road to Brown Road extension.
 - vi) Brown Road extension: interim emergency vehicle access.
 - vii) New North-South road: full road widening (including curb and gutter on both sides of the road), interim 2 m wide sidewalk on one side of the street along Lot 2 (East Lot) frontage.
 - viii) Garden City Road/Cambie Road: full intersection (traffic signal and road upgrades) improvements.
 - ix) Garden City Road/Capstan Way: full intersection (traffic signal & road upgrades) improvements.
 - x) Ketcheson Road/Capstan Way: full intersection improvements.

- xi) Sexsmith Road/Capstan Way: interim intersection (traffic signal and road upgrades) improvements to accommodate the noted road widening, as necessary.

NOTE: Development Cost Charges (DCC) credits may apply.

- e) Other Works shall include:
 - i) All underground City and private utilities;
 - ii) Above-grade City and private utilities where feasible; and
 - iii) Other off-site improvements, as determined at the sole discretion of the City.
- 23.2.4. Neighbourhood Park Servicing Agreement*: No final Building Permit* inspection permitting occupancy shall be issued for any building on Lot 1 (South Lot) and/or Lot 4 (Central Lot), in whole or in part, until the developer enters into the “Neighbourhood Park SA” (secured with a Letter of Credit), to the City’s satisfaction.
- a) All required works must be completed prior to final Building Permit inspection granting occupancy of the first building on Lot 2 (East Lot), in whole or in part.
 - b) Neighbourhood Park Works shall be limited to City-approved park improvements to the 5,247.5 m² (1.34 ac.) area to be transferred to the City for park and related purposes, at the developer’s sole cost, to satisfy CCAP park requirements. The park will be designed and constructed consistent with a Park Concept approved by Council, including retention of 54 existing trees located within the neighbourhood park (tag# 19, 21-25, 67, 73, 76, 77, 83-95, 99, 100, 301-306, 312, 314, 315, 317-325, 327, 328, 331, 335, 336, 338-340, 401, 402, 501, 502), and features that may include (but not limited to) plant material, pathways, site furniture, playground structures, fencing, lighting, shelters, decks, boardwalks, open lawn areas, rain gardens, and may contain Public Art. The neighbourhood park will be fully serviced and will seek to incorporate the existing, mature trees currently within the park area to the greatest extent possible. Existing trees identified as healthy and not presenting a risk to the public will be retained. The provision of park elements and site features will be guided by existing City policies and Plans and will meet the needs of present and future residents. Neighbourhood park construction will commence once a park conceptual design has been finalized and approved by Council. The design process will include a thorough public consultation process. Provision of any park features and the infrastructure required to support a future neighbourhood park as determined through a public consultation process and approved by Council.

NOTE: The developer shall be responsible for the design and construction, at the developer’s sole cost, of the network of park and public open space improvements for which design/construction shall be subject to “Neighbourhood Park SA Requirements” (generally indicated in the attached Park Concept Plan /Schedule 8 and the Park and Public Open Space Key Plan / Schedule 3), as determined to the City’s satisfaction.

NOTE: Development Cost Charges (DCC) credits shall NOT apply. For clarity, design/construction of park improvements undertaken by the developer on lands secured for park/public open space (City-owned or SRW) with respect to the Capstan Station Bonus and/or on land for which the developer is otherwise permitted to calculate density shall NOT be eligible for Development Cost Charge (DCC) credits. Likewise, temporary improvements (regardless of their location) and improvements on lands not owned by the City shall NOT be eligible for Development Cost Charge (DCC) credits.

NOTE: Street frontages are outside the scope of the park improvements and, therefore, are described under Transportation “Road Works” requirements. Street frontages must be designed and constructed in coordination with the park and public open space improvements and, as determined to the satisfaction of the City, elements identified along those frontages under the Transportation “Road Works” requirements may be varied via the SA detailed design processes to better achieve the inter-related objectives of the City’s parks, transportation, engineering, and related interests.

- c) Management and preservation of any existing trees deemed safe for retention by a Certified Arborist and under the guidance of the Registered Landscape Architect retained by the developer to design the Neighbourhood Park. Prior to commencing Park construction, a certified arborist will conduct an updated Tree Health and Hazard Assessment of the trees identified in Section 23.2.4 (b) for retention. Any trees identified as hazardous in the updated Assessment and those previously identified for removal will be removed prior to Park construction proceeding.
 - d) Long term tree health management plan for managing surface and subsurface water on the Park site. The Park site's existing hydrology and drainage patterns will change due to development on adjacent sites.
 - e) Required removal of 29 existing trees for safety and tree health reasons from the proposed City Neighbourhood Park area (tag # 16-18, 20, 26, 68-72, 74 75, 78-82, 307-311, 313, 316, 326, 329, 334, 337, 343).
 - f) Invasive Species Management Works: The developer is responsible for implementing the Polygon Talisman Park Invasive Species Survey and Management Plan, prepared by QEP McTavish Resource & Management Consultants Ltd., dated December 20, 2020 in the area of the Neighbourhood Park. Prior to City acceptance of the Park works, the City will require confirmation from McTavish that the noxious weeds (including Japanese Knotweed, Canada Thistle and Perennial Sowthistle), and invasive species mapped within the footprint of the park have been fully managed. The Invasive Species Survey and Management Plan will be a living document that is updated yearly based on the most current assessments of the status of noxious weeds and invasive plants on the site and will be updated with revised timelines and management approaches as needed.
- NOTE: Submission of a security (Letter of Credit) is required through the project's Rezoning Servicing Agreement to secure invasive species management.
- 23.2.5. Lot 2 (East Lot) and Lot 4 (Central Lot) Servicing Agreement*: No Building Permit* shall be issued for a building on Lot 2 (East Lot) or Lot 4 (Central Lot), in whole or in part, until the developer enters into the "Lot 2 (East Lot) and Lot 4 (Central Lot) SA" (secured with a Letter of Credit), to the City's satisfaction.
- a) All required works must be completed prior to final Building Permit inspection granting occupancy of the first building on Lot 2 (East Lot) or Lot 4 (Central Lot), in whole or in part.
 - b) Open Space Works shall include:
 - i) "Mid-Block Trail SRWs", which shall be limited to City-approved park improvements to the entire SRW area along the south property line of Lot 2 (East Lot) and Lot 4 (Central Lot), together with areas and/or features required to accommodate pedestrian and bicycle activity, and frontage integration, and emergency vehicle access, as determined to the City's satisfaction; and
 - ii) "Central Open Space SRW", which shall be limited to City-approved park improvements to the entire SRW area along the north portion of Lot 4 (Central Lot), together with areas and/or features required to accommodate public open space, pedestrian and bicycle activity, and frontage integration as determined to the City's satisfaction.
 - iii) "Capstan Way Corner Plaza SRWs", which shall be limited to City-approved park improvements to the entire corner SRW areas along Capstan Way along the north property line of Lot 2 (East Lot), together with areas and/or features required to accommodate pedestrian and bicycle activity, and frontage integration as determined to the City's satisfaction.

NOTE: The developer shall be responsible for the design and construction, at the developer's sole cost, of the network of park and public open space improvements for which design/construction shall be subject to "Parks SA Requirements" (generally indicated in the attached Park and Public Open Space Key Plan / Schedule 3), as determined to the City's satisfaction.

NOTE: Development Cost Charges (DCC) credits shall NOT apply.

c) Road Works shall include:

- i) Garden City Road: ultimate standards to the back of the sidewalk along Lot 2 (East Lot) frontage.
- ii) Sexsmith Road: full road widening (including curb and gutter) and interim 2 m wide off-road bike path and interim 2 m wide sidewalk along Lot 3 (West Lot) frontage.
- iii) Ketcheson Road extension: full road widening (including curb and gutter on both sides of the road) from North-South road to Brown Road extension, ultimate standards to back of the sidewalk along Lot 2 (East Lot) and Lot 4 (Central Lot) frontage.
- iv) Brown Road extension: full road widening (including curb and gutter on both sides of the road), interim 2 m wide sidewalk on one side of the street along Lot 3 (West Lot) frontage.
- v) New North-South road: ultimate standards to back of the sidewalk along both sides of street.
- vi) Sexsmith Road/Capstan Way: full intersection improvements.

NOTE: Development Cost Charges (DCC) credits may apply.

d) Other Works shall include, as applicable, the relocation of above-grade City/private utilities.

23.2.6. Lot 3 (West Lot) Servicing Agreement*: No Building Permit* shall be issued for a building on Lot 3 (West Lot), in whole or in part, until the developer enters into the “Lot 3 (West Lot) SA” (secured with a Letter of Credit), to the City’s satisfaction.

- a) All required works must be completed prior to final Building Permit inspection granting occupancy of the first building on Lot 3 (West Lot), in whole or in part.
- b) Open Space Works shall include: “Capstan Way and Sexsmith Road Corner Plaza SRWs”, which shall be limited to City-approved Parks improvements to the entire corner SRW areas along Capstan Way and Sexsmith Road along the north property line of Lot 3 (West Lot)), together with areas and/or features required to accommodate pedestrian and bicycle activity, and frontage integration as determined to the City’s satisfaction.

NOTE: The developer shall be responsible for the design and construction, at the developer’s sole cost, of the network of park and public open space improvements for which design/construction shall be subject to “Parks SA Requirements” (generally indicated in the attached Park and Public Open Space Key Plan / Schedule 3), as determined to the City’s satisfaction.

NOTE: Development Cost Charges (DCC) credits shall NOT apply.

c) Road Works shall include:

- i) Sexsmith Road: ultimate standards to the back of the sidewalk along Lot 3 (West Lot) frontage.
- ii) Ketcheson Road extension: ultimate standards to back of the sidewalk along Lot 3 (West Lot) frontage.
- iii) Brown Road extension: ultimate standards to back of the sidewalk along Lot 3 (West Lot) frontage.
- iv) Sexsmith Road/Brown Road: full intersection (traffic signal & road upgrades) improvements.

NOTE: Development Cost Charges (DCC) credits may apply.

d) Other Works shall include, as applicable, the relocation of above-grade City/private utilities.

23.2.7. Road Works: The developer shall be responsible for the design and construction of the road works, to the satisfaction of the City, subject to the review and approval of the detailed SA designs, which shall include, but may not limited to, the following. Final MOTI approval is required prior to rezoning adoption.

The following cross-sections are intended to be “typical”. The approved design may be required to vary from the “typical” conditions to address site-specific conditions and/or requirements, as determined to the sole satisfaction of the City through the SA design/approval processes. While the list below provides a general description of the minimum frontage work requirements to the standards of which are schematically shown in the approved road functional plan prepared by Core Group, the exact details and scope of the frontage works to be completed by the developer will be confirmed through the detailed design (SA) process to the satisfaction of the City.

NOTE: In addition to the following, landscape features are required to the satisfaction of the City, as determined via the SA and Development Permit* review and approval processes. Landscape improvements may include, but shall not be limited to, street trees, landscaped boulevards, hard- and soft-scape features, street furnishings, and decorative paving. Measures that enhance the viability of City street trees are encouraged (e.g., continuous soil trenches, silva cell system, etc.), taking into account necessary coordination with City/private utilities and other infrastructure, as determined to the City’s satisfaction.

- a) Cambie Road: The developer is responsible for the design and construction of the following works across the subject site’s entire Cambie Road frontage, to the satisfaction of the City.
 - i) Cross-Section: (described from south to north):
 - Existing curb on the north side of the street to be maintained;
 - 1.5 m wide landscaped boulevard; and
 - 3.0 m wide saw-cut concrete sidewalk.
- b) Garden City Road: The developer is responsible for the design and construction of the following works along the subject site’s entire Garden City Road frontage to the satisfaction of the City.
 - i) Cross-Section: (described from east to west):
 - Maintain existing curb and gutter along the west edge of the centre median;
 - Maintain / widen to provide the two south traffic lanes at 3.6m each;
 - 0.15 m wide curb and gutter;
 - 2.0 m wide landscaped boulevard;
 - 2.0 m wide bike path (asphalt with +/-0.15 m wide 200 mm thick concrete bands along each edge);
 - 1.5 m wide buffer strip, pedestrian lighting, decorative planting, and furnishings; and
 - 3.0 m wide saw-cut concrete sidewalk (at the future property line).
- c) Capstan Way: The developer is responsible for the design and construction of the following Interim Cross-Section works across the subject site’s entire Capstan frontage, to the satisfaction of the City, taking into consideration the following Ultimate Cross-Section works in the design and construction of those road works.
 - i) Interim Cross-Section (described from north to south) from Sexsmith Road to Ketcheson Road extension:
 - Maintain the existing curb on the north side of the street;
 - 3.1 m (min.) widening to 5.2m wide westbound vehicle travel lane;
 - 3.1 m area for 1) 3.1m wide left-turn lane at Sexsmith Road intersection (west leg) and 3.1 m painted median at Ketcheson Road intersection (east leg);
 - 5.4 m reducing to 3.3m wide eastbound vehicle travel lane;
 - 3.3 m wide eastbound vehicle travel / parking lane;
 - 0.15 m wide curb and gutter;
 - 2.5 m wide landscaped boulevard;
 - 2.5 m wide bike path (asphalt with +/-0.2 m wide 200 mm thick concrete bands along each edge);
 - 0.7 m wide buffer strip, pedestrian lighting, decorative planting, and furnishings; and
 - 2.5 m wide saw-cut concrete sidewalk.

- ii) Interim Cross-Section (described from north to south) Ketcheson Road extension to Garden City Road:
 - Maintain the existing curb on the north side of the street;
 - 5.1 m reducing to 5.0 m wide westbound vehicle travel lane;
 - 3.3 m wide left-turn lane at intersections;
 - 3.3 m wide eastbound vehicle travel lane;
 - 3.3 m wide eastbound right-turn lane;
 - 0.15 m wide curb and gutter;
 - 2.5 m wide landscaped boulevard;
 - 2.5 m wide bike path (asphalt with +/-0.2 m wide 200 mm thick concrete bands along each edge);
 - 0.7 m wide buffer strip, pedestrian lighting, decorative planting, and furnishings; and
 - 2.5 m wide saw-cut concrete sidewalk.
- iii) Ultimate Cross-Section: (described from north to south):
 - Maintain the proposed curb on the south side (established as noted above);
 - 6.6 m (2 lanes @ 3.3 m) wide eastbound vehicle travel lanes;
 - 3.3 m wide left-turn lane / landscaped median;
 - 6.6 m (2 lanes @ 3.3 m) wide westbound vehicle travel lanes;
 - 0.15 m wide curb and gutter;
 - 2.5 m wide landscaped boulevard;
 - 2.5 m wide bike path (asphalt with +/-0.2 m wide 200 mm thick concrete bands along each edge);
 - 0.7 m wide buffer strip, pedestrian lighting, decorative planting, and furnishings; and
 - 2.5 m wide saw-cut concrete sidewalk.
- d) Sexsmith Road: The developer is responsible for the design and construction of the following Interim Cross-Section works across the subject site's entire Sexsmith Road frontage, to the satisfaction of the City, taking into consideration the following Ultimate Cross-Section works in the design and construction of those road works. Note: Interim cross-section is to be constructed along the frontage of 8388 Sexsmith Road and ultimate cross-section is to be constructed along the frontage of 3699 Sexsmith Road in coordinated with SA 17-791396.
 - i) Interim Cross-Section (described from east to west) along the entire Sexsmith Road frontage:
 - 2.0 m wide saw-cut concrete sidewalk (at the new property line);
 - 0.75 m wide buffer strip;
 - 1.8 m wide bike path (asphalt with +/-0.15 m wide 200 mm thick concrete bands along each edge);
 - 1.75 m wide landscaped boulevard;
 - 0.15 m wide curb and gutter; and
 - Road upgrade to widen/maintain existing 12.7 m pavement width between the proposed new curb and gutter along the east side and the existing curb and gutter along the west side of the road. The design should accommodate the following:
 - 3.3 m (min) northbound vehicle travel lane
 - 3.3 m (min) southbound vehicle travel lane
 - 2.5 m parking lane
 - 1.2 m wide buffer
 - 1.8 m wide bike lane
 - ii) Ultimate Cross-Section (described from east to west):
 - Maintain the proposed curb on the east side (established as noted above);
 - 2.5 m wide northbound parking lane;
 - 9.9 m (3 x 3.3 m lanes) wide vehicle travel lanes (note: 3.3 m wide left-turn lane and 3.3 m wide landscaped median where intersection turning lanes are not required);

- 2.5m wide southbound parking lane;
 - 0.15 m wide curb and gutter;
 - 1.75 m wide landscaped boulevard;
 - 1.8 m wide bike path (asphalt with +/-0.15 m wide 200 mm thick concrete bands along each edge);
 - 0.75 m wide buffer strip; and
 - 2.0 m wide saw-cut concrete sidewalk (at the future property line).
- e) Odlin Crescent extension: The developer is responsible for the design and construction of the following Cross-Section works from Cambie Road to north property line of 8671 Cambie Road, to the satisfaction of the City. The developer is required to design and construct a new raised median and right-in/right-out diverter on Cambie Road and a transition between the improvements and the existing conditions west and east of the subject site to the satisfaction of the City.
- i) Cross-Section: (described from west to east):
- 2.0m wide saw-cut concrete sidewalk;
 - 1.35m wide landscaped boulevard;
 - 0.15m wide curb and gutter;
 - Road construction to provide a 10m wide pavement at Cambie Road, narrowing to 6.5m at the north property line of 8671 Cambie Road;
 - 0.15m wide curb and gutter; and
 - Transition to 8711 Cambie Road.
- f) Ketcheson Road extension: The developer is responsible for the design and construction of the following Cross-Section works along its entire length south of Capstan Way, to the satisfaction of the City.
- i) Cross-Section: (described from west to east):
- 2.0 m wide saw-cut concrete sidewalk on both sides;
 - 1.7 m wide landscaped boulevard on both sides;
 - 0.15 m wide curb and gutter on both sides (0.15 m wide 300 mm thick concrete band at areas with parking lane);
 - 7 m wide driving surface for two-way traffic and a 2.5 m wide parking lane on each side, separated by mountable curbs; and
 - At Capstan Way intersection (south leg), 1.5 m landscaped boulevard on east side and 3.1 m wide northbound right-turn & left-turn lanes
- g) Brown Road extension: The developer is responsible for the design and construction of the following Interim Cross-Section works, taking into consideration the following ultimate cross-section in the design and construction of those road works.
- i) Interim Cross-Section (described from north to south) with a 15 m wide dedication, the road cross-section should include the following as the minimum elements:
- 2.0 m wide saw-cut concrete sidewalk;
 - 2.25 m wide landscaped boulevard;
 - 0.15 m wide curb and gutter;
 - 8.5 m wide driving surface for two-way traffic;
 - 1.0 m wide asphalt shoulder; and
 - Jersey barriers with retaining wall (where required) within 1.0 m asphalt shoulder.
- ii) Ultimate Cross-Section (described from north to south) with a 20 m wide dedication (additional 5 m wide strip of land as dedication along the entire south frontage of Brown Road extension):
- Maintain the proposed curb on the north side (established as noted above);
 - Widen 8.5 m wide driving surface to 11.2 m;
 - 0.15 m wide curb and gutter;
 - 2.25 m wide landscaped boulevard; and

- 2.0 m wide saw-cut concrete sidewalk.

NOTES:

1. Brown Road extension at interim condition to be used for Emergency Access only; removal bollards required at both ends;
 2. Driveway required at Sexsmith Road; and
 3. Hammerhead turnaround required at the Ketcheson Road intersection (east leg).
- h) New North-South road: The developer is responsible for the design and construction of the following Cross-Section works along its entire length south of Ketcheson Road extension to the North property line of Lot 1 (South Lot) , to the satisfaction of the City.
- i) Cross-Section: (described from west to east):
 - 2.0 m wide saw-cut concrete sidewalk on both sides;
 - 1.7 m wide landscaped boulevard on both sides;
 - 0.15 m wide curb and gutter on both sides (0.15 m wide 300 mm thick concrete band at areas with parking lane); and
 - 7 m wide driving surface for two-way traffic and a 2.5 m wide parking lane on each side, separated by mountable curbs.
 - ii) Cul-de-sac terminus:
 - Minimum 7.7 m radius cul-de-sac bulb driving surface;
 - 0.15 m wide curb and gutter;
 - 1.5 m wide landscaped boulevard, except hard paved and designed to support fire trucks where needed for fire truck access; and
 - 2 m wide saw-cut concrete sidewalk, designed to support fire trucks where needed for fire truck access.
- NOTE: Hammerhead required at south end in on-site SRW.
- i) Garden City Road/Cambie Road: The developer is responsible for the design and construction of the following intersection improvements, to the satisfaction of the City:
- i) Intersection improvements:
 - Road upgrade to include a 3.1 m (min) wide southbound to westbound right-turn lane with a minimum storage length of approximately 35 m;
 - 0.15 m wide curb and gutter;
 - 2.0 m wide landscaped boulevard;
 - 2.0 m wide bike path (asphalt with +/-0.15 m wide 200 mm thick concrete bands along each edge);
 - 1.5 m wide buffer strip, pedestrian lighting, decorative planting, and furnishings; and
 - 3.0 m wide saw-cut concrete sidewalk (at the future property line).
 - j) Garden City Road/Capstan Way: The developer is responsible for the design and construction of the following intersection improvements, to the satisfaction of the City.
 - i) Intersection improvements:
 - South leg - realign the pedestrian crosswalk to connect to the proposed road improvements;
 - West leg - widen pedestrian crosswalk to 4.5 m;
 - North leg - Road upgrade and widen to include a 3.1 m (min) wide southbound to westbound right-turn lane with a minimum storage length of approximately 35 m. Relocation of existing infrastructure required (i.e. sidewalk, curb and gutter, utility pole, bus stop, streetlight pole, etc.).
 - k) Sexsmith Road/Capstan Way: The developer is responsible for the design and construction of the following Intersection Improvements, to the satisfaction of the City.

- i) Intersection improvements:
 - East leg and South leg - realign the pedestrian crosswalks to connect to the proposed road improvements;
 - North leg - modify existing lane markings to accommodate a southbound right-turn lane and change in lane designation of existing southbound left-turn lane to left-turn/through lane; and
 - Install bike box with green surface treatment for southbound bike lane.
- l) Traffic Signals: Works include, but are not limited to, the following:
 - i) Upgrade existing traffic signals: With the road and intersection improvements noted above, as well as the need to upgrade other existing traffic signals to accommodate enhanced traffic operations, applicant is to upgrade (as necessary) the following existing traffic signals:
 - Sexsmith Road & Capstan Way;
 - Garden City Road & Capstan Way;
 - Brown Road & Sexsmith Road; and
 - Garden City Road & Cambie Road.

NOTE: Signal upgrades to include but not limited to: upgrade and/or replace signal pole, controller, base and hardware, pole base, detection, conduits (electrical & communications), signal indications, communications cable, electrical wiring, service conductors, APS (Accessible Pedestrian Signals), traffic cameras, and illuminated street name sign(s), etc.
 - ii) Install new Traffic Signal Device: With the road and intersection improvements noted in above, new traffic signal devices (i.e., intersection pre-ducting, special x-walk with downward lighting, pedestrian signals, or full traffic signals) will be necessary at the following locations, with the exact upgrade to be determined with a traffic signal warrant to the satisfaction of the City.
 - Capstan Way & Ketcheson Road

NOTE: New signal to include but not limited new signal pole, controller, base and hardware, pole base, detection, conduits (electrical & communications), signal indications, communications cable, electrical wiring, service conductors, APS (Accessible Pedestrian Signals), traffic cameras, and illuminated street name sign(s), etc.

