# Committee of the Whole Report
**For the Meeting of April 23, 2020**

**To:** Committee of the Whole **Date: April 9, 2020**

**From:** Karen Hoese, Director, Sustainable Planning and Community Development

**Subject:** **Rezoning Application No. 00715 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue and associated Official Community Plan Amendment**

## RECOMMENDATION

1. That Council instruct the Director of Sustainable Planning and Community Development to prepare the necessary Official Community Plan Amendment Bylaw in accordance with Section 475 of the *Local Government Act* and the necessary Zoning Regulation Bylaw Amendments that would authorize the proposed development outlined in Rezoning Application No. 00715 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue, and change the OCP designation from Public Facilities, Institutions, Parks and Open Space and Traditional Residential to Urban Residential

2. That first and second reading of the Zoning Regulation Bylaw Amendments be considered by Council and a Public Hearing date be set once the following conditions are met:

a. Preparation and execution of the appropriate legal agreements executed by the applicant in order to secure the following:
   i. a housing agreement to ensure the residential rental units remain affordable or below-market in perpetuity in accordance with the City's definition of affordability and below-market in the *Victoria Housing Strategy 2016-2025* (Phase Two: 2019-2022)
   ii. that the applicant provides a minimum of 14 three-bedroom, eight four-bedroom dwelling units, 15 accessible dwelling units in accordance with in accordance with CAN/CSA-B651-95, the National Standard of Canada for barrier-free design, and private amenity space with a minimum floor area of 139m²
   iii. a Statutory Right-of-Way of 3.928m on Grant Street and 1.90m on Vining Street be registered on title to the satisfaction of the Director of Engineering and Public Works
   iv. a Statutory Right-of-Way of 10.85m along the proposed driveway at Grant Street be registered on title to the satisfaction of the Director of Engineering and Public Works
   v. construction of a vehicle turnaround on Grant Street adjacent to the subject properties

to the satisfaction of the Director of Engineering and Public Works

vi. construction of community gardens or contribution of cash in lieu equivalent to the installation of such gardens within the 145m² road closure area on the north side of North Park Street in consultation with the Fernwood Community Association and the Compost Education Centre and to the satisfaction of the Director of Sustainable Planning and Community Development and Director of Engineering and Public Works

vii. construction of an 8m wide greenway on the Victoria High lands adjacent to the development site in accordance with the plans dated April 6, 2020 to the satisfaction of the Director of Parks, Recreation and Facilities and the Director of Sustainable Planning and Community Development

3. That adoption of the zoning bylaw amendment will not take place until all of the required legal agreements that are registrable in the Land Title Office have been so registered

4. That the applicant provide a revised site plan and civil drawing showing a Grant Street turnaround to the satisfaction of the Director of Engineering and Public Works and the Director of Parks, Recreation and Facilities

5. That Council consider who is affected by the proposed changes to the Official Community Plan and determine, pursuant to Section 475(1) of the *Local Government Act* that the affected persons, organizations and authorities are those property owners and occupiers within a 200m radius of the subject properties.

6. That Council provide an opportunity for consultation pursuant to section 475 of the *Local Government Act* and direct the Director of Sustainable Planning and Community Development to:
   i. mail a notice of the proposed OCP Amendment to the affected persons; and
   ii. post a notice on the City's website inviting affected persons, organizations and authorities to ask questions of staff and provide written or verbal comments to Council for their consideration

7. That Council specifically consider whether consultation is required under Section 475(2)(b) of the *Local Government Act*, and determine that no referrals are necessary with the Capital Regional District Board, Councils of Oak Bay, Esquimalt and Saanich, the Songhees and Esquimalt First Nations, the School District Board, and the provincial and federal governments and their agencies because the proposed OCP amendment does not affect them

8. That Council direct the Director of Engineering and Public Works to bring forward for Council's consideration, a report and bylaws for road closures and necessary restructuring on Vining St and North Park St to accommodate the project

9. That Recommendations 1 to 8 be adopted on the condition that they create no legal rights for the applicant or any other person, no obligation on the part of the City or its officials, and any expenditure of funds is at the risk of the person making the expenditure.

## LEGISLATIVE AUTHORITY

In accordance with Section 479 of the *Local Government Act*, Council may regulate within a zone the use of land, buildings and other structures, the density of the use of the land, building

and other structures, the siting, size and dimensions of buildings and other structures as well as the uses that are permitted on the land and the location of uses on the land and within buildings and other structures.

