City of Surrey PLANNING & DEVELOPMENT REPORT Application No.: 7918-0463-00

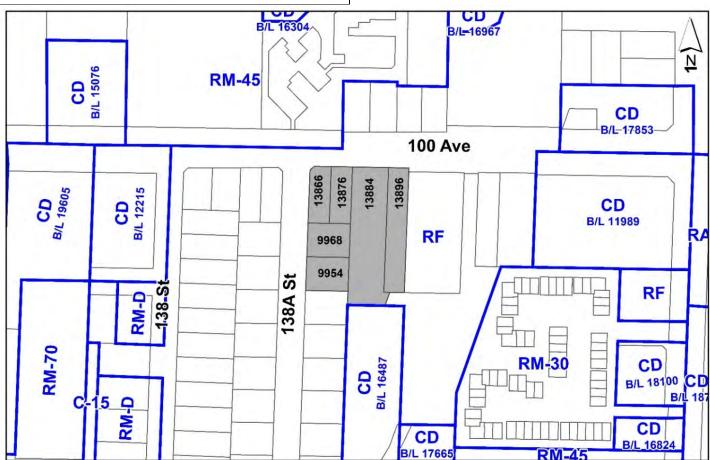
Planning Report Date: April 25, 2022

PROPOSAL:

- **OCP Amendment** of a portion from Multiple Residential to Central Business District and to Figure 16: Central Business District Densities to permit a density of 3.5 FAR.
- **CCP Amendment** of a portion from Residential Low to Mid Rise up to 2.5 FAR to Residential Mid to High Rise 3.5 FAR and Park
- **Rezoning** of a portion from RF to CD (based on RM-135)
- Development Permit

to permit the development of a 32-storey high-rise residential tower with 6-storey apartment podium and a second 6-storey apartment building consisting of approximately 449 dwelling units.

| LOCATION: | 13866, 13876, 13884 and |
|------------------|---|
| | 13896 - 100 Avenue |
| | 9954 and 9968- 138A Street |
| ZONING: | RF |
| OCP DESIGNATION: | Multiple Residential |
| CCP DESIGNATION: | Residential Low to Mid Rise up to 2.5 FAR and Park |



HALLEY GUILDFORD HALLEY GUILDFORD FLEETWOOD FLEETWOO

CLOVERDALE

184 ST 192 ST

SOUTH SURREY

160 ST

168 ST 176 ST

144 ST 152 ST

128 ST 136 ST **64 AVE**

56 AVE

48 AVE

40 AVE

32 AVE

24 AVE

16 AVE

8 AVE

0 AVE

NEWTON

120 ST

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RECOMMENDATION SUMMARY

- Bylaw Introduction and set date for Public Hearing for:
 - OCP Amendment; and
 - Rezoning.
- Approval to draft Development Permit for Form and Character and for Sensitive Ecosystems (Green Infrastructure Areas).

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- Requires an amendment to the Official Community Plan (OCP) to redesignate a portion of the subject site from Multiple Residential to Central Business District Designation and include the site in Figure 16: Central Business District Densities with a permitted density of "3.5 FAR".
- Requires an amendment to the City Centre Plan to redesignate a portion of the subject site from "Residential Low to Mid Rise up to 2.5 FAR" to "Residential Mid to High Rise 3.5 FAR" and "Park".

RATIONALE OF RECOMMENDATION

- Although the proposed density on the subject site is higher than that prescribed in the OCP and City Centre Plan, the proposed residential tower with apartment podium will support and complement the Green Timbers District of the City Centre.
- The proposed density and building form are appropriate for this part of Surrey City Centre, and forms part of an emerging high-density mixed-use and residential hub around the King George SkyTrain Station.
- The proposed development conforms to the goal of achieving high-rise, high-density development around the three SkyTrain Stations. The King George SkyTrain Station is located within a walking distance of 650 metres from the subject site.
- The proposed setbacks achieve a more urban, pedestrian streetscape in compliance with the Surrey City Centre Plan and in accordance with the Development Permit (Form and Character) design guidelines in the OCP.
- The applicant will provide a density bonus amenity contribution consistent with the Tier 2 Capital Projects Community Amenity Contributions (CACs), in support of the requested increased density.
- A 187-square metre lot (proposed Lot 2) will be conveyed to the City for parkland and form part of the Green Infrastructure Area.

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• The proposed building achieves an attractive architectural built form, which utilizes high quality, natural materials, and contemporary lines. The street interface has been designed to a high quality to achieve a positive urban experience between the proposed building and the public realm.

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RECOMMENDATION

The Planning & Development Department recommends that:

- A Bylaw be introduced to amend the Official Community Plan (OCP) Figure 3: General Land Use Designations to redesignate the portion of the subject site (Appendix IX) from Multiple Residential to Central Business District Designation and include the site in Figure 16: Central Business District Densities with a permitted density of "3.5 FAR" and a date be set for Public Hearing.
- 2. Council determine the opportunities for consultation with persons, organizations and authorities that are considered to be affected by the proposed amendment to the Official Community Plan, as described in the Report, to be appropriate to meet the requirement of Section 475 of the Local Government Act.
- 3. a Bylaw be introduced to rezone 13866, 13876 and 13884 100 Avenue, 9968 and 9954 - 138A Street, and the portion of 13896 – 100 Avenue shown as Block A on the attached Survey Plan (Appendix I), from "Single Family Residential Zone (RF)" to "Comprehensive Development Zone (CD)", and a date be set for Public Hearing.
- 4. Council authorize staff to draft Development Permit No. 7918-0463-00 generally in accordance with the attached drawings (Appendix II).
- 5. Council authorize staff to draft Sensitive Ecosystem Development Permit No. 7918-0463-00 in accordance with the Ecosystem Development Plan (Appendix X).
- 6. Council instruct staff to resolve the following issues prior to final adoption:
 - (a) ensure that all engineering requirements and issues including restrictive covenants, dedications, and rights-of-way where necessary, are addressed to the satisfaction of the General Manager, Engineering;
 - (b) submission of a subdivision layout to the satisfaction of the Approving Officer;
 - (c) resolution of all urban design issues to the satisfaction of the Planning and Development Department;
 - (d) submission of a finalized landscaping plan and landscaping cost estimate to the specifications and satisfaction of the Planning and Development Department;
 - (e) submission of a finalized tree survey and a statement regarding tree preservation to the satisfaction of the City Landscape Architect;
 - (f) submission of a finalized Ecosystem Development Plan and Impact Mitigation Plan to the satisfaction of City staff;
 - (g) the applicant satisfy the deficiency in tree replacement on the site, to the satisfaction of the Planning and Development Department;
 - (h) conveyance of proposed Lot 2, at no cost, to the City as part of the Green Infrastructure Area;

- the applicant provide a density bonus amenity contribution consistent with the Tier 2 Capital Projects CACs in support of the requested increased density, to the satisfaction of the General Manager, Planning and Development Department;
- Registration of a Section 219 Restrictive Covenant to adequately address the City's needs with respect to public art, to the satisfaction of the General Manager Parks, Recreation and Culture and with respect to the City's Affordable Housing Strategy and Tier 1 Capital Project CACs, to the satisfaction of the General Manager, Planning & Development Services;
- (k) P-15 agreement to secure for and protect the Green Infrastructure Area restoration and associated maintenance period;
- (l) registration of a volumetric statutory right-of-way for public rights-of-passage for the proposed corner plaza spaces located on the northwest and southwest corners of the site; and
- (m) submission of a finalized Traffic Impact Assessment (TIA) to the satisfaction of staff.
- Council pass a resolution to amend the City Centre Plan to redesignate the subject site from "Residential Low to Mid Rise up to 2.5 FAR" to "Residential Mid to High Rise 3.5 FAR" and "Park" as shown in Appendix VIII, when the project is considered for Final Adoption.

| Direction | Existing Use | CCP Designation | Existing Zone | | | |
|----------------------------|--|--|---------------|--|--|--|
| Subject Site | Vacant treed site. | Residential Low to Mid Rise up to 2.5 FAR and Park | RF | | | |
| North (Across 100 Avenue): | Townhouse development and single family dwellings. | Residential Low to Mid Rise up to 2.5 FAR | RM-45 and RF | | | |
| East: | Greenway within Hydro corridor with multi-use pathway system. | Park | RF | | | |

SITE CONTEXT & BACKGROUND

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|-------------|-------------------|
|-------------|-------------------|

| Direction | Existing Use | CCP Designation | Existing Zone |
|----------------------------|---|--|------------------------------|
| South: | Single family dwelling and greenway within Hydro corridor with multi-use pathway system. | Residential Low to Mid Rise up to 2.5 FAR and Park | RF and CD Bylaw No. 16487 |
| West (Across 138A Street): | Single family dwellings | Residential Low to Mid Rise up to 2.5 FAR | RF |

Context & Background

- The 0.71-hectare subject site consists of six properties located on the southeast corner of 100 Avenue and 138 Street in the Green Timbers District in City Centre.
- The site is designated Multiple Residential in the Official Community Plan (OCP), Residential Low to Mid-Rise up to 2.5 FAR and Park in the City Centre Plan (CCP) and is currently zoned Single Family Residential Zone (RF).

DEVELOPMENT PROPOSAL

Planning Considerations

- The applicant is proposing the following:
 - OCP and City Centre Plan amendments of a portion of the subject site;
 - Subdivision/Consolidation of the existing 6 lots into 2 lots (1 development lot and 1 lot to be conveyed to the City);
 - Rezoning of a portion of the subject site; and
 - Detailed Development Permit (Form and Character) and Sensitive Ecosystems Development Permit (Green Infrastructure Areas).

to permit the development of one high-rise 32-storey residential tower with 6-storey apartment building podium (Building 2) and one 6-storey apartment building (Building 1) with two-storey ground-oriented townhomes.

• The following table provides specific details on the proposal:

| | Proposed |
|---------------------|---------------------|
| Lot Area | |
| Gross Site Area: | 7,110 square metres |
| Road Dedication: | 1,212 square metres |
| Undevelopable Area: | 187 square metres |
| Net Site Area: | 5,711 square metres |

| | Proposed | | | |
|---------------------------|----------------------------|--|--|--|
| Number of Lots: | Existing – 6; Proposed - 2 | | | |
| Building Height: | 96 metres / 32 storeys | | | |
| Floor Area Ratio (FAR): | 4.2 (gross) | | | |
| | 5.2 (net) | | | |
| Floor Area | | | | |
| Residential: | 29,948 square metres | | | |
| Total: | 29,948 square metres | | | |
| Residential Units: | | | | |
| 1-Bedroom: | 139 | | | |
| 1-Bedroom + den: | 121 | | | |
| 2-Bedroom: | 144 | | | |
| 2-Bedroom + den: | 24 | | | |
| 3-Bedroom: | 9 | | | |
| Townhouse (2-Bed + den) | 12 | | | |
| Total: | 449 | | | |

Referrals

| Engineering: | The Engineering Department has no objection to the project subject to the completion of Engineering servicing requirements as outlined in Appendix III. |
|---------------------------------|---|
| School District: | The School District has advised that there will be approximately 56 school-age children generated by this development, of which the School District has provided the following expected student enrollment. |
| | 35 Elementary students at Lena Shaw School 21 Secondary students at Guildford Park School |
| | (Appendix IV) |
| | The applicant has advised that the dwelling units in this project are expected to be constructed and ready for occupancy by October 2025. |
| Parks, Recreation & Culture: | Parks accepts the voluntary conveyance of the Green Infrastructure Network protection area as a lot, without compensation, for conservation purposes under the Maximum Safeguarding provision of the DP ₃ – Sensitive Ecosystem Development Permit Area. A P-15 agreement is required for monitoring and maintenance of replanting in the conveyed Green Infrastructure Network area. A detailed planting plan is required for review and approval by Parks. |
| Surrey Fire Department: | The Fire Department has no concerns with the proposed development application. However, there are some items which will be required to be addressed as part of the Building Permit application. |

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|-------------------------------|---|
| Advisory Design Panel: | The proposal was considered at the ADP meeting on September 9, 2021, and was conditionally supported. The applicant has agreed to resolve all of the outstanding items from the ADP review as outlined in the Development Permit section of this report. Any additional revisions will be completed prior to Council's consideration of Final Adoption of the rezoning bylaw, to the satisfaction of the Planning and Development Department. (Appendix VI). |
| Fortis: | No concerns. |
| BC Hydro: | No concerns as long as proposed Lot 2 is conveyed as a fee simple lot. The applicant should be advised that any use of BC Hydro's right of way or installations in proximity to our powerlines must be sent for further review. |

Transportation Considerations

<u>Transit</u>

- The subject site is located one block west of bus route #325 (Newton Exchange / Surrey Central Station) that runs along 140 Street.
- The subject site is located three blocks east of the Frequent Transit Network along King George Boulevard that serves bus routes #320 (Langley / Fleetwood / Surrey Central Station), #501 (Langley Centre / Surrey Central Station) and R1-King George Rapid Bus.
- King George SkyTrain Station and surrounding transit hub are approximately 650 metres (less than 10-minute walk) from the subject site. Planned redevelopment in the adjacent area will increase road network connections that reduce the walking distance between the SkyTrain station and this site.

Traffic Impacts

- The proposed development triggers the requirement for a Transportation Impact Analysis (TIA) to evaluate traffic impacts to the surrounding network and identify any required improvements to mitigate impacts.
- Based on industry standard rates, the proposal is anticipated to generate approximately 95 vehicle trips during the AM and 86 vehicle trips in the PM peak hours.
- Based on the assumed future road network and intersection controls, the TIA results indicate that site-generated traffic impacts are not significant and do not require additional infrastructure beyond the standard frontage roadworks.

Road Network and Infrastructure

• As part of the subject rezoning application, the applicant is required to dedicate approximately 3.5 metres along the north property line for the widening of 100 Avenue.

• An additional dedication is required along the south property line for a portion of the east-west connection for 99A Avenue, in compliance with the City Centre Plan.

<u>Access</u>

• Vehicle access to a four-level underground parking garage is through a single entry/exit along the south property line via the newly dedicated 99A Avenue.

<u>Parking</u>

- The proposed development includes a total of 472 parking spaces, consisting of 427 resident parking spaces and 45 parking spaces for visitors, 9 of which are designated for persons with a disability, within an enclosed four-level underground parking garage.
- The proposed parking exceeds the requirement of 449 parking spaces in the Zoning Bylaw but does not exceed the maximum permitted 584 parking spaces.

Parkland and Natural Area Considerations

- A Development Permit for Sensitive Ecosystems (Green Infrastructure Areas) is required.
- In accordance with the required City processes with respect to Sensitive Ecosystem Development Permit Areas (Green Infrastructure Areas) the applicant engaged Binpal Engineering Ltd. and appropriate Qualified Environmental Professionals (QEP), to prepare the required environmental assessments and reports.
- A portion of the Green Infrastructure Area traverses the south-east corner of the subject site, and the Green Infrastructure 50-metre buffer area blankets most of the subject site.
- As part of the proposed development, the Green Infrastructure Area is proposed to be relocated on site by shifting the corridor further east to better align with the existing BC Hydro corridor. The relocated area will now encumber less of the subject site but will secure an area larger than the portion currently designated as "Park" in the City Centre Plan.
- The Green Infrastructure Area will now include approximately 187 square metres of land (proposed Lot 2) to be conveyed, at no cost, to the City.
- The City Centre Plan will also be amended to reflect a larger area designated as "Park".

Sustainability Considerations

- The applicant has met all of the typical sustainable development criteria, as indicated in the Sustainable Development Checklist. This project will be required to meet a minimum of Step 3 of the BC Energy Step Code, and possibly higher based upon the date of Building Permit issuance.
- The building will be connected to the City's District Energy system.

- In addition, the applicant has highlighted the following additional sustainable features:
 - Construction waste to be categorized and recycled;
 - In proximity to King George SkyTrain station;
 - Electric charging stations for vehicles and bicycles provided;
 - Stormwater management plan to be developed;
 - Green space and pedestrian hardscape provided to reduce urban heat island effect;
 - o Water saving plumbing fixtures and irrigation system installed; and
 - Drought tolerant plants to be planted.

School Capacity Considerations

- The School District has advised that the two schools (Lena Shaw Elementary School and Guildford Park Secondary School) in the catchment area of the subject site are at or over capacity, respectively.
- As part of the 2022/23 Five Year Capital Plan, the School District is seeking an 8-classroom addition at Lena Shaw Elementary School. The Ministry of Education has yet to approve funding for this project.
- In March 2020, the Ministry of Education supported the School District to prepare a feasibility study for a 450-seat addition at Guildford Park Secondary School. The addition is projected to open September 2024 to help alleviate the over-capacity issue.

POLICY & BY-LAW CONSIDERATIONS

Regional Growth Strategy

• The subject site is designated General Urban in Metro Vancouver's Regional Growth Strategy (RGS). The proposed development complies with the RGS.

Official Community Plan

Land Use Designation

- The subject site is designated Multiple Residential in the Official Community Plan (OCP), with a permitted maximum density of 2.5 FAR.
- The applicant is proposing an amendment to the OCP to redesignate a portion of the subject site from Multiple Residential to Central Business District Designation and include the site in Figure 16: Central Business District Densities with a permitted density of 3.5 FAR.

Amendment Rationale

• Although the proposed density on the subject site is higher than that prescribed in the OCP and City Centre Plan, the proposed 32-storey residential tower with 6-storey apartment podium and second 6-storey apartment building will support and complement the Green Timbers District of the City Centre.

- The proposed density and building form are appropriate for this part of Surrey City Centre, and forms part of an emerging high-density residential and mixed-use hub around the King George SkyTrain Station.
- The proposed development conforms to the goal of achieving high-rise, high-density development around the three SkyTrain Stations. The King George SkyTrain Station is located within a walking distance of 650 metres from the subject site.
- The proposed development includes a mix of housing types with 42% two-bedroom, 2-bedroom and den and 3-bedroom units.
- The two-storey, ground-oriented townhouses fronting 100 Avenue are an important asset to the project as they provide housing variety and a repetition of front doors and patios on the street.
- The proposed development will be subject to the Tier 2 Capital Plan Project CACs for proposed density greater than the OCP designation, as described in the Community Amenity Contribution section of this report.

Public Consultation for Proposed OCP Amendment

• Pursuant to Section 475 of the <u>Local Government Act</u>, it was determined that it was not necessary to consult with any persons, organizations or authorities with respect to the proposed OCP amendment, other than those contacted as part of the pre-notification process.

Themes/Policies

- The proposed development is consistent with the following OCP Themes and Policies:
 - o Growth Management
 - Accommodating Higher Density: Direct higher-density development into Surrey's City Centre, through the development of a high-density development within City Centre.
 - Centres, Corridors and Neighbourhoods:
 - Dynamic City Centre: Strengthen Surrey's City Centre as a dynamic, attractive, and complete Metropolitan Core.
 - Transit Corridors: Support Transit Oriented Development along major corridors linking urban centres and employment areas, through the development of a high density development within walking distance to the SkyTrain and other transit infrastructure.
 - Healthy Neighbourhood: Plan and design urban neighbourhoods with sufficient densities to support a higher-quality transit system that is accessible to most residents.
 - Urban Design: Encourage beautiful and sustainable urban design, by promoting a vibrant, active, pedestrian-friendly environment.

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Secondary Plans

Land Use Designation

- The subject site is designated "Residential Low to Mid Rise up to 2.5 FAR" and "Park" in the City Centre Plan.
- The applicant is proposing to amend the City Centre Plan from "Residential Low-Mid Rise 2.5 FAR" to "Residential Mid to High Rise 3.5 FAR". The area currently shown as "Park" in the City Centre Plan will also be amended to reflect the increase in "Park" through the conveyance of the 187-square metre proposed Lot 2.

Amendment Rationale

- Although the proposed density on the subject site is higher than that prescribed in the City Centre Plan, the proposed residential tower with apartment podium will support and complement the Green Timbers District of the City Centre.
- The proposed density and building form are appropriate for this part of Surrey City Centre, and forms part of an emerging high-density residential hub around the King George SkyTrain Station.
- The proposed development conforms to the goal of achieving high-rise, high-density development around the three SkyTrain Stations. The King George SkyTrain Station is located within a walking distance of 650 metres from the subject site.
- A 187-square metre lot (proposed Lot 2) will be conveyed to the City and form part of the Green Infrastructure Area.

Density Bonus

• The proposed development will be subject to Tier 2 Capital Plan Project CACs for proposed density greater than the Secondary Plan designation, as described in the Community Amenity Contribution section of this report and will be calculated and collected in accordance with Schedule G of the Zoning Bylaw prior to Final Adoption.

Themes/Objectives

- The proposed development is consistent with the following guiding principles:
 - Encourage Housing Diversity, with a variety of unit types and sizes;
 - Create Vibrant Urban Space, with high quality architectural aesthetics and amenities such as plazas and street furniture to encourage people to interact with the public realm;
 - Green the Downtown, with appropriate new tree planting and landscaping treatments; and
 - Promote Identity and Sense of Place, with a blend of open landscaped spaces and enclosed residential spaces.

CD Bylaw

- The applicant proposes to rezone the subject site from "Single Family Residential Zone (RF)" to "Comprehensive Development Zone (CD)".
- The applicant is proposing a "Comprehensive Development Zone (CD)" to accommodate a proposed high-rise development on the subject site. The proposed CD Bylaw for the proposed development site identifies the uses, densities and setbacks proposed. The CD Bylaw will have provisions based on the "Multiple Residential 135 Zone (RM-135)".
- A comparison of the density, lot coverage, setbacks, building height and permitted uses in the RM-135 Zone and the proposed CD Bylaw is illustrated in the following table:

| Zoning | RM-135 Zone (Part 25) | Proposed CD Zone |
|-----------------------------|--|---|
| Floor Area Ratio (net): | 2.5 | 5.2 |
| Lot Coverage: | 33% | 46% |
| Yards and Setbacks | 50% of the height of the building | 4.5 metres (all sides) |
| Principal Building Height: | n/a | 96 metres (32-storeys) |
| Permitted Uses: | Multiple unit residential buildings. Ground-oriented multiple residential buildings. Child Care Centres. | Multiple unit residential buildings. Ground-oriented multiple residential buildings. |
| Amenity Space | | |
| Indoor Amenity: | 1,009 square metres | The proposed 1,214 m ² exceeds the Zoning By- law requirement. |
| Outdoor Amenity: | 1,347 square metres | The proposed 2,457 m ² exceeds the Zoning By- law requirement. |
| Parking (Part 5) | Required | Proposed |
| Number of Stalls | | |
| Residential: | 404 | 427 |
| Residential Visitor: | 45 | 45 |
| Total: | 449 | 472 |
| Bicycle Spaces | | |
| Residential Secure Parking: | 539 | 669 |
| Residential Visitor: | 12 | 15 |

• The proposed CD Bylaw will incorporate similar uses as the RM-135 Zone.