24. (***Servicing Agreement* - SA***): Enter into a Servicing Agreement(s)* for the design and construction, at the developer's sole cost, of full upgrades across the subject site's street frontages, together with various engineering, transportation, parks and sustainability works, to the satisfaction of the City, which include, but may not be limited to the following.

Except as expressly provided for and in compliance with the subject development's "Phasing Agreement", related legal agreement(s), and security, to the satisfaction of the Director of Development, Director of Engineering, Director of Transportation, Director, Parks Services, and Director, Sustainability and District Energy:

NOTE: Prior to final adoption of the rezoning bylaw, all Servicing Agreement (SA) works must be secured via a Letter(s) of Credit;

NOTE: All works shall be completed prior to final Building Permit inspection granting occupancy of the first building on the subject site (excluding parking intended as an ancillary use to non-parking uses), in whole or in part; and

NOTE: Development Cost Charge (DCC) credits may apply.

- 24.1. **Barn Owl Hunting Habitat Enhancement Servicing Agreement* Requirements:** The developer shall be responsible for the design and construction, at the developer's sole cost, of works as described in the "Phasing Agreement" above.
- 24.2. **Neighbourhood Park Servicing Agreement* Requirements:** The developer shall be responsible for the design and construction, at the developer's sole cost, of works as described in the "Phasing Agreement" above.

- 24.3. RZ Servicing Agreement Parks Requirements: The developer shall be responsible for the design and construction, at the developer's sole cost, of the following, to the City's satisfaction.

24.3.1. Open Space Works shall include:

- a) "Mid-Block Trail SRWs", which shall be limited to City-approved park improvements to the SRW areas along the west and north property lines of Lot1 (South Lot), connecting to Garden City Road, new North-South road, and the neighbourhood park, together with areas and/or features required to accommodate park integration, pedestrian and bicycle activity and frontage integration as determined to the City's satisfaction.
- b) "Mid-Block Trail SRW Emergency Access Route", which shall include emergency vehicle access from the new North-South Road to Garden City Road with bollards at both ends within the SRW area along the north property line of Lot 1 (South Lot) and the south property line of Lot 2 (East Lot), as determined to the City's satisfaction.

NOTE: The developer shall be responsible for the design and construction, at the developer's sole cost, of the network of park and public open space improvements for which design/construction shall be subject to "Parks SA Requirements" (generally indicated in the attached Park and Public Open Space Key Plan / Schedule 3), as determined to the City's satisfaction.

NOTE: Development Cost Charges (DCC) credits shall NOT apply.

- 24.3.2. Neighbourhood Park Invasive Species Management Works: The developer is responsible for implementing the Polygon Talisman Park Invasive Species Survey and Management Plan, prepared by QEP McTavish Resource & Management Consultants Ltd., dated December 20, 2020 in the area of the Neighbourhood Park.

- a) Submission of an invasive species security (Letter of Credit) in the amount of \$36,410, as defined by the cost estimate prepared by McTavish. The security is to be released 50% (\$18,205) at completion of two year invasive species treatment period. The QEP must provide written confirmation that the treatment period is complete and that it is acceptable to move into the five year maintenance and monitoring period. The remaining \$18,205 of the security will be divided into five equal portions of \$3,641 (10% of the total security value). Upon successful completion of each year of maintenance and monitoring, confirmed in writing by the QEP, \$3,641 of the remaining security will be released (10% of the total security per year).
- b) Prior to City acceptance of the Park works, the City will require confirmation from a QEP that the noxious weeds (including Japanese Knotweed, Canada Thistle and Perennial Sowthistle), and invasive species mapped within the footprint of the park have been fully managed.
- c) The Invasive Species Survey and Management Plan will be a living document that is updated yearly based on the most current assessments of the status of noxious weeds and invasive plants on the site and will be updated with revised timelines and management approaches as needed.

- 24.3.3. Tree Management Works shall include: Protection and relocation of off-site City trees, and neighbourhood park City trees, providing tree survival securities, and entering into legal agreement(s) to the satisfaction of the City (as generally indicated on the Preliminary Tree Management Plan /Schedule 6), including:

- a) Park protective tree fencing – installation of construction hoarding around entire perimeter of proposed City neighbourhood park prior to any construction activities occurring onsite, including preloading, for public safety and tree protection purposes.
- b) Submission of a tree survival security (Letter of Credit) in the amount of \$155,000, to secure the required protection of 20 existing trees in the Garden City Road median (tag# 363-382). Subject to tree survival, the security is to be released 90% at completion of adjacent SA works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of

replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).

NOTE: Submission of a separate tree survival security (Letter of Credit) in the amount of \$260,000, is required through the project's Rezoning and Development Permit* processes to secure the required protection of 32 existing City-owned trees along the subject site's Sexsmith Road and Cambie Road frontages (tag# 1, 3, 14, 15, 48, 49, 51-57, 59-65, 66, 180, 181, 184, 185, 197-200, 330, 332, 333), at the developer's sole cost, through the project's Development Permit* processes.

NOTE: As noted in the Preliminary Tree Management Plan (Schedule 6), the arborist has identified potential root zone conflict areas between required road works and ten existing City trees (tag# 1, 3, 180, 181, 184, 185, 197, 198, 199, 200), which must be resolved through detail design as part of the required SA process.

- c) Relocation of fourteen (14) existing street trees located along the south side of Capstan Way to facilitate required road widening (tag# 101-110, 113, 115, 119, 120), at the developer's sole cost, to the satisfaction of the Director, Parks Services, including the submission of a tree survival security (Letter of Credit) in the amount of \$95,000. Subject to tree survival, the security is to be released 90% at completion of tree relocation works and the remaining 10% at the end of a one year maintenance period. In the event tree survival is not achieved, the developer shall be required to make a cash-in-lieu contribution for the planting of replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).

NOTE: In the event that the City determines that the fourteen (14) City street trees cannot be relocated, the developer shall be required to make a cash-in-lieu contribution for the planting of replacement trees elsewhere in Richmond (based on a rate of at least 2:1 for each tree removed and a cost per replacement tree determined to the sole satisfaction of the City).

- d) Submission of a Contract entered into between the applicant and a Certified Arborist for supervision of any work conducted within the tree protection zone of the City-owned trees to be protected. The Contract should include the scope of work to be undertaken, including the proposed number of site monitoring inspections and a provision for the Arborist to submit a post-construction assessment report to the City for review.
- e) Installation of appropriate tree protection fencing around all trees to be protected prior to any construction activities, including building demolition, occurring on-site.
- f) Execution of legal agreement for each tree survival security taken, in form and content satisfactory to the City.

24.4. RZ Servicing Agreement Transportation Requirements: The developer shall be responsible for the design and construction of the road works, to the satisfaction of the City, subject to the review and approval of the detailed SA designs, which shall include, but may not be limited to, the "Road Works" as described in the "Phasing Agreement" for the "Rezoning SA".

24.5. RZ Servicing Agreement Engineering Requirements:

24.5.1. Water Works:

- a) Using the OCP Model, there is 197 L/s of water available at a 20 psi residual at the Sexsmith Road frontage, 120 L/s of water available at 20psi residual along the Garden City Road frontage, 416L/s at 20psi residual at Capstan Way and 642 L/s at 20psi residual at Cambie Road. Based on the proposed development, the subject site requires a minimum fire flow of 220 L/s. The available flows along Sexsmith Road and Garden City Road are NOT adequate and the existing watermains require upgrades.

- b) At the 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 the development has adequate fire flow for onsite fire protection at the Building Permit* stage. Calculations must be signed and sealed by a Professional Engineer and be based on Building Permit designs.
 - ii) Provide the following since the available flows are not adequate to service the proposed development:
 - Install approximately 274 m of 200 mm diameter water main along proposed development roads, proposed Ketcheson Road to Brown Road connecting to the mains at Sexsmith Road and Capstan Way.
 - Install approximately 175 m of 200 mm diameter water main along proposed North-South road to the north property line of proposed Lot 1 (South Lot) and along a utility SRW in the publicly accessible Mid-block Trail SRW connecting to new main at Garden City Road.
 - Upgrade approximately 190 m of the existing 150 mm diameter water main along Sexsmith Road to 200 mm diameter from proposed Brown Road extension to Capstan Way. Tie-in to the north shall be to the existing water main along Capstan Way and tie-in to the south shall be to the existing water main along Sexsmith Road.
 - Install approximately 348 m of 200 mm diameter water main along the west side of Garden City Road (development frontage) complete with fire hydrants spaced as per City's Engineering specifications. Tie-in to the north shall be to the existing water main along Capstan Way and tie-in to the south shall be to the existing water main at Cambie Road.
 - Provide fire hydrants on the north side of Cambie Road, along development's frontage as per City standards.
 - Provide fire hydrants along all new and upgraded water mains to achieve maximum 75 m spacing per City standards. Fire hydrants required on west side of Garden City Road, along new water main.
 - iii) Provide a watermain complete with hydrants (to meet City standards) along the proposed Odlin Crescent extension road in 8671 Cambie Road. The watermain shall be from the north property line of 8671 Cambie Road to the tie-in point at the existing watermain in Cambie Road. Watermain sizing shall be determined via the SA design process.
 - iv) Provide a utility SRW for water meter chamber. The exact dimensions and location of the SRW shall be finalized at the Servicing Agreement process.
 - v) Provide a 6 m wide utility SRW extending from the southern extent of the proposed North-South road to Garden City Road. This may be shared with the required publicly accessible Mid-block Trail SRW.
- c) At the Developer's cost, the Developer is required to:
- i) Cut and cap at main the existing water service connections for 3480, 3500, 3540 and 3660 Sexsmith Road. As well as the connection at 8791 Cambie Road.
 - ii) Install new water service connection(s) for the proposed lots.
 - iii) Complete all required tie-ins to existing City water mains.

24.5.2. Storm Sewer Works:

- a) At the Developer's cost, the Developer is required to:
 - i) Upgrade the existing twin storm sewers at Sexsmith Road frontage, approximately 175 m in length, into a single 1200 mm diameter storm sewer system in the middle of Sexsmith Road. Tie-in to the north shall be via the existing Manhole (STMH 131076). Tie-in to the south shall be to the existing storm sewers along the east and west sides of Sexsmith Road. Tie-ins shall be via the use of new manholes. Developer is to remove existing 1050 mm storm sewer on east side of Sexsmith Road, along development frontage to the new manhole.
 - ii) Install new storm service connections complete with an IC, utility SRW may be required to accommodate IC.
 - iii) Provide approximately 265 m of 600 mm diameter storm sewers along proposed internal roads from Capstan Way and proposed Ketcheson Road to proposed Brown Road, connecting to the new main at Sexsmith Road. Install a manhole at the high end of system, at future Capstan Way and proposed Ketcheson Road intersection.
 - iv) Provide approximately 110 m of 600 mm diameter storm sewer along proposed North-South road to the north property line of proposed Lot 1 (South Lot). Tie-in to the main along Ketcheson Road to the west.
 - v) Remove approximately 79 m existing 250 mm AC drainage line along north side of Cambie fronting lots 8791, 8771 and 8731 Cambie Road. Restore sidewalk and curb-and-gutter if required.
 - vi) Provide storm sewers complete with manholes (as per City standards) along the proposed Odlin Crescent extension in 8671 Cambie Road. The storm sewer shall be from the north property line of 8671 Cambie Road to the tie-in point at the existing box culvert in Cambie Road. Storm sewer sizing shall be determined via the SA design process.
 - vii) Install approximately 210 m of 600 mm storm sewer, from the intersection of Garden City road and Capstan way to STMH6589. Install new manholes at pipe bends and to connect to existing main at Capstan Way. Connect existing catch basins to the proposed drainage main.
 - viii) Cap and fill the old drainage main, north of STMH6589, with low density flowable concrete as per MMCD standards.
- b) At the Developer's cost, the City will:
 - i) Cut and cap all existing storm sewer service connections at all frontages of the subject site.
 - ii) Complete all required tie-ins to the existing City drainage system.

24.5.3. Sanitary Sewer Works:

- a) At the Developer's cost, the Developer is required to:
 - i) Provide approximately 100 m of 300 mm diameter sanitary sewer within the roadway along Sexsmith Road from existing manhole SMH56774 located at the intersection of Sexsmith Road and Capstan Way southward to a new manhole.
 - ii) Provide approximately 85 m of 250 mm diameter sanitary sewer from the new manhole at Sexsmith Road southward to the future Brown Road extension and Sexsmith Road intersection.
 - iii) Provide approximately 90 m of 250 mm diameter sanitary sewer from the intersection of Sexsmith Road and future Brown Road, east along Brown Road.
 - iv) Provide approximately 135 m of 300 mm diameter sanitary sewer within the roadway along Capstan Way from the intersection at proposed Sexsmith Road and Capstan Way east towards future Ketcheson Road intersection. Tie-in to the west via manhole SMH56774.

- v) Provide approximately 100 m of 250 mm diameter sanitary sewer along future Ketcheson Road to the intersection with future North-South Road.
- vi) Provide approximately 120 m of 250 mm diameter sanitary sewer along the proposed North-South road to the north property line of proposed Lot 1 (South Lot). Tie-in to future Ketcheson Road via a manhole and provide a manhole at the high end of the system.
- b) At the Developer's cost, the City will:
 - i) Install new sanitary service laterals to proposed development.
 - ii) Complete all required tie-ins to the existing City sanitary system (at Capstan Way).

24.5.4. Frontage Improvements:

- a) At the Developer's cost, the Developer is required to:
 - i) Provide other frontage improvements (including 8671 Cambie Road) as per the city's Transportation Department requirements. Improvements shall be built to the ultimate condition wherever possible.
 - ii) Coordinate with BC Hydro to put underground the existing overhead lines and remove the poles that conflict with the curb lane along the east side of the ultimate Sexsmith Road.
 - iii) Pre-duct for future hydro, telephone and cable utilities along all road frontages.
 - iv) Coordinate with BC Hydro regarding the required relocation of transmission poles along Garden City Road frontage such that the poles and anchors do not conflict with future cycle path or side walk.
 - v) Provide private utility services (e.g., BC Hydro, Telus, Shaw and gas main) in the future road within 8671 Cambie Road. The new BC Hydro, Telus, Shaw and gas lines shall be from the north property line of 8671 Cambie Road to the tie-in point at the existing systems in Cambie Road.
 - vi) Locate all above ground utility cabinets and kiosks required to service the proposed development within the developments site (see list below for examples). A functional plan showing conceptual locations for such infrastructure shall be included in the Rezoning staff report and 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 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 SRWs that shall be shown in the functional plan and registered prior to SA design approval:

	(Width x Depth)	Street light kiosk	1.5m x 1.5m
BC Hydro LPT	3.5m x 3.5m	Telus FDH Cabinet*	1.1m x 1m
BC Hydro PMT	4m x 5m	Traffic signal kiosk	1m x 1m
Shaw cable kiosk*	1m x 1m	Traffic signal UPS	2m x 1.5m
*show possible location in functional plan			

24.5.5. Street Lighting Improvements:

- a) At the Developer's cost, the Developer is required to:
 - i) Provide street lighting along both the existing public street frontages (Cambie Road, Garden City Road, Capstan Way, and Sexsmith Road) and along proposed new development roads (Odlin Crescent extension, Ketcheson Road extension, Brown Road extension, and proposed North-South road). General requirements for street lighting are as follows, to be confirmed through the SA process:

- Capstan Way (South side of street), Sexsmith Road (East side of street) and Cambie Road (North side of street): Pole colour: Grey; Roadway lighting at back of curb: Type 7 (LED), including 1 street luminaire and 1 duplex receptacle, but excluding any pedestrian luminaires, banner arms, flower basket holders, or irrigation; and pedestrian lighting between sidewalk & bike path: Type 8 (LED) including 2 pedestrian luminaires set perpendicular to the roadway and 1 duplex receptacle and 2 flower basket holders along Cambie road only (none elsewhere), but excluding any irrigation.

NOTE: Requirements may change if it is decided that there will be no bike path/lane or and an on-street bike lane.

- Garden City Road (West side of street): Existing roadway lighting at median to remain (no change); Pole colour: Grey; Pedestrian lighting between sidewalk & bike path: Type 8 (LED) including 2 pedestrian luminaires set perpendicular to the roadway and duplex receptacles, but excluding any banner arms, flower basket holders, or irrigation. NOTE: Requirements may change if it is decided that there will be no bike path/lane or and an on-street bike lane.
- Odlin Crescent extension in 8671 Cambie Road: To be determined via the SA process.
- Ketcheson Road Extension (both sides of street) and Brown Road Extension (North side of street): Pole colour: Grey; Roadway lighting at back of curb: Type 7 (LED) including 1 street luminaire, but excluding any pedestrian luminaires, banner arms, flower basket holders, irrigation, or duplex receptacles.
- New North-South road (both sides of street): Pole colour: Grey; Roadway lighting at back of curb: Type 8/Custom 6.0 m Height (LED) including 1 street luminaire, flower basket holders, and 1 duplex receptacle, but excluding any banner arms or irrigation. (For reference: Drawing #615759-12-09)
- Mid-Block Trail SRW: Pole colour: Grey; Pedestrian lighting: Type 8 (LED) including 1 or 2 pedestrian luminaires, but excluding any banner arms, flower basket holders, irrigation, or duplex receptacles.

24.5.6. General Items:

- a) The Developer is required to, at the developer's cost:
 - i) Provide, prior to first SA design submission, a geotechnical assessment of preload and soil preparation impacts on the existing utilities fronting or within the development site, proposed utility installations.
 - ii) 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.
 - iii) Not encroach in to City Rights-of-Ways with any proposed trees, permanent retaining wall or other non-removable structures.
- b) All infrastructure designed and constructed as part of the required Servicing Agreement shall be coordinated with adjacent developments, both existing and future. The Developer's civil engineer shall submit a signed and sealed letter with each submission confirming that they have coordinated with the civil engineer(s) of the adjacent project(s) and that the Servicing Agreement designs are consistent. The City will not accept the first SA design submission without the letter indicating coordination with the adjacent developments.

i) The coordination should cover, but not be limited to, the following:

- Corridors for City utilities (existing and proposed water, storm sewer, sanitary and DEU) and private utilities.
- Pipe sizes, material and slopes.
- Location of manholes and fire hydrants.
- Road grades, high points and low points.
- Alignment of ultimate and interim curbs.
- Proposed street lights design.

25. (***No Rental or Age Restrictions***) Registration of a restrictive covenant on Lot 2 (East Lot), Lot 3 (West Lot) and Lot 4 (Central Lot) prohibiting (a) the imposition of any strata bylaw that would restrict the ability for any residential dwelling unit to be rented; and (b) the imposition of any strata bylaw that would place age-based restrictions on occupants of any residential dwelling unit.

26. (***Urban Agriculture***) Registration of a legal agreement on Lot 1 (South Lot) securing the provision of at least 92.9 m² (1,000 ft²) finished area on the roof of the affordable housing building, complete with raised vegetable gardening planters, work table, lighting, hose bib, and rainwater collection, and access by elevator and stair for the purposes of providing all building residents with access to and use of an urban agriculture garden.

Prior to a Development Permit* being forwarded to the Development Permit Panel for consideration, the developer is required to:

1. (***Legal Agreements***) Satisfy the terms of legal agreements secured through the rezoning application (RZ 18-836123) with respect to the development's Development Permit.
2. (***Additional Requirements***) Discharge and registration of additional right-of-way(s) and/or legal agreements, as determined to the satisfaction of the Director of Development, Director of Transportation, Director of Engineering, Manager of Real Estate Services, and Senior Manager of Parks.
3. (***Waste Management Plan***) As part of the permit drawings, submit a plan (i.e. drawings and related specifications) to the City's satisfaction, indicating the nature of all waste management-related facilities proposed on the subject site and their compliance with City bylaws and policies, including, but not limited to, carts/bins (e.g., uses, types, and numbers), waste/holding rooms (e.g., uses, locations, sizes and clear heights), loading facilities (e.g., locations, sizes, and clear heights), pedestrian/vehicle access (e.g., routes and vehicle turning templates), and related features, as required (e.g., signage, janitor sinks, floor drains, lighting, ventilation, safety measures, and door/gate operations).

Prior to Building Permit* Issuance, the developer must complete the following requirements:

1. (***Legal Agreements***) Satisfy the terms of legal agreements registered on title prior to final adoption of the rezoning bylaw (RZ 18-836123) and/or Development Permit issuance with respect to the development's Building Permit.
2. (***Rezoning and Development Permit Features***) Incorporation of urban design, accessibility and sustainability measures in Building Permit (BP) plans as determined via the Rezoning and/or Development Permit processes.
3. (***Construction Parking and Traffic Management Plan***) 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.
4. (***Latecomer Agreements***) If applicable, payment of latecomer agreement charges, plus applicable interest associated with eligible latecomer works.
5. (***Construction Hoarding***) Obtain a Building Permit* (BP) 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:

* This requires a separate application.

- 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]

Signed

Date

Schedule 1: Preliminary Subdivision Plan (December 3, 2020)

Schedule 2: Preliminary Road Functional Plan (December 2, 2020)

Schedule 3: Park and Public Open Space Key Plan (October 20, 2021)

Schedule 4: Farm Soil Recovery Area Diagram (December 16, 2020)

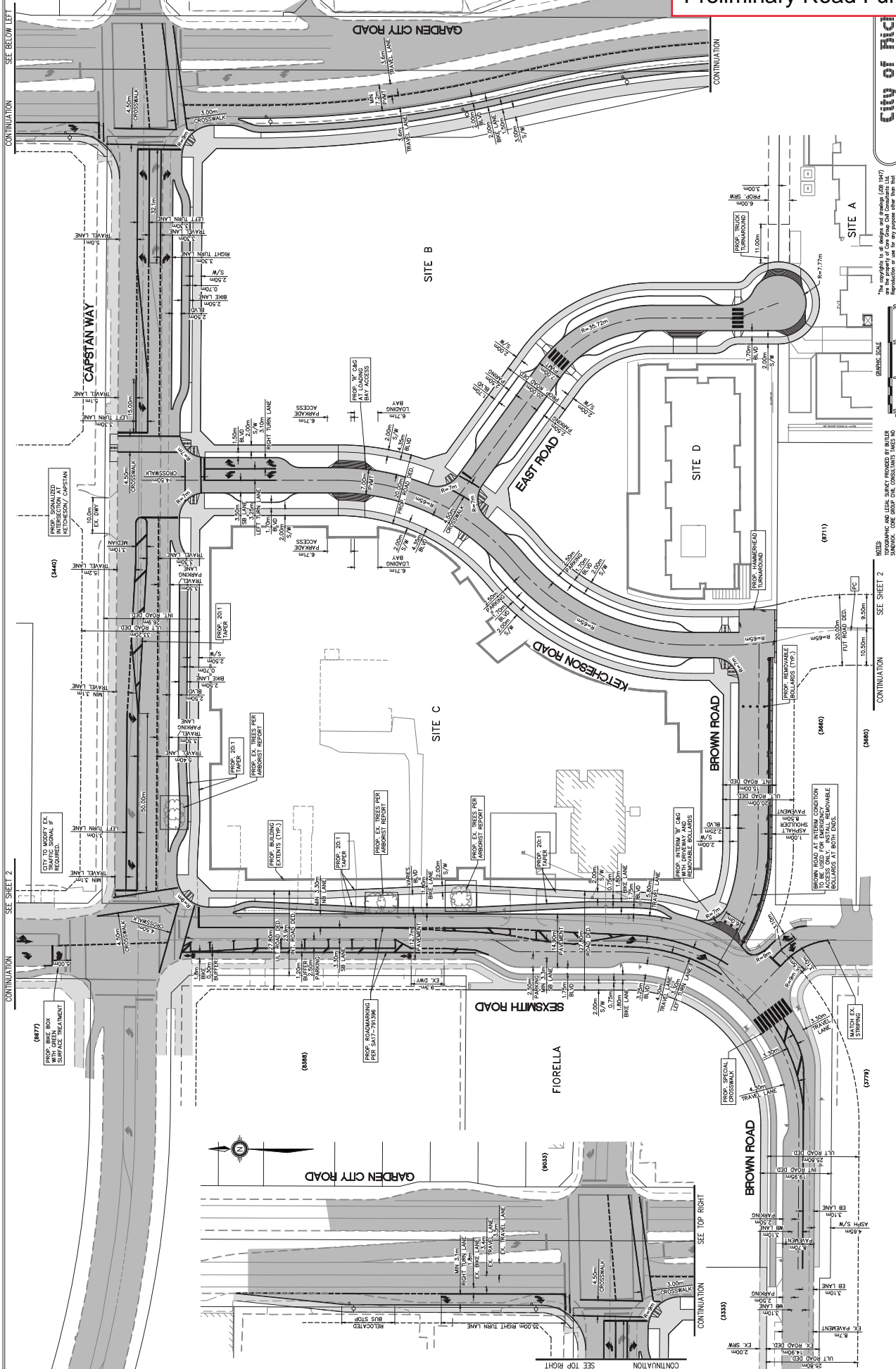
Schedule 5: Invasive Species Survey and Management Plan (December 20, 2020)

Schedule 6: Preliminary Tree Management Plans (September 30, December 3 and 18, 2020 Amendment #4 and 5)

Schedule 7: Preliminary SA Phasing Plan (January 18, 2021)

Schedule 8: Park Concept Plan (January 11, 2021)

Schedule 2 Preliminary Road Functional Plan



City of Richmond
EST. 1981, NO. 5, ROAD, DISTRICT

TITLE: INTERIM ROAD FUNCTIONAL PLAN
TALISMAN PARK

CITY FILE: -

DESIGN	C.N.	D.M.	N.P.
DRAWN	C.N.	D.B. <td>C.N.</td>	C.N.
CHECKED	C.N.	C.N.	C.N.
ENGINEER	C.N.	C.N.	C.N.