In accordance with Section 482 of the *Local Government Act*, a zoning bylaw may establish different density regulations for a zone, one generally applicable for the zone and the others to apply if certain conditions are met.

## EXECUTIVE SUMMARY

The purpose of this report is to present Council with information, analysis and recommendations for a Rezoning Application for the properties located at 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue. The proposal is to rezone from the R-K Zone, Medium Density Attached Dwelling District, and R-2 Zone, Two-Family Dwelling District to a new residential rental tenure zone in order to increase the density and permit a multi-unit residential development consisting of approximately 158 affordable and below-market rental dwelling units. An amendment to the *Official Community Plan* (OCP) from Public Facilities, Institutions, Parks and Open Space and Traditional Residential to Urban Residential is required to facilitate this development.

The following points were considered in assessing this application:

- While the current OCP Urban Place Designations do not envision this form of development, the proposed Urban Residential Urban Place Designation would support the proposed density of 1.29:1 floor space ratio (FSR) and building heights ranging from three to five storeys.
- The applicant is proposing a density of 1.29:1 FSR and building heights ranging from three to five storeys, which is consistent with the Urban Residential Urban Place Designation.
- The Fernwood Strategic Directions in the OCP support new population and housing growth within walking distance of North Park Village and the retention of neighbourhood heritage character and streetscapes of significance.
- The *Fernwood Neighbourhood Plan* (1994) supports the retention of duplex zoning. The Plan states that the focus of future non-market housing for the Fernwood area should be for seniors and family-housing, and that the scale of development for non-market housing should reflect that of the surrounding housing stock, being generally small scale and lower density. The Plan also encourages better access across the Vic High School site and more attractive public outdoor space with appropriate amenities. Although the scale of the proposal may be greater than this Plan envisioned many of its other goals are achieved with this proposal.
- The applicant is proposing 14 studios, 45 one-bedroom, 77 two-bedroom, 14 three-bedroom and eight four-bedroom dwelling units of affordable housing, including ground-oriented, accessible, and dwelling units that would support aging in place.
- The applicant would construct an 8m wide greenway linking Gladstone Avenue and Grant Street on the abutting Victoria High lands, which is identified as a priority greenway in the City's *Greenways Plan* (2003). The greenway would include outdoor seating, garbage bins, bike racks, lighting and a double-row of trees with groundcover shrub plantings.
- The applicant is working with neighbourhood non-profit organizations to expand community gardens on and off-site and use the amenity space for family support

programs, social recreation opportunities and out of school care programs.

## BACKGROUND

### Description of Proposal

This Rezoning Application is to rezone from the R-K Zone, Medium Density Attached Dwelling District, and R-2 Zone, Two-Family Dwelling District to a new residential rental tenure zone in order to increase the density to 1.29:1 floor space ratio (FSR) to permit five residential buildings, including four and five-storey multi-unit residential buildings and three blocks of townhouses, consisting of approximately 158 affordable and below-market rental dwelling units. An amendment to the *Official Community Plan* (OCP) from Public Facilities, Institutions, Parks and Open Space and Traditional Residential to Urban Residential is required to facilitate this development.

The new zone would be drafted to reflect the proposed development and the following differences from the existing R-K and R-2 Zones related to increasing the density, height and site coverage, and reducing setbacks would be accommodated in the new zone.

### Affordable Housing

The applicant proposes the creation of 158 new residential units, which would increase the overall supply of housing in the area. The following mix of studios, one, two, three, and four-bedroom units would be provided:

| Unit Type | Number of dwelling units |
|---|---|
| Studios | 14 |
| One-bedroom | 45 (seven units would be accessible) |
| Two-bedroom | 77 (seven units would be accessible) |
| Three-bedroom | 14 (one unit would be accessible) |
| Four-bedroom | 8 |
| **Total** | **158 (15 accessible units)** |

It is recommended that a covenant be registered on title to secure the three and four bedroom sized units and accessible dwelling units.

The applicant is partnering with BC Housing in order to deliver a mixed income model under BC Housing's Community Housing Fund in which:

- 20% of the units are deeply subsidized serving very low income households (<$19,999), and would be secured at income assistance rates, as determined by the Ministry of Social Development and Poverty Reduction. These units are considered affordable according to the City of Victoria's definition.
- 50% of the units are Rent Geared to Income (RGI) and would be secured at BC Housing's Housing Income Limits. These units will rents at 30% of tenants' specific household's incomes and will serve median to moderate incomes ($35,000 to $84,999) and are considered affordable and below-market depending on unit size, according to the City of Victoria's definition.