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- The proposed net floor area ratio (FAR) of the development will be 5.2, and the lot coverage is proposed to be 46%, which will exceed the maximum 2.5 FAR and 33% lot coverage permitted under the RM-135 Zone. The proposed density complies with the proposed 3.5 FAR designation in the Surrey City Centre Plan with Tier 2 density bonus and the proposed lot coverage is appropriate for the proposed high-rise development with 6-storey apartment podiums.
- The RM-135 Zone requires the setbacks to be 7.5 metres or a minimum of 50% of the building height, whichever is greater. The applicant is proposing reductions for all setbacks in the CD Bylaw. The reduction in building setbacks is supportable as they allow for more active engagement of the streets, which is desirable for the City Centre area and consistent with the City Centre Plan design guidelines.

Capital Projects Community Amenity Contributions (CACs)

- On December 16, 2019, Council approved the City's Community Amenity Contribution and Density Bonus Program Update (Corporate Report No. R224; 2019). The intent of that report was to introduce a new City-wide Community Amenity Contribution (CAC) and updated Density Bonus Policy to offset the impacts of growth from development and to provide additional funding for community capital projects identified in the City's Annual Five-Year Capital Financial Plan.
- The City Centre Plan identifies the subject site as "Residential Low-Mid Rise 2.5 FAR" and "Park". The proposed gross density for the subject site is 4.2 FAR.
- The proposed development will be subject to the Tier 1 Capital Plan Project CACs. The contribution will be payable at the rate applicable at the time of Building Permit Issuance (\$2,000 per unit).
- The proposed development is subject to the Tier 2 Capital Plan Project CACs for proposed density greater than the City Centre Plan designation, which will be calculated in accordance with the flat rates under Schedule G of the Zoning Bylaw and payable prior to Final Adoption. The amount of floor space subject to Tier 2 CACs will be determined in advance of Final Adoption.

Affordable Housing Strategy

- On April 9, 2018, Council approved the City's Affordable Housing Strategy (Corporate Report No. Ro66; 2018) requiring that all new rezoning applications for residential development contribute \$1,000 per new unit to support the development of new affordable housing. The funds collected through the Affordable Housing Contribution will be used to purchase land for new affordable rental housing projects.
- The applicant will be required to register a Section 219 Restrictive Covenant to address the City's needs with respect to the City's Affordable Housing Strategy.

Public Art Policy

• The applicant will be required to provide public art or register a Restrictive Covenant agreeing to provide cash-in-lieu, at a rate of 0.5% of construction value, to adequately address the City's needs with respect to public art, in accordance with the City's Public Art Policy requirements. The applicant will be required to resolve this requirement prior to consideration of Final Adoption.

PUBLIC ENGAGEMENT

- Pre-notification letters were sent on June 8, 2021, and the Development Proposal Signs were installed on June 21, 2021. Staff received written responses from two residents within the pre-notification area expressing concern with proposed the proposed density, building height (no tapering or stepping down as expected) and shadowing (*staff comments in italics*):
 - Concern expressed with the proposed density.

(The applicant is proposing to amend the City Centre Plan from "Residential Low to Mid Rise Up to 2.5 FAR" to "Residential Mid to High Rise 3.5 FAR" to permit a 32-storey residential tower development with 6-storey podium and a second 6-storey apartment building with an overall gross density of 4.2 FAR across the entire subject site.

Although the proposed density on the subject site is higher than that prescribed in the OCP and City Centre Plan, the proposed residential development will support and complement both the Green Timbers and King George Districts of the City Centre.

The proposed 32-storey, high-rise tower with 6-storey podiums will provide a transition in height from the existing high-rise residential development to the west to the low to mid rise density to the east (east of the BC Hydro SRW corridor) identified in the City Centre Plan.

The site is within a walking distance of 650 metres from the King George SkyTrain station. The proposed development conforms to the goal of achieving high-rise, high density development around the SkyTrain Stations.)

• Concern expressed with the proposed building height and shadowing.

(The area south of 100 Avenue and north of Fraser Highway, between 138 Street and 138A Street is under review for increased density as part of the City Centre Plan update.

The current proposal has been reviewed by staff and determined there was merit to the proposed redesignation and additional height to provide a transition from the towers to the west stepping down to the low to mid rise designation (4-6 storey form) to the east along 140 Street. The BC Hydro corridor is a natural buffer to contain higher density development to the west and the subject site is also in close proximity to the King George Skytrain station.

A shadow study has been prepared by the project architect as part of the Development Permit Form and Character requirements. The tower location was determined taking shadowing impacts into consideration.)

DEVELOPMENT PERMITS

Sensitive Ecosystems (Green Infrastructure Areas) Development Permit Requirement

- The subject property falls within the Sensitive Ecosystems Development Permit Area (DPA) for Green Infrastructure Areas in the OCP, given the location of a Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) that traverses the southeast corner of the subject site. The Sensitive Ecosystems (Green Infrastructure Areas) Development Permit is required to protect environmentally sensitive and/or unique natural areas from the impacts of development.
- The City of Surrey Biodiversity Conservation Strategy (BCS) Green Infrastructure Network (GIN) map, adopted by Council on July 21, 2014 (Corporate Report No. R141; 2014), identifies Local BCS Corridor within the subject site, in the Green Timbers BCS management area, with a Medium ecological value.
- The BCS further identifies the GIN area of the subject site as having a Moderate habitat suitability rating, derived from species at risk presence, species accounts and known ecosystem habitat inventories. The BCS recommends a target Corridor width of 50 meters.
- The development proposal conserves 187 square meters of the subject site through the conveyance of a fee simple lot (proposed Lot 2) which is 187 square meters or less than 1% of the total gross area of subject site. This method of GIN retention/enhancement will assist in the long-term protection of the natural features and allows the City to better achieve biodiversity at this location consistent with the guidelines contained in the BCS.
- An Ecosystem Development Plan, prepared by Libor Michalak, *R.P. Bio.*, and dated April 5, 2022 was reviewed by staff and found to be generally acceptable, with some modifications to content and format of the report still required. The finalized report and recommendations will be incorporated into the Development Permit.

Form and Character Development Permit Requirement

- The proposed development is subject to a Development Permit for Form and Character and is also subject to the urban design guidelines in the Surrey City Centre Plan.
- The proposed development generally complies with the Form and Character Development Permit guidelines in the OCP and the design guidelines in the Surrey City Centre Plan.
 - The applicant has worked with staff to develop a design that incorporates City Centre urban design guidelines and principles through podium massing refinement, public realm, and street interface. The applicant has continued to work with staff on an ongoing basis to resolve specific design-related concerns.
 - The applicant and staff will continue to work on the following items prior to final adoption of the development:
 - Continue to simplify the outdoor amenity courtyard area;
 - Further development of the proposed publicly accessible corner plazas to include seating, at grade patios, and parking entry alignment;

- Design development and refinement of the architectural frames, features, and materials; and
- Design development of the two-storey townhomes at grade.
- The proposed development includes one 32-storey high-rise residential tower with 6-storey apartment podium and one 6-storey apartment building with approximately 449 units and an overall gross density of 4.2 FAR.
- The proposal is significantly taller than the 4 to 6 storeys anticipated under the existing City Centre Plan designation. However, the proposal is supportable given the evolving urban context of the City Centre King George District to the west, along with the proximity to rapid transit, and conveyance of the Green Infrastructure Area. The immediate area is also contained to the east by the BC Hydro corridor.
- Building 1 is a 6-storey, L-shaped apartment building located on the northern portion of the site. Nine, two-storey, ground-oriented townhouse units are proposed at the base of the building fronting 100 Avenue. The two-storey townhouse units are an important asset to the project as they provide housing variety and a repetition of front doors and patios along the street. Three additional two-storey townhouse units are proposed fronting 138A Street at the base of Building 1.
- Building 2 includes a 32-storey high-rise tower, which sits on a 6-storey residential apartment podium. The L-shaped 6-storey podium is located on the southern portion of the site with the tower located at the corner of 138A Street and the new 99A Avenue road dedication. The tower location helps reduce shadowing to the existing developments north of 100 Avenue.
- Large roof-top outdoor amenity spaces are located atop both apartment podiums.
- The modern design integrates front patios and creates visual interest at the street level by providing large windows, architectural detailing and high-quality brick material emphasizing the two-storey townhouses units, as well as providing the two-storey townhouse expression at the base of Building 2 for the nine, ground floor single-storey units.
- The tower is a contemporary design with double-glazed low-e exterior glass wall. The southwest corner façade of the tower includes four square architectural features in white aluminum composite panel intended to accent the corner and provide visual interest.
- The applicant has agreed to address any outstanding post-ADP and staff comments to the satisfaction of the City Architect, prior to final adoption (Appendix VI).

Landscaping

- The landscape concept has been designed to respond to the urban nature of City Centre as an active, pedestrian-friendly space. The overall design considers site circulation, navigates the significant slope, and incorporates an inclusive interface between the public and private realm.
- Corner plazas are proposed at the north-west and south-west corners of the site and include bike racks with unit pavers and concrete banding.

- An open lawn is proposed as a central and key focal point in the outdoor amenity space and provides an opportunity for active recreation use by residents. This outdoor space includes a children's play area and multiple seating options for resident's gathering around the open lawn area.
- Each ground floor unit includes a private patio space with soft landscape screening and private gate with layered planting consisting of a variety of shrubs.
- Additional landscaping is provided on the six-storey podium roof and has been designed as a green outdoor area with both programmed and passive space.

Indoor Amenity

- Per the required Indoor Amenity Space requirements, high-rise towers that are 25 storeys or higher must meet a base requirement of 3 square metres per unit up to 557 square metres per tower, which equates to 186 units, plus 1 square metre per unit above 557 square metres.
- Per the required Indoor Amenity Space requirements, low to mid rise apartments that are 3-6 storeys must meet a base requirement of 3 square metres per unit and a minimum of 74 square metres per tower.
- In addition, as per the Indoor Amenity Space requirements specified in the Zoning Bylaw, the requirements must be met on a per building basis. The subject development proposes two buildings.
- Based upon the City's revised Zoning Bylaw requirement, the proposed development must provide 1,009 square metres of indoor amenity space to serve the residents of the proposed 449 units.
- The applicant is proposing 1,214 square metres of indoor amenity space located throughout the development, which exceeds the total indoor amenity space required under the Zone, and additionally satisfies the requirement on a per building basis.
- The indoor amenity space proposed is located on Level 1 and Level 7 in each building and includes meeting space with table and chairs, multi-purpose room with ping pong and pool tables and lounge area, gym and function rooms.

Outdoor Amenity

- Based upon the City's Zoning Bylaw requirement of 3 square metres per dwelling unit of outdoor amenity space, 1,347 square metres of outdoor amenity space is required for the proposed development.
- Overall, the proposed outdoor amenity space provided through private, programmed amenity is 2,457 square metres which exceeds the outdoor amenity space requirement.
- The outdoor amenity space proposed includes a large central open lawn space with children's play area, as well as multiple smaller scale hardscaped centered around the open lawn. These spaces include ping pong tables, picnic tables, benches as well as moveable table and chairs.

• Private outdoor amenity space is also provided on Level 7 of both buildings (associated with the indoor amenity area) with table and chairs and bench seating.

TREES

• Corey Plester, ISA Certified Arborist of Mike Fadum and Associates Ltd. prepared an Arborist Assessment for the subject property. The table below provides a summary of the tree retention and removal by tree species:

| Tree Species | | isting | Remove | Retain | | |
|--|----------|---------------------------|------------|--------|--|--|
| Alde | r and Co | ttonwood | Гrees | | | |
| Alder/Cottonwood | | 3 | 3 | 0 | | |
| | | ious Trees nd Cottonwo | ood Trees) | | | |
| Bigleaf Maple | | 9 | 9 | 0 | | |
| Horsechestnut | | 1 | 1 | 0 | | |
| Cherry | | 6 | 6 | 0 | | |
| Golden Willow | | 1 | 1 | 0 | | |
| | Conife | rous Trees | | | | |
| Douglas Fir | | 9 | 9 | 0 | | |
| Western Redcedar | | 4 | 4 | 0 | | |
| Western Hemlock | | 1 | 1 | 0 | | |
| Lawson Falsecypress | | 2 | 2 | 0 | | |
| Total (excluding Alder and Cottonwood Trees) | | 33 | 33 | О | | |
| City Trees | | 9 | 8 | 1 | | |
| Total Replacement Trees Proposed (excluding Boulevard Street Trees) | l | | 58 | | | |
| Total Retained and Replacement T | rees | 58 | | | | |
| Contribution to the Green City Pro | gram | | TBD | | | |

Table 1: Summary of Tree Preservation by Tree Species:

• The Arborist Assessment states that there are a total of 33 mature trees on the site, excluding Alder and Cottonwood trees. Three (3) existing trees, approximately less than 1% of the total trees on the site, are Alder and Cottonwood trees. It was determined that no trees can be retained as part of this development proposal. The proposed tree retention was assessed taking into consideration the location of services, building footprints, road dedication and proposed lot grading.

- Table 1 includes an additional 9 protected trees that are located on City parkland. Eight (8) of the trees are proposed to be removed. Parks, Recreation and Culture Department has confirmed the removal of the 8 Alders is acceptable as proposed.
- A detailed planting plan prepared by a Registered Professional Biologist (R.P. Bio.) and an associated P-15 agreement are required for the monitoring and maintenance of the proposed trees to be planted in the conveyed riparian area.
- For those trees that cannot be retained, the applicant will be required to plant trees on a 1 to 1 replacement ratio for Alder and Cottonwood trees, and a 2 to 1 replacement ratio for all other trees. This will require a total of 75 replacement trees on the site. The applicant is proposing 58 replacement trees, which does not meet City requirements.
- The new trees on the site will consist of a variety of trees including Japanese Pink Snowbell Dwarf, Starlight Dogwood, Japanese Stewartia and Kobus Magnolia.
- In summary, a total of 58 trees are proposed to be retained or replaced on the site with a contribution to the Green City Program (amount to be determined prior to final adoption).

CITY ENERGY

- The subject site is located within Service Area A, as defined in the "City Centre District Energy System By-law" (see Appendix VII for location). The District Energy System consists of three primary components:
 - community energy centres, City-operated facilities that generate thermal energy for distribution through a piped hot water network;
 - distribution piping that links the community energy centres with buildings connected to the system; and
 - City-owned energy transfer stations (ETS) located within the building connected to the system. The ETS transfers heat energy from the distribution system to the building's mechanical system and is used to meter the amount of energy used.
- All new developments within Service Area A with a build-out density equal to or greater than a floor area ratio (FAR) of 1.0 will be required to provide hydronic thermal energy systems in support of the City's District Energy (DE) system including domestic hot water, make-up air units and in-suite hydronic space heating. The City is committed to having the DE system operational within the timeframe of this project. Therefore, the subject application will be required to connect to the City's DE system prior to occupancy.
- In order to avoid conflicts between the District Energy System and other utilities, the location of the ETS and related service connections are confirmed by Engineering and the applicant at the servicing agreement stage. The Engineering Department also requires the applicant to register a statutory right-of-way and Section 219 Restrictive Covenant over the subject site for the following purposes:

Page 21

- City access to, and maintenance and operation of, the ETS within the building and any infrastructure between the building and the property line; and
- o to prevent conflicts with other utilities.
- Prior to the issuance of a building permit, the Engineering Department will confirm that the applicant has met the requirements of the "City Centre District Energy System By-law".

INFORMATION ATTACHED TO THIS REPORT

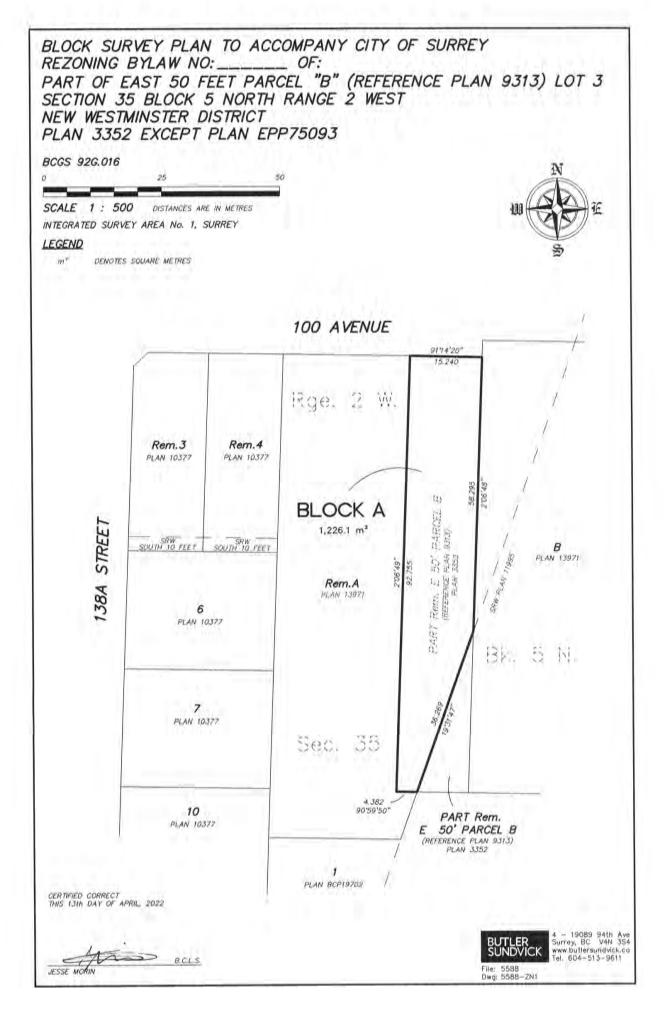
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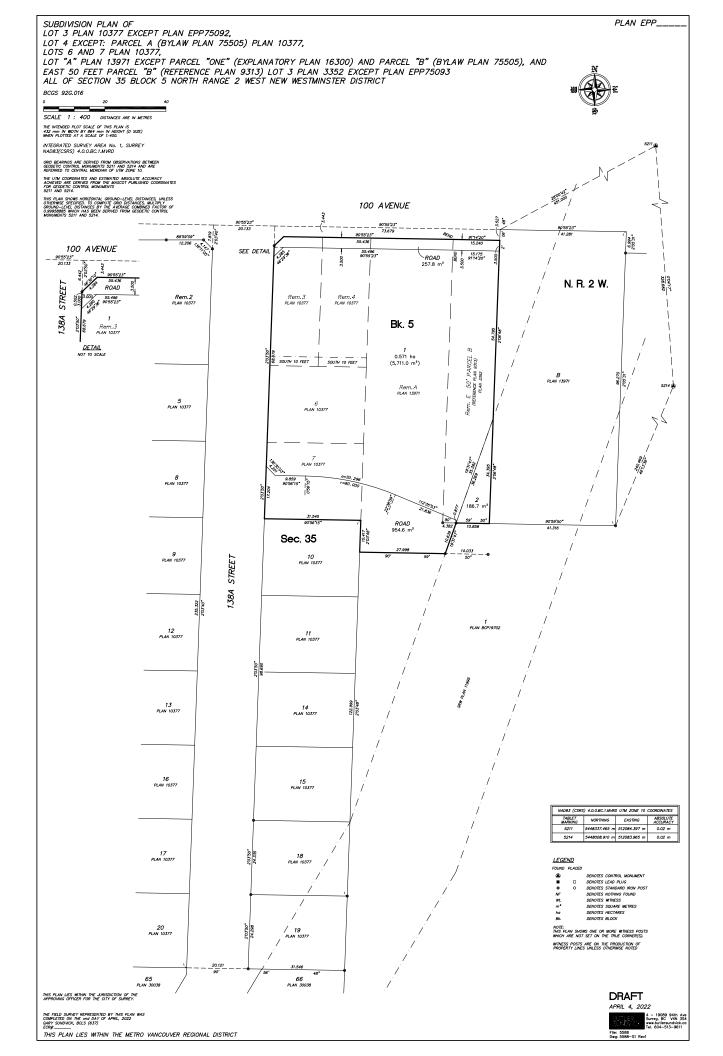
| Rezoning Survey Plan and Subdivision Plan |
|---|
| Site Plan, Building Elevations, Landscape Plans and Perspective |
| Engineering Summary |
| School District Comments |
| Summary of Tree Survey and Tree Preservation |
| ADP Comments and Responses |
| District Energy Map |
| City Centre Plan Amendment |
| OCP Redesignation Maps |
| Draft Sensitive Ecosystem Development Plan with Planting Plan |
| |