SCALE: 1:500
DATE: 0-0-0

REVISIONS

NO.	DATE	BY	CH.	DESCRIPTION
1	12/02/2020	D.B.	C.N.	REVISED EAST ROAD
2	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
3	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
4	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
5	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
6	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
7	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
8	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
9	08/02/2020	D.B.	C.N.	REVISED EAST ROAD
10	08/02/2020	D.B.	C.N.	REVISED EAST ROAD

DEVELOPER: POLYGON TALISMAN PARK HOMES LTD.
900-1000 TALISMAN PARK DRIVE
VANCOUVER, BC V6H 4Z2
Tel: (604) 481-4811

ENGINEER: CoreGroup
330-444 PATERSON COURT
VANCOUVER, BC V6H 4Z2
Tel: (604) 278-0625 Fax: (604) 278-0626

BENCHMARKS

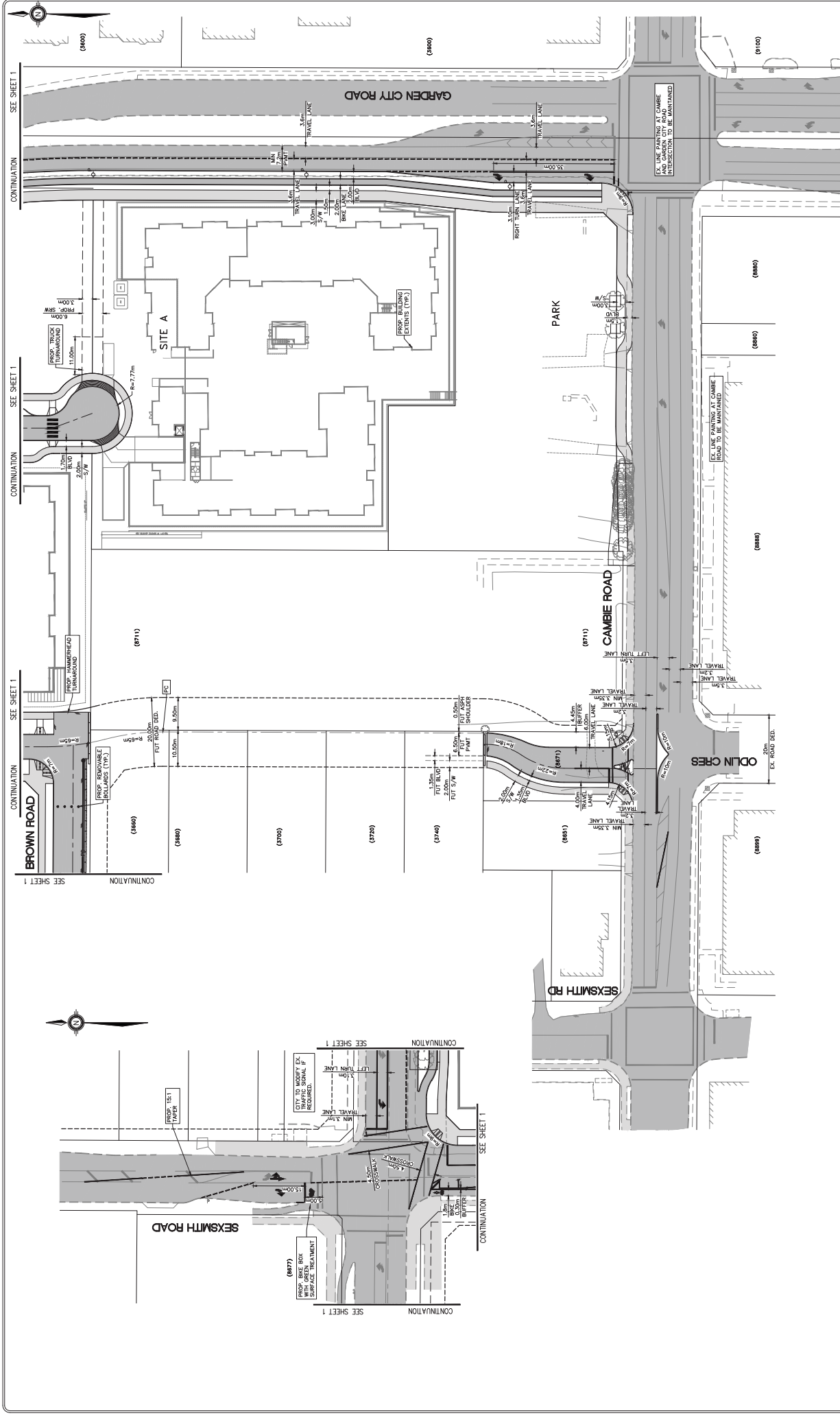
ALL ELEVATIONS ARE TO GEODETIC DATUM AND REFER TO BENCHMARK NUMBERS

ELEVATIONS ARE DERIVED FROM THE BENCHMARK (PINE LOCATED AT BROWN ROAD AND BROWN CREEK)

ELEVATION = 173.0m (LOCAL DASH DASH)

CITY WORK ORDER NO. _____

CONTRACTOR WORK ORDER NO. _____



City of Richmond
8871 No. 5 Road, Richmond, B.C. V6V 2E1

TITLE: INTERIM ROAD FUNCTIONAL PLAN
TALISMAN PARK

CITY FILE: -

DESIGN: C.N.	DWG. NO:
DRAWN: D.B.	DATE: 12/02/2020
CHECKED: C.N.	SCALE: 1:500
ENGINEER: C.N.	SEC. NO: 0-0-0
	SHT. NO: 2 OF 3

NOTES:
1. THE COPYRIGHT IS IN THE DESIGN AND DRAWING OF THIS PLAN.
2. THE CITY OF RICHMOND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT.
3. THE CITY OF RICHMOND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT.
4. THE CITY OF RICHMOND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT.

GRAPHIC SCALE
0 10 20
SCALE: 1:500

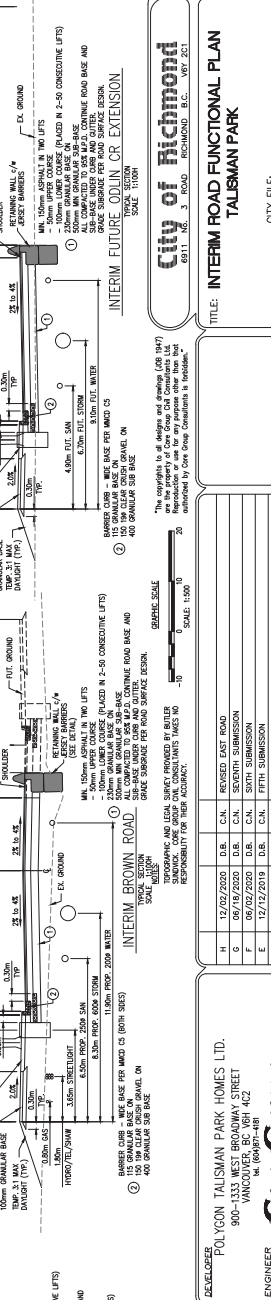
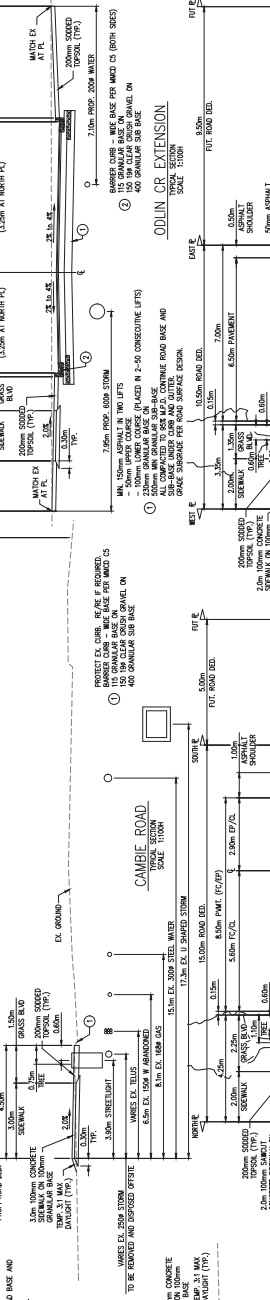
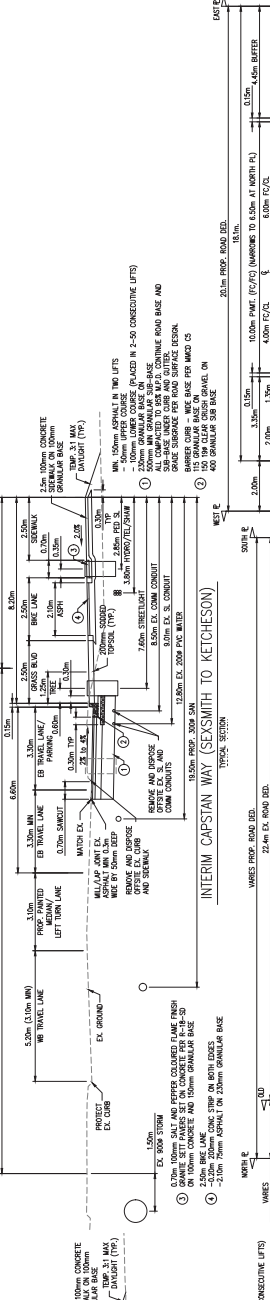
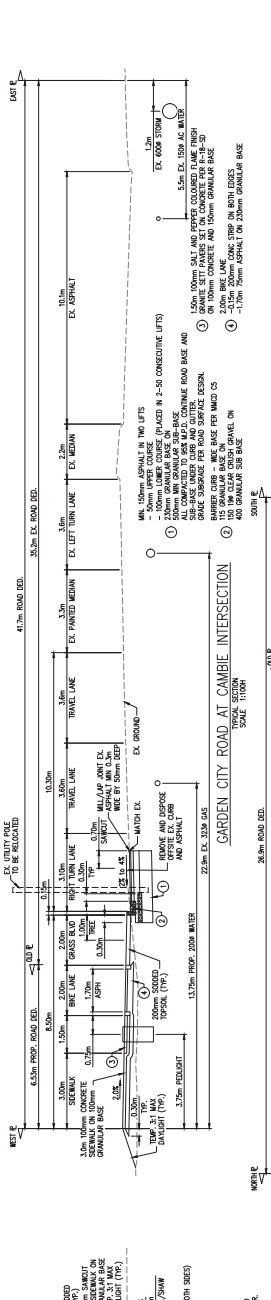
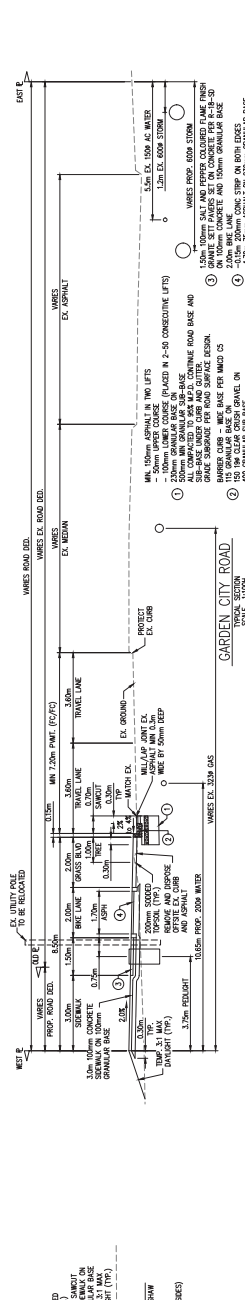
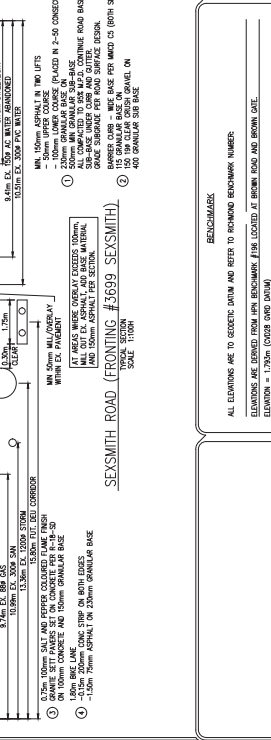
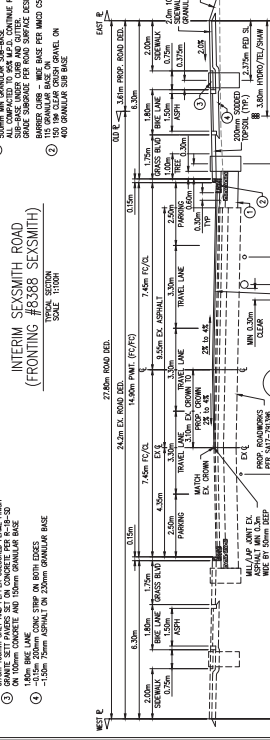
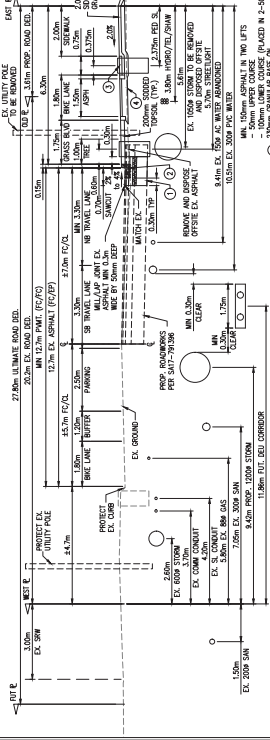
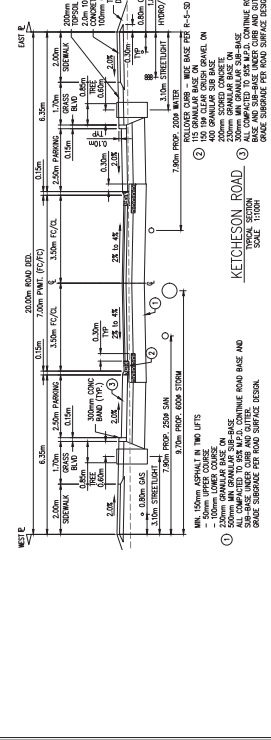
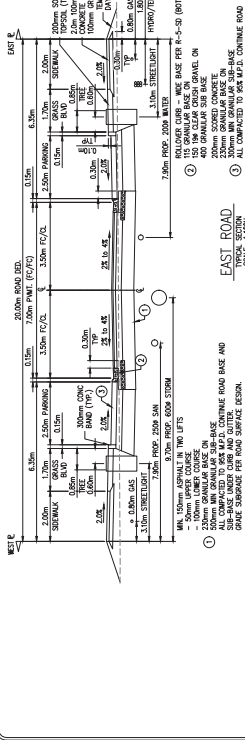
NO.	DATE	BY	CHK.	DESCRIPTION	REVISIONS
H	12/02/2020	D.B.	C.N.	REVISED EAST ROAD	
G	09/02/2020	D.B.	C.N.	REVISED SOUTH ROAD	
F	09/02/2020	D.B.	C.N.	REVISED SOUTH ROAD	
E	12/12/2019	D.B.	C.N.	REVISED SOUTH ROAD	
D	09/19/2019	D.B.	C.N.	REVISED SOUTH ROAD	
C	09/19/2019	D.B.	C.N.	REVISED SOUTH ROAD	
B	09/17/2019	D.B.	C.N.	REVISED SOUTH ROAD	
A	09/17/2019	D.B.	C.N.	REVISED SOUTH ROAD	

DEVELOPER: POLYGON TALISMAN PARK HOMES LTD.
900-10000 BROWN ROAD, SUITE 100
VANCOUVER, BC V6H 4Z2
TEL: (604) 271-4881

ENGINEER: CoreGroup CONSULTANTS
330-4444 PATERSON COURT
VANCOUVER, BC V6H 4Z2
TEL: (604) 271-4881

BENCHMARKS:
ALL ELEVATIONS ARE TO GEODETIC DATUM AND REFER TO BENCHMARK NUMBERS.
ELEVATIONS ARE DERIVED FROM THE BENCHMARK #1111 LOCATED AT BROWN ROAD AND BROWN CREEK.
ELEVATION = 173.0m (LOCAL DATED DATUM).

CITY WORK ORDER NO: _____
PROJECT NO: _____
DRAWING NO: _____



City of Richmond
8811-111 ST. ROAD, RICHMOND, B.C. V6V 1Z1

TITLE: INTERIM ROAD FUNCTIONAL PLAN
TALISMAN PARK

CITY FILE: -

DESIGN:	C.N.	DATE:	12/02/2020
DRAWN:	D.B.	SCALE:	1:500
CHECKED:	C.N.	SEC. NO:	D-0-0
ENGINEER:	C.N.	SHT. NO:	3 OF 3

The copyright is the design of the drawings (C.N. 1471) and the drawings are the property of the City of Richmond. Reproduction of any part of the drawings without the written permission of the City of Richmond is prohibited.

TOPOGRAPHIC AND LEGAL SURVEY PROVIDED BY BULLER SURVEYING. CORE GROUP HAS CONSULTANTS TIMES 10

REVISIONS

NO.	DATE	BY	CHK.	DESCRIPTION
1	12/02/2020	D.B.	C.N.	REVISED EAST ROAD
2	12/02/2020	D.B.	C.N.	REVISED BROWN ROAD
3	12/02/2020	D.B.	C.N.	REVISED SEXSMITH ROAD
4	12/02/2020	D.B.	C.N.	REVISED GARDEN CITY ROAD
5	12/02/2020	D.B.	C.N.	REVISED INTERIM BROWN ROAD
6	12/02/2020	D.B.	C.N.	REVISED INTERIM CAPSTAN WAY
7	12/02/2020	D.B.	C.N.	REVISED INTERIM ODLIN CR EXTENSION
8	12/02/2020	D.B.	C.N.	REVISED INTERIM BROWN ROAD
9	12/02/2020	D.B.	C.N.	REVISED INTERIM CAPSTAN WAY
10	12/02/2020	D.B.	C.N.	REVISED INTERIM ODLIN CR EXTENSION

POLYGON TALISMAN PARK HOMES LTD.
900-1111 STREET
VANCOUVER, BC V6H 4Z1

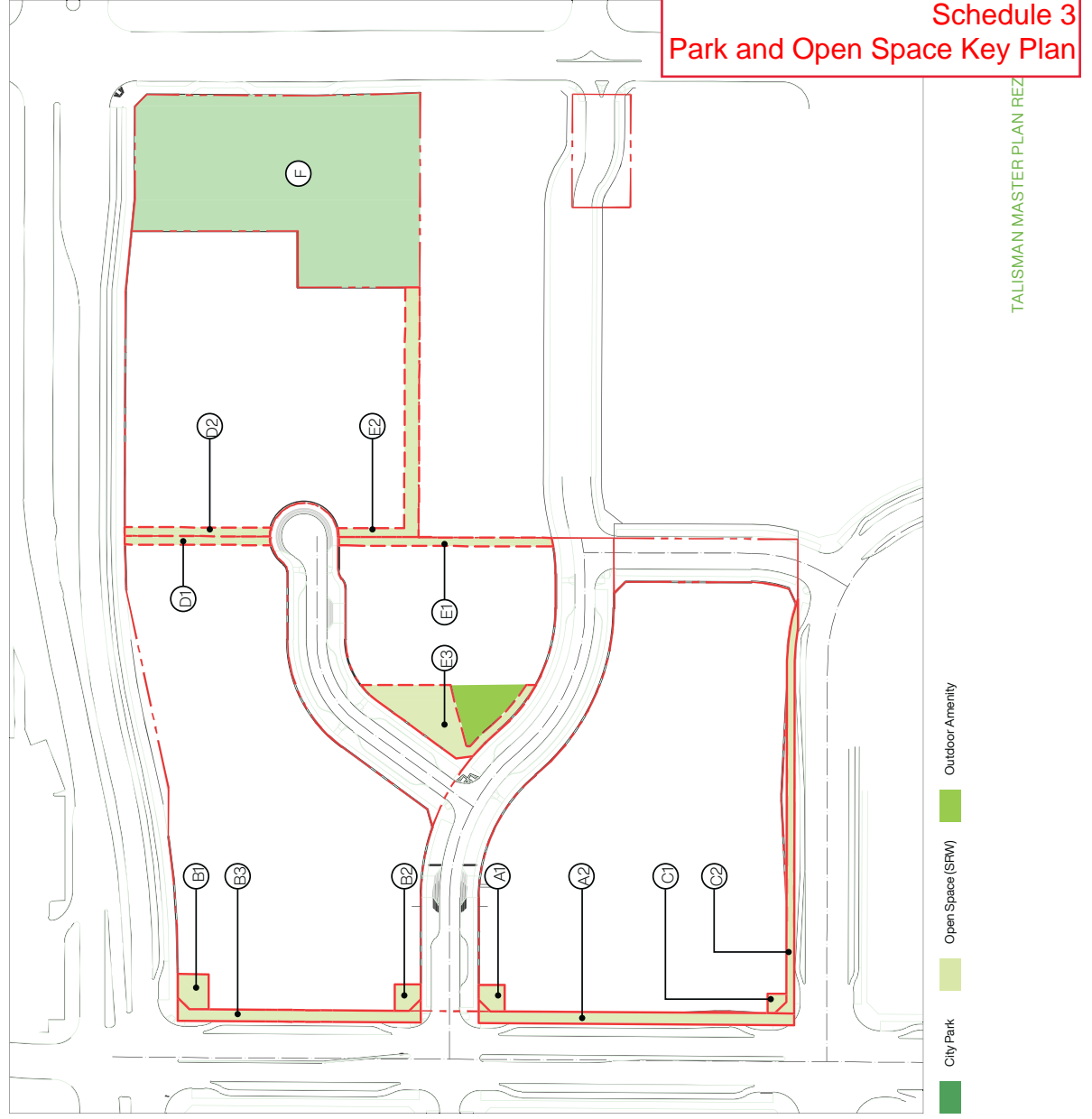
CoreGroup
LANDSCAPE ARCHITECTS
330-1111 STREET
VANCOUVER, BC V6H 4Z1