- 30% of the units will serve moderate and above moderate income households (>$50,000) and will be secured using BC Housing's moderate income definition. These units are considered below-market according to the City of Victoria's definition.

Staff recommend for Council's consideration that the applicant enter a Housing Agreement to ensure the affordability of the project aligns with the Community Housing Fund and ensures the residential rental units remain affordable or below-market in perpetuity in accordance with the City's definition of affordable and below-market housing in the *Victoria Housing Strategy 2016-2025* (Phase Two: 2019-2022).

**Tenant Assistance Policy**

The proposal is to demolish an existing townhouse complex consisting of 18 dwelling units and a vacant building consisting of four dwelling units for a total loss of 22 rental dwelling units. Consistent with the Tenant Assistance Policy, the applicant has provided a Tenant Assistance Plan which is attached to this report.

**Sustainability**

The applicant has identified a number of sustainability features which will be reviewed in association with the concurrent Development Permit Application for this property.

**Active Transportation**

The application proposes to install 195 long-term and 30 short-term residential bicycle parking spaces with this development, which supports active transportation.

**Public Realm**

The following public realm improvements are proposed in association with this Rezoning Application:

- constructing a truck turnaround at the end of Grant Street
- constructing an 8m wide Greenway on the Vic High lands abutting the development site
- widening Vining Street by an additional 1.90m and installing a sidewalk, street lights, curb and gutters
- reducing the width of North Park Street by 4m and installing community gardens.

These would be secured with legal agreements, registered on the property's title, prior to Council giving final consideration of the proposed Zoning Regulation Bylaw Amendment.

**Accessibility**

The British Columbia Building Code regulates accessibility as it pertains to buildings. The applicant is proposing 15 accessible dwelling units, which would be designed in accordance with CAN/CSA-B651-95, the National Standard of Canada, for barrier-free design. These standards either meet or exceed the accessibility requirements of both BC Housing and the British Columbia Building Code. The seven one-bedroom, seven two-bedroom, and one three-bedroom units would be wheelchair accessible, and fully accessible and safe useable environments for persons with physical, sensory or cognitive disabilities. The proposed outdoor areas and pathways surrounding the buildings are also designed to be accessible.

**Land Use Context**

The area is characterized by a mix of residential uses, including single-family dwellings, duplexes, townhouses and multi-unit residential buildings as well as institutional uses, park and community gardens.

**Existing Site Development and Development Potential**

The site is presently occupied by townhouses and a two-storey, multi-unit residential building. A large portion of the site is vacant.

The subject properties currently zoned R-K could be developed as two and a half storey townhouses and the properties currently zoned R-2 could be developed as two-storey duplexes.

**Data Table**

The following data table compares the proposal with the existing R-K and R-2 Zones. An asterisk is used to identify where the proposal differs from the existing Zone.

| Zoning Criteria | Apartment 1 | Apartment 2 | Townhouse 1 | Townhouse 2 | Townhouse 3 | Zone Standard R-K Zone | Zone Standard R-2 Zone |
|---|---|---|---|---|---|---|---|
| Site area ($m^2$) – minimum | 8681.10 (total site) | | | | | 28,490 | 43,845 |
| Lot width (m) - minimum | 54.94 | | | | | 18 | 15 |
| Density (Floor Space Ratio) – maximum | **1.29:1*** | | | | | 0.6:1 | 0.5:1 |
| Height (m) – maximum | **12*** (measured to exterior roof pitch) | **14.78*** (measured to exterior roof pitch) | **11.25*** (measured to exterior roof pitch) | **10.65*** (measured to exterior roof pitch) | **9.80*** (measured to exterior roof pitch) | 8.50 (measured from average grade to the highest point of the finished ceiling height (interior)) | 7.60 |
| Site coverage (%) – maximum | **41*** | | | | | 33 | 40 |
| Open site space (%) – minimum | 49 | | | | | 45 | 30 |
| **Setbacks** (m) – minimum | | | | | | | |
| North (Gladstone | 147.30 | 99.80 | 44.80 | **7* (building)/1* (stairs)** | 48.50 | 7.50 (building)/1.60 (stairs) | 3.50 |