approved by Ron Gill

Jeff Arason Acting General Manager Planning and Development

JLM/cm







| | ADDRESS | 13866 100TH AVENUE (I | OT 3) | | | PARKING A Measure: Ci | | | | | ATION | <u>v</u> | | | | |
|-------------|--|---|---|--|------------------------------|---|--|--------------|----------------|-------------|-----------|------------|--------|-----------|------------|-----|
| | ADDRESS | 13876 100TH AVENUE (I 9968 138A ST. (LOT 6) | | | | | ty of Suffe | arking | вујам рап | 10 | | Require | d | | Propos | sed |
| | DESCRIPTION | 9954 138A ST. (LOT 7) 13884 100TH AVENUE (I 13896 100TH AVENUE (I LOT 3 PL 3352 EXPL EPI LOT 6 & 7 PL 10377, LOT REF 9313 OF PL 3352 E PLAN 3352,10377 & 1397 | LOT 3) SURREY B.C. P75092, LOT 4 PL 1037 T A PARCEL 1 EXPL 16 X PL EPP 75093 SECTI | 7 EX PARCEL & 75505 300/ PARCEL & PL 75505 ON 35 BLK 5 NORTH HAN | OF PL 13071 DE 2 WEST NWD | Parking (Par Total Unit: 4 Building Are Residential Table C.1 | t 5 - Off St 49 UNITS as floor Area: àround orie | 322,356 S | .F.(29,947.8 | 84 S.M.) | ns) | | | | | |
| ONIN JSE | G G STREET | CD MULTI-FAMILY DWELLIN 2 STREETS (138A & 10 | | | | | .9/ Dwelling .10/Unit for | | | | | 404 44 | | | | 427 |
| Neasur | re: City of Surrey | | | | | Total Parkin | g slot requ | lired includ | ding visitor | | | 44 | 9 | | | 472 |
| _ | | RMITTED / REQUIRED | | PROPOSED | | | | arking 35% | | | | 157.1 | 5 | | | 99 |
| k. | SITE AREA GROSS LOT AREA | SQ. FT 76,507.83 | 5Q.M 7,107.81 | SQ. FT | SQ.M | Accessible F | | - | OF | | | | | | | |
| | NET LOT AREA(after road decication & | 61,473,99 | 5.711.12 | | 1 | 5.D.3 2 | % HEQD PA | ARKING SPA | AGE | | | 8.9 | 8 | | | 9 |
| - | greenway dedication) | | | | | Bicycle Stor | ane (Part 9 | - Off Stree | et Ricycle | Space R | oulatio | (ne | | | | |
| 1 | YARD & SETBACK(atter road dedication) | FT | M | FT | M | Section D.50 | | | | | guian | , | | | | |
| - | YARD & SETBACK(after load dedication) | | - | | | | visitor / Bl | | | | | 1 | 2 | | | 15 |
| _ | FRONT YARD ALONG 100 AVE(NORTH) | 14,77 | 4,50 | 14,77 | 4.50 | | | nit (secured | i) | | | 538 | | | | 669 |
| - | SIDE YARD ALONG VIEA ST. WEST) SIDE YARD ALONG GREENWAY (EAST) | 14.77 | 4.50 | 14,77 | 4.50 | Total | | | | | | 550.8 | 0 | | 684 | .00 |
| | REAR YARD SETBACK (SOUTH) | 14.77 | 4.50 | 14.37 | 4.50 | | | | | | | | | | | |
| - | ROAD DEDICATION | | | - | | EV PARKING | 3 | | | | | | | | | |
| | | | | | | 1 | lisitor parki | ng 50% sta | lls | | | 22.4 | 5 | | 2 | 2.5 |
| | FRONT YARD ALONG 100 AVE(NORTH) | 11.48 | 3.50 | 11.48 | 3.50 | Total Parkin | g slot requ | ired for EV | 1 | | | 2 | 2 | | | 2 |
| | SIDE YARD ALONG 138A ST. WEST) REAR YARD SETBACK (SOUTH) | 0.00 | 0.00 | 0.00 | 0.00 | AREA SUMMA | RY | | | | | | | | | |
| | LOT CONVEYED TO THE CITY | | | SQ. FT | SQ.M | Measure: Surre | | law | | | | | | | | |
| | SIDE YARD ALONG GREENWAY (EAST) | | | 1969.64 SQ, FT | 184.86 | | - | EXCLAMENITIE | S BALCONIESI | | | RESID | INTIAL | | | |
| | SITE COVERAGE IN NET LOT AREA(%) | | | 26081.27 | 46% | | | | | | _ | | | | | |
| - | BUILDING HEIGHT | | | FT | M | 1 Sector | BLDG1 | BLDG2 | TOWER | TH (289.0) | 1 BR | 1 BR+D | 2BR | 2 BR+D | 38R | - |
| | TOWER (994 AVENUE) | 26 FLOORS | | 312.00 | 95,10 | Level 1 Level 2 | 6492 14519 | 11197 | - | 3 | 5 | 9 | 3 | 1 4 | 1 | - |
| | PODIUM(100 AVENUE FROM LOWEST GRADE) PODIUM(138 STREET FROM LOWEST GRADE) | 7 FLOORS 6 FLOORS | | 69.70 | 21.24 | Level 3 | 14294 | 13696 | - | | 5 | 16 | 3 | 4 | 2 | 1 |
| | PODIUM(95) AVENUE FROM LOWEST GRADE | 6 FLOORS | | 66.62 | 20.31 | Level 4 | 13923 | 13705 | | | 6 | 23 | 4 | 4 | 2 | t |
| | DENSITY FAR (ORDES LOT AREA) | | | SO. FT | SQ.M | Level 5 | 13923 | 13705 | 1 | | 6 | 23 | 4 | 4 | 2 | |
| | FAR (GROSSLOT AREA) | | | 4.2 | | Level 6 | 13071 | 13117 | | 1 | 13 | 18 | 5 | 4 | 2 | |
| - | | | | | | Level 7 | 3460 | 4618 | | _ | 5 | 0 | 2 | 1 | | - |
| _ | FLOOR AREA (BUILDING-110) AVENUE FLOOR AREA (BUILDING-2998 AVENUE | N. | | 79,682.0 242,674.0 | | Level 8-30(23) Level 31-32(2) | | - | 148764 9774 | - | 92 2 | 23 | 115 | 2 | - | |
| - | TOTAL NET RESIDENTIAL ARE | | | 322,356.0 | 29947.84 | Level 41-32(2) | | - | 9/14 | - | * | | 0 | £ . | - | - |
| | 00000 | | | | 632 UNITS/Ha | Total Nei | - | 10.7 | Sec. 2 | 1.0 | 1.00 | 1.000 | 1000 | 1.1.5 | 10.77 | |
| - | GROSS UNITS/H | | | - | 787 UNITS/Ha | area(FAR) | 79682 | B4135 | 158538 | 12 | 139 | 121 | 144 | 24 | 9 | - |
| | AMENITY AREA | | | SQ. FT | SQ.M | TOTAL | 322356 | - | | ADAPTABL | 31% | 27 22.45 | 32% | 5% | 2% | |
| - | INDOOR AMENITY AREA BUILDING 1 L | | | 13.064.0 0.323.0 | 1213.69 | | | | | ADAPTABL | E ONIT SE | 22.45 | | | | |
| | AUREDING-1 L | 7 | | 1,5A3.0 | 143.35 | FAR CALCUL | ATION | SF | SM | | | | | SF | SM | |
| - | BUILDING 2 L BUILDING 2 L | | | 2,370.0 | 200.16 | Net floor area | anon | 322,356.0 | | | | Net floor | area | 322,356,0 | | |
| | OUTDOOR AMENITY AREA | - | | 26,452.2 | 2457.49 | Gross Site Are | a | 75,507.8 | 7,107.81 | | | Net Site / | | 61,474.0 | 5.711.12 | |
| 1 | | | | 16,541.0 | 1536.71 | FAR gross | | 4.2 | | | | FAR net | | 5.2 | | |
| | NGEDING-1 E RUILDING-2 I | | | 5,519.4 | 612.77 408.02 | | | | | | | | ULATIO | N | | _ |
| | PARKING | STALLS | | STALLS | | Sand Sandaria | | | | | | - | | | TOWER BLDO | |
| - | TOTAL PARKING (TABLE C.1) RESIDENTIAL PARKING | 452. | | 472 427 | | INDOOR AMEN | | and and a | | | | 1 | BLDG 1 | BLDG 2 | 2 | |
| | VISITOR PARKEN | | | 45 | | | BLDG 1 | BLDG 2 | TO | DTAL AMENIT | Y | L3 | 5 | 13 | | - |
| | | - | | | | L1 L7 | 6323 1543 | 2370 2828 | | | | L2 L3 | 17 | 19 | | - |
| - | HANDICAPPED PARKING 5.3 C.1 | | | 9 | | TOTAL | 7866 | 5198 | | 13064 | | L3 L4 | 20 | 19 | - | |
| | TOTAL BIKE STORAGE/PARKING D.5. | 550.8 | | 684 | | 10 mil | | | | 1000- | | L5 | 20 | 19 | | |
| - | CLASS / QASS (| 538.8 | | 669 | | OUTDOOR AM | ENITY | | т | DTAL AMENIT | Y | L6 | 18 | 19 | | |
| _ | | 1 | | | | н | 16541 | | | | | L7 | 3 | 5 | | |
| - | EV PARKING -50% VISITOR STALLS | 21.85 | | 23 | | L7 | 5519.37 | 4391.85 | | | | L8-30 | | | 230 | |
| | | | | | | TOTAL | 22060.37 | 4391.85 | | 26452 | | L31-32 | | | 12 | 1 |
| _ | | 1 | | | | TOTAL | EL000.07 | 4001.00 | | | | TOTAL | 94 | 113 | 242 | |

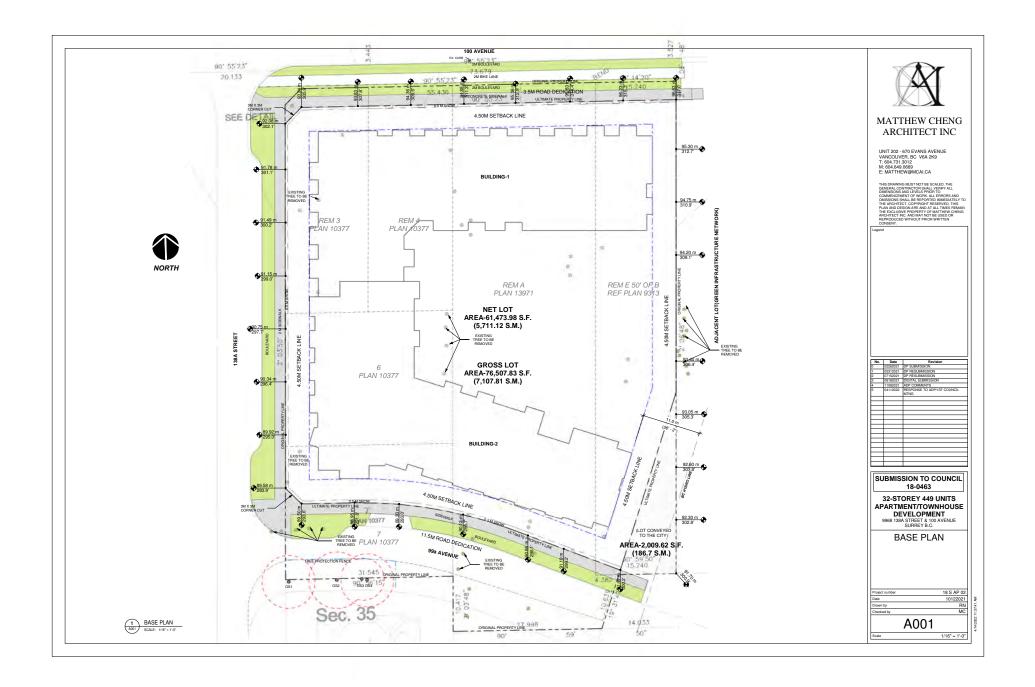
sed MATTHEW CHENG ARCHITECT INC 427 45 UNIT 202 - 670 EVANS AVENUE VANCOUVER, BC V6A 2K9 T: 604.731.3012 M: 604.649.0669 E: MATTHEW @MCALCA **472** 99 THIS DRAWING MUST NOT BE SCALED. THE GENERAL CONTRACTOR SHALL VERRY ALL DIMENSIONS AND LEVELS PROC. MICE TO COMMENCEMENT OF WORK. ALL ERRORS AND OMSSIONS SHALL BE REPORTED MINEDATELING PLAN AND DESIGN ARE AND AT ALL TIMES REMAIN THE EXCLUSE PROPERTY OF MUTTEN ARCHITECT INC. AND ANY NOT BE USED OR ARCHITECT INC. AND ANY NOT BE USED OR ARCHITECT INC. AND ANY NOT BE USED OR ONNERN. 9 15 669 1.00 22.5 23 Total units 18 36 30 39 39 37 8 230 12
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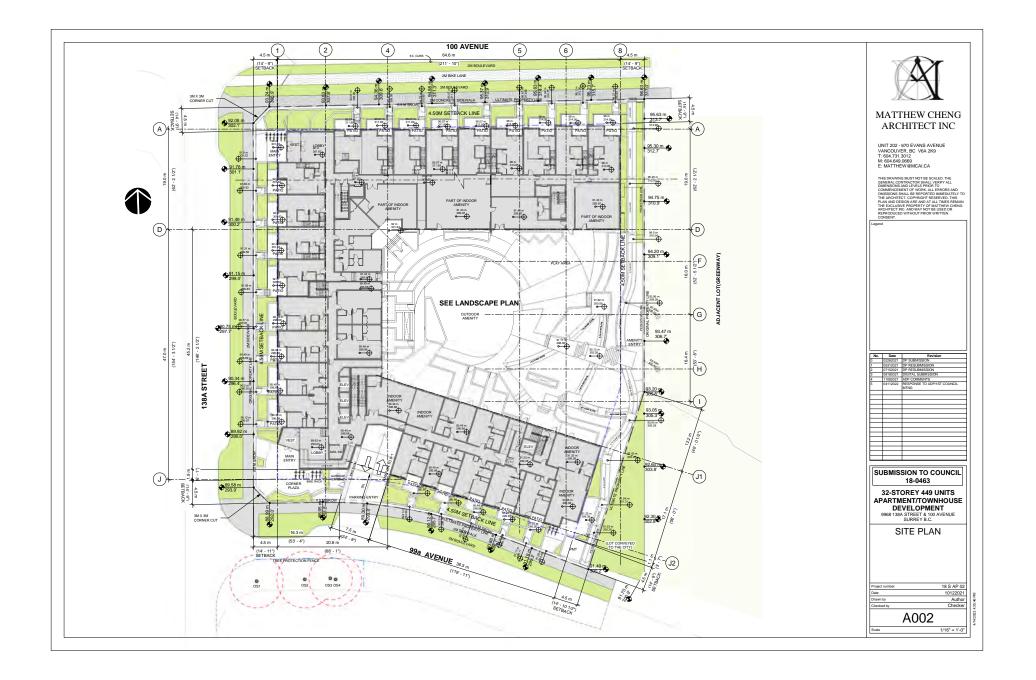
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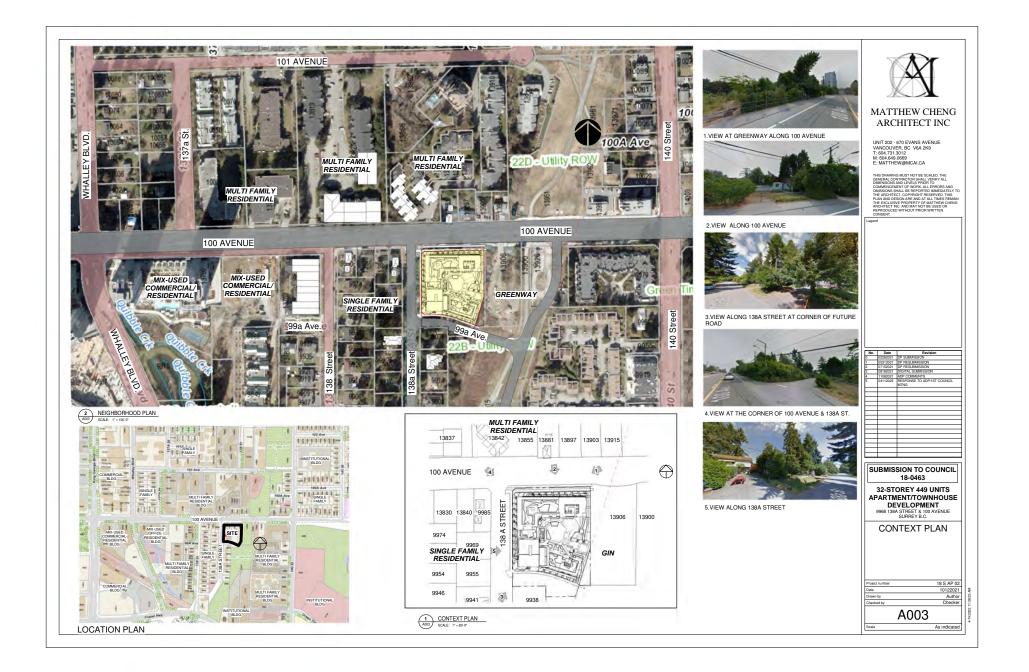
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Scale









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2 MARCH 21 12NN A004 SCALE: 12" = 1'-0"



3 MARCH 21 2PM A004 SCALE: 12" = 1'-0"



4 JUNE 21 10AM A004 SCALE: 12"= 110"



5 JUNE 21 12NN A004 SCALE: 12" = 110"



6 JUNE 21 2PM



MATTHEW CHENG ARCHITECT INC

UNIT 202 - 670 EVANS AVENUE VANCOUVER, BC V6A 2K9 T: 604.731.3012 M: 604.649.0669 E: MATTHEW@MCALCA

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SHADOW ANALYSIS

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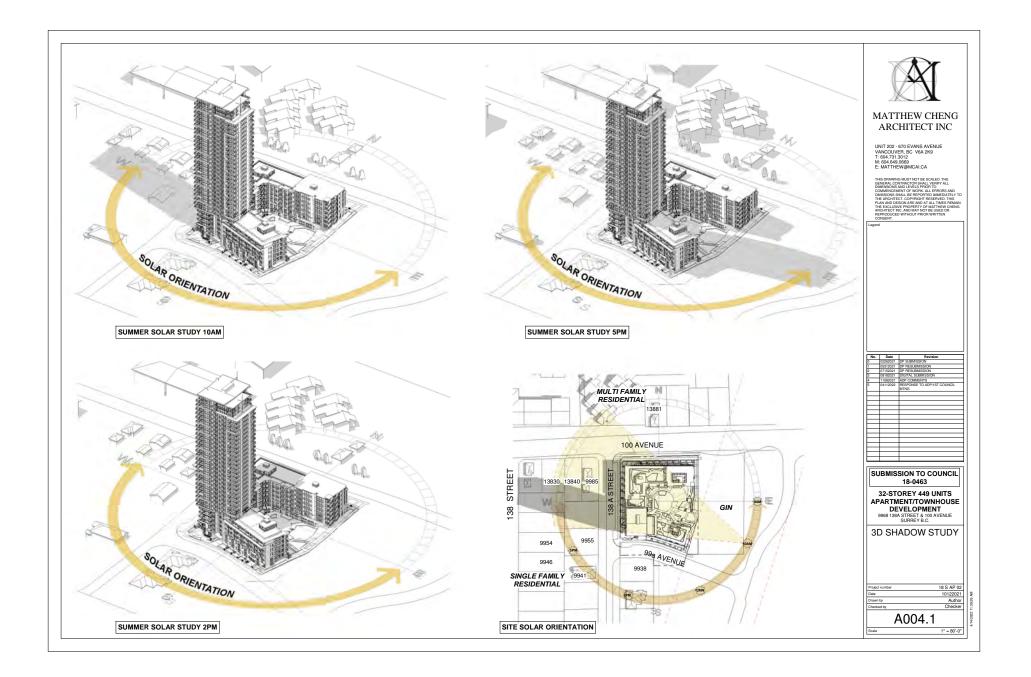
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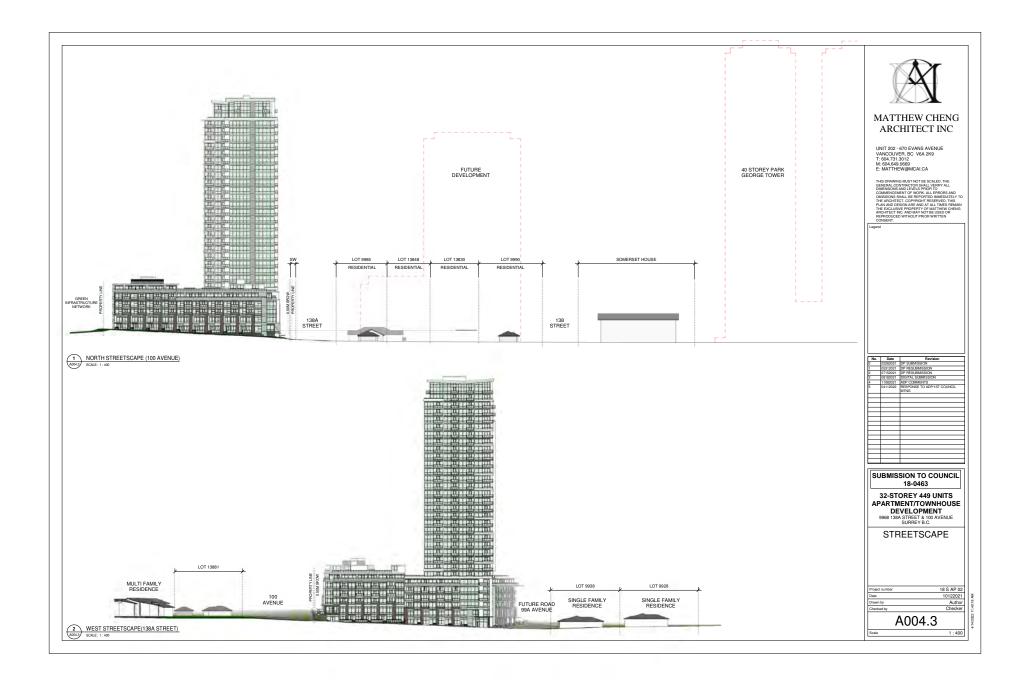