ALL ELEVATIONS ARE TO GEODETIC DATUM AND REFER TO RICHMOND BENCHMARK NUMBERS
ELEVATIONS ARE DERIVED FROM JPM BENCHMARK #18 LOCATED AT BROWN ROAD AND BROWN CREEK
ELEVATION = 1.73m (LOOSE SHARP DRAIN)

CITY WORK ORDER NO. _____
CONTRACTOR WORK ORDER NO. _____
TENDER / PROJECT NO. _____
ACCOUNT NO. _____

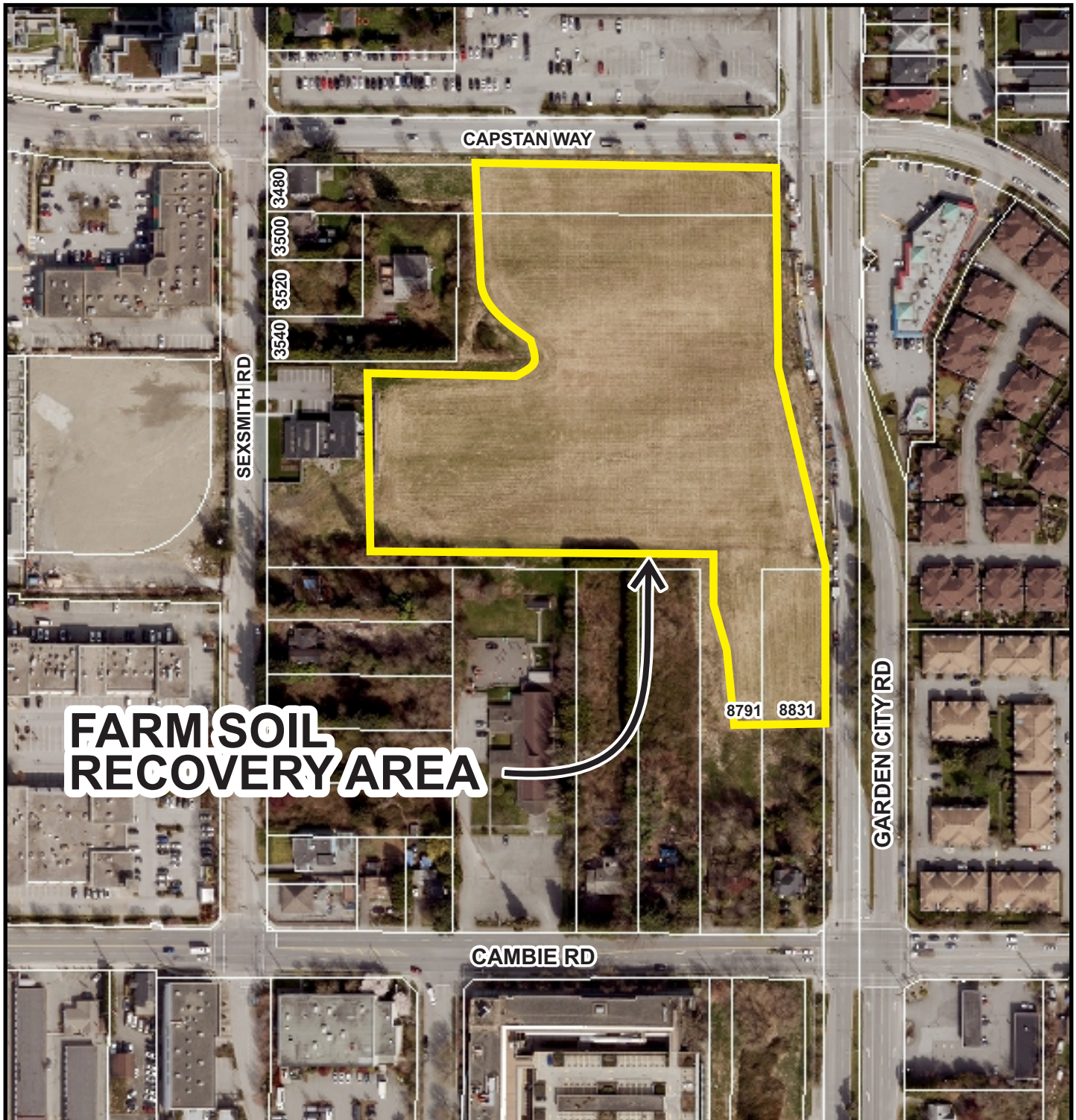
City Park & CSB Calculations

Capstan Station Bonus Open Space				
Required				
1CCAP required: 5m2 per unit				5 m ²
2 Total proposed units				1,341 units
3 Total CSB required				6,705 m ²
Provided				
	Dedication (Road)	Dedication (Park)	SRW	
A1 - Capstan Way corner plaza				73.4 m ²
A2 - Capstan Way additional widening	445.0 m ²			
B1 - Capstan Way corner plazas				121.4 m ²
B2 - Capstan Way corner plazas				73.3 m ²
B3 - Capstan Way additional widening	353.3 m ²			
C1 - Sexsmith Road corner plaza				35.8 m ²
C2 - Sexsmith Road additional widening	368.5 m ²			
D1 - Northeast Lot Mid-block Trail SRW				150.3 m ²
D2 - South Lot Mid-block Trail SRW				150.9 m ²
E1 - Central Lot Open Space				221.0 m ²
E2 - South Lot Open Space				498.6 m ²
E3 - Central Lot Open Space				600.0 m ²
F - Park		5,427.4 m ²		
Sub-total	1,166.8 m ²	5,427.4 m ²		1,924.7 m ²
Total		8,518.9 m²		
Surplus			1,813.9 m ²	





City of Richmond



Farm Soil Recovery Area
RZ 18-836123

Original Date: 04/07/20

Revision Date: 12/16/20

Note: Dimensions are in METRES



Polygon Talisman Park Invasive Species Survey and Management Plan

Prepared for: Polygon Talisman Park Ltd.

December 20, 2020

Revision Index			
Revision #	Approved by	Date (YYYY-MM-DD)	Issued Status
0	M. McTavish	2020-12-10	Issued for Review
1	M. McTavish	2020-12-17	Issued for Use
2	M. McTavish	2020-12-20	Issued for Use

Polygon Talisman Park Ltd.

Date: December 20, 2020

Attn: Robin Glover c/o Polygon Talisman Park Ltd.

Re: Invasive Species Survey and Management Plan for Polygon Talisman Park Development in Richmond, BC

McTavish Resource & Management Consultants Ltd. (McTavish) was retained by Polygon Talisman Park Ltd. to carry out an invasive species survey and develop an invasive species management plan for Polygon Talisman Park located in Richmond, BC. This management plan has been prepared using an integrated pest management approach in accordance with applicable legislation and regulations.

Should you have any questions or require further information, please contact the undersigned.

Sincerely,

McTAVISH RESOURCE & MANAGEMENT CONSULTANTS LTD.

PER:



Taisha Mitchell, BSc RPBio PBIOL PAG

Project Biologist

T: 604-364-1332

E: taisha@mctavishconsultants.ca

APPROVED BY:



Matt McTavish, EP

Director, Environment & Forestry Services

T: 604-323-4881

E: matt@mctavishconsultants.ca



Table of Contents

1.0	Introduction	1
2.0	Study Area and Project Description	1
3.0	Regulatory Framework.....	3
4.0	Methods	3
4.1	Invasive Species Survey.....	3
4.2	Invasive Species Management Plan	4
5.0	Invasive Species Survey Results	4
5.1	Japanese Knotweed	4
5.2	Himalayan Blackberry	4
5.3	Weed Seed Bank	5
5.4	Other Invasive Species	5
6.0	Prevention.....	6
7.0	Invasive Species Control and Site Specific Management Plan	6
7.1	Japanese Knotweed	6
	Manual and Mechanical Removal.....	7
	Chemical Treatment.....	7
7.2	Himalayan Blackberry	8
	Manual and Mechanical Removal.....	8
7.3	Weed Seed Bank and Other Invasive Species	8
	Weed Seed Bank	8
	Other Invasive Species	9
8.0	Site Specific Control Strategies	9
	Japanese Knotweed	9
	Himalayan Blackberry	10
	Weed Seed Bank and Other Invasive Species.....	10
	General Mitigation Measures	10
9.0	Disposal	11
9.1	Japanese Knotweed	11
9.2	Himalayan Blackberry	12
9.3	Weed-Seed Bank and Other Invasive Species.....	12
10.0	Monitoring and Reporting	12
11.0	Summary and Conclusion	13
12.0	References	14
Appendix I.	BC IAPP Distribution and Density Codes	15
Appendix II.	Invasive Species Survey Results and Map.....	16



Appendix III.	Select Photographs	19
Appendix IV.	Invasive Species Control, Monitoring and Reporting Cost Estimate	25

List of Figures

Figure 1 Overview Map	2
Figure 2 Facing southeast from northeast corner of property (July 14, 2020)	19
Figure 3 Facing east from northwest corner of property (July 14, 2020)	19
Figure 4 Facing south from northeast corner of property (July 14, 2020)	20
Figure 5 Facing northwest from eastern edge of property (July 14, 2020)	20
Figure 6 Facing Japanese knotweed infestation (November 24, 2020)	21
Figure 7 Facing northeast at Himalayan blackberry infestation in residential yard off Sexsmith Rd (November 24, 2020)	21
Figure 8 Facing west at residential driveway off Sexsmith Rd (November 24, 2020)	22
Figure 9 Facing north at Himalayan blackberry infestation in residential yard off Cambie Rd (November 24, 2020)	22
Figure 10 Facing southeast at infestation with weed seed bank (November 24, 2020)	23
Figure 11 Facing bull thistle infestation in residential yard off Cambie Rd (November 24, 2020)	23
Figure 12 Facing southwest at Canada fleabane infestation in residential yard off Cambie Rd (November 24, 2020)	24

List of Tables

Table 1 Properties within Polygon Talisman Park Site Boundaries	1
Table 2 Regulatory Framework Applicable to the Proposed Development	3
Table 3 Summary of Herbicides Suitable for Knotweed Treatment at Sumas Terminal	8



1.0 Introduction

McTavish Resource & Management Consultants Ltd. (McTavish) was retained by Polygon Talisman Park Ltd. (Polygon) to conduct an invasive plant species survey for a proposed development site bounded by Sexsmith Road, Capstanway, Garden City Road and Cambie Road in Richmond, BC (the “site”).

This assessment 1) identifies and documents invasive species that occur on site including regionally and provincially noxious weeds; and 2) outlines an invasive species management plan using an integrated pest management approach.

2.0 Study Area and Project Description

The site is comprised of nine (9) properties in Richmond, BC (**Table 1; Figure 1**).

Table 1 Properties within Polygon Talisman Park Site Boundaries

Address	PID	Area (m ²)
3600 Sexsmith Road	006-162-843	32,385.00
3480 Sexsmith Road	006-111-998	4,378.00
8851 Cambie Road	003-576-485	4,043.00
8771 Cambie Road	004-174-135	4,048.00
8731 Cambie Road	003-923-088	4,047.00
8671 Cambie Road	004-504-909	808.00
3560 Sexsmith Road	004-197-666	3,294.00
3520 Sexsmith Road	001-943-090	956.00
3500 Sexsmith Road	004-272-200	808.00
Total		54,767.00

Approximately half of the site is in agricultural use while the remainder is in residential use. The agricultural area is mainly flat and has been in perennial forage production for over 30 years (Pers. Comm. B. Milligan). The residential areas are vegetated with sod-forming grasses, maintained and unmaintained ornamental shrubs, native and non-native trees, and invasive species. The site occurs in an urban center and is surrounded by mixed-density residential and commercial areas to the north, south, east, and west.

Polygon intends to develop much of the site to multi-family residential. A park will be developed in the southeastern corner of the site. It is understood that the park will be dedicated to the City of Richmond following its construction.



Polygon Talisman Park - Overview Map



Location: Polygon Talisman
Park Site, Richmond, British
Columbia

UTM: 10 U 508500.28 m E
5438658.49 m N

Legend



Site Boundary

0 10 20 30 40 50 m



Coordinate System: NAD83 UTM 10N

Mapping by:



Project number: OT-32
Drawn by: [Name]
Date: 2020-12-10

3.0 Regulatory Framework

Provincial and federal legislation and regulations and municipal bylaws that apply are outlined in **Table 2**.

Table 2 Regulatory Framework Applicable to the Proposed Development

Jurisdiction	Legislation/Regulation	Applicability
Provincial	<i>Weed Control Act and Regulation</i>	Noxious weeds must be controlled in accordance with regulation.
Provincial	<i>Integrated Pest Management Act and Regulation</i>	Regulates the sale and use of pesticides. Includes standards for integrative pest management programs and use of pesticides aimed to ensure protection of human health and the environment.
Municipal	<i>Pesticide Control Use Bylaw No. 8514</i>	Regulates pesticide use in the City or Richmond. Prohibits use for the purpose of maintaining outdoor trees, shrubs, flowers, other ornamental plants or turf on private residential property or City land. There are several exceptions including use of pesticide in response to a noxious weed.
Municipal	<i>Unightly Premises Regulations Bylaw No. 7162</i>	The owner or occupier of real property, or their agents, must clear or cause such property to be cleared of noxious weeds (as defined in the <i>BC Weed Control Regulation</i>) and their seeds.

4.0 Methods

4.1 Invasive Species Survey

The invasive plant species survey was conducted on November 24, 2020 by Taisha Mitchell (RPBio, PBIOL, PAg) and Devin Robinson (BNRSc, BIT, AAg). The visual inspection was carried out on foot and included collection of the following data:

- Location of infestation(s) on and adjacent to the site
- Species and common name
- Growth stage and height
- Distribution and density (**Appendix I**)
- Site environmental data and/or potential areas of concern



4.2 Invasive Species Management Plan

Based on the invasive species survey, a site-specific management plan was developed to address invasive species concerns on site. The management plan follows an integrated pest management approach and addresses prevention, control, monitoring, and evaluation of invasive species identified at the site. Recommended strategies use a combination of control approaches that adhere to applicable regulatory requirements and best management practices.

5.0 Invasive Species Survey Results

Multiple invasive species including several provincially noxious species under the Weed Control Regulation of the BC *Weed Control Act* were observed on the site (**Appendix II**). Select photographs are provided in **Appendix III**.

Invasive species identified on site include an infestation of Japanese knotweed (*Fallopica japonica*), large swathes of Himalayan blackberry (*Rubus armeniacus*) that occur across the site, and one area that has been identified to have a well-developed weed-seed bank. Additional invasive species occur in low to moderate densities across the site.

5.1 Japanese Knotweed

One Japanese knotweed (provincially noxious) infestation was observed within the yard of a now demolished residence (PID: 004-174-135). This infestation is approximately 300 m² in size with multiple patches of mature knotweed. This infestation is situated in an area that will be the future location of a public park and grows adjacent to mature trees that will be retained. At the time of the assessment the knotweed had died back for the winter.

Japanese knotweed is tolerant to a variety of site conditions including highly shaded areas, areas with high salinity, high heat, drought, or saturation. This highly pervasive species has environmental, economic, and social impacts.

Knotweed is a perennial species (*i.e.*, persistent plants where above ground vegetation dies back after the first frost and below ground vegetation lies dormant during the winter before re-sprouting in the spring). Knotweed species typically spread by rhizomes (underground lateral stems) that can extend up to three metres deep and up to 20 metres wide. New plants may sprout from fragments of rhizome and stem material from as little as 0.7 grams and can sprout from depths of one metre or more.

5.2 Himalayan Blackberry

Himalayan blackberry (non-regulated) was also observed in large thickets across the site. Dense infestations occurred along the inner periphery of the agricultural field, along the edges of the residential yards, and has overgrown several of the residential yards.

Himalayan blackberry is widespread across the lower mainland and is often found on disturbed sites, streamside areas, utility corridors, urban areas, forest edges, and ravines. Himalayan blackberry prefers rich, well-drained soils with high light availability, however, tolerates a wide variety of soil and light



conditions. Himalayan blackberry forms dense thickets of live and dead canes and degrades habitat quality through competition and can obstruct roads, right of ways, and walkways.

Himalayan blackberry is primarily a biennial species (*i.e.*, plant that takes two years to complete lifecycle) that reproduces both vegetatively and by seed. This species propagates new plants when the tips of first year canes come into contact with the ground and spreads via underground runners that produce new shoots.

5.3 Weed Seed Bank

An infestation with a well-developed weed-seed bank was observed in the southeast corner of the site. This 2,000 m² infestation was comprised of multiple species including provincially noxious Canada thistle (*Cirsium arvense*) and perennial sowthistle (*Sonchus arvensis*). Within the infested area, invasive species observed had a moderate to high density and distribution.

The following provides a list of the most prevalent species and their seed production and longevity to provide context for the extent of the possible weed seed bank.

- Canada thistle – 1,000 to 1,500 seeds per flowering shoot. Un-germinated seeds may remain dormant and viable for up to three years (ISCBC, 2019)
- Bull thistle – 100 to 300 per flowerhead with up to 4,000 seeds produced per mature plant. Ungerminated seeds may remain dormant and viable for up to three years (WCNWCB, Nd.)
- Perennial sow thistle – ~30 seeds per flowerhead up to 4,000 seeds per mature plant (USFS, 2007). Ungerminated seed may remain dormant and viable for up to three years (MSU, 2020b).
- Curled dock – 100 to over 60,000 seeds per plant. Ungerminated seed may remain dormant and viable for up to 17 years (seed bank reduced 50% over three years; MSU, 2020a)
- Tufted vetch – With 10 – 30 flowers per plant, which can produce 4-8 seeds per pod, 40 to 240 seeds per plant. Ungerminated seeds remain dormant and viable for five to seven years (YISC, 2010).

5.4 Other Invasive Species

Other invasive species on site include herbaceous species observed in low densities on the periphery of the managed agricultural field and across the residential properties. One 300 m² infestation of bull thistle (*Cirsium vulgare*) was observed in a residential property off Cambie Road.

English ivy (*Hedera helix*) and common holly (*Ilex aquifolium*) were observed along the eastern boundary of the site intermixed with trees along Garden City Road.



6.0 Prevention

The following table outlines mitigation measures to be implemented on site during development to prevent the spread of invasive species.

- The Japanese knotweed infestation and the weed-seed bank shall be delineated by a Qualified Environmental Professional (QEP) prior to the commencement of works on site to limit access and prevent the spread of weed-species of concern.
 - Japanese knotweed visible infestation + 5 m buffer
 - Extent of visible infestation where weed seed bank occurs + 2 m buffer
- All machinery, vehicles and equipment entering the subject property are to arrive clean and free of visible soil and debris.
- Soil and vegetative disturbances should be reduced within the delineated infestations.
- Where contact to delineated infestation cannot be avoided, all machinery, vehicles, tools, equipment, and footwear are to be cleaned prior to working outside the infestation area. Cleaning should include mechanical removal of soil and visible vegetative debris *within* the delineated infestation (and immediate washing for knotweed-infested areas). Footwear and clothing are also to be free of soil and vegetative debris prior to leaving the marked limits of a delineated infestation.
- During any tree clearing and grubbing, mechanically brush excess soils off felled trees and grubbed roots prior to the removal of the material from any delineated infestation.
- Any excavated soils within the delineated infestations are to stay within the infested area from which it came. If infested soils are to be removed from site, they must be disposed of at an approved facility (see Section 8.0 Disposal, below).

7.0 Invasive Species Control and Site Specific Management Plan

The following section outlines best management practices that are applicable for control of Japanese knotweed, Himalayan blackberry infestations, the weed seed bank and other invasive species including provincially noxious species. These best management practices are non-exhaustive and provide a summary of those relevant to the site based on the infestations, scheduling of development, local bylaw restrictions and other applicable regulations.

Section 8.0 outlines the site-specific recommendations for control of the identified invasive species issues on site.

7.1 Japanese Knotweed

Japanese knotweed control strategies on site include mechanical, manual, and chemical treatment. The strategies outlined considers the *Best Management Practices for Knotweed Species in the Metro Vancouver Region* (Metro Vancouver & the ISCMV et al. 2018).



Manual and Mechanical Removal

Manual control involves cutting established above-ground vegetation during the growing season, thus weakening the plant, and reducing the stored energy in the above ground vegetation prior to translocation to the rhizomes in the fall. Manual removal may also be used to remove died-back canes during the fall and winter.

Mechanical removal of the rhizomes and rhizome “root ball” can further weaken the plant as the rhizome network can account for over two thirds of the mature plants’ biomass. A more aggressive approach is to completely excavate the rhizome material (20 m wide and 3 m deep). The best management for full rhizome material removal is to excavate soils 20 m out from the visible infestation boundary and 3 m deep. Chemical treatment follow-up is recommended.

Extreme care must be taken while using these methods to prevent further spread either through dispersal of live vegetative material or soils infested with knotweed. All knotweed material and knotweed infested soils are to be disposed of appropriately (see Section 8.0).

Chemical Treatment

Chemical control application methods include foliar application and stem injection with approved herbicide (**Table 3**). Foliar application can be applied using a backpack or handheld sprayer or by wicking/wiping herbicide on the underside of leaf surfaces. Stem injection involves injecting herbicide into each individual stem and can be very effective.

Timing for chemical treatment varies based on the herbicide (follow label instructions). Generally, herbicide should be applied during the growing season when there is sufficient foliage on the stem to ensure adequate surface area for absorption (i.e. stems are at least one metre high). For stems over 1-m tall, stems can first be bent downward (without breaking stem) or cut back to a manageable height to avoid spraying over head. Any knotweed material lost from bending, or cut back is to be disposed of appropriately (see Section 8.0).



Table 3 Summary of Herbicides Suitable for Knotweed Treatment at Sumas Terminal

Herbicide Category ¹	Herbicide(s) ²	Application	Persistence ⁴	Timing
Non-selective	Glyphosate	Foliar Stem injection ³	Non-residual	During growing season
Selective	<ul style="list-style-type: none"> • Imazapyr • Aminopyralid + metsulfuron methyl • Aminopyralid • Triclopyr 	Foliar	Residual	During growing season

1. Non-selective controls all vegetation while selective targets specific vegetation (i.e. broadleaf species).
2. Herbicides must be applied in approved areas following labels and applicable legislation.
3. Only approved herbicide for stem injection is Roundup WeatherPRO® (PCP No. 33653). Previously, Roundup WeatherMax® with Transorb 2 Technology Liquid Herbicide (PCP No. 27487) was approved for stem injection in BC – user must ensure that stem injection is included for use on label prior to use.
4. Residual herbicides have varying levels of persistence and mobility in soil/water.

7.2 Himalayan Blackberry

Himalayan blackberry control on site will largely rely on manual and mechanical removal as outlined in *Best Management Practices for Himalayan Blackberry in the Metro Vancouver Region* (Metro Vancouver & the ISCMV et al., 2019c).

Manual and Mechanical Removal

Mechanical removal can be effective at depleting stored plant reserve and decrease the size and vigor of an infestation.

Digging and grubbing involves digging up the root crowns and lateral roots. Mechanical cutting of above-ground growth can be done with hand and powered tools. This technique is not often effective on its own and must be repeated multiple times to deplete stored plant reserves. Mechanical removal is required if digging/grubbing to access the roots and root crowns. If roots are being removed after cutting it is recommended to leave canes 30 cm in height at the root crown to easily locate. Follow up chemical treatment or chemical treatment in conjunction with manual/mechanical removal is often recommended.