| Zoning Criteria | Apartment 1 | Apartment 2 | Townhouse 1 | Townhouse 2 | Townhouse 3 | Zone Standard R-K Zone | Zone Standard R-2 Zone |
|---|---|---|---|---|---|---|---|
| Ave) | | | | | | | |
| South (Grant St) | **7* (living room)** | 54.60 | 100.50 | 155.60 | 115.90 | 2.50 (blank wall)/4 (habitable room)/7.5 (living room) | 10.70 or 35% of lot depth whichever is greater |
| East | **3.60* (living room)** | **3.60* (living room)** | **2.50* (living room)/1 (stairs)** | **2.50* (living room)/1 (stairs)** | 28.60 | Same as south setbacks | 3 |
| West | **5.80* (living room)** | **4* (living room)/5.80* (amenity room)** | 27.50 | **4* (living room)** | 5.20 (habitable room) | Same as south setbacks | 4.55 |
| Vehicle parking – minimum | | | | | | | |
| Residential | | | 96 | | | 96 | |
| Visitor | | | 16 | | | 16 | |
| Before and after school care | | | 5 | | | 2 | |
| **Bicycle parking stalls** – minimum | | | | | | | |
| Long-term | | | 195 | | | 195 | |
| Short-term | | | 30 | | | 17 | |

**Relevant History**

On May 25, 2019 the City provided owners authorization to CRHC to proceed with its land use application to include the City lands within its land use application for the Caledonia Housing Project identified on the Land Use Application Form.

This rezoning proposal was put forward in response to Council's objectives to find innovative ways to facilitate the development of new affordable housing. The applicant has proposed to build affordable and below-market housing on land owned in part by the City located at 1235 Caledonia St., 1230 Grant St. and two portions of Vining Street and North Park Street.

If Council approves the rezoning then SD 61 would exchange nearby parcels it owns for the City land that is subject to the rezoning. These SD 61 parcels are located at 1801 & 1805 Chambers Street (lands adjoining Haegart Park), 1216 North Park Street & 1855 Chambers Avenue

(Compost Education Centre & Community Gardens) and 2005 Chambers Avenue (Spring Ridge Commons). If CRHC is not successful in securing the necessary rezoning, the land exchange will not occur and the land exchange agreement between the City and SD 61 would terminate.

Providing land in support of affordable housing is consistent with the City's 2019-2022 Strategic Plan Objective 3: Affordable Housing - Action 5 to consider existing City land for affordable housing. The proposal also supports the direction provided for in the Victoria Housing Strategy 2016-2025 to consider opportunities to use existing City lands to support increased affordable housing supply.

**Community Consultation**

Consistent with the *Community Association Land Use Committee (CALUC) Procedures for Processing Rezoning and Variance Applications*, the applicant has consulted the Fernwood CALUC at a Community Meeting held on June 5, 2019. At the time of writing this report, a letter from the CALUC had not been received.

Additional consultation efforts are noted in the applicant's proposal overview and design rationale dated September 2019 (attached).

**ANALYSIS**

**Official Community Plan**

OCP Designations and Proposed Amendment

The subject site is within two OCP Urban Place Designations. As shown on the map below, the designation for the subject properties located at 1218, 1219, 1220 and 1226 North Park Street, 1230 Grant Street and 1219 Vining Street is Public Facilities, Institutions, Parks and Open Space Core (green layer), which supports recreational, institutional (i.e. government offices), educational buildings and structures within open space (green). Variable heights ranging from two and a half storeys or higher depending on the adjacent context, and a density of approximately 0.5:1 floor space ratio (FSR) is supportable.

The designation for the subject properties located at 1211 Gladstone Avenue and 1209-1215 North Park Street is Traditional Residential (yellow), which supports ground-oriented buildings up to two-storeys, including single-family dwellings, duplexes and attached housing. A density of up to approximately 1:1 FSR is supportable.