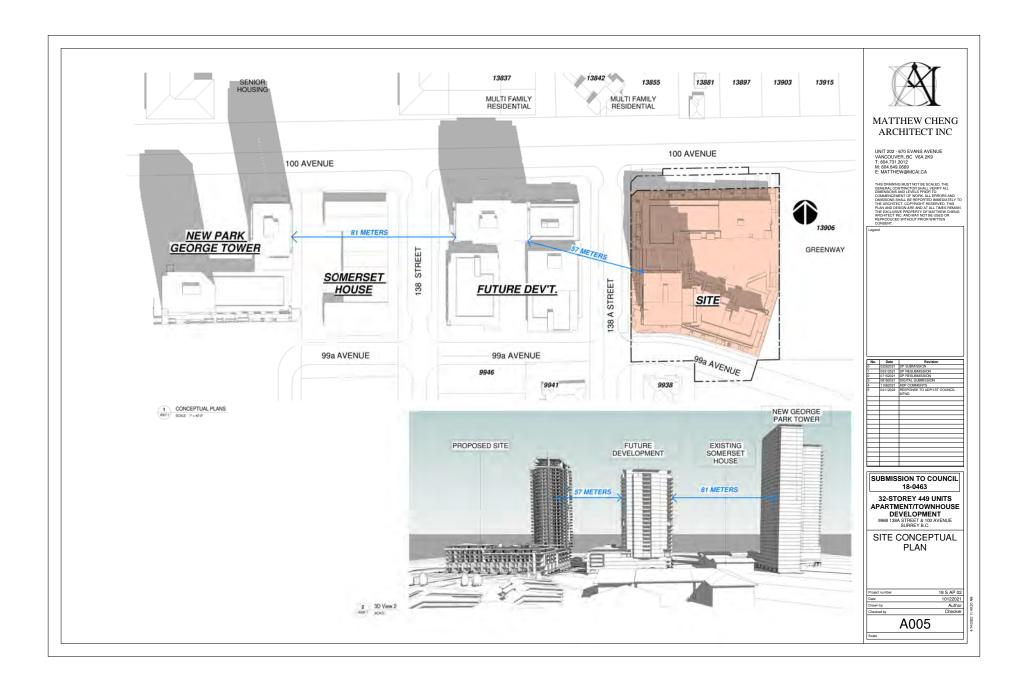
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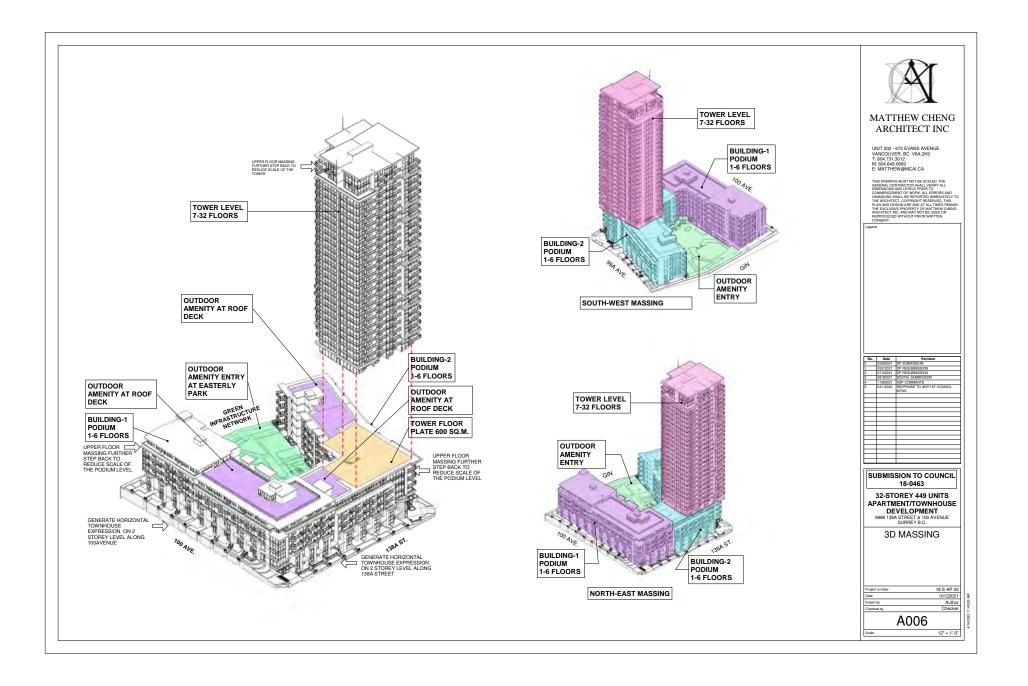


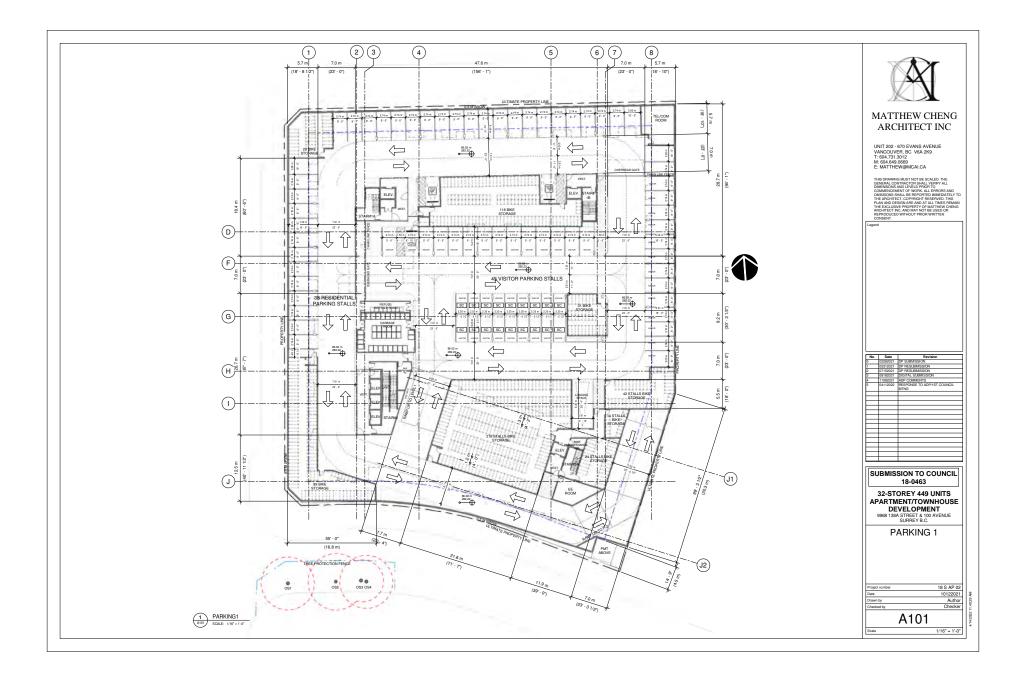
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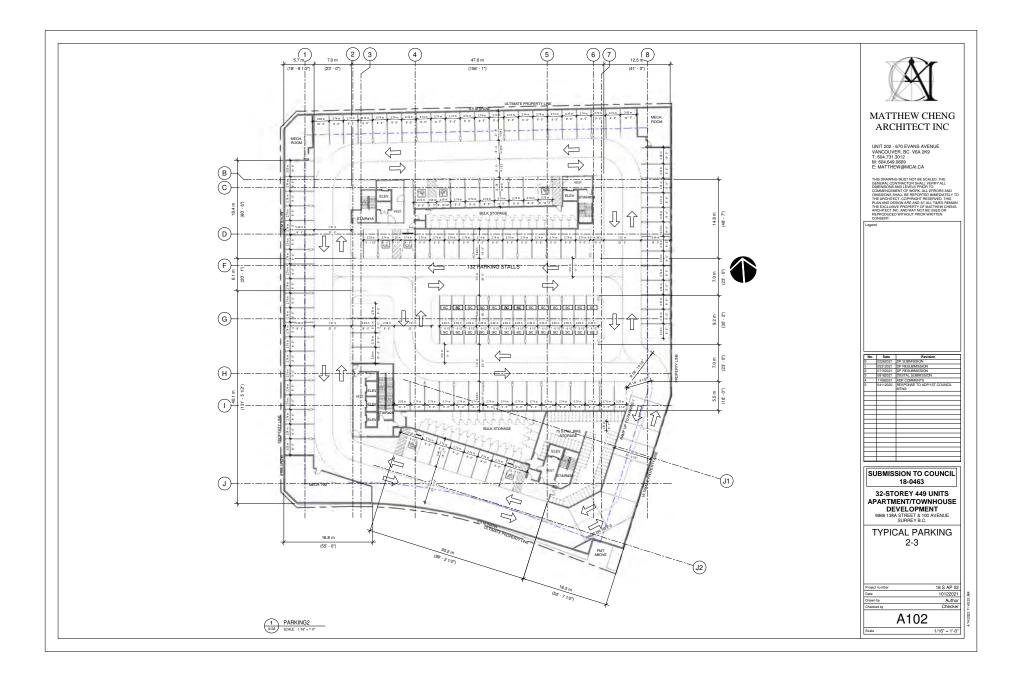