7.3 Weed Seed Bank and Other Invasive Species

Weed Seed Bank

Weed seed banks are difficult to manage and recommendations are typically provided for seed banks in agricultural contexts that can be managed over multiple years. In these instances, the best management practice is to deplete the weed seed bank followed by establishment of desirable species to out-compete the invasive species in conjunction with chemical treatment (GRDC, 2010).



Other Invasive Species

Chemical spot treatment of herbaceous invasive species is the best approach for complete control. However, as pesticide use is restricted to noxious species unless treated with pesticides listed in Schedule A of the City of Richmond *Pesticide Use Control Bylaw No. 8514* within the City of Richmond, mowing is recommended. Mowing should be carried out before flowering and seed set and should be done multiple times to weaken the plant.

English ivy and common holly should be manually/mechanically removed (Metro Vancouver & the ISCMV et al., 2019a,b). English ivy can be cut and pulled using hand tools. To remove from trees, cut through ivy stems around the entire trunk of the host tree 1-2 m from the ground, being careful not to damage the tree trunk. All material below the cut can be removed, while the material above can be left to die off in place.

Common holly can be removed by pulling (for small plants up to 3 cm in diameter) or pulled, dug, or excavated (for larger plants). For larger plants consider first removing branches and/or cutting the trunk down to about 1 m in height to facilitate pulling of the trunk. When removing holly, as much of the root mass should be removed as possible to limit resprouting. Follow up treatment is recommended for both English ivy and common holly.

8.0 Site Specific Control Strategies

The recommendations outlined in this section follow an integrated pest management approach and adhere to applicable regulatory requirements (including local bylaws) and best management practices. All recommendations consider the species, size and vigor of the infestation, site conditions, intended site use, and scheduling of development.

Following any treatment, the contractor is to provide a record of treatment (including herbicides used and any non-treatment zones or pesticide-free zones) to Polygon. Estimated cost of control is included in **Appendix IV**.

Japanese Knotweed

The following provides a timeline for control of knotweed identified on site.

Winter 2020/2021

- Manual removal of above-ground knotweed canes using hand tools.

Winter 2020/2021 – Spring 2021

- Mechanical removal of knotweed crowns and rhizome material prior to growth in spring. Excess soils are to be removed from crown/rhizome ball within the delineated infestation prior to transport. These soils are to stay within the delineated area to prevent spread.

Summer 2021 and Summer 2022+

- Chemical treatment of any knotweed re-growth. Chemical treatment can be carried up to two times per growing season. Stem injection (using approved herbicide) or foliar treatment using



glyphosate is recommended due to the proximity of trees for retention near the infestation. Care is to be taken not to spray any surrounding trees or non-target vegetation.

- Chemical treatment to be continued for each subsequent growing season until complete control achieved.

Himalayan Blackberry

- Mechanical removal of all above-ground vegetation (leaving 30 cm long canes at crown). To be completed outside the bird nesting window (*i.e.* complete between August 18 and March 25).
- Digging/grubbing of root crowns and lateral roots.
- Multiple mechanical removal and/or mowing of cane re-growth during growing season.
- If canes can only be removed once in a season, then it is recommended to carry out immediately after flowering as most root reserves have been used to produce flowers.

Weed Seed Bank and Other Invasive Species

- Provincially noxious species identified on site (Canada thistle, perennial sow thistle) should be spot treated using an appropriate herbicide up to two times during the growing season. It is recommended invasive species control contractors use the map provided in **Appendix II** to target known locations of noxious species, as well as sweep the residential yards, the weed seed bank infestation, and the periphery of the agricultural field for unidentified noxious species infestations.
- If chemical control for noxious species is not possible, mowing before flowering and seed set can be carried out. Mowing should be done at least once but should be done multiple times.
- Weed seed depletion within the weed seed bank can be achieved by mowing at least once (but should be done multiple times) prior to flowering and seed set.
- English ivy and common holly are to be mechanically removed. The best timing for English ivy is in the spring or fall when vines are more flexible and the ground moist while best timing for common holly is any time during the growing season (before fruit production).

General Mitigation Measures

- Should any vegetative removal and/or mowing control measures be completed during the regional bird-nesting window (March 1 – August 30), then a Wildlife Resource Specialist should be retained to conduct a bird nest survey prior to disturbance to prevent contravention of the *Federal Migratory Birds Convention Act* and/or the *BC Wildlife Act*.
- All herbicide use is to be carried out in accordance with the *BC Pest Integrated Pest Management Act and Regulation*, the City of Richmond *Pesticide Control Use Bylaw No. 8514*, and as described on the herbicide label. Pesticide application can only be carried out by certified herbicide applicators under a valid Pesticide Licence.
- Care is to be taken to avoid accidental herbicide application to trees and non-target vegetation.
- Care is to be taken to prevent further spread of weeds by transporting vegetative parts, and by spreading weed seeds. Mowers and other equipment used should be swept free of soil and



vegetative debris prior to leaving the infested areas and washed prior to working in any other area or off site.

- In addition to those listed above, all preventative mitigation measures and biosecurity protocols outlined in Section 6.0 are to be adhered to.

9.0 Disposal

The following section outlines disposal recommendations for the identified invasive species concerns on site as well as additional mitigation measures. In addition to those listed below, all preventative mitigation measures and biosecurity protocols outlined in Section 6.0 are to be adhered to.

9.1 Japanese Knotweed

The best management practice for knotweed disposal is to avoid offsite disposal due to the risk of spread during transport. On site disposal may include on-site composting (on a tarp separate from other materials and secured to prevent spread) or deep burial of knotweed material (minimum depth of 5 m).

Due to the intended site use and development timeline, off site removal is most feasible. Dead canes can be removed in the winter and disposed of at an approved facility. Live canes manually removed in the summer can be elevated and left to dry on site within the delineated infestation area and disposed of at an approved facility following complete desiccation. If canes must be removed immediately following manual removal, extreme care is to be taken to avoid loss of vegetative material and to prevent spread.

Excess soils from the delineated knotweed infestation may require removal. Knotweed-infested soils must be disposed of at an approved facility and are often only accepted for deep burial at an additional charge.

The following measures are to be implemented for the disposal of non-desiccated knotweed and knotweed-infested soils (as adapted from ISCBC, 2018).

- Extreme care is to be taken when handling and disposing of knotweed and knotweed-infested soils to prevent spread.
- Vegetative knotweed materials should be bagged, tarped, and strapped securely or placed within a sealed trailer for transport.
- Dump trucks (or alternative) are to be secured in such a way that there is no chance of soil, seeds, and fragments from escaping (lining with tarps over any gapes, cracks, etc.).
- Soil within dump trucks (or alternative) is to be covered securely with heavy tarps or an appropriate non-porous alternative (the rock screen that covers dump trucks is not adequate in preventing the release of infested soils into the environment).
- Loading of knotweed vegetative debris and or infested soil is to occur within the already infested area whenever possible. If loading cannot occur within the infested area, use a single loading route. Following loading, the loading route is to be flagged and incorporated into the delineated area for monitoring unless it is deemed “not infested” by a Qualified Environmental Professional.



- A singular route between the knotweed infestation and the site exit is to be delineated. The marked route is only to be used as to limit the extent of possible spread of knotweed and/or knotweed infested soils.
- The contractor is to declare to any disposal facility that they intend to dispose of knotweed vegetative material, roots (rhizomes), and/or knotweed infested soils (any soil within 20 m wide 3 m deep from infestation) prior to disposal and acceptance.
- Should the removal of live knotweed canes and/or knotweed infested soils be required, it is recommended to retain a QEP to monitor these works to ensure the mitigation measures outlined in this document are adhered to.

9.2 Himalayan Blackberry

Himalayan blackberry disposal may be achieved on or off site. On site disposal involves chipping the material and allowing to decompose on site.

Off-site disposal at an approved facility is recommended due to the large volume of waste. The following measures are to be implemented.

- Care is to be taken to avoid the spread of plant parts during disposal.
- Plant material should be covered and secured for transport.

9.3 Weed-Seed Bank and Other Invasive Species

Following mowing, invasive species from within the weed seed bank, as well as other invasive species on site can be left on site to desiccate and compost if mowed prior to flowering/seed set. If mowed following (not recommended), then invasive species debris should be removed from and disposed of at an approved facility and the following implemented.

- Care is to be taken to avoid the spread of plant parts during disposal.
- Plant material should be covered and secured for transport.

If excess soils from the infestations within the weed seed bank is to be disposed of, soils must be disposed of at an approved facility. Soil within dump trucks is to be secured securely to prevent the release of infested soils into the environment.

10.0 Monitoring and Reporting

A QEP is to be retained to carry out periodic monitoring of weed infestations on site. Invasive species monitoring should be carried out twice per growing season (once in spring and once in fall) while control is ongoing to document the progress of ongoing control efforts.

Following control, monitoring should continue annually (late spring) for three years following complete control of noxious species (excluding knotweed) on site, and for up to five years following complete control of the knotweed on site. The monitoring period and frequency may be increased should further treatment be required.



Monitoring is to take into consideration site conditions, known and new infestations, size and condition of infestation, treatment method, and treatment effectiveness. Monitoring may also include effectiveness of biosecurity and mitigation measures implemented to prevent the spread of invasive species throughout and off site.

Monitoring of knotweed control is to be a focus. Monitoring of this infestation is to include at a minimum the known infestation area, the travel route on site used during any disposal, and the surrounding area (up to 20 m beyond these areas). Additional monitoring for live knotweed and/or knotweed infested soil removal is recommended, as outlined in Section 9.0.

Estimated cost of monitoring and reporting is provided in **Appendix IV**.

Based on monitoring observations, further mitigation measures, treatment and/or control may be recommended. Each monitoring site visit is to be documented and a summary report provided to the client.

11.0 Summary and Conclusion

Invasive species including provincially noxious Canada thistle, Japanese knotweed, and perennial sowthistle, were identified within the Polygon Talisman Park site. Dense Himalayan blackberry infestations as well as a well-developed weed seed bank were also identified on site.

Invasive species management will be carried out following an integrated pest management approach which includes prevention, control, monitoring, and evaluation of invasive species control on site. Recommended strategies will adhere to applicable regulatory requirements and best management practices.




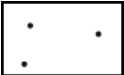
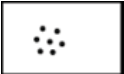

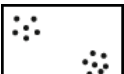

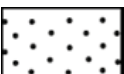

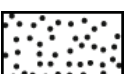
12.0 References

- [GRDC] Grains Research & Development Corporation. 2010. Managing the Weed Seedbank. Factsheet. Available at: https://grdc.com.au/__data/assets/pdf_file/0020/206804/managing-the-weed-seedbank.pdf.pdf (Accessed December 2020)
- [ISCBC] Invasive Species Council of BC. 2019. Canada Thistle – *Cirsium arvense*. Factsheet. Available at: prefers rich, well-drained soils with high light availability (Accessed December 2020)
- Metro Vancouver & the ISCMV et al. 2018. *Best Management Practices for Knotweed Species in the Metro Vancouver Region*. Available at: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/InvasiveSpeciesBMP-Knotweed-v3.pdf> (Accessed December 2020)
- Metro Vancouver & the ISCMV et al. 2019a. *Best Management Practices for English Holly in the Metro Vancouver Region*. Available at: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/EnglishHollyBMP.pdf> (Accessed December 2020)
- Metro Vancouver & the ISCMV et al. 2019b. *Best Management Practices for English and Irish Ivies in the Metro Vancouver Region*. Available at: <http://www.metrovancouver.org/services/regional-planning/PlanningPublications/EnglishIrishIviesBMP.pdf> (Accessed December 2020)
- Metro Vancouver & the ISCMV et al. 2019c. *Best Management Practices for Himalayan Blackberry in the Metro Vancouver Region*. Available at: http://www.metrovancouver.org/services/regional-planning/PlanningPublications/HimalayanBlackBerries_BMP-v7.pdf (Accessed December 2020)
- [MSU] Michigan State University. 2020a. Curly dock. Available at: <https://www.canr.msu.edu/weeds/extension/curly-dock> (Accessed December 2020)
- [MSU] Michigan State University. 2020b. Perennial Sowthistle. Available at: <https://www.canr.msu.edu/weeds/extension/perennial-sowthistle> (Accessed December 2020)
- [USFS] US Forest Service - Alaska Region. 2007. Perennial Sowthistle. Available at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd529918.pdf (Accessed December 2020)
- [WCNWC] Whatcom County Noxious Weed Control Board. Nd. Bull Thistle – *Cirsium vulgare*. Available at: https://www.nwcb.wa.gov/images/weeds/Bull-Thistle_Whatcom.pdf (Accessed December 2020)
- [YISC] Yukon Invasive Species Council. 2010. Tufted Bird Vetch (*Vicia cracca*). Available at: <https://www.yukoninvasives.com/index.php/en/resources/info-sheets/48-tufted-bird-vetch-info/file> (Accessed December 2020)



Appendix I. BC IAPP Distribution and Density Codes

BC IAPP Distribution Codes

Code	Description	Distribution
1	Rare individual, a single occurrence	
2	Few sporadically occurring individuals	
3	Single patch or clump of a species	
4	Several sporadically occurring individuals	
5	A few patches or clumps of a species	
6	Several well-spaced patches or clumps	
7	Continuous uniform occurrence of well-spaced individuals	
8	Continuous occurrence of a species with a few gaps in the distribution	
9	Continuous dense occurrence of a species	

BC IAPP Density Codes

Code	Description
1	≤ 1 plant/m ² (Low)
2	2-5 plants/m ² (Med)
3	6-10 plants/m ² (High)
4	>10 plants/m ² (Dense)



Appendix II. Invasive Species Survey Results and Map

Common Name	Species Name	Location	Life Stage*	Distribution (1-9)	Density (1-4)	Status
Bull thistle	<i>Cirsium vulgare</i>	Onsite	Mature	1	1	None
		Adjacent	-	-	-	
Butterfly Brush	<i>Buddleja davidii</i>	Onsite	Mature	1	1	None
		Adjacent	-	-	-	
Canada fleabane	<i>Conzya canadensis</i>	Onsite	Mature	5	3	None
		Adjacent	-	-	-	
Canada thistle	<i>Cirsium arvense</i>	Onsite	Mature	3	3	Provincially Noxious
		Adjacent	-	-	-	
Common holly	<i>Ilex aquifolium</i>	Onsite	Mature	2	1	None
		Adjacent	-	-	-	
Creeping buttercup	<i>Ranunculus repens</i>	Onsite	Mature	6	4	None
		Adjacent	-	-	-	
Curly dock	<i>Rumex crispus</i>	Onsite	Mature	3	2	None
		Adjacent	-	-	-	
Daphne	<i>Daphne sp.</i>	Onsite	Mature	1	1	None
		Adjacent	-	-	-	
English ivy	<i>Hedera helix</i>	Onsite	Mature	2	2	None
		Adjacent	-	-	-	
Field bindweed	<i>Convolvulus arvensis</i>	Onsite	Mature	4	3	None
		Adjacent	Mature	2	2	
Himalayan blackberry	<i>Rubus armeniacus</i>	Onsite	Mature	5	4	None
		Adjacent	Mature	2	2	
Japanese knotweed	<i>Fallopia japonica</i>	Onsite	Mature	3	3	Provincially Noxious



Invasive Species Survey and Management Plan – Polygon Talisman Park
December 20, 2020

Common Name	Species Name	Location	Life Stage*	Distribution (1-9)	Density (1-4)	Status
		Adjacent	-	-	-	
Perennial sow thistle	<i>Sonchus arvensis</i>	Onsite	Mature	3	3	Provincially Noxious
		Adjacent	-	-	-	
Scotch broom	<i>Cystis scoparius</i>	Onsite	Mature	1	1	None
		Adjacent	-	-	-	
Smartweed	<i>Polygonum persicaria</i>	Onsite	-	-	-	None
		Adjacent	Juvenile	2	1	
Tufted vetch	<i>Vicia cracca</i>	Onsite	Mature	4	2	None
		Adjacent	Mature	4	1	
White sweetclover	<i>Melilotus albus</i>	Onsite	Mature	3	2	None
		Adjacent	-	-	-	
Wild chervil	<i>Anthriscus sylvestris</i>	Onsite	Juvenile	3	2	Regionally Noxious – Fraser Valley Region
		Adjacent	Juvenile	3	2	
Wild mustard	<i>Brassica sp.</i>	Onsite	Mature	3	2	None
		Adjacent	-	-	-	

* Seedling, Juvenile, or Mature



Polygon Talisman Park - Invasive Species Map



Location: Polygon Talisman
Park Site, Richmond, British
Columbia
UTM: 10 U 508500.28 m E
5438658.49 m N

Legend

- Site Boundary
- Japanese Knotweed
- 5-m Knotweed Buffer
- Himalayan Blackberry
- Weed Seed Bank
- 2-m Weed Seed Bank Buffer
- Other Invasive Species



Mapping by:
METAVISH
RESOURCE & MANAGEMENT
CONSULTANTS LTD.
Project number: OT-32
Drawn by: [Name]
Date: 2020-12-10



Appendix III. Select Photographs



Figure 2 Facing southeast from northeast corner of property (July 14, 2020)



Figure 3 Facing east from northwest corner of property (July 14, 2020)





Figure 4 Facing south from northeast corner of property (July 14, 2020)



Figure 5 Facing northwest from eastern edge of property (July 14, 2020)





Figure 6 Facing Japanese knotweed infestation (November 24, 2020)



Figure 7 Facing northeast at Himalayan blackberry infestation in residential yard off Sexsmith Rd (November 24, 2020)



Figure 8 Facing west at residential driveway off Sexsmith Rd (November 24, 2020)



Figure 9 Facing north at Himalayan blackberry infestation in residential yard off Cambie Rd (November 24, 2020)





Figure 10 Facing southeast at infestation with weed seed bank (November 24, 2020)



Figure 11 Facing bull thistle infestation in residential yard off Cambie Rd (November 24, 2020)



Figure 12 Facing southwest at Canada fleabane infestation in residential yard off Cambie Rd (November 24, 2020)

Appendix IV. Invasive Species Control, Monitoring and Reporting Cost Estimate

The following provides an estimated cost for initial knotweed removal, invasive species control of noxious species within the area footprint of the proposed City park for two growing seasons (as outlined in this report), and oversight by a qualified environmental professional (QEP). Following the initial two-year treatment period, additional treatment may be required and a per year rate for ongoing control and monitoring works has been provided. Following control, ongoing annual QEP monitoring is recommended and the estimated cost is provided below.

Task	Estimated Cost per Task (\$)	Estimated Expenses (\$)	Assumptions
Initial Knotweed Removal - Contractor	2,800.00	1,090.00	Two labourers; Use of one trailer; Use of skidsteer; Use of hand tools; one tonne knotweed material or soil for disposal at rate of \$250/tonne (nuisance waste).
Initial Knotweed Removal - QEP Monitoring	1,200.00	90.00	One QEP to monitor work in field and provide summary report.
Himalayan Blackberry Removal	6,400.00	8,700.00	Three labourers and two operators; Use of skidsteer with mulching attachment and mid-sized excavator; requires green bin and trucking of waste; disposal of material at rate of \$175/ tonne.
Invasive Species Management - Contractor	4,000.00	\$370.00	Two site visits per year for two years of invasive species management of noxious species by two labourers; use herbicide for 300 m ² infestation using Roundup in backpack sprayer; Assumes potential use of hand and power tools for management. Does not assume disposal of material.
QEP Monitoring (Control Phase)	3,510.00	360.00	Two site visits per year and reporting for two years.
QEP Monitoring (Following Complete Control for 5 years)	4,130.00	450.00	One site visit per year and reporting for 5 years.
Sub Total	22,040.00	11,060.0	
10% Contingency	2,204.00	1,106.00	
Total	24,244.00	12,166.00	
Grand Total (Excluding GST)		36,410.00	

Per year cost for control (2 visits) *including expenses, excluding GST and 10% contingency*: \$2,185.00

Per year cost for QEP monitoring (2 visits) *including expenses, excluding GST and 10% contingency*: \$1,935.00





Pacific Sun Tree Services

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

604-323-4270

Tree Management Plan: Amendment #5 OVERVIEW All Trees

PRELIMINARY
Lots 1 - 4,
Park & Road Lots

Date: November 25, 2020 (rev Dec 18)
Client: Polygon Talisman Park Ltd.