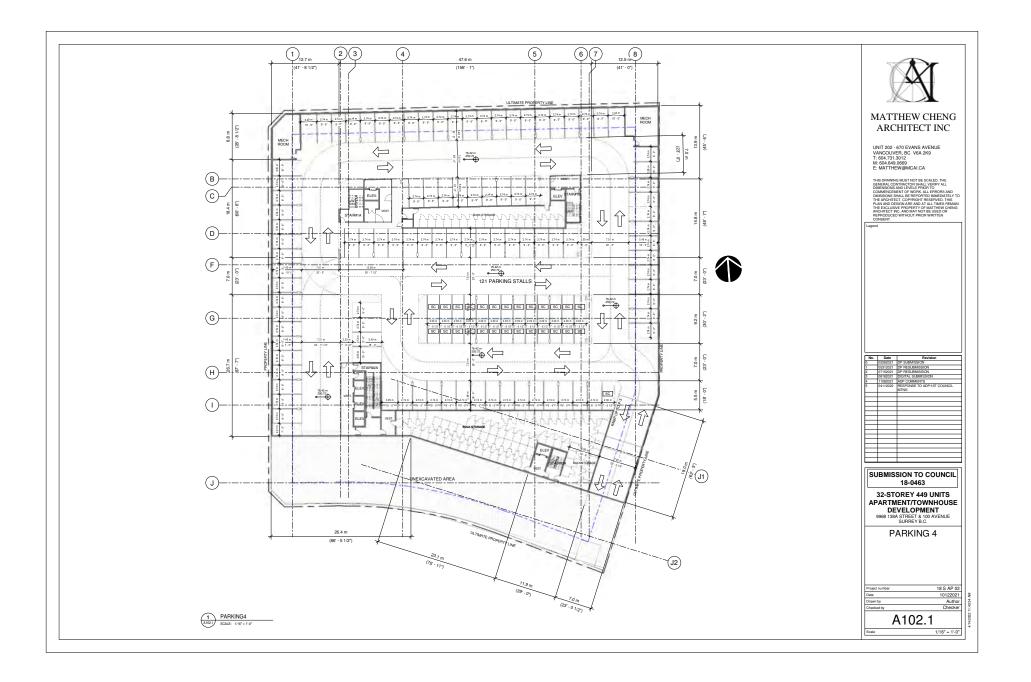










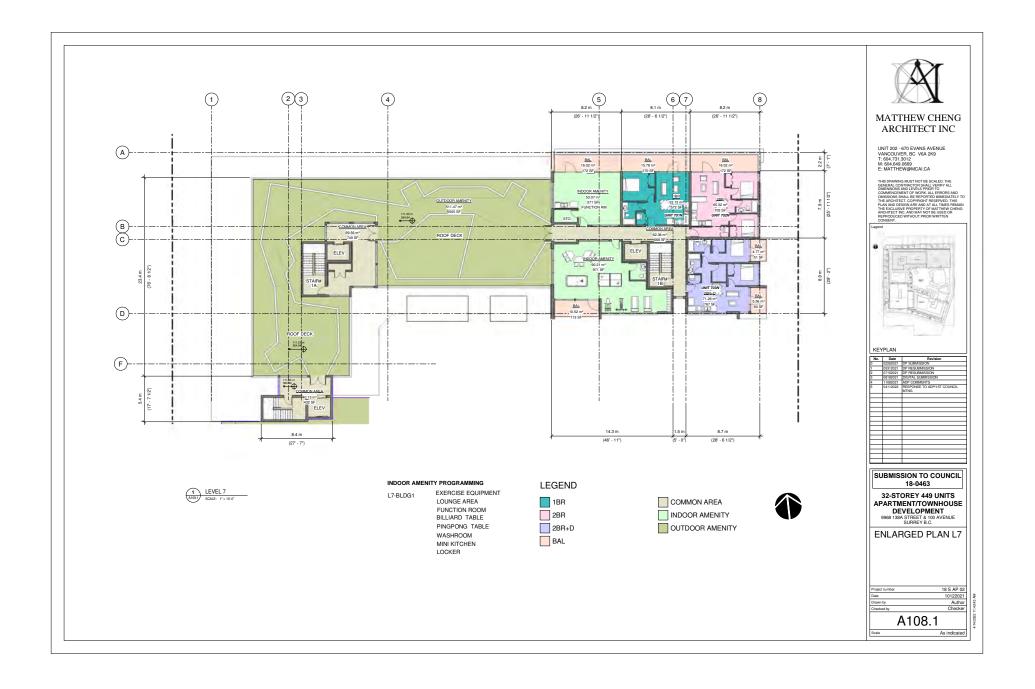




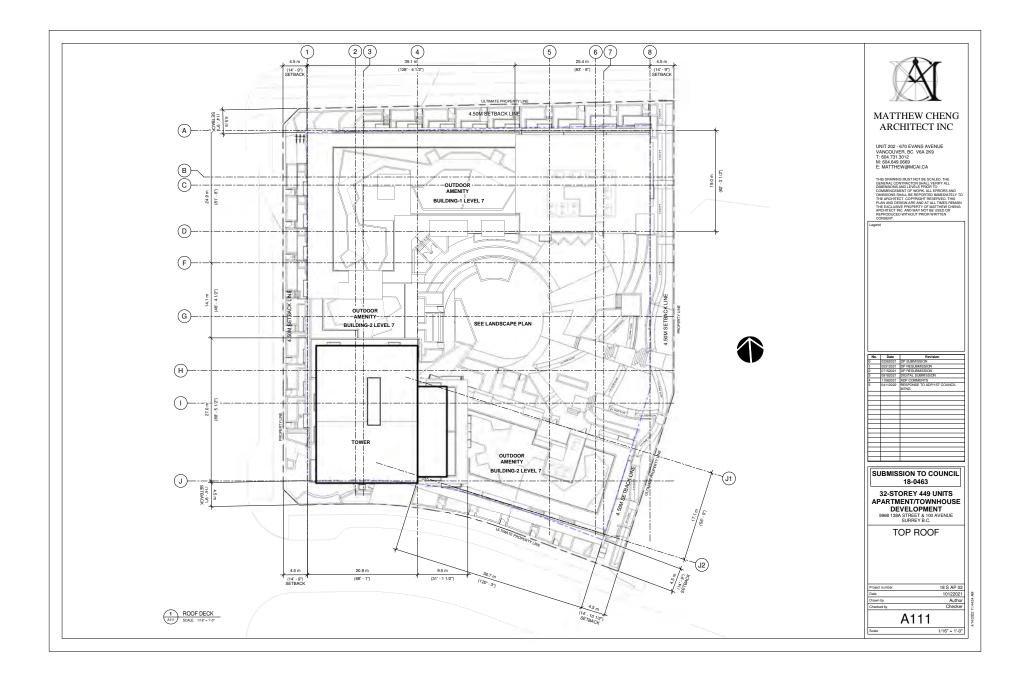


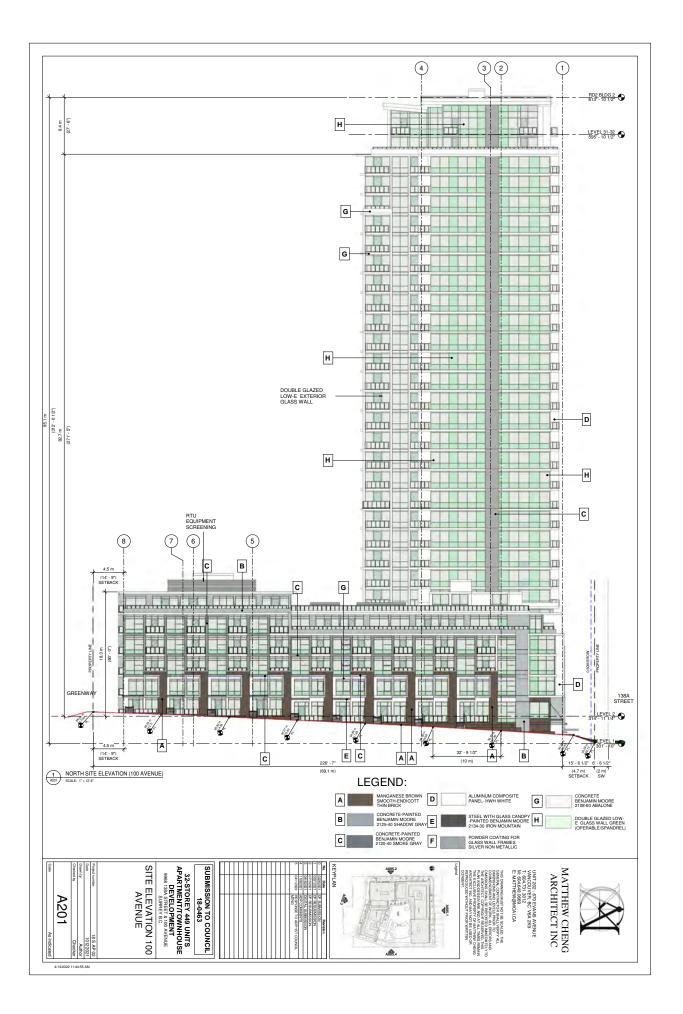


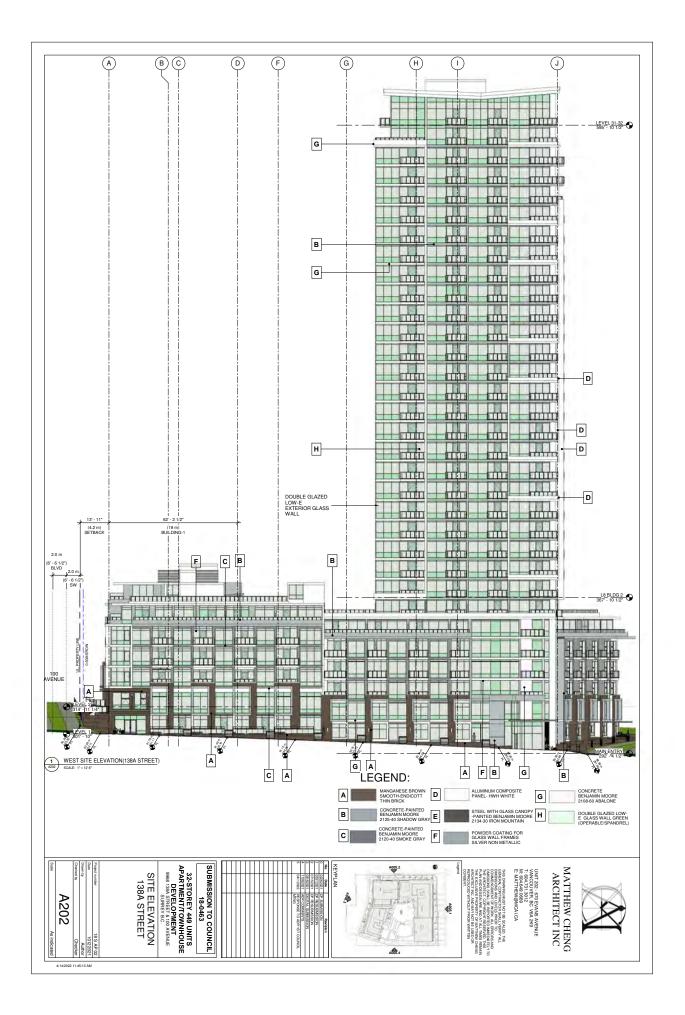


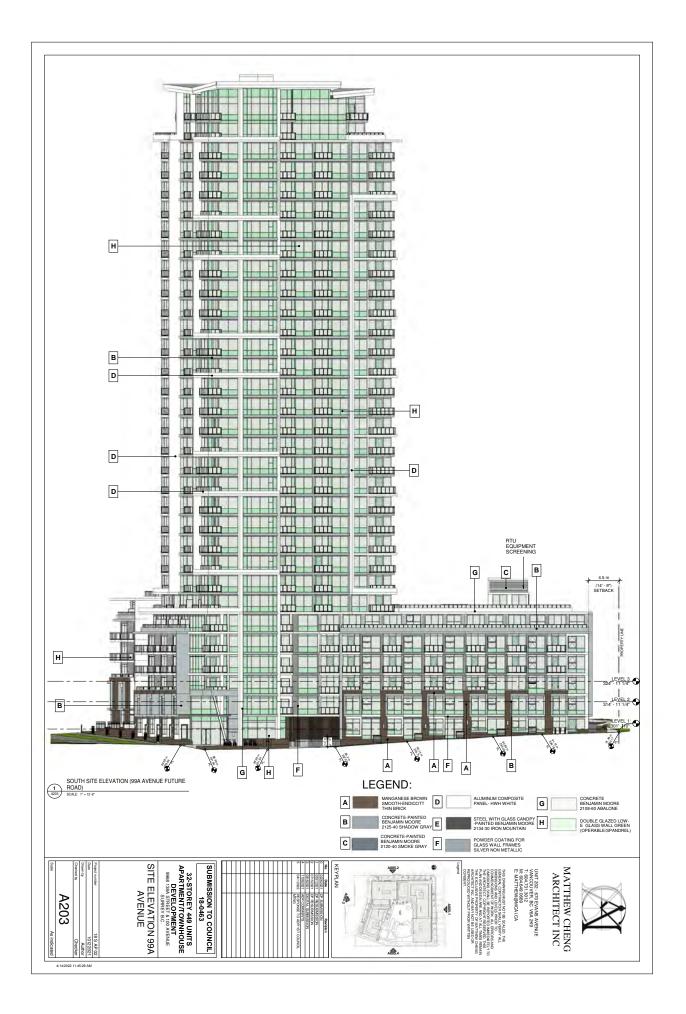


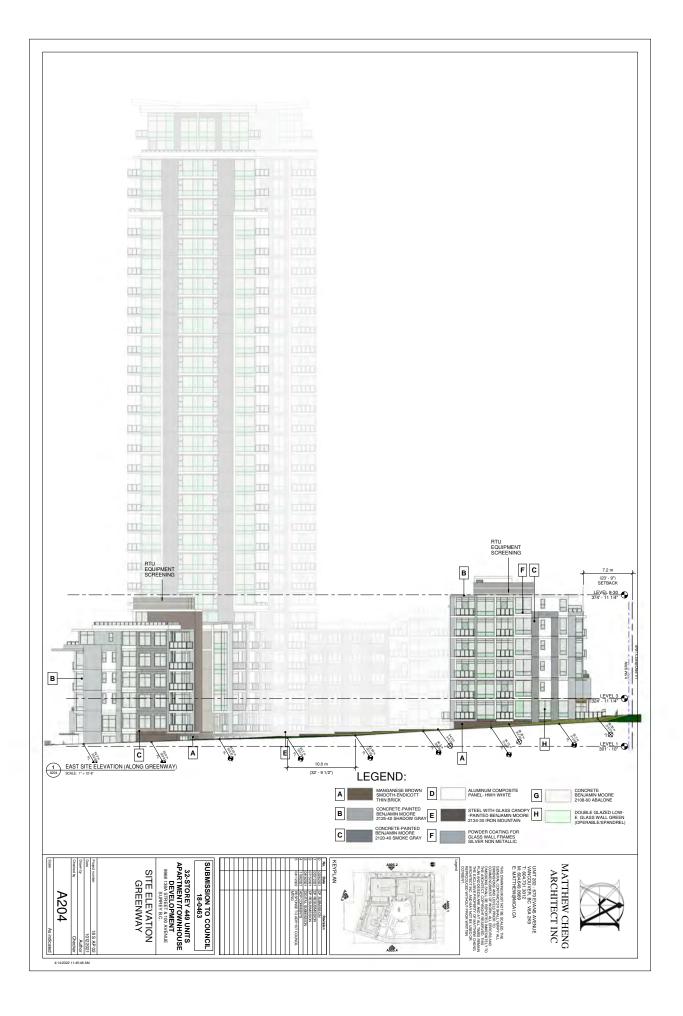








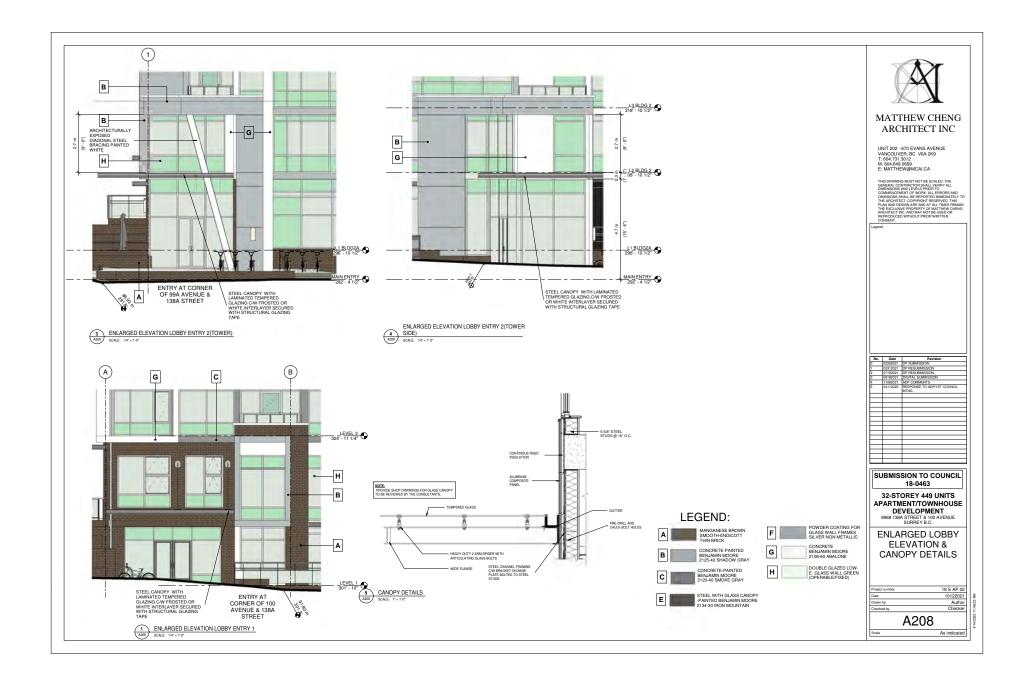








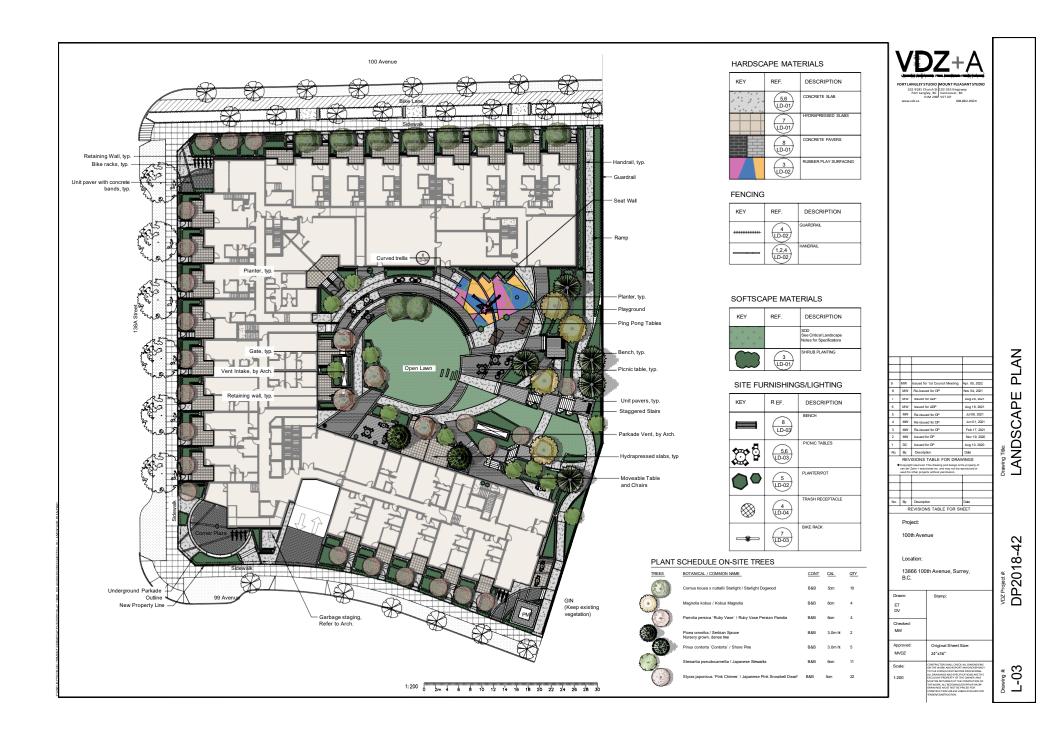


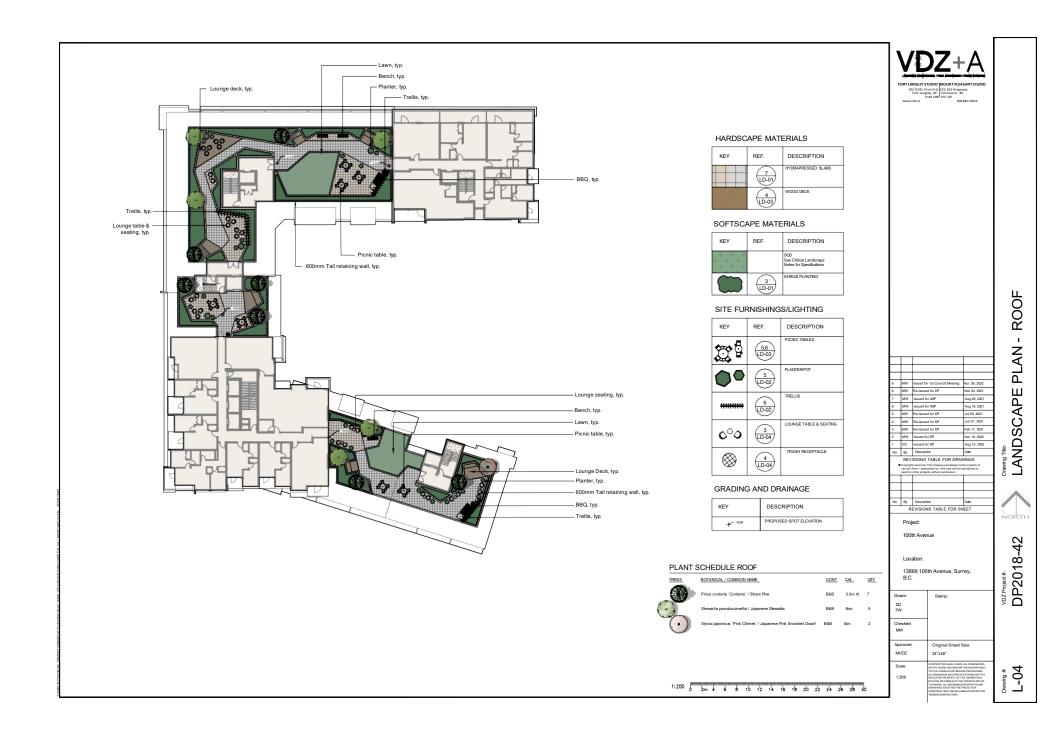


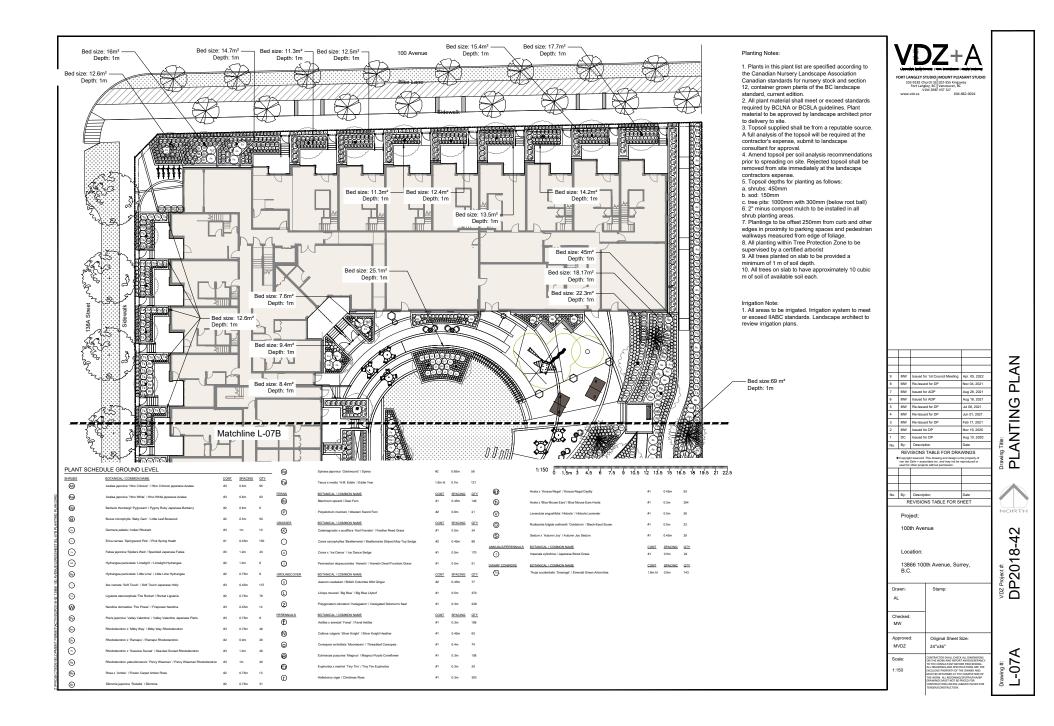


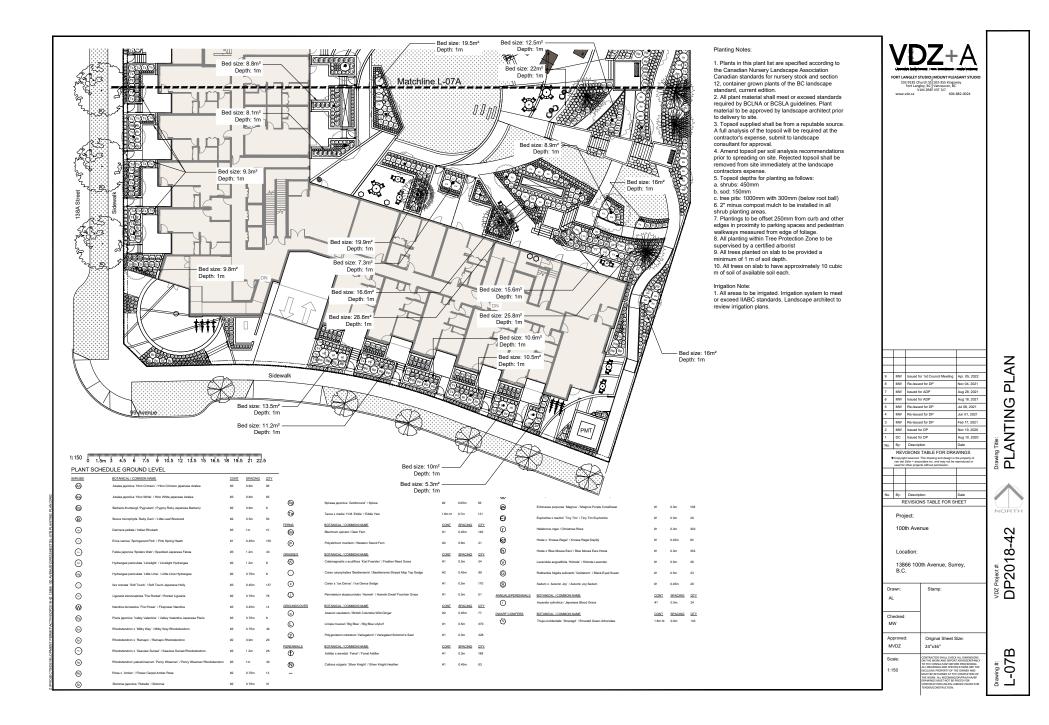


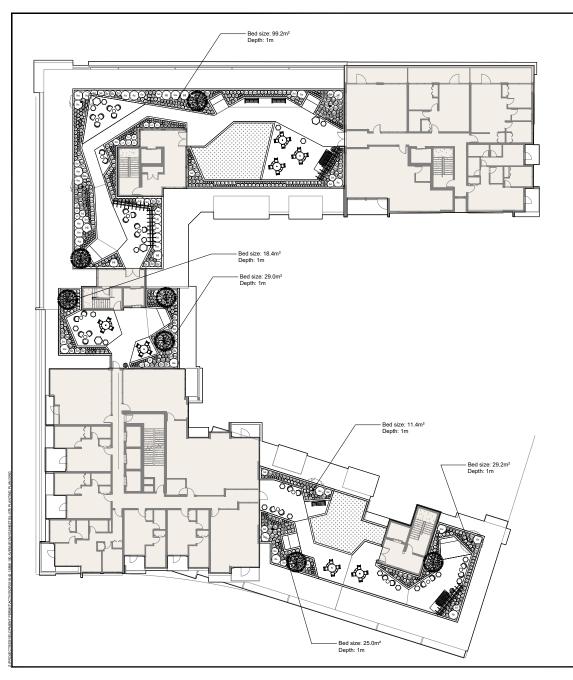












| RUBS | BOTANICAL / COMMON NAME | CONT | SPACING | QT |
|------------|---|------|---------|-----------|
| Ah | Azalea japonica 'Hino Crimson' / Hino Crimson japanese Azalea | #3 | 0.6m | 27 |
| | Erica carnea 'Springwood Pink' / Pink Spring Heath | #1 | 0.45m | 25 |
| Ga | Gaura lindheimeri 'Siakiyou Pink' / Siakiyou Pink Gaura | #2 | 0.6m | 40 |
| н | Hydrangea paniculata 'Limelight' / Limelight Hydrangea | #2 | 1.2m | 7 |
| u | Ligularia stenocephala 'The Rocket' / Rocket Ligularia | #2 | 0.75m | 32 |
| W | Nandina domeatica 'Fire Power' / Firepower Nandina | #3 | 0.45m | 11 |
| Pa | Rhododendron x 'Seaview Sunset' / Seaview Sunset Rhododendron | #3 | 1.2m | 10 |
| ** | Ribea sanguineum 'White Icicle' / White Flowering Currant | #2 | 1.2m | 14 |
| Sr | Skimmia japonica 'Rubella' / Skimmia | #2 | 0.75m | 20 |
| | Spinaea douglasii / Western Spinea | #2 | 0.9m | 29 |
| Sg | Spiraea japonica 'Goldmound' / Spirea | #2 | 0.65m | 40 |
| ASSES | BOTANICAL / COMMON NAME | CONT | SPACING | <u>01</u> |
| к | Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass | #1 | 0.5m | 82 |
| A | Hakonechioa macra 'Aureola' / Golden Japanese Forest Grass | #1 | 0.45m | 50 |
| J | Pennisetum alopecuroides 'Hameln' / Hameln Dwarf Fountain Grass | #1 | 0.5m | 93 |
| ROUNDCOVER | BOTANICAL / COMMON NAME | CONT | SPACING | 21 |
| L | Liriope musicari 'Big Blue' / Big Blue Lilyturf | #1 | 0.5m | 68 |
| z | Polygonatum odoratum 'Variegatum' / Variegated Solomon's Seal | #1 | 0.3m | 94 |
| RENNIALS | BOTANICAL / COMMON NAME | CONT | SPACING | 21 |
| t | Achillea millefolium 'Terra Cotta' / Terra Cotta Yarrow | #1 | 0.3m | 14 |
| f | Astibe x srendsii 'Fanal' / Fanal Astibe | #1 | 0.3m | 39 |
| е | Echinacea purpurea 'Magnus' / Magnus Purple Coneflower | #1 | 0.3m | 17 |
| Er | Euphorbia x martinii 'Tiny Tim' / Tiny Tim Euphorbia | #1 | 0.3m | 37 |
| h | Hosta x 'Blue Mouse Ears' / Blue Mouse Ears Hosta | #1 | 0.3m | 35 |
| v | Lavandula angustifolia 'Hidcote' / Hidcote Lavender | #1 | 0.5m | 49 |
| Mf | Monarda didyma 'Fireball' / Fireball Bee Balm | #2 | 0.45m | 51 |
| G | Rudbeckia fulgida sullivantii 'Goldaturm' / Black-Eyed Susan | #1 | 0.5m | 26 |

Planting Notes:

1. Plants in this plant list are specified according to the Canadian Nursery Landscape Association Canadian standards for nursery stock and section 12, container grown plants of the BC landscape standard, current edition. All plant material shall meet or exceed standards required by BCLNA or BCSLA guidelines. Plant material to be approved by landscape architect prior to delivery to Site.
 Topsoil supplied shall be from a reputable source. A full analysis of the topsoil will

be required at the contractor's expense, submit to landscape consultant for approval.

 A. Amend topsoil per soil analysis recommendations prior to spreading on site.
 Rejected topsoil shall be removed from site immediately at the landscape contractors expense.

Topsoil depths for planting as follows:

- a. shrubs: 450mm b. sod: 150mm

c. tree pits: 1000mm with 300mm (below root ball)
6. 2" minus compost mulch to be installed in all shrub planting areas.

Plantings to be offset 250mm from curb and other edges in proximity to parking spaces and pedestrian walkways measured from edge of foliage.

 All planting within Tree Protection Zone to be supervised by a certified arborist
 All trees planted on slab to be provided a minimum of 1 m of soil depth. 10. All trees on slab to have approximately 10 cubic m of soil of available soil each.

Irrigation Note:

1. All areas to be irrigated. Irrigation system to meet or exceed IIABC standards. Landscape architect to review irrigation plans.

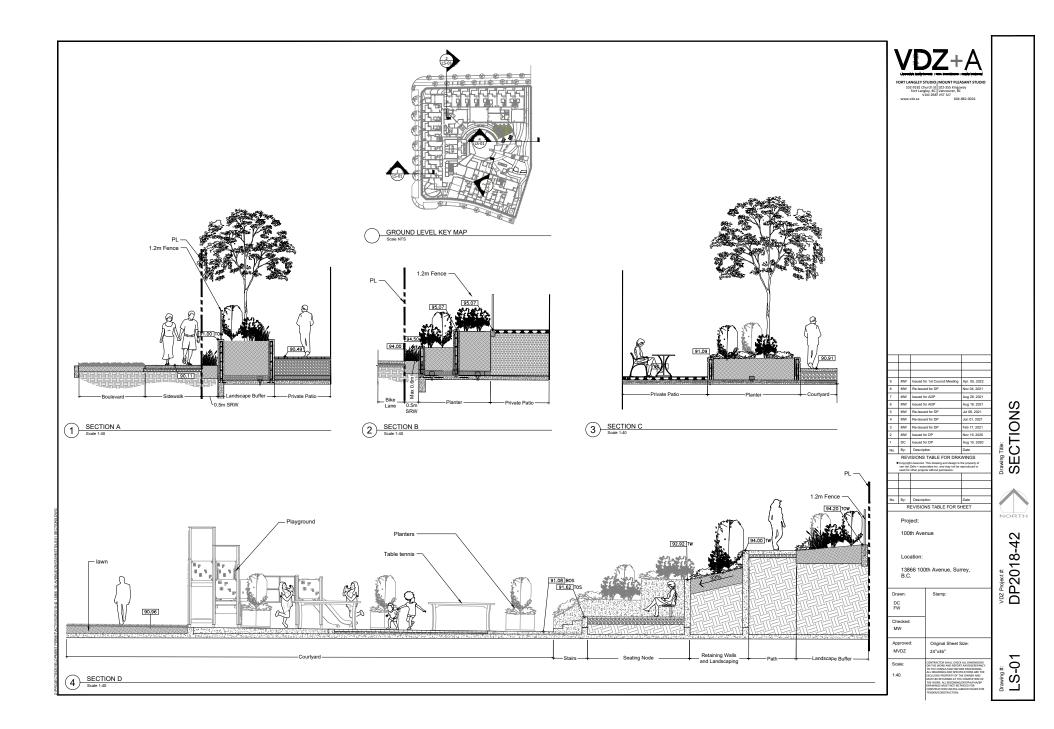
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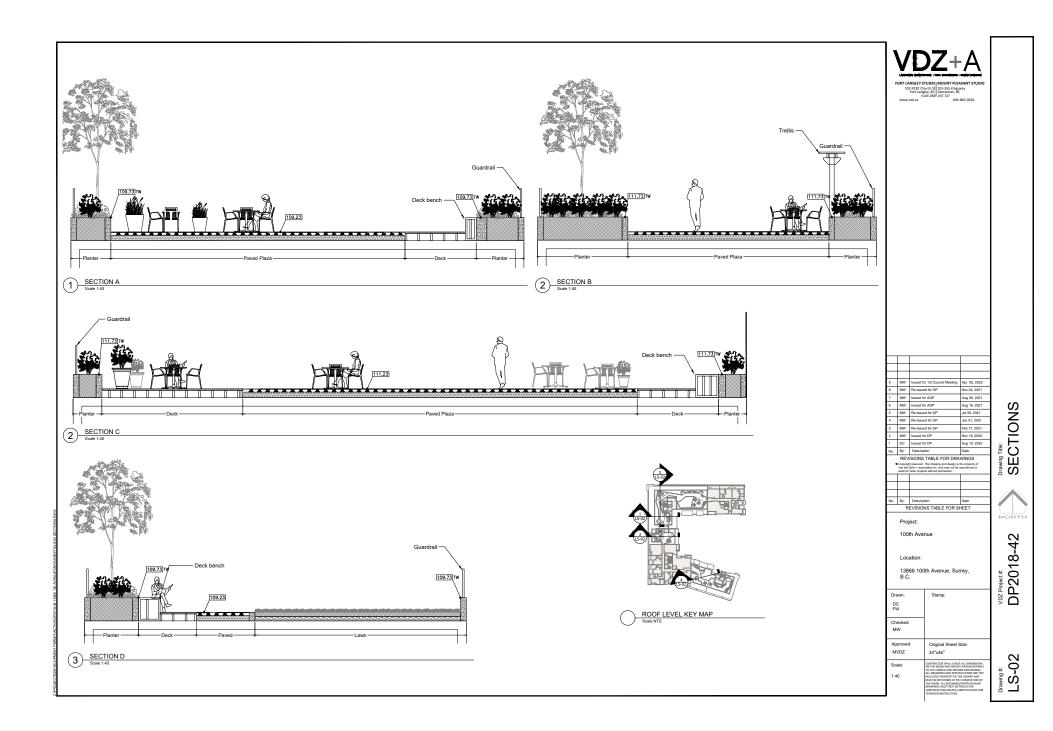


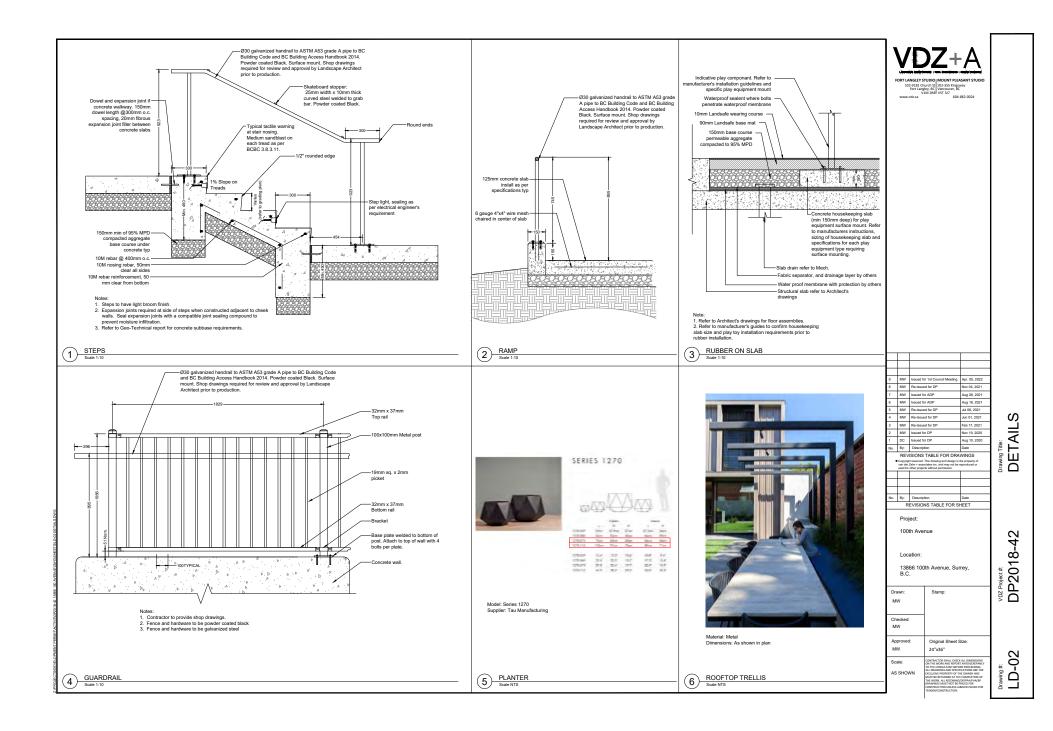
VDZ+A

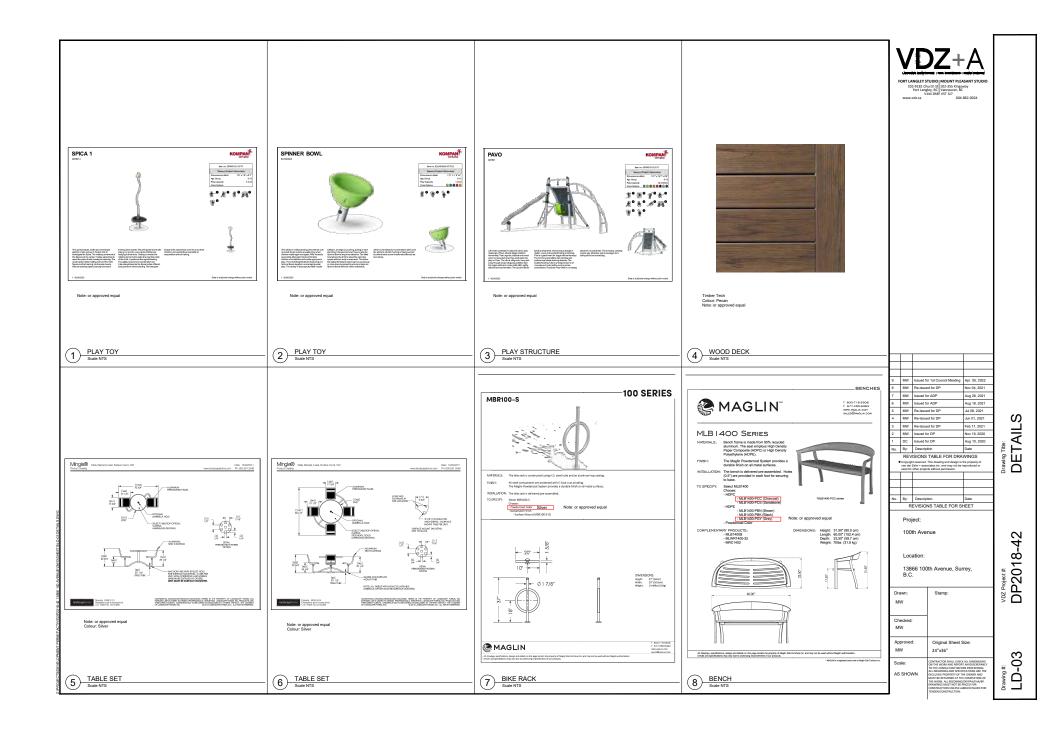
102-9181 Church St Fort Langley, BC V1M 2R8 V5T 3J7 ww.vdz.ca 604-882-0024

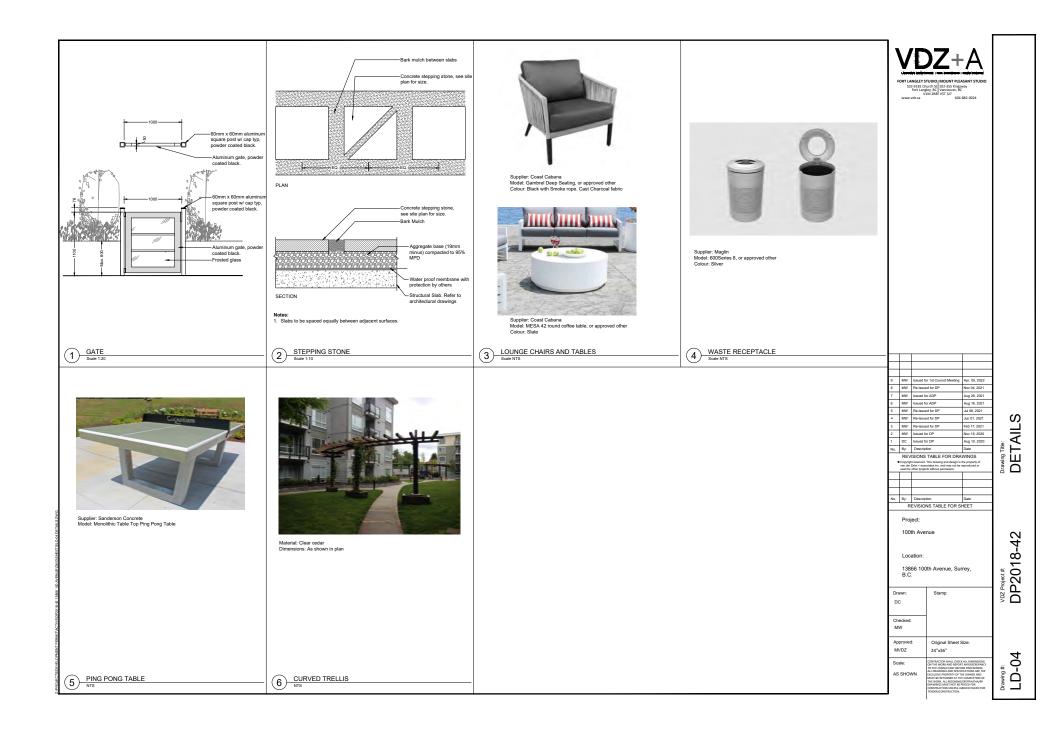
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INTER-OFFICE MEMO

TO:Manager, Area Planning & Development
- North Surrey Division
Planning and Development DepartmentFROM:Development Services Manager, Engineering DepartmentDATE:April 17, 2022PROJECT FILE:7818-0463-00RE:Engineering Requirements
Location: 13866/76/84/96 - 100 Ave, 9968 - 138A St and 9954 - 138A St

OCP AMENDMENT/CITY CENTRE PLAN AMENDMENT

• Complete sanitary catchment analysis and drainage catchment analysis to determine capacities. Resolve downstream constraints, as identified.

REZONE/SUBDIVISION

Property and Right-of-Way Requirements

- Dedicate 3.5m along 100 Avenue.
- Dedicate as road, the by-law road for Parcel A and Parcel B.
- Dedicate varying road allowance (minimum 11.5m) for 99A Avenue.
- Dedicate required corner cuts.
- Provide 0.5m wide statutory right-of-way along 138A Street,99A Avenue and 100 Avenue.

Works and Services

- Construct east side of 138A Street and south side of 100 Avenue.
- Construct 99 Avenue to a half road standard.
- Implement the recommendations of the benklebeam and geotechnical reports.
- Construct minimum 250mm water main along 138A Street, 99A Avenue and 100 Avenue.
- Submit fire flow analysis to confirm water system's flow and velocity.
- Construct minimum 250mm sanitary main along 138A Street and 99A Avenue.
- Construct storm mains to service the development.
- Provide water, storm, and sanitary service connections to the lot.
- Register applicable legal documents as determined through detailed design.
- Pay amenity charge for undergrounding the existing overhead electrical and telecommunication infrastructure.

A Servicing Agreement is required prior to Rezone/Subdivision.

Jeffy lag

Jeff Pang, P.Eng. Development Services Manager HB4

NOTE: Detailed Land Development Engineering Review available on file



Planning

School Enrolment Projections and Planning Update:

The following tables illustrate the enrolment projections (with current/approved ministry capacity) for the elementary and secondary schools serving the proposed development.

The NCP for the area calls for significant redevelopment located along King George Boulevard and 104th Avenue with the current building form changing into mid to high-rise residential development and mixed use. The timing of these future high-rise developments, with good market conditions could impact the enrolment growth upwards even more from the projections below.

Lena Shaw operates at or slightly above the school's capacity. Post 2023, the projected growth trend begins to get stronger finishing at end of the decade to around 900 students. As part of the District's 2022/2023 Five Year Capital Plan, the district has requested an 8-classroom addition. The Ministry of Education has not approved funding for this project.

Guildford Park Secondary operates over capacity. With the continued development and densification of the City Center, enrollment for this school is projected to continue to grow, perhaps, quicker than what is shown below. In March 2020, the Ministry of Education supported the District to prepare a feasibility study for a 450-capacity addition at the secondary school. The addition is targeted to open for September 2024.

THE IMPACT ON SCHOOLS

APPLICATION #:

18 0463 00 (Updated April 2022)

SUMMARY

| The proposed | 449 | highrise units |
|---------------------------|---------|----------------|
| are estimated to have the | e follo | wing impact |
| on the following schools: | | |

Projected enrolment at Surrey School District for this development:

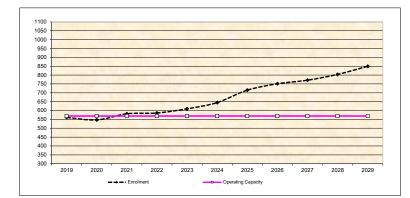
| Elementary Students: Secondary Students: | 35 21 |
|---|------------|
| September 2021 Enrolment/School Capacity | |
| Lena Shaw Elementary Enrolment (K/1-7): | 83 K + 499 |
| Operating Capacity (K/1-7) 57 K + 512 | |

| Guildford Park Secondary | |
|--------------------------|------|
| Enrolment (8-12): | 1364 |
| Capacity (8-12): | 1050 |
| | |

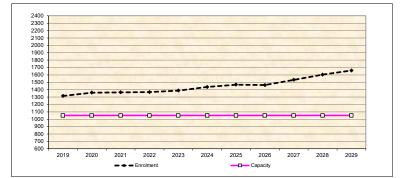
| Projected population of school-age children for this development: | 72 |
|---|----|
| | |

Population : The projected population of children aged 0-19 Impacted by the development. **Enrolment:** The number of students projected to attend the Surrey School District ONLY.

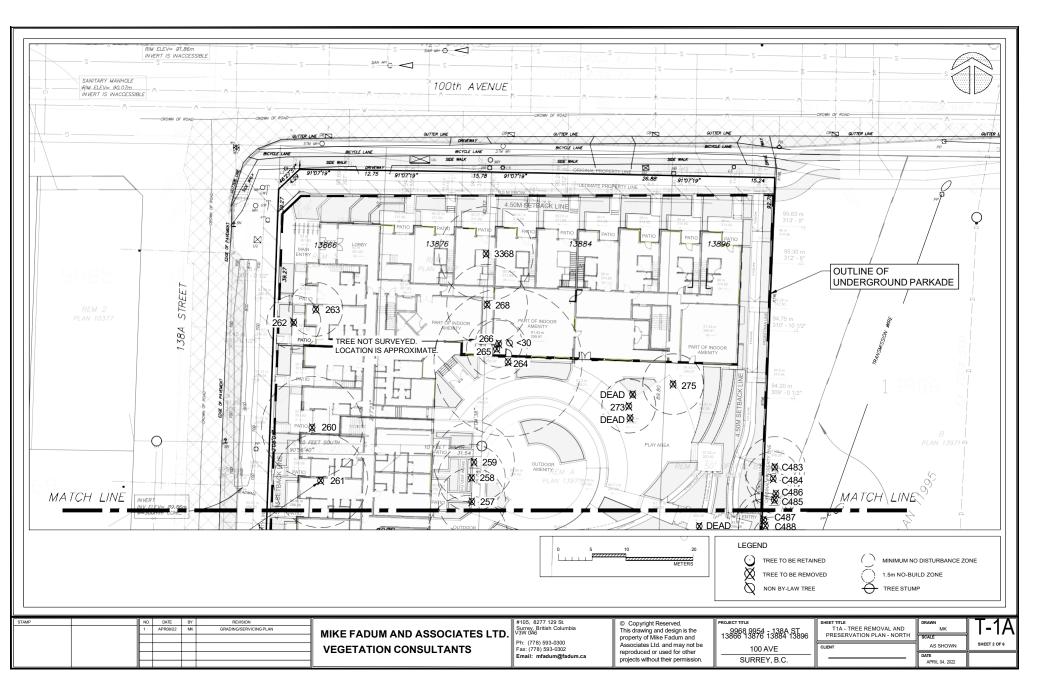
Lena Shaw Elementary

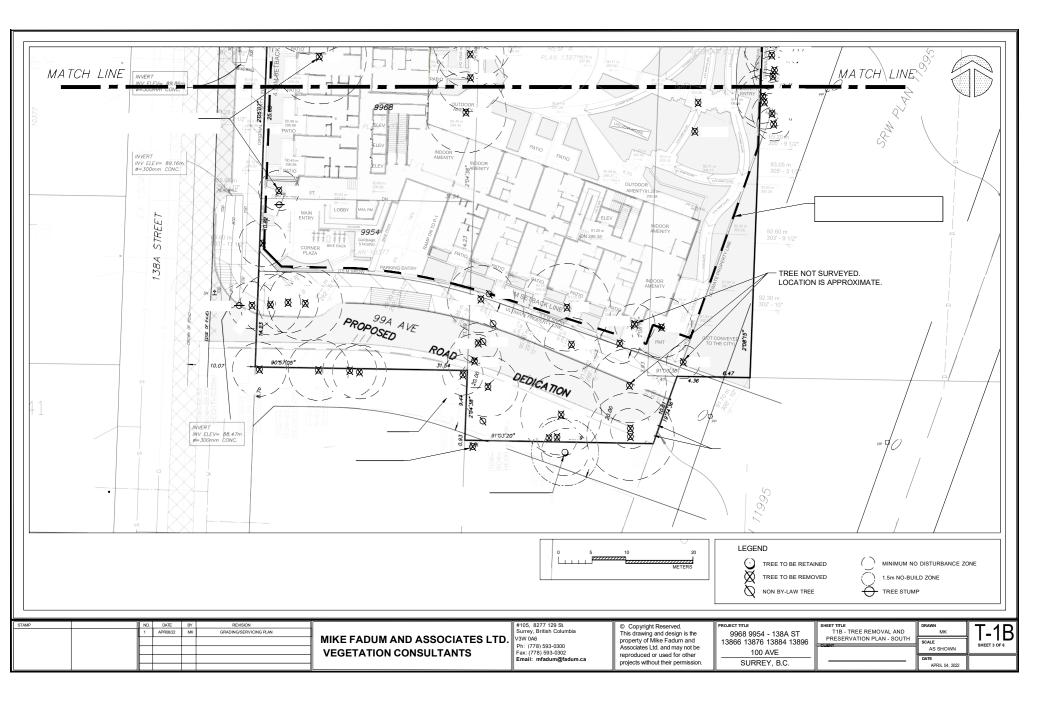


Guildford Park Secondary



* Nominal Capacity is estimated by multiplying the number of enrolling spaces by 25 students. Maximum operating capacity is estimated by multiplying the number of enrolling spaces by 27 students.





Tree Preservation Summary

Surrey Project No: 18-0463-00 Address: 9968 / 9954 138A Street and 13866 / 13876 / 13884 / 13869 100 Avenue Registered Arborist: Corey Plester #PN-8523A

| On-Site Trees | Number of Trees |
|---|-----------------|
| Protected Trees Identified | |
| (on-site and shared trees, including trees within boulevards and proposed streets | 51 |
| and lanes, dead trees but excluding trees in proposed open space or riparian | |
| Protected Trees to be Removed | 50 |
| Protected Trees to be Retained | 1 |
| (excluding trees within proposed open space or riparian areas) | L |
| Total Replacement Trees Required: | |
| Red Alder/ Black Cottonwood Trees Requiring 1 to 1 Replacement Ratio | |
| 11 X one (1) = 11 | |
| All other Trees Requiring 2 to 1 Replacement Ratio 33 X two (2) = 66 | 75 |
| Dead Trees >30cm DBH Requiring 1 to 1 Replacement Ratio | |
| 6 X one (1) = 6 | |
| Replacement Trees Proposed | 58 |
| Replacement Trees in Deficit | 17 |
| Off-Site Trees | Number of Trees |
| Protected Off-Site Trees to be Removed | 5 |
| Total Replacement Trees Required: - Alder & Cottonwood Trees Requiring 1 to 1 Replacement Ratio 0 X one (1) = 0 | 10 |
| All other Trees Requiring 2 to 1 Replacement Ratio 5 X two (2) = 10 | |
| Replacement Trees Proposed | NA |
| Replacement Trees in Deficit | NA |
| Summary report and plan prepared and submitted by: Mike Fadum and Associat | es Ltd. |
| Signature of Arborist: Date: April 14, 2022 | |





Advisory Design Panel Minutes

Location: Virtual THURSDAY, SEPTEMBER 9, 2021 Time: 3:00 p.m.

Present:

Panel Members: R. Drew, Chair T. Bunting N. Couttie W. Chong M. Derksen M. Heeney J. Packer

<u>Guests:</u>

Matthew Cheng, Matthew Cheng Architect Inc. Micole Wu, Van Der Zalm Associates Zeeshan Wahla, EMEC Engineering Group Martin Liew, Martin Liew Architecture Inc. Caelan L Griffiths, PMG Landscape Architects

Staff Present:

A. McLean, City Architect S. Maleknia, Urban Design Planner W. Lee, Recording Secretary

A. **RECEIPT OF MINUTES**

It was

1.

Moved by Winston Chong Seconded by Michael Heeney That the minutes of the Advisory Design

Panel meeting of August 26, 2021, be received.

Carried

B. NEW SUBMISSIONS

| Time: | 3:00 p.m. |
|-----------------------|---|
| File No.: | 7918-0463-00 |
| New or Resubmit: | New |
| Last Submission Date: | N/A |
| Description: | Proposed OCP and CCP Amendment, Rezoning from RF to CD and a DP (Form and Character and DP ₃) to allow the development of one 6-storey apartment building and one 32-storey high-rise residential tower with a 6-storey podium with a total of 437 residential units and 4 levels of underground parking. A subdivision from 5 to 2 lots (one development lot and one lot to be conveyed to the City for the Green Infrastructure Network) is also proposed. |
| Address: | 13866/76/84/96 - 100 Avenue and 9954/68 - 138A Street |
| Developer: | Kam Pawar |
| Architect: | Matthew Cheng, Matthew Cheng Architect Inc. |
| Landscape Architect: | Micole Wu, Van Der Zalm Associates |
| Planner: | Jennifer McLean |
| Urban Design Planner: | Sam Maleknia |

The Urban Design Planner advised that Staff supports the higher density at this location considering the proximity to King George SkyTrain Station.

The Panel was asked to comment on:

- Overall massing and heigh of the tower and podiums;
- Architectural expression, and use of materials;
- Relationship between the podiums and the tower;
- The courtyard, rooftops, and overall landscape approach;
- Amenity package; and
- Public realm interfaces;

The Project Architect presented an overview of the site planning, streetscapes, building concept, floor plans, and elevations.

The Landscape Architect presented an overview of the general concept for the Landscape design.

ADVISORY DESIGN PANEL STATEMENT OF REVIEW

It was

Moved by Michael Heeney Seconded by Tom Bunting That the Advisory Design Panel (ADP) is in

CONDITIONAL SUPPORT of the project and recommends that the applicant address the following issues to the satisfaction of the Planning & Development Department and, at the discretion of Planning staff, resubmit the project to the ADP for review.

Carried

Key Points

• Consider developing a phasing plan.

(The developer will build the development as whole. No construction phasing is proposed.)

• Consider utilizing the energy and thermal comfort models to inform your design process – use future climate files to best understand the resiliency of the project.

(Energy modeller is consulted and provided a report that the design complies on with Step 2 of the Step Code. AC is recommended on the report for all units and indoor amenities.)

• Develop larger contiguous space in the courtyard. Rooftops offer more intimate spaces.

(Intimate pocket spaces at L1 courtyard have been removed and create an open courtyard space. More outdoor amenity space is provided on L7.)

• Consider a dedicated access from outside to the bike rooms.

(Dedicated access/path to bike room thru is provided on the parking entry.)

• Consider further development of greenway and courtyard relationship. Balance security and porosity.

(Landscape provided a more articulated courtyard area with gradual transition to the easterly park/greenway. By locating the pedestrian link in the middle of landscape and providing a seating area on landing to create a visual connection, this will create a gradual transition from the PL to east park with low fence/shrubs for privacy.)