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Retain Tree



Remove Tree

Tree Recommended
for Retention:



Tree Recommended
for Removal:



Undersize Tree:

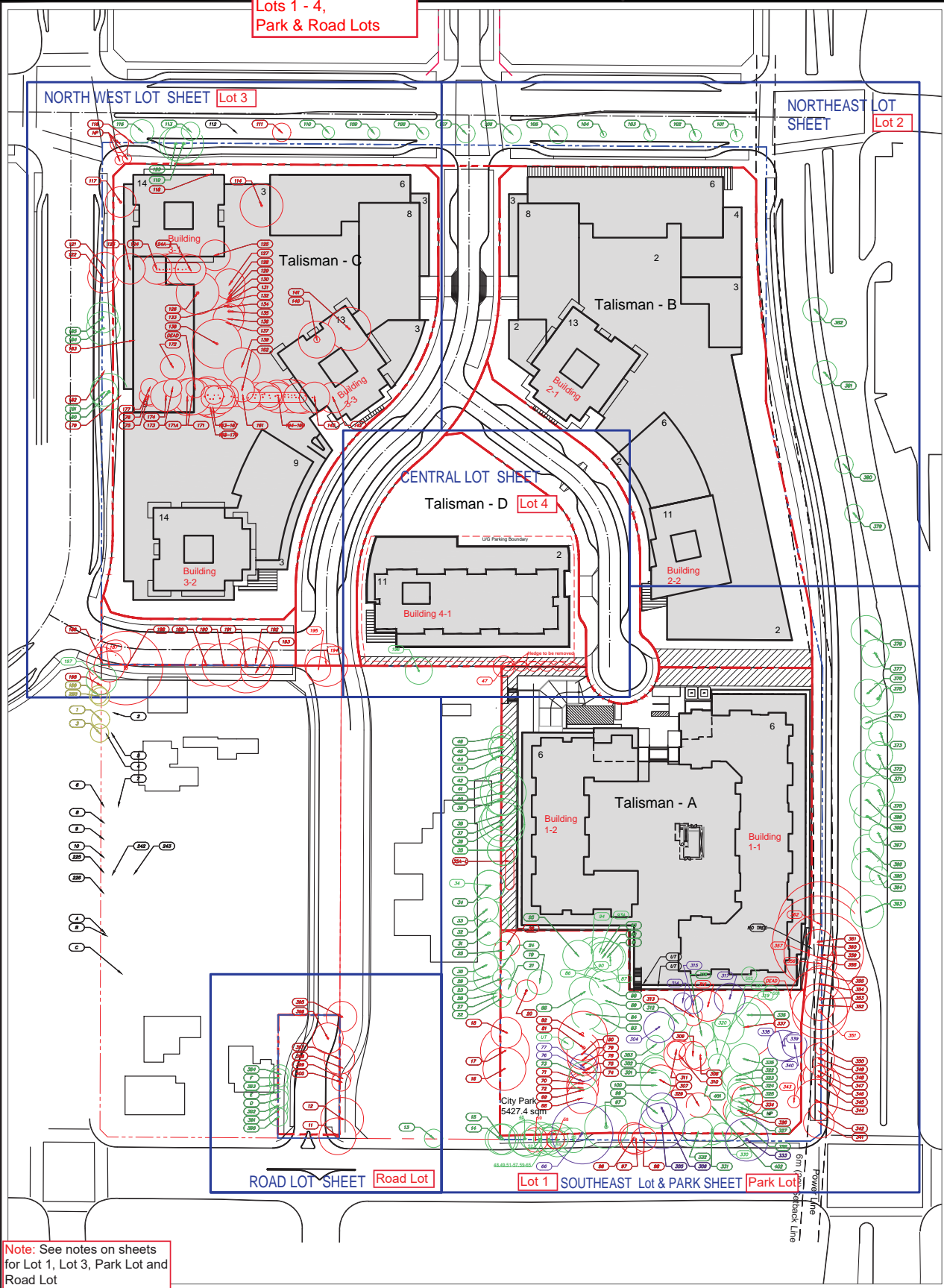
UT

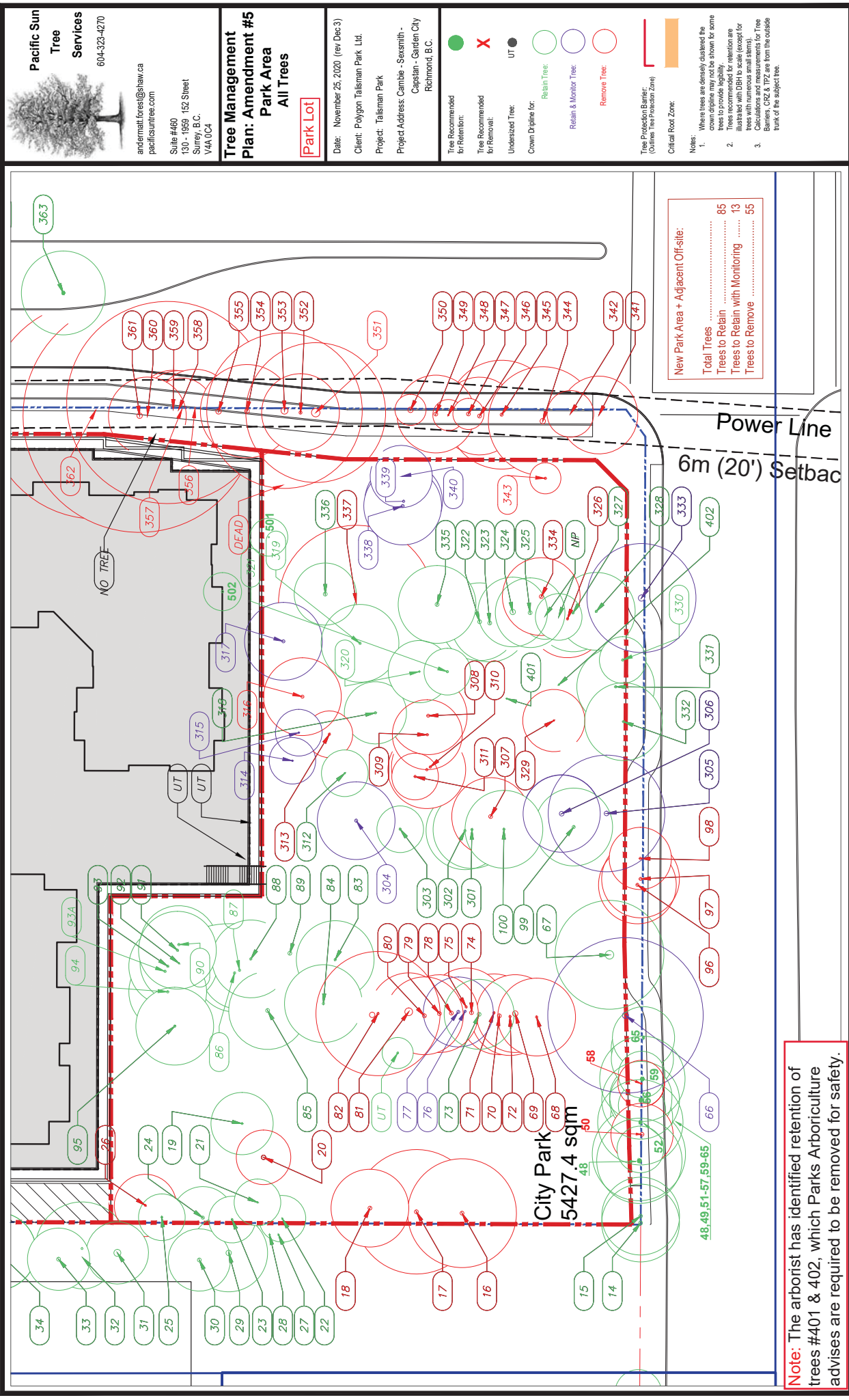
Retain & Monitor Tree

Tree is outside of project area & not
incorporated within the statistics for
retained & removed trees.

Schedule 6

Notes:
1. Where trees are densely
clustered the crown dripline may
not be shown for some trees to
provide legibility.
2. Trees recommended for
retention are illustrated with DBH to
scale (except for trees with
numerous small stems).
3. Calculations and measurements
for Tree Barriers, CRZ & TPZ are
from the outside trunk of the
subject tree.





Pacific Sun Tree Services
604-323-4270
andernatt@forest.ca
pacificsuntree.com
Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

Tree Management Plan: Amendment #5
Park Area
All Trees
Park Lot

Date: November 25, 2020 (rev Dec 3)
Client: Polygon Tailman Park Ltd.
Project: Tailman Park
Project Address: Cambie - Sexsmith - Capstan - Garden City
Richmond, B.C.

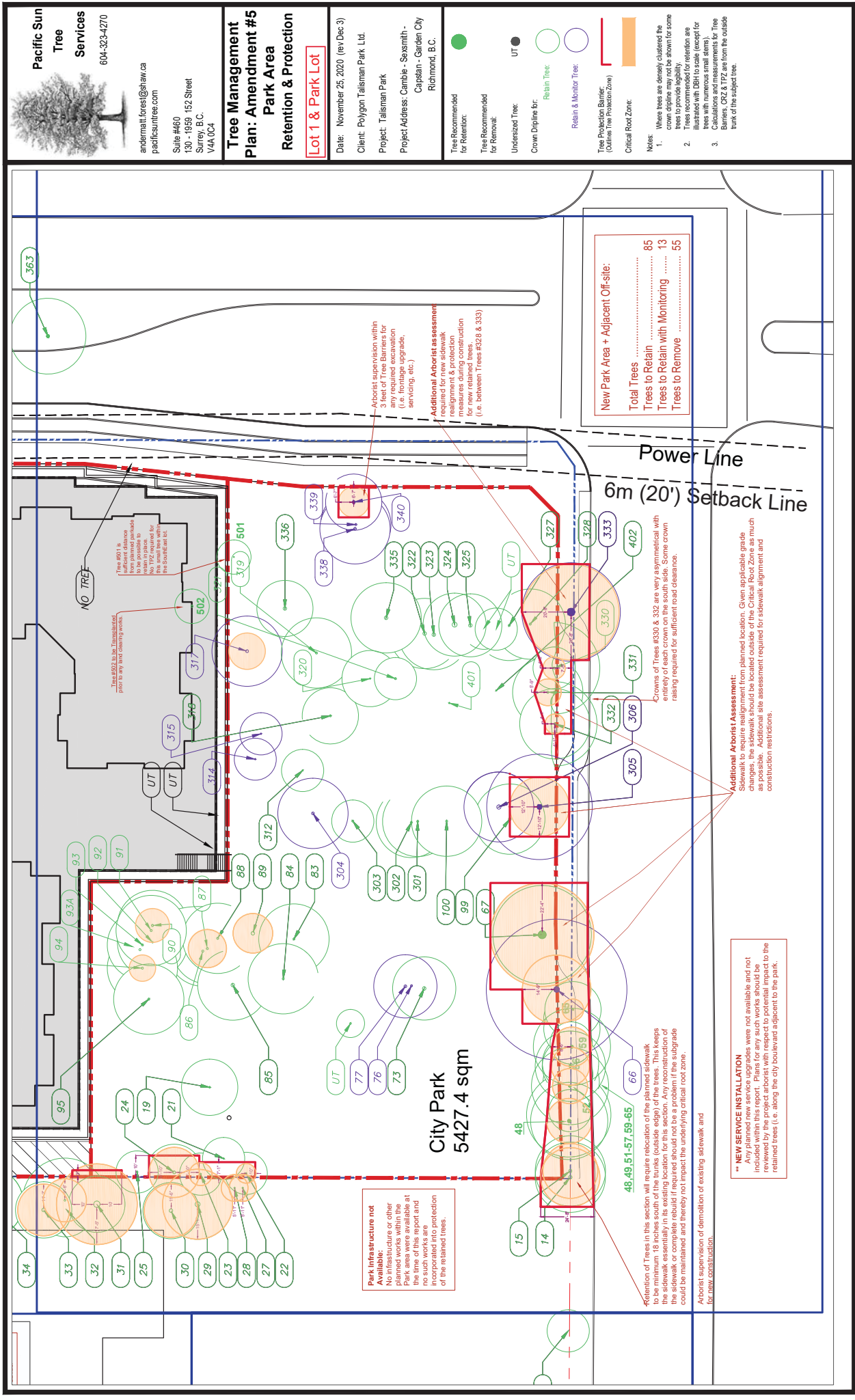
Tree Recommended for Retention: ●
Tree Recommended for Removal: X
Undersized Tree: ● UT
Crown Damage for: ○ Retain Tree; ○ Retain & Monitor Tree; ○ Remove Tree
Tree Protection Barrier: (Outline Tree Protection Zone)
Critical Root Zone:

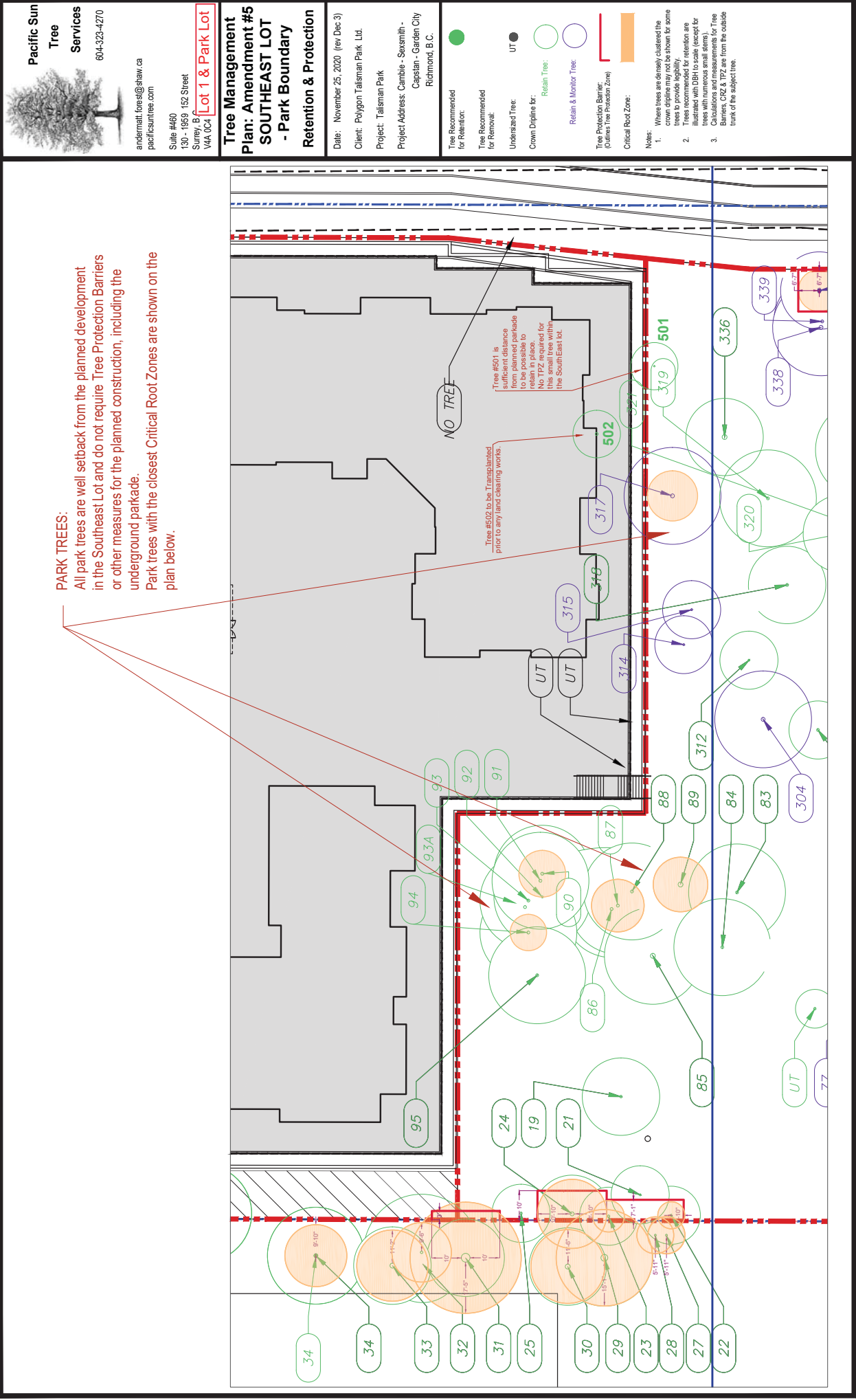
Notes:
1. Where trees are densely clustered the crown outline may not be shown for some trees to provide legibility.
2. Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems). Tree Barriers CR2 & CR3 are from the outside trunk of the subject tree.

New Park Area + Adjacent Off-site:

Total Trees	85
Trees to Retain	13
Trees to Retain with Monitoring	55
Trees to Remove	

Note: The arborist has identified retention of trees #401 & 402, which Parks Arboriculture advises are required to be removed for safety.







604-323-4270

Pacific Sun Tree Services

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

Tree Management Plan: Amendment #5 SOUTHEAST LOT - West Boundary Retention & Protection

Lot 1

Date: November 25, 2020
Client: Polygon Talisman Park Ltd.

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Retain Tree

Remove Tree

Tree Recommended for Retention:



Tree Recommended for Removal:



Undersize Tree:

Tree Protection Barrier:
(Outlines Tree Protection Zone)



Critical Root Zone:



Notes:
1. Where trees are densely clustered the crown dripline may not be shown for some trees to provide legibility.
2. Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems).
3. Calculations and measurements for Tree Barriers, CRZ & TPZ are from the outside trunk of the subject tree.

Parkade & Building Redesign:
The location of the parkade and buildings has been pulled in from the property line to accommodate the retention of trees along the property line.

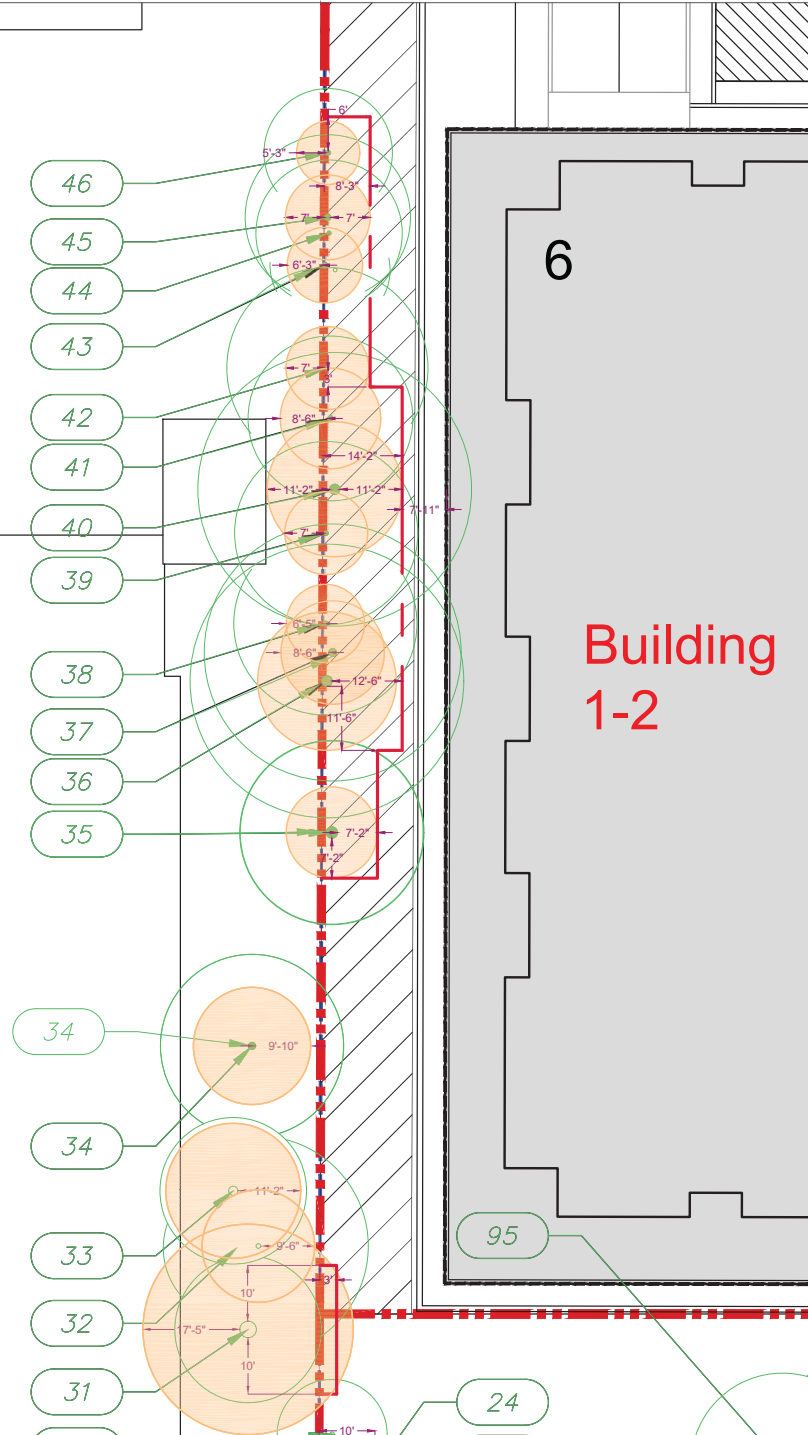
Arborist Supervision: Excavation
Excavation within 5 feet of the Tree Barriers is to be under arborist supervision. Arborist to conduct root pruning as required.

Tree Barriers:
Tree Barriers are to remain in place throughout construction.

Crown Pruning:
Some pruning may be required to provide the necessary clearance for construction of the outer parkade wall which extends above ground. Pruning to be limited to the removal of crown as necessary only for clearance of the new building. Pruning to be under project arborist supervision and should be completed prior to commencement of construction works.

Landscaping:
Mulch only in area within Tree Protection Zones. No plantings in mulch area. No mulch within 3 inches of trunk and maximum depth of 5 inches.

Pedestrian Access through SRW:
At the time of this report, plans were not available for any access pathway or other infrastructure including fences and walls. Planned development of such works should be reviewed by the project arborist where they fall inside or within 3 feet of Tree Protection Barriers.





Pacific Sun Tree Services

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

604-323-4270

Tree Management Plan: Amendment #4 Site 3 **Lot 3** Tree Retention & Removal Plan

Date: September 30, 2020
Client: Townline Housing Solutions

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Tree Recommended for Retention:

Tree Recommended for Removal:

Undersize Tree:

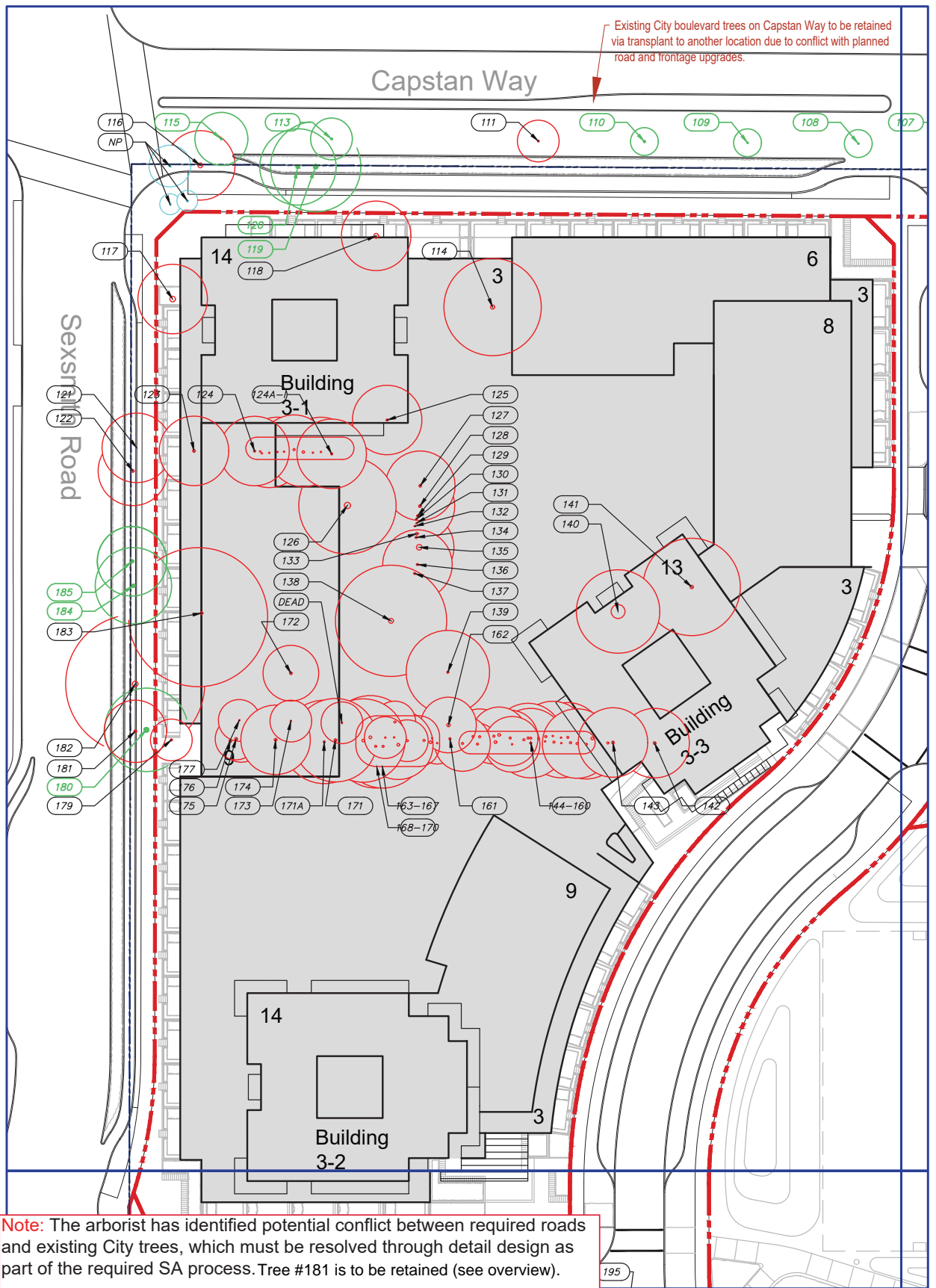
UT

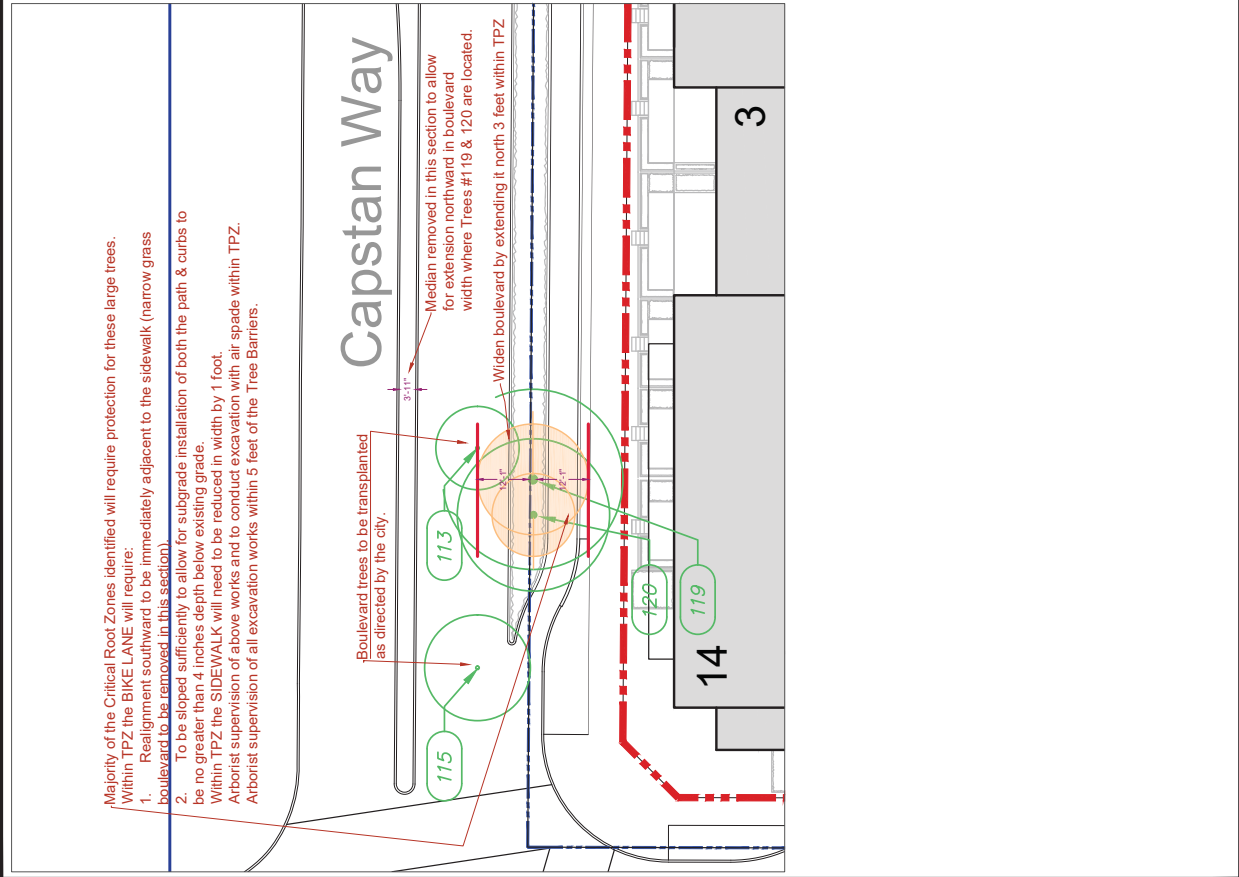
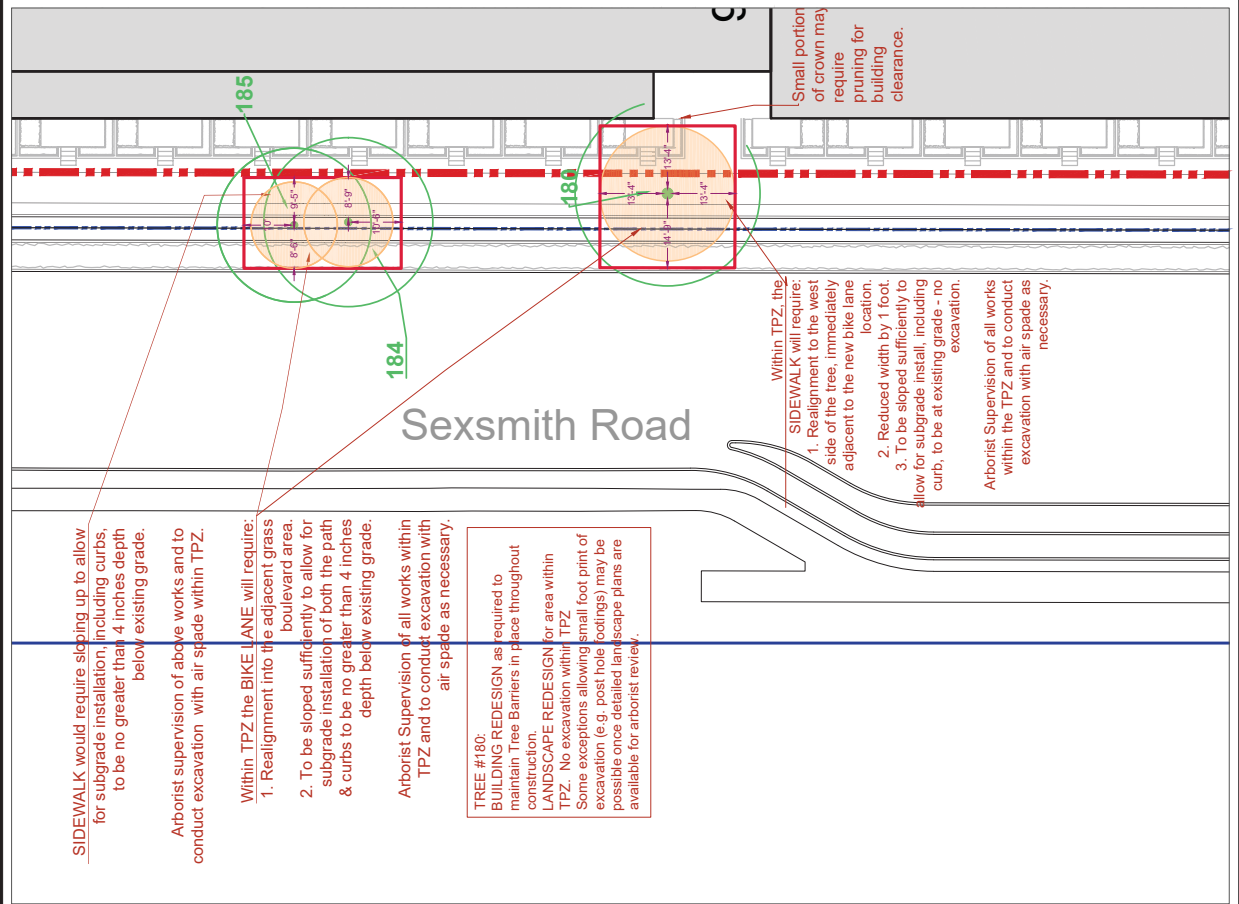
Tree Protection Barrier:
(Outlines Tree Protection Zone)

Critical Root Zone:



Notes:
1. Where trees are densely clustered the crown dripline may not be shown for some trees to provide legibility.
2. Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems).
3. Calculations and measurements for Tree Barriers, CRZ & TPZ are from the outside trunk of the subject tree.







604-323-4270

Pacific Sun Tree Services

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

Tree Management Plan: Amendment #4 Site 4 - North **Lot 3** Tree Retention & Protection Plan

Date: September 30, 2020
Client: Polygon Talisman Park Ltd.

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Retain Tree

Remove Tree

Tree Recommended
for Retention:



Tree Recommended
for Removal:



Undersize Tree:

UT

Tree Protection Barrier:
(Outlines Tree Protection Zone)

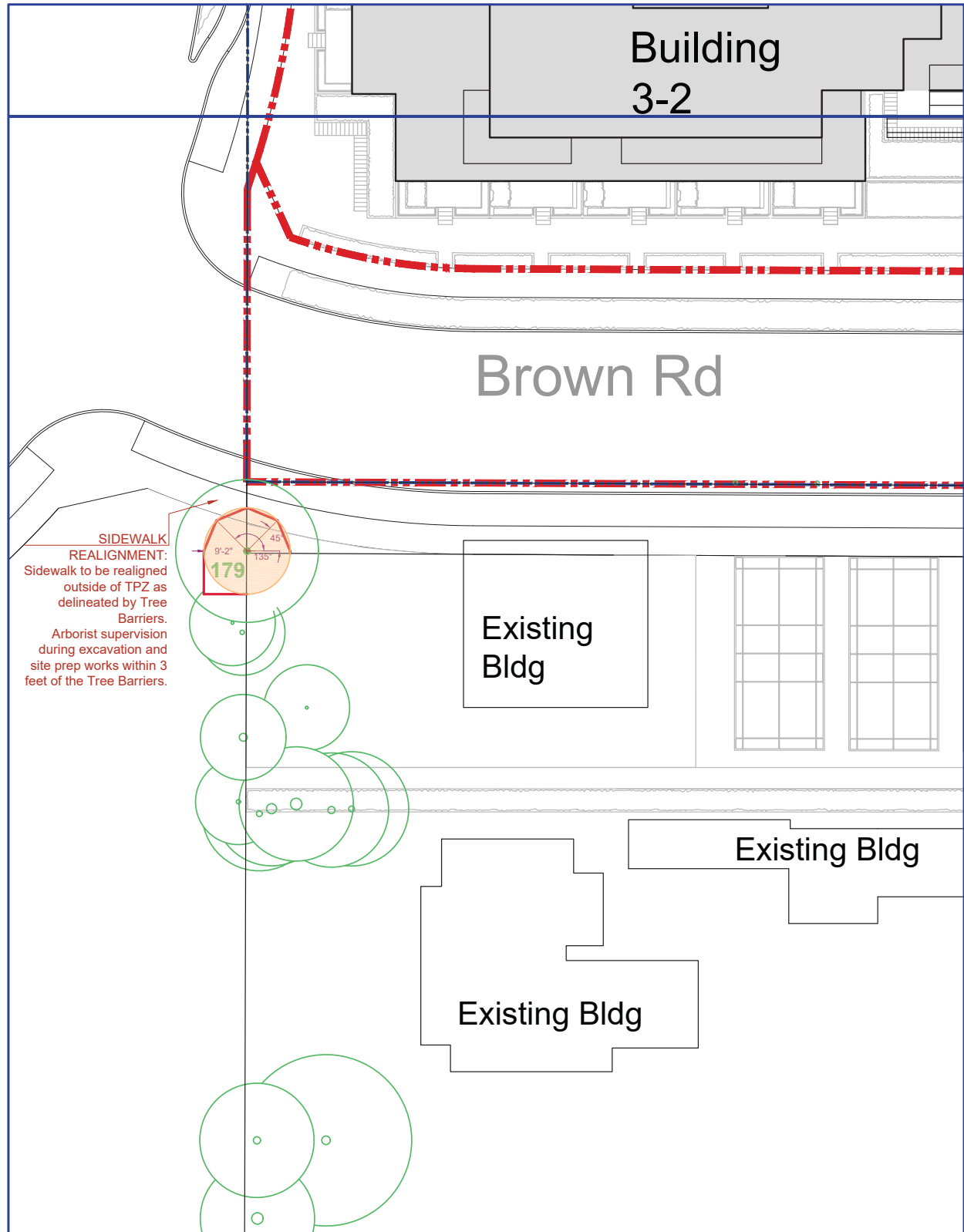


Critical Root Zone:

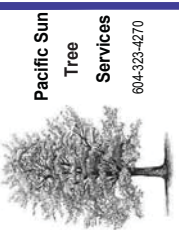


Notes:

1. Where trees are densely clustered the crown dripline may not be shown for some trees to provide legibility.
2. Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems).
3. Calculations and measurements for Tree Barriers, CRZ & TPZ are from the outside trunk of the subject tree.



Note: The arborist has identified potential conflict between required roads and existing City trees, which must be resolved through detail design as part of the required SA process.



Pacific Sun Tree Services

604-323-4270

andermatt.fores@shaw.ca
pacificsuntree.com

Suite #460
130 - 1859 152 Street
Surrey, B.C.
V4A 0C4

Tree Management Plan: Amendment #5

CENTRAL LOT

Lot 4

Retention & Protection

Date: November 25, 2020

Client: Polygon Talisman Park Ltd.

Project: Talisman Park

Project Address: Cambie - Saxsmith - Captain - Garden City Richmond, B.C.

Tree Recommended for Retention:

Tree Recommended for Removal:

Understand Tree:

Crown Delineator:

Retain Tree:

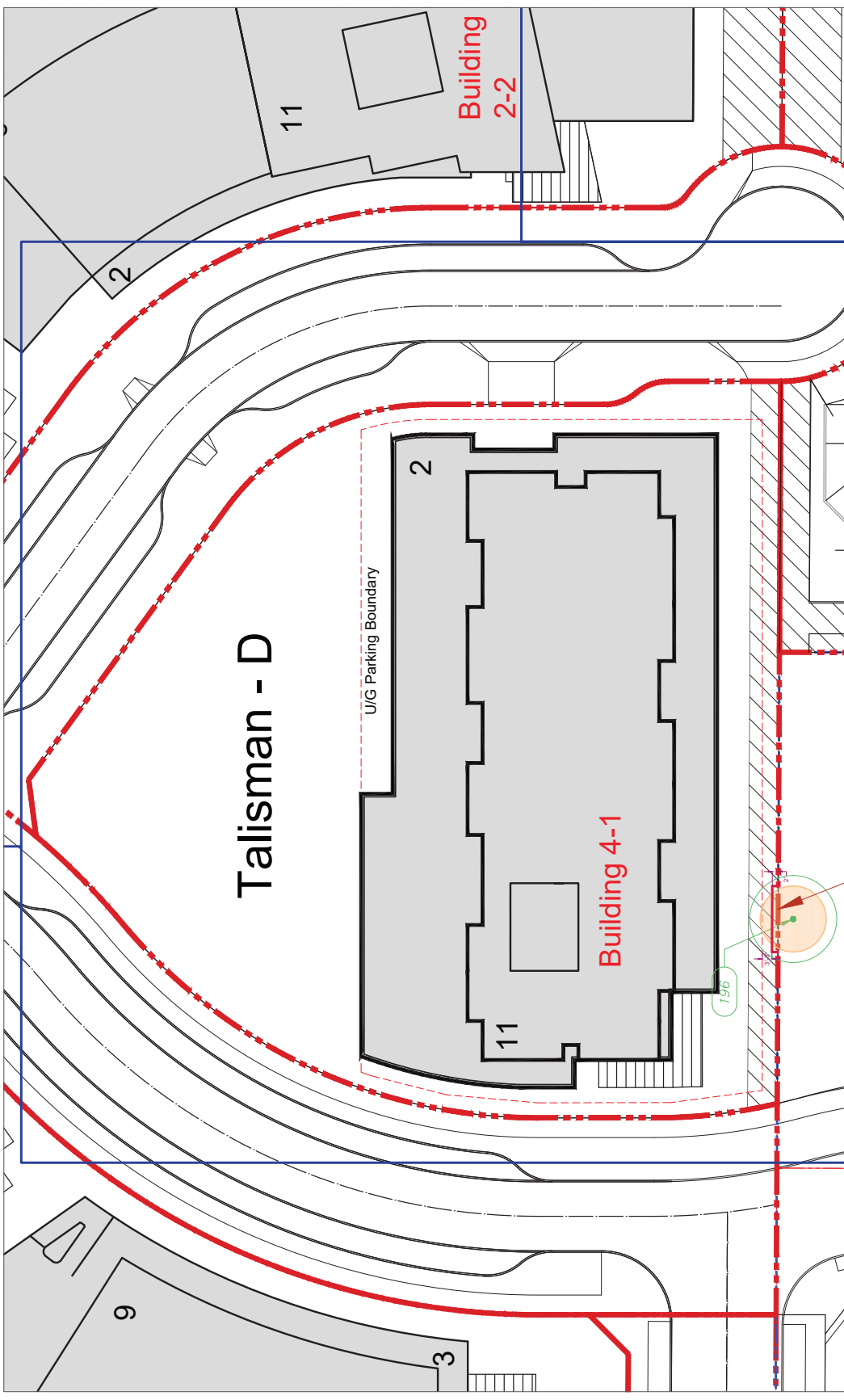
Remove Tree:

Tree Protection Barrier:
(Outline Tree Protection Zone)

Critical Root Zone:

Notes:

- Where trees are densely clustered the root zone may not be shown for some trees to provide legibility.
- Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems). Calculations and measurements for Tree Barriers, CRZ & TPZ are from the outside trunk of the subject tree.



Neighbour's tree with Critical Root Zone predominantly off-site.

Delineated Tree Protection Zone provides ample protection for this tree's root system while providing approximately 3 foot setback from the planned underground parkade wall.



Pacific Sun Tree Services

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

604-323-4270

Tree Management Plan: Amendment #4 Site 4 **Road Lot** Tree Retention & Removal Plan

Date: September 30, 2020
Client: Townline Housing Solutions

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Retain Tree



Remove Tree

Tree Recommended
for Retention:



Tree Recommended
for Removal:



Undersize Tree:

UT



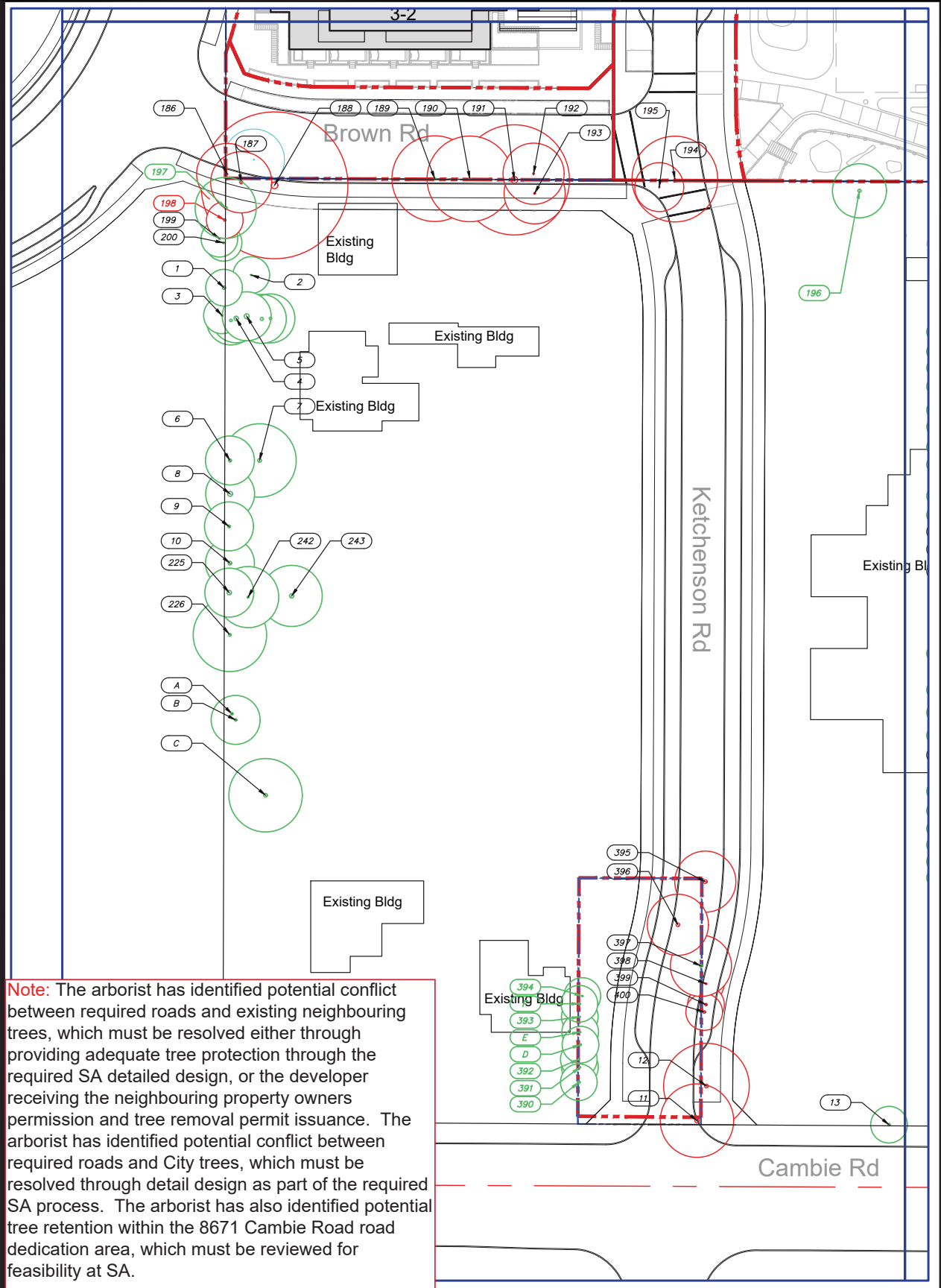
Tree Protection Barrier:
(Outlines Tree Protection Zone)



Critical Root Zone:



Notes:
1. Where trees are densely clustered the crown dripline may not be shown for some trees to provide legibility.
2. Trees recommended for retention are illustrated with DBH to scale (except for trees with numerous small stems).
3. Calculations and measurements for Tree Barriers, CRZ & TPZ are from the outside trunk of the subject tree.





**Pacific Sun
Tree Services**

andermatt.forest@shaw.ca
pacificsuntree.com

Suite #460
130 - 1959 152 Street
Surrey, B.C.
V4A 0C4

604-323-4270

**Tree Management
Plan:
Amendment #4
Site 4 - South
Road Lot
Tree Retention &
Protection Plan**

Date: September 30, 2020
Client: Polygon Talisman Park Ltd.

Project: Talisman Park
Project Address: Cambie - Sexsmith
Capstan - Garden City
Richmond, B.C.

Crown Dripline for:



Remove Tree

Tree Recommended
for Retention:



Tree Recommended
for Removal:

UT



Undersize Tree:

Tree Protection Barrier:
(Outlines Tree Protection Zone)

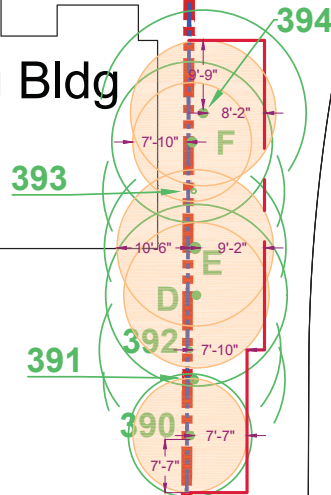
Critical Root Zone:



Notes:
1. Where trees are densely
clustered the crown dripline may
not be shown for some trees to
provide legibility.
2. Trees recommended for
retention are illustrated with DBH to
scale (except for trees with
numerous small stems).
3. Calculations and measurements
for Tree Barriers, CRZ & TPZ are
from the outside trunk of the
subject tree.

EXCAVATION:
Excavation within 5 feet of the Tree
Barriers is to be under
arborist supervision. Arborist to
conduct root pruning as required.

Existing Bldg



Note: The arborist has identified potential tree retention within the 8671 Cambie Road road dedication area, which must be reviewed for feasibility at SA.

ALL PHASES



PHASING LEGEND

PHASE 1
PHASE 2
PHASE 3
PHASE 4

CHECK BEFORE YOU BID

CONTRACTOR SHALL REFER TO DRAWINGS FOR ALL OTHER UTILITIES. SERVICE LOCATIONS AND DEPTHS ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AND MAKE THE ENGINEER OF POTENTIAL CONFLICTS.

BENCHMARKS

ALL ELEVATIONS ARE TO GEODETIC DATUM AND REFER TO RICHMOND BENCHMARK NUMBERS.

ELEVATIONS ARE DERIVED FROM IPM BENCHMARK #186 LOCATED AT BROWN ROAD AND BROWN CREEK.

ELEVATION = 1.73m (5'8" 1/2")

CITY WORK ORDER NO. _____

CONTRACTOR BIDDING NO. _____

DEVELOPER

POLYCON CARSTEN VILLAGE HOMES LTD.