• Consider further development of the entrance sequence at the tower lobby to reduce the steps and not a sunken lobby.

(The site is very challenging with regards to grading. We try to reduce the sunken part of main entry lobby by providing a ramp down to the main entry lobby and sloped flooring to the lowest point of corner plaza, see Site plan.

• Consider further development of the suite kitchens to be more functional

(*Kitchens on the bigger units are redesigned to provide more storage and counter space.*)

• Consider more strongly integrating the expressions of the tower and the podium.

(Tower levels are aligned to the tower main entry to integrate the podium form with seamless transition and create wider public space at the tower entry. The location of the tower at the southwest corner of the site allows views from surrounding sites.)

• Consider further development of the material palette (use and detailing) of the tower and podium.

(Material palette has been simplified and reduced.)

• Consider a robust lighting plan in the courtyard.

(Electrical engineer is on board and coordinating with the Landscape Architect for the perimeter lighting plan.)

• Consider daylighting the exit stairs where possible.

(South stairs are provided with natural lighting and ventilation, see Building 2 plan.)

Site

• Undertake more design development to illustrate how the project could be phased and the individual phases operate independently before the full project is built out.

(The developer will build the construction development as whole. No construction phasing will be done.)

• Consider more design development to improve the relationship and transition from the courtyard to the greenway to the east. Consider a creative landscape device to allow for visual connection but securing the private area

(Landscape has provided a more articulated courtyard area with gradual transition to the easterly park. By locating the pedestrian link in the middle of landscape and providing a seating area on landing to create a visual connection, this will create a gradual transition from the PL to east park with low fence/shrubs for privacy.)

• Encourage further design development to the sunken courtyard; could be bolder with level changes versus gradual; the "picket fence" that contains the courtyard can be playful and inviting.

(The courtyard design by Landscape introduces a more playful approach with regards to changes of level without using any rigid design of stairs, see Landscape plans.)

• Strongly recommend further design development to entry sequence to the Tower lobby that can be a level (contiguous from street to lobby to corridor) and not a sunken lobby.

(The site is very challenging with regards to grading. We tried to reduce the sunken part of main entry lobby by providing a ramp down to the main entry lobby and sloped flooring to the lowest point of corner plaza, see Site plan.)

Form and Character

- Commend applicant for an overall attractive project. The fundamental form is well done and clear.
- Appreciate the higher density at this location.
- Suggest further clarity at the podium level on form and materials; further simplify the expression.

(Material palette has been simplified and reduced.)

Strongly recommend further design development to the tower elevations;
 i.e., window to wall ratio to be further investigated therefore an exploration of a more robust solid wall assembly. Encourage further design development

to the detailing of the materials at windows, edges, interfaces, etc. so that there is more clarity to material use and strengthens the datums.

(An Energy modeller has been consulted and provided a report that the design complies with Step 2 of the Step Code. AC is recommended on the report for all units and amenities.)

• Strongly recommend further design development to minimize the material application to the podium level; rationalize the brick selection, provide a clearer entry portal with single material use, organize the hierarchy of the material use i.e., frames within frames.

(Simplified material palettes are provided on the podium level.)

• Recommend that the typical kitchen design provides a functional kitchen with under-counter cupboards, reasonable useable counter space, and no interference between fried and oven doors, etc.

(*Kitchens on the bigger units have been redesigned to provide more storage and counter space.*)

• Encourage to continue developing the southeast corner of the building and to avoid sunken condition.

(The south-east corner of the building has been further developed by converting the unit to indoor amenities and also by providing small outdoor space for gradual transition facing greenway.)

• Consider creating a larger indoor amenity space that would support larger outdoor amenities.

(Corner residential units at level-1 are dedicated to the indoor amenity to support the amenity requirements.)

Landscape

• Commend applicant on the landscape design. Consider a robust lighting plan around the perimeter of the building at the east north-south path on the east and within the courtyard.

(An Electrical Engineer are on board and coordinating with the Landscape Architect for the perimeter lighting plan.)

• Consider creating a larger contiguous space that would support larger amenities. No need for too many intimate spaces in the courtyard.

(Intimate pocket spaces at L1 courtyard has been removed and an open courtyard space has been created.)

• Encourage more integration with courtyard and public greenway. -

(Pedestrian paths are located in the middle of landscape and providing a seating area on landing to create a visual connection, this will create a gradual transition from the PL to East Park with low fence/shrubs for privacy.)

• Engage a civil engineer sooner than later for surface water management strategy.

(Surface water management study of site is included in this submission.)

• Consider incorporating native species to go along the greenway.

(Offsite landscape is not included on the Landscape design scope of work but they already have an idea for the greenway vegetation buffer.)

CPTED

• To improve CPTED, consider reversing plans for ground level single story townhouse units so the living area is forward overlooking the street and patio and the bedroom is set back for more privacy.

(The layout of townhouse expression units have privacy for the bedrooms facing streets.)

Sustainability

- Commend applicant on electric vehicle and bike charging.
- Encourage prioritizing energy modeling as soon as possible to further inform the design process. Suggest looking at future climate files to better understand how the project will perform into the future both from energy and thermal comfort perspective.

(Energy modeller is on board and provided us a report that complies with Step 2 of the Step Code.)

 Consider daylighting the south podium stairwell and provide other measures to make that stairwell attractive for residents to take the stairs. –

(South stairs are provided with natural lighting and ventilation, see Building 2 plan.)

• Consider a bicycle maintenance room and other measures to make it easy for bikes to get in and out of the building.

(Bike maintenance room are provided on parking level and accessed through the passenger elevator. We also provide a bike path on the parking entry.)

• Consider consolidating all bike parking on the upper level or have special elevator for bikes for people to use their bikes more likely.

(Almost 80% of all bike storage is located on P1. We can designate one of the elevators as a bike elevator.)

• Encourage locating organics and recycling at the closes to the recycling room and the garbage disposal at the furthest point of the room.

(Recycling and organic room are relocated on the front side for accessibility, see P1.)

• Consider Energy Star appliances.

(Energy saving appliances will be considered throughout this development and will include on specifications.)

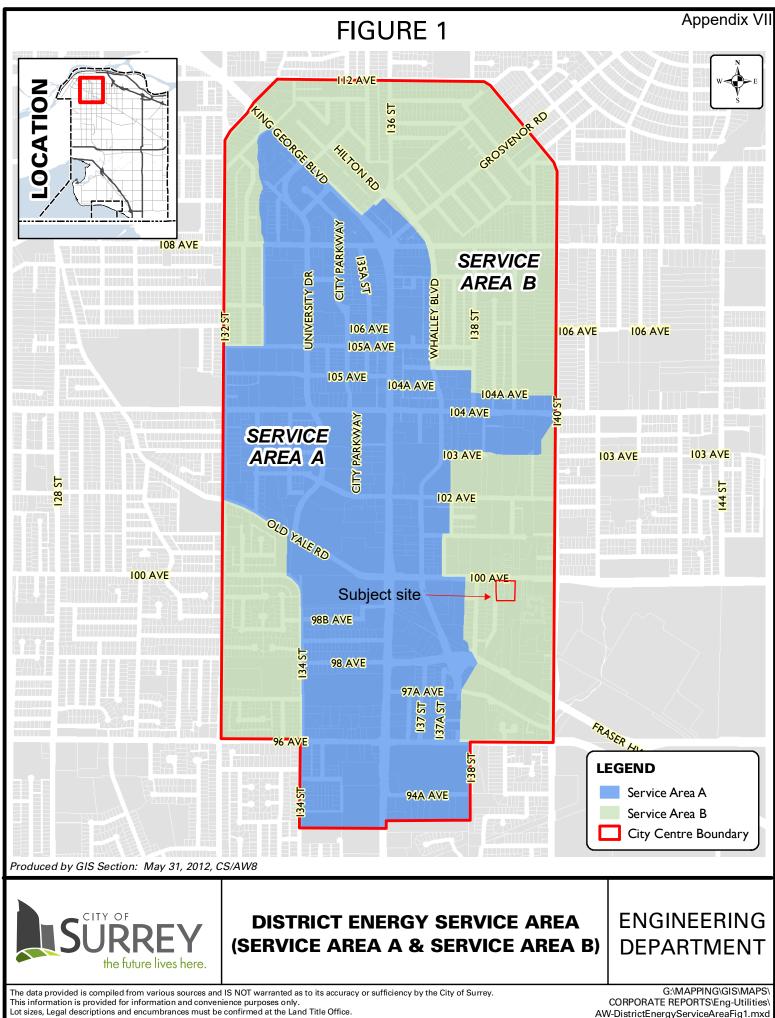
• If the overall building does not have air condition, consider adding AC to the amenity rooms.

(As per energy modeller recommendation all rooms/units are to be provided with air conditioning.)

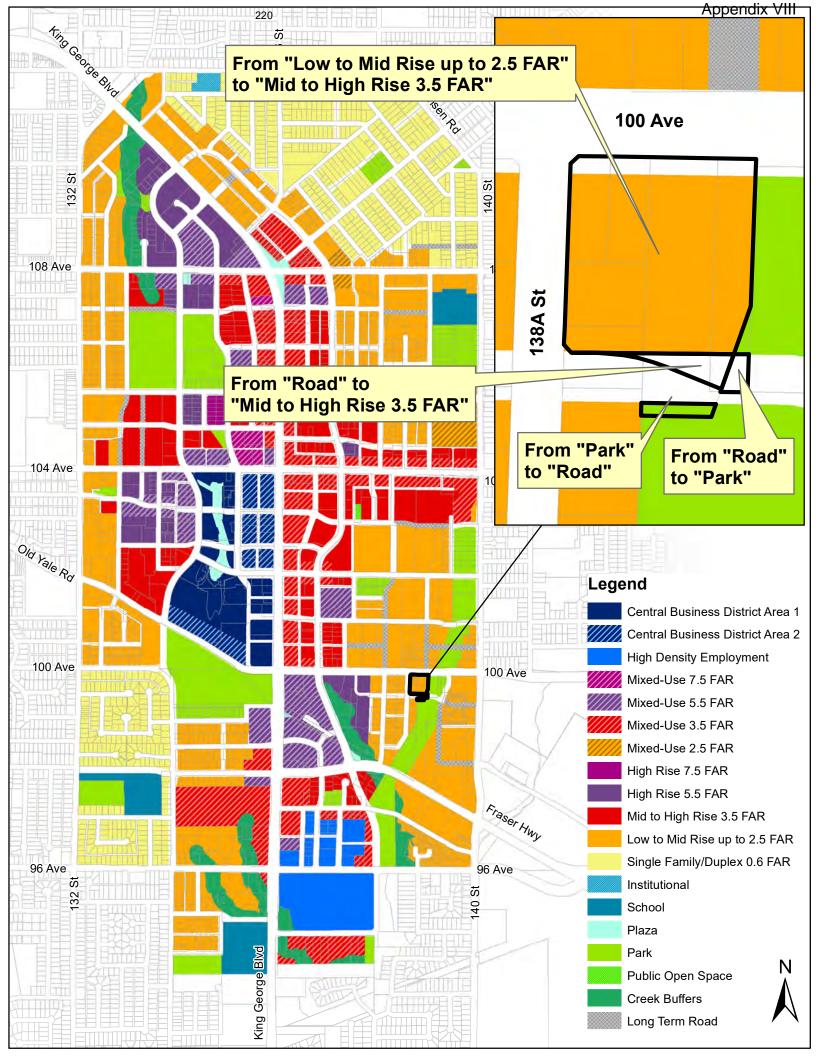
Accessibility

• Ensure that there is an Accessible path from the tower units to amenity rooms in Building 1.

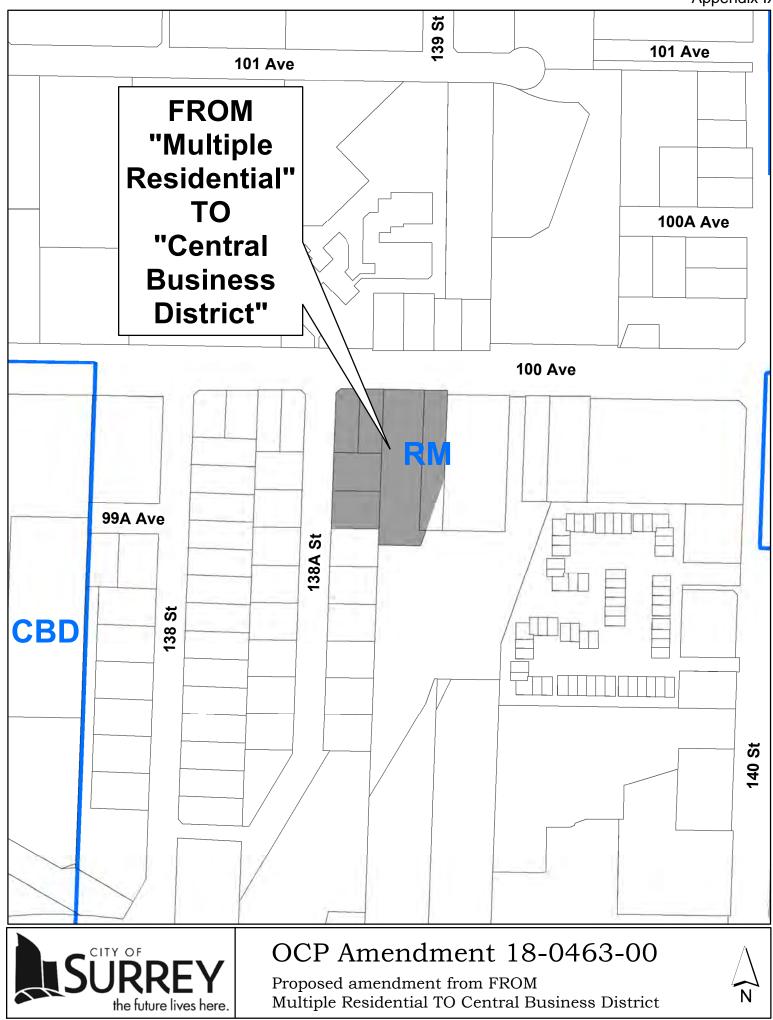
(Access is provided from roof deck amenities of tower to Building 1 by putting a hydraulic elevator and access stair, see Level 7.)

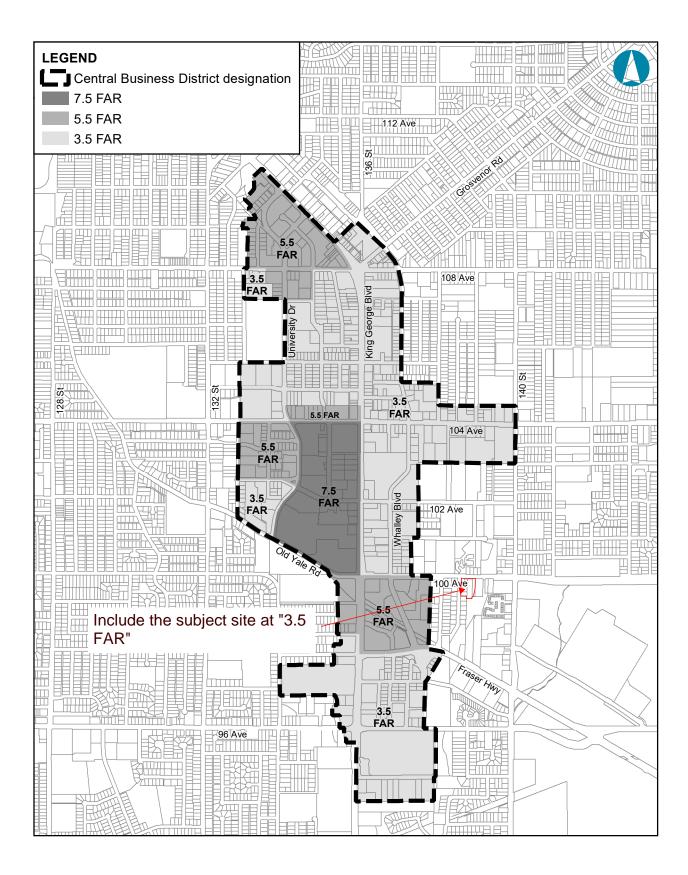


AW-DistrictEnergyServiceAreaFig1.mxd



Appendix IX







& Project Managers

SENSITIVE ECOSYSTEM DEVELOPMENT PERMIT AREA REPORT (DP3)

13866, 13876, 13884, 13896 – 100 Avenue & 9954, 9968 – 138A Street Surrey, BC

Prepared for

The Sky Living General Partner Ltd. On behalf of The Sky Living Limited Partnership c/o Allure Ventures Inc. 13629 - 108 Avenue Surrey, BC V3T 2K4

Prepared by

BINPAL ENGINEERING LTD. #215, 8232 – 120th Street Surrey, BC V3W 3N4

April 12, 2022

FILE #: SJB2105.031

Quality Advice • Innovative Solutions Tel: 604.596.3815 • Fax: 604.596.5194 #215, 8232-120 Street • Surrey, BC V3W 3N4 • Email: info@binpaleng.com www.binpaleng.com Updated April 12, 2022

Re: Sensitive Ecosystems Development Permit Areas Report 13866, 13876, 13884, 13896 100 Ave., 9954, 9968, 138A St. Surrey BC Project No. 275A

1. INTRODUCTION

It is understood that the applicant/developer wishes to redevelop 13866, 13876, 13884, 13896 100 Ave., 9954, 9968, 138A St. Surrey BC (the Site) with a 32-storey tower and 6-storey apartment podium development as presented in Appendix A, Site Plan. The Site currently contains single family houses and yards (Appendix A COSMOS Figure). There is a Class C Ditch located along the east side of 138A Street and a City of Surrey (the City) Bioconservation Strategy (BCS) Green Infrastructure (GIN) Corridor located along a BC Hydro Right-of-Way (ROW) in the east of the Site. 100th Street borders the north and more residential units and the ROW border the south.

Under the City's Bylaw Part 7A, developments within 50 m of identified regulated streams or GIN Corridors require the completion of a Sensitive Ecosystem Development Permit Areas (SEDPA) report to assess a project's effects on the City's regulated streams and GIN Corridors.

The following SEDPA report in accordance with the City's DP3 Bylaw Part 7A. This SEDPA report is to be used in support of the proposed development application. It explains how the project is to protect the Site's natural habitats and sensitive ecosystems as required in City.

2. SENSITIVE ECOSYSTEMS SUBSECTION D - SUBMISSION REQUIREMENTS

2.1 CONSULTANT QUALIFICATIONS

DP3 #23: ALL registered professionals who will be involved in the development proposal, whether a Biologist, Geoscientist, Engineer, Forester, and/or Agrologist, shall have demonstrated education, expertise, accreditation and knowledge relevant to sensitive environment, ecosystems and/or streamside management.

We confirm that all registered professionals involved in this development proposal have demonstrated education, expertise, accreditation and knowledge relevant to sensitive environment, ecosystems and/or streamside management.DP3 #24 ALL Arborists who will be involved in the development proposal shall be registered and certified with the International Society of Arboriculture (ISA).

No trees are present at the Site. No arborist is required.

DP3 #25 Supply a list and written statement, including all documentation, verifying the qualifications of all Qualified Environmental Professionals (QEP) and/or ISA Certified Arborist responsible for preparing report submissions or involved in monitoring site conditions for Sensitive Ecosystem Development Permit applications.

The following are the professionals that are involved in the development proposal:

Arborist:

Corey Plester, RFT ABCFP Registered Forest Wildlife Dangerous Tree Assessor #P2845 ISA Certified Arborist PN# 8523A ISA Tree Risk Assessment Qualified Mike Fadum and Associates Ltd. #105, 8277-129 Street Surrey, BC Phone 778-593-0300 Fax 778-593-0302

Biologist:

Libor Michalak R.P.Bio. 3380 Georgia Street Richmond, BC V7E 2R6 Tel: 604.838.0475 Email: retrix6@gmail.com

Proj. No. 275A

Geotechnical Engineer:

John Carter P.Eng. GeoWest Engineering Ltd. 200 – 34425 McConnell Road Abbotsford, BC V2S 7P1 Tel: 604-852-9008 Email: info@geowestengineering.com

DP3 #26: Where more than one Qualified Environmental Professional is needed, submit a written statement identifying THE PRIMARY QEP for the entire development and acknowledging their role to ensure: all required reports are prepared by qualified professionals and are coordinated both in content and execution; and that all relevant Development Permit Guidelines and requirements have been met and/or addressed in the application submission.

Biologist:

Libor Michalak R.P.Bio. 3380 Georgia Street Richmond, BC V7E 2R6 Tel: 604.838.0475 Email: retrix6@gmail.com

All consultants working on this project, "ensure: all required reports are prepared by qualified professionals and are coordinated both in content and execution; and that all relevant Development Permit Guidelines and requirements have been met and/or addressed in the application submission."

3. PROTECTION AREAS

3.1 Streamside

DP3 #27a: Zoning Bylaw: Part 7a, Streamside Protection of Surrey's Zoning Bylaw is to be used to determine the Area of Protection required for development adjacent to a stream.

A single stream is associated with the Site. A Class C (non-fish habitat) Ditch is present along the west of the Site and east of 138A Avenue (Appendix A, COSMOS Figure). The Class C Ditch originates approximately 40 m south of the junction at 100 Ave and 138th Street (Appendix B, Photograph 1, Appendix A, Figure 1). It is a grassed swale and is mowed regularly by residents, it's lined with bare soil grasses and various weeds (e.g., dandelions, clovers, bluegrass, heal-all etc.), and has a riparian system of overhanging with ornamental shrubs consisting of English Laurel (*Prunus laurocerasus*) shrubs and an urban tree canopy throughout its length with the Site (Photographs 1 and 2 of Appendix B).

The Ditch originates from overland surface flow after precipitation events. It has no ground water flows associated with it. The Ditch directs water flows south along the eastern side of 138A Street via a grassed swale and flows through a number of culverts that access driveways to properties (Photographs 1 and 2 of Appendix B). The Ditch eventually enters a culvert in the south into a 250 and 300 PVC pipe that opens again to a grassed swale and finally terminates in the storm sewer network for the area approximately 375 m downstream of the Site into a 450 CP. It contributes water as part of the larger storm sewer network for the Fraser Highway. Water was not observed in the Ditch at the time of visit and the Ditch is believed to dry up <24 hrs. after rain events.

The City of Surrey's (the City) online COSMOS database geographic information system (GIS) mapping identifies this watercourse with the Site. A Site visit to verify the classification of the stream under the City's Streamside Protection Bylaw Part 7A associated with the Site was performed on April 2, 2022 by the undersigned.

The City of Surrey Streamside Bylaw Part 7A (the Bylaw), has adopted the definition of 'stream' from the Provincial *Water Sustainability Act (WSA)*, which defines as regulated stream as:

"(a) a natural watercourse, including a natural glacier course, or a natural body of water, whether or not the stream channel of the stream has been modified, or

(b) a natural source of water supply, including, without limitation, a lake, pond, river, creek, spring, ravine, gulch, wetland or glacier, whether or not usually containing water, including ice, but does not include an aquifer".

The assessment of the stream associated with the Site was classified in accordance to the above definition of 'stream'. The historical aerial photography from 1940 to 1949 indicate that the ditch associated with the Site was created between 1940 and 1949 (Plates 1 and 2). It is not present in the landscape in 1940 but appears to be there along 138A Street in 1949. This indicates that it was created between this time period and it is not a natural since it was created for draining 138A Street.

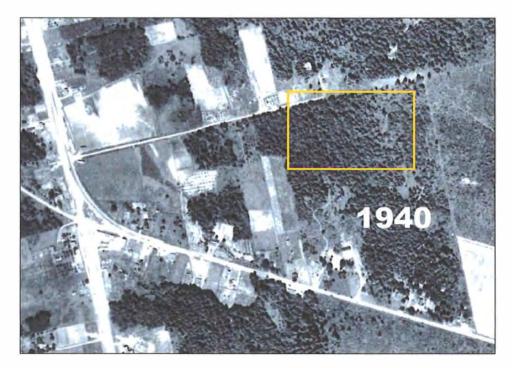


Plate 1: 1940 Aerial



Plate 2: 1949 Aerial

The Ditch was confirmed Class C during the Site visit (June 27, 2018 and the April 3, 2022) and it is in the opinion that it is not considered a 'stream' as defined in the *Water Sustainability Act* and *Riparian Areas Regulation* in the City of Surrey and under the Zoning Bylaw: Part 7A it is recommended that this Class C Ditch have no development setbacks.

DP3 #27b: Biodiversity Conservation Strategy: the Biodiversity Management Areas, Green Infrastructure Network (GIN) and Appendix J of the Biodiversity Conservation Strategy (BCS) are to be used to determine the Area of Protection required for development within a Green Infrastructure Area.

GIN Corridor No. 96 is located east of the Site and forms the BC ROW (Appendix A, COSMOS Figure and Figure 1). It is rated as Moderate value in the BCS and requires a 60 m target width to be retained. The corridor is of Local value meaning it is expected to provide movement for species more adapted to urban environments. This area is mostly field habitat in the yards of residential neighbourhoods. It provides a continuous corridor throughout the established neighbourhood. Goals for the corridor as part of the BCS include working with adjacent landowners to naturalize this area and remove barriers to wildlife movement.

4. LEVELS OF SAFEGUARDING

DP3 #28: Maximum Safeguarding: conveyance of the Protection Area to the City of Surrey. Where conveyance is chosen, the applicant is not responsible for the additional ecological restoration or on-going maintenance of the Protection Area as detailed and described below under the Minimum Safeguarding option.

Safeguarding being proposed for GIN Corridor 96 is presented in Appendix A, Figure 1. The full recommended 60 m width is to be retained and be separated from the proposed development. The Lot (proposed Lot 2 on the SD plan) is being conveyed to the City at no cost.

DP3 #29: Minimum Safeguarding: registration of a combined Restrictive Covenant/Rightof-Way against the property to ensure safeguarding and maintenance of the Protection Area in perpetuity.

Minimum Safeguarding does not apply.

The Restrictive Covenant/Right-of-Way shall detail the:

1) Identified "no disturbance" and "maintenance access' areas; (illustr.);

This is presented in Figure 1 of Appendix A.

2) Provisions for post-construction on-going management of the Protection Areas for a minimum of five years, including any required rehabilitation, restoration and/or conservation of any areas identified by the project-managing QEP;

A fence will restrict access to GIN Corridor No. 96. A planting plan for the GIN requested by the City is presented in Appendix D with a cost estimate.

3) Provisions for yearly monitoring and reporting; and

Presented in Appendix D.

4) Identification of the Principal QEP responsible for providing yearly monitoring reports during the mini mum five-year maintenance period.

N/A as the area will be dedicated to the City.

5) Compensation plan and cost estimate for all items listed in this section. This will also be used to determine landscape bonding and security requirements for installation and maintenance purposes.

Presented in Appendix D.

5. PRE-DEVELOPMENT SITE CONDITIONS

DP3 #30: Building and Construction: Identify all existing on-site buildings, structures and developed areas, including paved and landscaped areas, and any other areas disturbed beyond its original condition.

This information is presented in Appendix A, COSMOS Figure. At the time of the Site visit, six Single Family homes were associated with the Site and consisted of driveways, grass covered landscaped areas, and sheds were present on the site, with a few large trees (Photographs 1-4 and Appendix E Photographs 1 and 2). Vegetation is composed of native hardhack (*Spirea douglasii*), western sumac (*Rhus glabra*), beaked hazelnut (*Corylus cornuta*), ornamental shrubs dominated by cultivated cedar hedges, Laurel (*Prunus laurocerasus*), invasive exotic Himalayan blackberry (*Rubus armaniacus*).

Japanese knotweed (*Falopia sp.*) is present along 13866 and 9968 138th Street (Photograph 5). It is a noxious weed as defined under the BC *Weed Control Act* and will require removal as presented in Appendix C in Section 2.3.1 of the Construction Environmental Management Plan (CEMP).

DP3 #31: Soils: Perform a slope analysis and identify existing topographic features including geological and hydrogeological soil conditions, particularly areas of unstable or sensitive soils.

This is presented in the Geowest Eng. Geotechnical Report (February 14, 2022).

DP3 #32: Trees and Vegetation: Identify and detail existing vegetation and trees (including trees defined in the Surrey Tree Protection Bylaw, as amended) and submit in an arborist's assessment report.

The combined subject properties are flat with no existing structures and trees typically located along the existing property lines. The tree population is dominated with bigleaf maple, red alder and Douglas-fir. A naturalized group/grove of trees is located near the south property line with a significant English ivy infestation that is likely contributing to the decline of tree health within the area. The overall tree structure is moderate, and the heath is moderate-moderate-poor. Table 1 of the Tree Evaluation Report by Mike Fadum and Assoc. dated April 4, 2022 and revised April 8th,2022 presents trees on the Site.

DP3 #33: Habitat: Identify Schedule 1, Federally protected *Species-At-Risk Act* or Provincial Red- or Blue-Listed plant or animal species and their critical habitats including shrub and ground cover communities and any species, or habitat feature, identified as requiring year-round protection as identified in the Provincial *Wildlife Act*.

The closest species at risk identified on BC CDC iMap database (Appendix) was the federally 'Special Concern' Schedule 1 *Species at Risk Act* (*SARA*) and provincially blue-listed Northern Red-legged Frog (*Rana aurora*). The report shows a single location of the species >800 m southeast of the Site. Since there are no streams or riparian areas associated with this Site it is not likely this species can be associated with the area.

The habitat of the Site is general urban residential and unlikely to contain critical habitats including shrub and ground cover communities or any species, or habitat features on-Site requiring year-round protection as identified in the Provincial *Wildlife Act.*

DP3 #34: Drainage: Identify the Streamside Protection Area and stream locations, including top of bank (illustrated stream classifications (as defined in Surrey's Zoning Bylaw, as amended).

The Class C Ditch associated with 138A Street is presented in Appendix A, COSMOS Figure and in Appendix B, COSMOS Figure 1 and Photographs.

DP3 #35: Drainage: Identify existing site drainage conditions in accordance with the Integrated Storm water Management Plan (ISMP) relevant to the Site location.

Site runoff currently drains overland and infiltrates to the surrounding area and contributes to the 100 Avenue and 138A storm sewer network of the area. Soil structure and drainage is also discussed in the Geowest Eng. Geotechnical Report (February 14, 2022).

The subject site fronts and drains into an open road side ditch system along 138A Street. The works and servicing requirements require a construction of drainage pipe system which can convey site drainage safely into the municipal system (which includes both drainage pipes and ditches). This design and proposal will be completed as a part of engineering design process. The design process will start once the subject development has received an approval from City council. These works will be part of servicing agreement approval process. Currently the area is not designed to follow the ISMP due to the age of infrastructure however, the Site drains into the municipal storm sewer network which can be open ditch and /or pipe system.

DP3 #36: Drainage: Detail existing site drainage conditions including depth to ground water table, storm water conveyance, infiltration and storage features and storm water channels and overland flow paths.

This is presented in the Geowest Eng. Geotechnical Report (February 14, 2022). A static ground water level was not encountered during drilling. Seepage was encountered at depths of 1.8 to 3.9 m. Note that groundwater and/or seepage levels measured during drilling or shortly thereafter are typically influenced by disturbance caused during drilling. Depending on the season and/or weather conditions, near-surface seepage flows should be anticipated within natural and fill soil layers overlying low permeable very stiff/dense to very dense soils and/or within sandy seams. Groundwater levels and near-surface run-off flows are expected to fluctuate seasonally, and with drainage conditions.

6. PROPOSED DEVELOPMENT CONDITIONS AND SPECIFICATIONS

DP3 #37a: Overall Site: Identify the Streamside Protection Area and where it is situated with the development.

See DP3 #27a for the information on the Class C Ditch. There is proposed to be no Streamside Protection Area for this ditch. See DP3 #27a.

DP3 #37b: Overall Site: Identify the Green Infrastructure Protection Area and where it is situated with the development.

COSMOS Figure and Figure 1 of Appendix A identifies GIN Corridor No. 96, the Green Infrastructure Protection Area and where it is situated with the development.

DP3 #38: Overall Site: Locate development where it is least sensitive to the objectives of the Biodiversity Management Areas, Green Infrastructure Network (GIN) corresponding conditions and recommendations required for management as identified in Surrey's Biodiversity Conservation Strategy.

See DP3 #37b.

DP3 #39: Building and Construction: Detail construction specifications including materials, timing, technologies and techniques proposed as a means to mitigate and reduce the ecological impacts of development on the identified Stream or Green Infrastructure Protection Area.

- This information is presented in Appendix A Figure 1.
- An Erosion Sediment Control (ESC) Plan in accordance with the City of Surrey ESC Bylaw 2006 No. 16138 for construction will be required to protect the natural features for the Site (i.e., storm outflow, a 275 PVC pipe along 138A St. south of the Site for Class C Ditch and the GIN Corridor No. 96). The ESC Plan should be prepared by a Qualified Environmental Professional (QEP), and include mitigation measures and Best Management Practices (BMPs) that to avoid or minimize adverse impacts to the GIN Corridor (e.g., vegetation removal, sediment deposition, wastes, wildlife and vegetation protection etc.). It should be based on the environmental conditions at the Site, the nature of the proposed project and the findings of assessments conducted as part of this project. The ESC plan will be provided to the Contractor selected to perform the construction.
- During construction fencing (e.g., orange snow fencing with silt fencing and signage) will be erected to protect the GIN Corridor (Appendix A, Figure 1). Permanent fencing (Parks Standard Drawing SD-PK6112, Appendix A) with appropriate signage (Appendix A) will be required along the outside edge to prevent encroachment post construction. It is to be installed at 10 m intervals indicating "No Disturbance associated with Sensitive Wildlife Habitat." Coordination with a QEP may be required for installation.
- Timing schedule of the works of all proposed development activities is proposed to commence as soon as approval is provided by the City of Surrey for this project. In addition, should any vegetation clearing on the Site occur for this project during the bird breeding season (March 1 to August 31 of any year), in accordance with the City's interpreted dates of the federal Migratory Birds Convention Act and the provincial Wildlife Act, an active bird nesting survey will be required prior to vegetation removal in order to identify and protect any active nests associated with the vegetation removal.
- The Site it is to have a civil engineer provide a stormwater management plan for the development to conform with ISMP requirements for the area.
- All trees and shrubs that are contributing to the GIN are to be protected. The bare ground areas associated with the east of properties 9968 and 9954 138A Avenue and in the rear yards of 13884 and 13896 100 Street adjacent to the GIN (Appendix A, COSMOS Figure) will be revegetated inside the GIN Corridor with Broadcast Native Coastal Seed Mix approved by the City and a QEP.

[•] If present, trees at the edge of the GIN Corridor and foundation that may be required to be

- If present, trees at the edge of the GIN Corridor and foundation that may be required to be removed due to the drip canopy overhanging to the Site from the GIN Corridor will be replaced as per specifications by the project arborist. An arborist will be present during the installation of the temporary fence for construction and permanent fence to ensure that no GIN Corridor trees are affected by the setback install. A planting plan for the GIN requested by the City is presented in Appendix D.
- Best Management Practices during construction will be required to protect GIN Corridor No. 96 at the Site include:
 - City of Surrey Erosion Sediment Control Bylaw No. 16138 (the Bylaw).
 - Ministry of Environment (MOE) and the Department of Fisheries and Oceans Canada (DFO) *Land Development Guidelines for the Protection of Aquatic Habitat;*
 - Develop with Care 2014 Environmental Guidelines for Urban and Rural Land Development in British Columbia.
- Development design will be performed to keep with existing flows or modify overland runoff in accordance to drainage specification by the City.
- Best Management Practices (BMPs) will be considered for the development such as recommendations from the ISMP:
 - Connecting roof leaders to runoff away from the GIN Corridor and over pervious patio blocks and surrounding landscaped areas (Appendix A, Figure 1);
 - Bring water quality to the forefront through overland drainage that is vegetated but directed away from the GIN Corridor;
 - Minimizing property paving by incorporating pervious pavement features into the development; and
 - Maintain current land situation for water discharge as much as possible, to the City's storm sewer system.
- All invasive species of plant material are to be removed from the Site during Site clearing and grading. The Japanese Knotweed that has been identified on the Site (Section DP3 #30), is to be managed in accordance to the BC Weed Control Act Section 2¹ and is required to be removed from the Site in accordance with Best Management Practices. A QEP will complete a detailed Site assessment of all plants and a management plan is presented in the Appendix C CEMP.

¹ In accordance with the regulations, an occupier must control noxious weeds growing or located on land and premises, and on any other property located on land and premises, occupied by that person.

- A project kick-off meeting with the contractor and the QEP for this Project is recommended to go over sensitive areas (i.e., GIN Corridor setback location, storm sewer outflow for the Class C Ditch) and Site-specific measures (e.g., fencing) and general notes will be discussed for installation and maintenance of the system through the Project period.
- No construction laydown material, personnel or machinery equipment will be allowed in the GIN Corridor.
- A monitoring schedule is to include an initial site pre-construction Site visit by the QEP to verify if fencing and protective measures have been installed followed by a letter confirmation that all is in accordance with the protection measures. A development permit will not be awarded until the City receives a pre-construction visit showing orange snow fencing in place and all measures to protect the setback area for the GIN Corridor and retained areas south of the Site for the Class C Ditch. Post-construction a visit will be performed to verify if any negative effects resulted from the construction activities and a final monitoring letter will be provided to the City that explains that works met the satisfaction of the permit.
- Sediment control structures (e.g., sediment control fencing, orange snow fencing) will be installed as the first construction activity along the setback area for the GIN Corridor (Appendix A, Figure 1).
- All copies of permits, licenses and approvals, where required, will be available for review on-Site. Works must comply with the terms of all permits, licenses and approvals. Changes to proposed works relevant to these permits, licenses and approvals must be approved by the appropriate regulatory agencies.
- All Project activities will be limited to the approved project footprint (Appendix A, Figure 1), which will be clearly delineated in the field by the QEP prior to commencement of works, based on the Project drawings, prior to construction works;
- Care will be taken for all construction work for the facilities such that there is no release of any deleterious substances to the Class C Ditch south of the Site and the GIN Corridor.

DP3 #40: Building and Construction: Explain how the proposed development conforms to Surrey's Drainage Regulation and Charges Bylaw, as amended, as well as policies in Secondary Plans, Integrated Stormwater Management Plans and the Zoning Bylaw, as amended.

The ISMP requires on Site mitigation of flows through the use of on Site landscaping and other low impact strategies. The objective is to control, 90% of the total annual precipitation. The proposed project should provide detention/infiltration capacity to the City's storm system. The proposed site development requires detention/infiltration volumes acceptable to the ISMP. The BC Water Quality Guidelines (BCWQG), aquatic life, fresh water (AWFW) would apply to this site, as storm water is being discharged from the Site. Water quality is expected to not have constituents (pH, metals, hydrocarbons, etc.) greater than the BCWQG AWFW or impact the overall water quality of the drainage basin. Surface runoff will be directed to vegetated areas (grass, landscaping, etc.) where pre-treatment can potentially occur prior to being collected in the drainage pipe and outlets. This will help reduce the total suspended solids (TSS) loading, if any.

DP3 #41: Building and Construction: Detail the locations of all proposed buildings, structures and impervious surfaces.

This is presented on Appendix A Figure 1.

DP3 #42: Building and Construction: Detail the timing and scheduling of all proposed development activities.

Timing schedule of the works of all proposed development activities is proposed to commence as soon as approval is provided by the City of Surrey for this project and Site preparations are presented in the Geotechnical Report (February 14, 2022) in Section 6.0.

DP3 #43: Soils: Provide site grading plans illustrating the area and extent of proposed soil disturbance including slope grades and any proposed retaining wall heights, locations and materials used. Detail how slope or soil stability will be ensured and how erosion and increased sedimentation risks will be reduced.

The extent of soil or asphalt disturbance will be limited to the proposed building foundation size and in accordance with the Geotechnical report specifications. A detailed Site grading plan will be prepared at a later date. Slope and soil stability will be protected and erosion and increased sedimentation risks will be reduced through the development of an Erosion Sediment Control Plan (ESC) prepared by a Professional Engineer under the requirements of the City of Surrey ESC Bylaw 2006 No. 16138.

Proj. No. 275A

DP3 #44: Trees and Vegetation: Identify how existing trees, shrubs and groundcover will be retained and protected including details and specifications on the replanting, restoration and management of vegetated areas and maintenance of short- and long-term hydraulic regime.

Tree Evaluation Report by Mike Fadum and Assoc. dated April 4, 2022 and rev. April 8, 2022, identifies tree protection in Section 3.0. A Planting Plan for the GIN Corridor is proposed in Appendix D for revegetating the area with appropriate vegetation.

DP3 #45: Trees and Vegetation: Identify individual tree retention and removal, and areas of structured landscaping including plant species, size and location.

See DP3 #44 and the tables in the Tree Evaluation Report by Mike Fadum and Assoc. dated April 4, 2022 April 4, 2022 and rev. April 8, 2022. Also see DP3 #44.

DP3 #46: Trees and Vegetation: Provide details as to how the Streamside or Green Infrastructure Area management or protection objectives will be met and monitored following the official completion of all construction activity. Where restorative work IS NOT required, maintenance and monitoring shall be for a minimum of ONE year; and where restorative work IS required, maintenance and monitoring shall be for a minimum of 5 years.

A vegetation plan is proposed for the GIN Corridor (Appendix D, Planting Plan). Monitoring and reporting will be performed by a QEP as the area will be dedicated to the City. Costs are presented in Appendix D.

DP3 #47: Trees and Vegetation: Provide a restoration, maintenance and cost estimate plan consistent with the development requirements identified in the Ecosystem Management Plan and/or Impact Mitigation Plan to be used to determine landscape bonding and security requirements for installation, monitoring and maintenance purposes.

See DP3 #44 #46 and the Tree Evaluation Report by Mike Fadum and Assoc. dated April 4, 2022 April 4, 2022 and rev. April 8, 2022. Landscape requirements for installation for the planting of the GIN Corridor are presented in Appendix D. Monitoring and maintenance are not required since the area will be dedicated to the City.

DP3 #48: Habitat: Articulate how the proposed development meets the Objectives and Recommendations of the Biodiversity Management Areas and Green Infrastructure Network (GIN) of the Biodiversity Conservation Strategy (BCS).

The GIN Corridor is to be planted with native species to improve the habitat as per the BCS. Appendix D, Figure 1 identifies the fence required to maintain the prescribed width of the GIN Corridor and protect it. Also, see DP3#29 and the GIN Corridor is to be accentuated with plantings (Appendix D).

Proj. No. 275A

DP3 #49: Habitat: Detail how wildlife habitat will be protected and enhanced while taking into consideration wildlife movement and connectivity to adjacent sites. Focus on Schedule 1, Federally-protected Species-At-Risk Actor Provincial Red- or Blue Listed plant or animal species and their critical habitats and how they may be affected by the proposed development and indicate how proposed Best Management Practices may be used for the protection and preservation of that habitat.

Protection of the GIN Corridor (Appendix A, Figure 1) with fencing is to isolate the development from the GIN Corridor area (Appendix D, Figure 1). Mitigation measures for the GIN Corridor are also presented in DP3 #39. The development will also incorporate planting in the green areas of the building to facilitate wildlife movement and connectivity to the GIN Corridor. No species at risk are expected to be associated with the Site (see DP3 #33). Bird nesting is addressed in DP3 #39.

DP3 #50: Drainage: Identify post-development drainage site conditions in accordance with the Integrated Storm-water Management Plan (ISMP) relevant to the site location.

Site mitigation of flows will be coordinated through the use of on Site landscaping and other low impact strategies as discussed in DP3 #39. Site preparations are presented in the attached Geowest Eng. Geotechnical Report (February 14, 2022). In addition to this statement, the development would be required to adhere the requirements noted in DP3 #40

DP3 #51: Drainage: Detail how flooding risk and water quality degradation will be mitigated including specific measures that will be taken to prevent channel erosion and prevent the fouling of streams, wetlands or drainage conveyance corridors.

Stormwater is proposed to be discharged via pipe that would outfall directly to the City's storm sewer network or existing ditch system located along 138A Street. Water quality issues from construction will be addressed through the preparation of a Construction Environmental Management Plan that will contain an Erosion Sediment Control Plan to address fouling of flows to the City's stormwater network system. All works will be performed in accordance to the City's ESC Bylaw 2006 No. 16138. In addition, a Construction Environmental Management Plan should be developed for the project prior to construction that will provide Best Management Practices during construction for the protection of the natural features of the area.

Thank you for this opportunity and trust the information in this letter report is sufficient for your current needs. If you require clarification of any part of this letter report, please contact the undersigned at 604-838-0475.

Yours truly,

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Libor Michalak, R.P.Bio.

ATTACHMENTS:

- Photographs
- Appendix A : Figures
- Appendix B : Ditch Assessment Letter
- Appendix C : Construction Environmental Mangement Plan
- Appendix D : Planting Plan