300-4888 PATERSON COURT

3RD FLOOR

VANCOUVER, BC V6H 4Z2

TEL: (604) 671-4881

ENGINEER

CoreGroup

LAND DEVELOPMENT ENGINEERING

300-4888 PATERSON COURT

3RD FLOOR

VANCOUVER, BC V6H 4Z2

TEL: (604) 671-4881

REVISIONS

NO.	DATE	BY	CHK.	DESCRIPTION
E	2021/01/18	D.B.	C.N.	REVISED PHASING PLAN
D	2020/12/23	D.B.	C.N.	REVISED PHASING PLAN PER REVISED SITE PLAN
C	2020/07/10	D.B.	C.N.	REVISED PHASING PLAN PER CITY COMMENTS
B	2018/09/24	D.B.	C.N.	SECOND SUBMISSION
A	2018/09/18	D.B.	C.N.	FUNCTIONAL PLAN

GRAPHIC SCALE

0 10 20

SCALE: 1:500

City of Richmond

6831 - No. 3 ROAD RICHMOND, B.C.

PHASING KEYPLAN

ALL PHASES

CITY FILE: .

DESIGN: C.N.

DRAWN: T.A.

CHECKED: C.N.

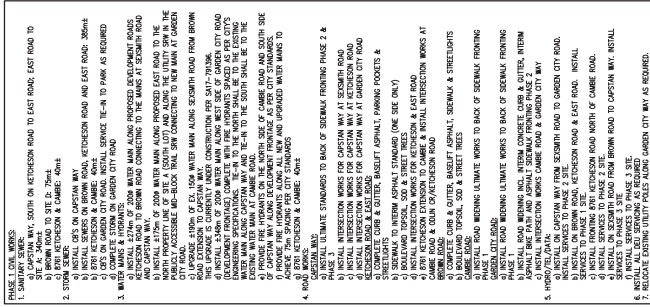
ENGINEER: C.N.

DATE: 2021/01/18

SCALE: 1:500

SEC. NO: 28-1-6

SHT. NO: 18



GRAPHIC SCALE

*The copyright
are the prop
Reproduction

GRAPHIC SCALE

0 1.0 2.0

CEPT: FIRSTLY: PARCEL "A" (REFERENCE PLAN 20421) SECONDLY: PART SUBDIVIDED BY PLAN SECTION 28 PLAN 15930; AND LOT 69 SECTIONS 27 AND 28 PLAN 47080 AND LOT 48 SECTION

KEY PROVIDED BY BUTLER
CONSULTANTS TAKES NO

NOTES
TOPOGRAPHIC AND LEGAL
SUNDWICH, CORE GROUP

LOCATIONS, AND DETAILS, THE EXACT LOCATION OF THESE UTILITIES SHALL BE DETERMINED ON SITE. INFORMATION ON EXISTING UTILITIES MAY NOT BE COMPLETE OR ACCURATE. PRIOR TO CONSTRUCTION CONTRACTOR SHALL EXPOSE LOCATIONS OF ALL EXISTING UTILITIES AND ADVISE THE ENGINEER OF POTENTIAL CONFLICTS.

BENCHMARK

ELEVATIONS ARE DERIVED FROM LHM BENCHMARK #198 LOCATED AT BROWN ROAD AND BROWN GATE.

ELEVATION	1.793m	FIELD BOOK NO
-----------	--------	---------------

CITY WORK ORDER NO	TOWNSHIP / DISTRICT NO
--------------------	------------------------

DEVELOPER
POLYGON CAPSTAN VILLAGE HOMES I TD.

VANCOUVER, BC V6H 4C2
Tel. (604) 871-4181

CoreLogic

LAND DEVELOPMENT SERVICES
320-8988 FRASERTON COURT

STUDY OF THE EFFECTS OF THE

100

[illegible]

NO.	DATE	REVISIONS	BY	CHKD	APP'D	REMARKS
1	10/10/2018	1	10/10/2018	10/10/2018	10/10/2018	10/10/2018
2	10/10/2018	2	10/10/2018	10/10/2018	10/10/2018	10/10/2018
3	10/10/2018	3	10/10/2018	10/10/2018	10/10/2018	10/10/2018
4	10/10/2018	4	10/10/2018	10/10/2018	10/10/2018	10/10/2018
5	10/10/2018	5	10/10/2018	10/10/2018	10/10/2018	10/10/2018
6	10/10/2018	6	10/10/2018	10/10/2018	10/10/2018	10/10/2018
7	10/10/2018	7	10/10/2018	10/10/2018	10/10/2018	10/10/2018
8	10/10/2018	8	10/10/2018	10/10/2018	10/10/2018	10/10/2018
9	10/10/2018	9	10/10/2018	10/10/2018	10/10/2018	10/10/2018
10	10/10/2018	10	10/10/2018	10/10/2018	10/10/2018	10/10/2018
11	10/10/2018	11	10/10/2018	10/10/2018	10/10/2018	10/10/2018
12	10/10/2018	12	10/10/2018	10/10/2018	10/10/2018	10/10/2018
13	10/10/2018	13	10/10/2018	10/10/2018	10/10/2018	10/10/2018
14	10/10/2018	14	10/10/2018	10/10/2018	10/10/2018	10/10/2018
15	10/10/2018	15	10/10/2018	10/10/2018	10/10/2018	10/10/2018
16	10/10/2018	16	10/10/2018	10/10/2018	10/10/2018	10/10/2018
17	10/10/2018	17	10/10/2018	10/10/2018	10/10/2018	10/10/2018
18	10/10/2018	18	10/10/2018	10/10/2018	10/10/2018	10/10/2018
19	10/10/2018	19	10/10/2018	10/10/2018	10/10/2018	10/10/2018
20	10/10/2018	20	10/10/2018	10/10/2018	10/10/2018	10/10/2018
21	10/10/2018	21	10/10/2018	10/10/2018	10/10/2018	10/10/2018
22	10/10/2018	22	10/10/2018	10/10/2018	10/10/2018	10/10/2018
23	10/10/2018	23	10/10/2018	10/10/2018	10/10/2018	10/10/2018
24	10/10/2018	24	10/10/2018	10/10/2018	10/10/2018	10/10/2018
25	10/10/2018	25	10/10/2018	10/10/2018	10/10/2018	10/10/2018
26	10/10/2018	26	10/10/2018	10/10/2018	10/10/2018	10/10/2018
27	10/10/2018	27	10/10/2018	10/10/2018	10/10/2018	10/10/2018
28	10/10/2018	28	10/10/2018	10/10/2018	10/10/2018	10/10/2018
29	10/10/2018	29	10/10/2018	10/10/2018	10/10/2018	10/10/2018
30	10/10/2018	30	10/10/2018	10/10/2018	10/10/2018	10/10/2018
31	10/10/2018	31	10/10/2018	10/10/2018	10/10/2018	10/10/2018
32	10/10/2018	32	10/10/2018	10/10/2018	10/10/2018	10/10/2018
33	10/10/2018	33	10/10/2018	10/10/2018	10/10/2018	10/10/2018
34	10/10/2018	34	10/10/2018	10/10/2018	10/10/2018	10/10/2018
35	10/10/2018	35	10/10/2018	10/10/2018	10/10/2018	10/10/2018
36	10/10/2018	36	10/10/2018	10/10/2018	10/10/2018	10/10/2018
37	10/10/2018	37	10/10/2018	10/10/2018	10/10/2018	10/10/2018
38	10/10/2018	38	10/10/2018	10/10/2018	10/10/2018	10/10/2018
39	10/10/2018	39	10/10/2018	10/10/2018	10/10/2018	10/10/2018
40	10/10/					

[illegible]

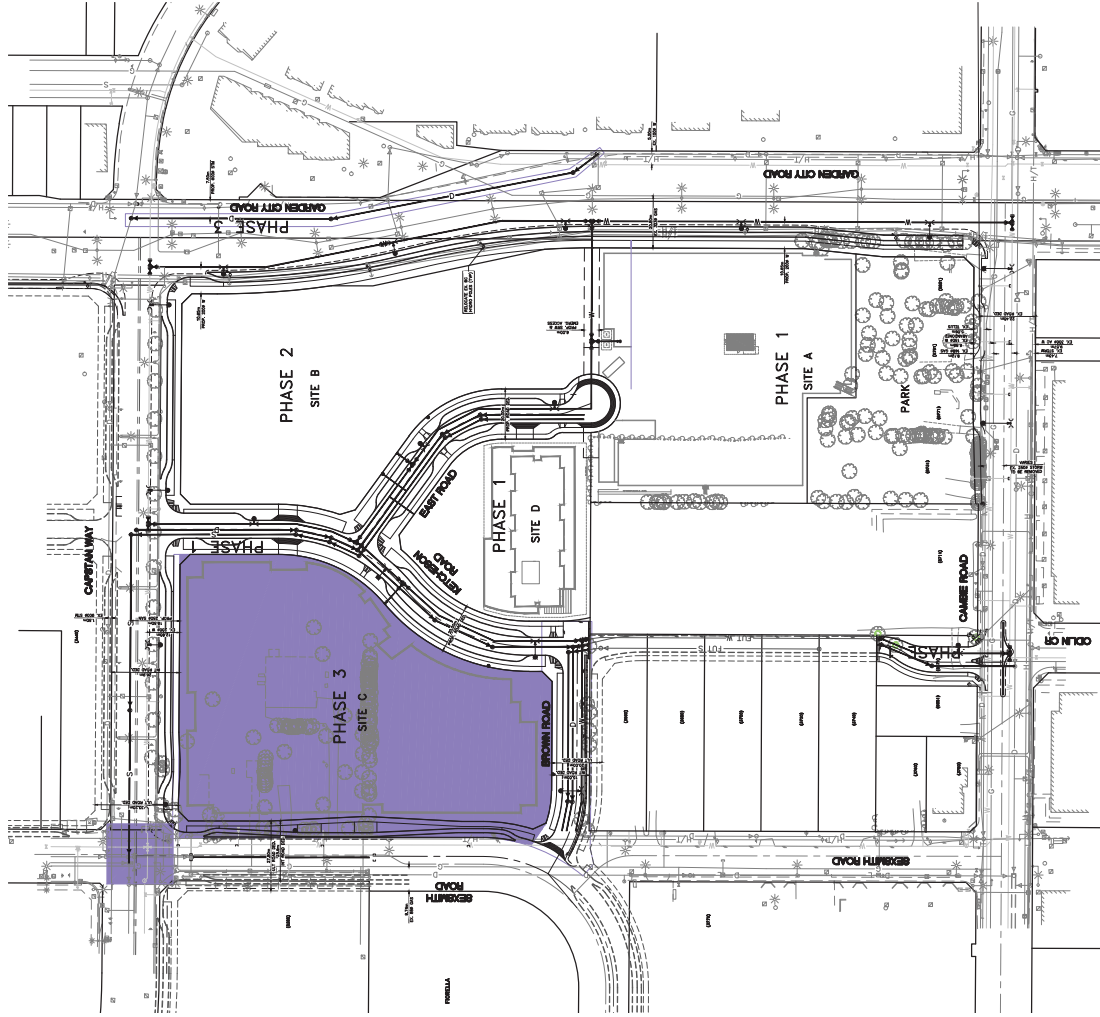
1833

1

C.N.

ED: C.N.

PHASE 3



PHASE 3 CIVIL WORKS
1. ROAD IMPROVEMENTS
a. ULTIMATE STANDARDS TO BACK OF SIDEWALK FOR PHASE 3 FRONTAGE
b. FULL INTERSECTION IMPROVEMENTS (TRAFFIC SIGNAL, B. ROAD UPGRADES)
c. FULL INTERSECTION IMPROVEMENTS (TRAFFIC SIGNAL, B. ROAD UPGRADES)
d. FULL INTERSECTION IMPROVEMENTS (TRAFFIC SIGNAL, B. ROAD UPGRADES)
e. ULTIMATE STANDARDS TO BACK OF SIDEWALK FOR PHASE 3 FRONTAGE

CHECK BEFORE YOU BID
CONTRACTOR SHALL REFER TO DRAWINGS FOR ALL CIVIL UTILITIES. SERVICE
UTILITIES ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL VERIFY
LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

ALL ELEVATIONS ARE TO GEODETIC DATUM AND REFER TO RICHMOND BENCHMARK NUMBERS.
ELEVATIONS ARE DERIVED FROM THE BENCHMARK #118 LOCATED AT BROWN ROAD AND BROWN CREEK.
ELEVATION = 173.0m (GASD DATED 2018)

CITY WORK ORDER NO. _____
CONTRACTOR BIDDING NO. _____

FEED BOOK NO. _____
TENDER PROJECT NO. _____
ACCOUNT NO. _____

DEVELOPER
POLYCON CARSTAN VILLAGE HOMES LTD.
300-1000 VILLAGE STREET
VANCOUVER, BC V6H 4Z2
Tel: (604) 671-4881

ENGINEER
CoreGroup
300-1000 VILLAGE STREET
VANCOUVER, BC V6H 4Z2
Tel: (604) 671-4881

GRAPHIC SCALE
0 10 20
SCALE: 1:500

NOTES
1. THE COPYRIGHT IS IN THE DESIGN AND DRAWINGS FOR THIS PROJECT.
2. THE CITY OF RICHMOND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DOCUMENT.
3. THE CITY OF RICHMOND IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED IN THIS DOCUMENT.

DESIGN: C.N.
DRAWN: T.A.
CHECKED: C.N.
ENGINEER: C.N.

DATE: 2023/07/18
SCALE: 1:500
SHEET NO: 1 OF 1

City of Richmond
6831 No. 3 Road Richmond, B.C. V6T 2C1

PHASING KEYPLAN
PHASE 3

CITY FILE: .

DATE: 2023/07/18
SCALE: 1:500
SHEET NO: 1 OF 1

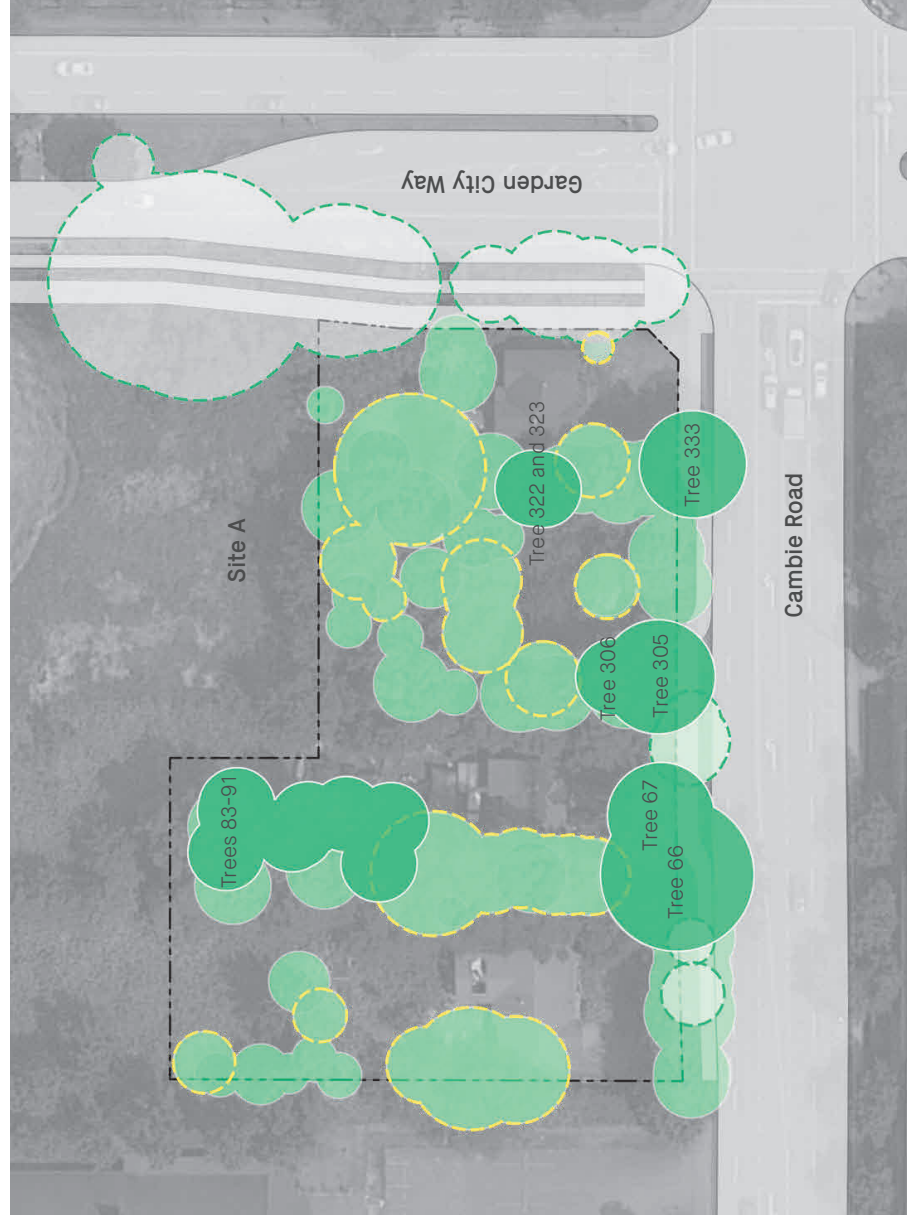
Proposed Park Program Elements



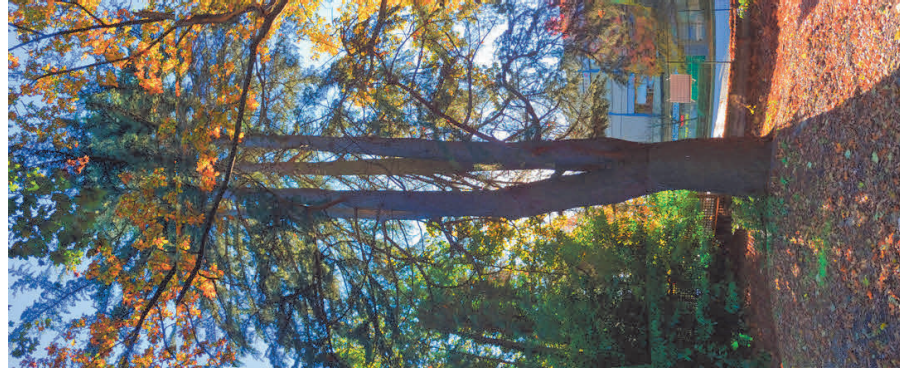
NOTE: The Park Program elements shown above represent the proposed features on the future park as required by Council approved Plans. The configuration and placement of these features on the new park site are subject to public consultation and Council approval as part of the overall future park design process.

Proposed Park Tree Retention and Removals

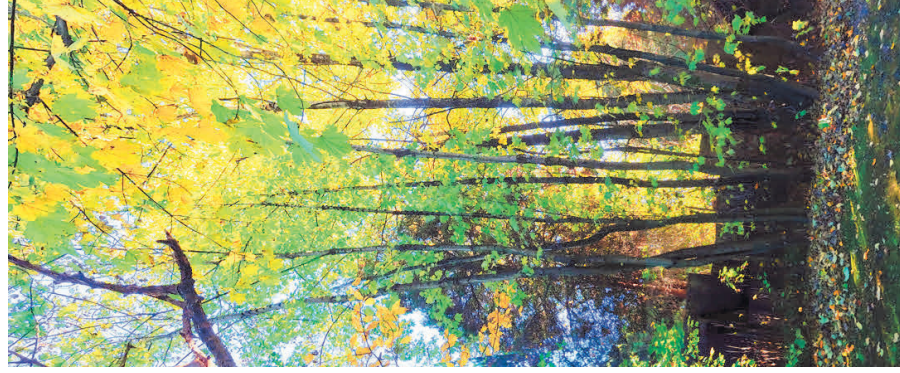
- Legend**
- Existing Trees
 - Significant Existing Trees
 - Offsite Tree Removals
 - Proposed Onsite Tree Removals Based on Arborist Hazard and Tree Health Assessment



Significant Existing Park Trees to be Retained



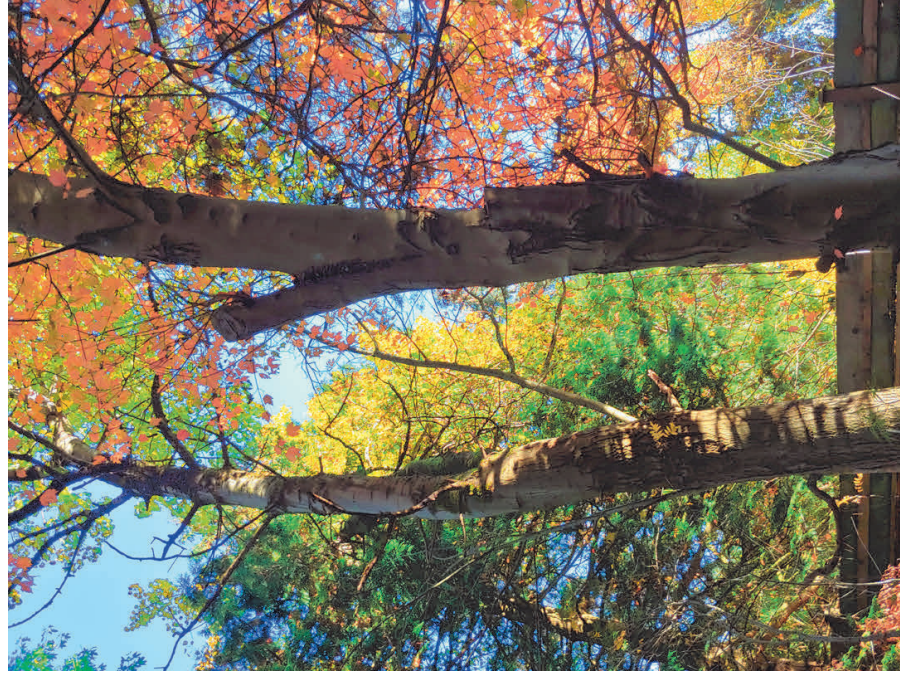
Deodar Cedar / Cedrus deodara
Tree 67



Black Locust / Robinia pseudoacacia
Cherry / Prunus
Trees 83-91



Western Redcedar / Thuja plicata
Tree 306



Aspen / Populus and Sycamore Maple / Acer pseudoplatanus
Tree 322 and 323

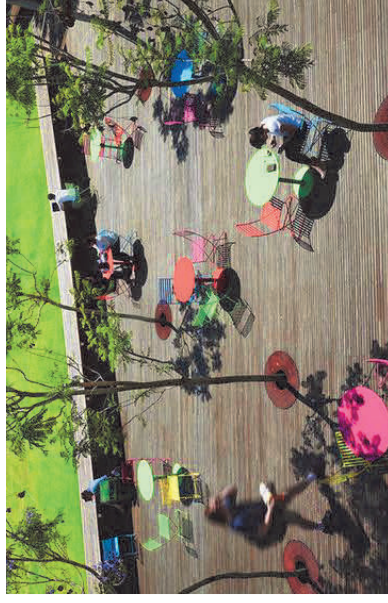
Park Precedent Images



Tot's Play



Children's Play



Plaza



Portals



Dog Park



Rain Gardens

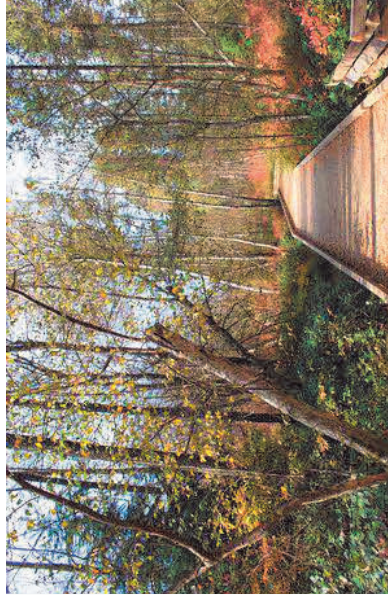
Park Precedent Images



Concrete Paths



Mulch and Gravel Trails



Elevated Wood Boardwalks



Tree Decks



Seat Steps



Berming