**Map 1. Official Community Plan Urban Place Designations**

The applicant is proposing to amend the OCP Urban Place designations to Urban Residential, which supports attached dwellings up to three-storeys and mid-rise multi-unit residential buildings up to six-storeys and a density of up to 1.2:1 FSR. Even though the proposed density of 1.29:1 FSR is slightly above the density specified for Urban Residential, the proposal further advances other policies and objectives in the OCP, such as:

- providing 158 affordable and rental dwelling units
- achieving new housing growth within walking distance to North Park and Fernwood Villages
- proposing a mix of unit types that are suitable for seniors and households with children as well as accessible units
- providing underground parking and maximizing the amount of open space and outdoor amenities available to residents and visitors
- providing amenity space for family support programs, social recreation opportunities and out of school care programs
- incorporating community gardens for food production
- providing an 8m wide greenway linking Grant Street and Gladstone Avenue.

With respect to the procedures for an OCP Amendment, the *Local Government Act* (LGA) *S*ection 475 requires a Council to provide one or more opportunities it considers appropriate for consultation with persons, organizations and authorities it considers will be affected by an amendment to the OCP. Consistent with Section 475 of the LGA, Council must further consider whether consultation should be early and ongoing. This statutory obligation is in addition to the Public Hearing requirements. In this instance, staff recommend for Council's consideration that notifying owners and occupiers of land located within 200 metres of the subject site along with posting a notice on the City's website will provide adequate opportunities for consultation with those affected.

Given that through the Community Association Land Use Committee (CALUC) Community

Meeting process, all owners and occupiers within a 200m radius of the site were notified and invited to participate in a Community Meeting, the consultation proposed at this stage in the process is recommended as adequate and consultation with specific authorities, under Section 475 of the LGA, is not recommended as necessary.

Should Council support the OCP amendment, Council is required to consider consultation with the Capital Regional District Board; Councils of Oak Bay, Esquimalt and Saanich; the Songhees and Esquimalt First Nations; the School District Board and the provincial government and its agencies. However, further consultation is not recommended as necessary for this amendment to the Urban Place Designation as this matter can be considered under policies in the OCP.

Council is also required to consider OCP Amendments in relation to the City's *Financial Plan* and the *Capital Regional District Liquid Waste Management Plan* and the *Capital District Solid Waste Management Plan*. Although this proposal will have no impact on the two Waste Management Plans, the City's Financial Plan may need to be adjusted to accommodate the future costs that are anticipated in association with maintenance of the new greenway.

Built Form

The OCP encourages a high quality of architecture, landscape and urban design to enhance the visual identity and appearance of the city. The applicant is proposing a human-scale design with a variety of traditional and contemporary architectural features to provide visually-interesting buildings that respect the neighbourhood context. All five buildings contain ground-oriented units with private entrances and direct connections to the street, proposed greenway and interior open space. All the residential parking would be provided underground, except for five surface parking spaces, screened from public view, for accessible vehicles and visitors. The careful site planning maintains views of Vic High at various vantage points within the neighbourhood.

The applicant is proposing substantial open space and outdoor amenities for residents and visitors in order to create a sense of place that expands beyond the property boundaries. The outdoor amenities include a children's urban agriculture planting area, playground, allotment garden beds for community gardening, rain gardens, accessible pathways, pedestrian-scale lighting, picnic tables and benches.

Housing

This proposal is a result of a partnership between the City, Capital Regional Housing Authority, School District 61 and BC Housing, which is consistent with the OCP's aim of advancing innovative approaches to housing that result in a range of market and non-market residential units, through a variety of partnerships. The OCP also encourages affordable non-market and innovative forms of ground-oriented housing that attract a mix of residents, including seniors and households with children. The applicant is proposing a mix of unit types, including ground-oriented, accessible, larger family-size units and dwelling units that would support aging in place.

Multi-Generational Neighbourhoods

The OCP encourages new development that would attract young people, seniors and households with children. The on-site amenities, such as the indoor common areas, playground, community gardens, and outdoor seating would encourage social interactions. The

OCP also encourages new development with community supports for families and employers, such as out-of-school care programs for the neighbourhood, which the applicant would be providing as part of this development in the proposed amenity space.

Food Security

The OCP encourages the provision of gardens and other food production spaces for the use of residents in new multi-unit residential developments. The applicant is proposing numerous community gardens for residents as well as looking to partner with local non-profit organizations to offer urban agriculture opportunities on site.

**Local Area Plans**

The *Fernwood Neighbourhood Plan* (1994) supports the retention of the duplex zoning in order to preserve the current "look and image" of single-family homes and duplexes in the neighbourhood. In addition, the Plan states that the focus of future non-market housing for the Fernwood area should be for seniors and family-housing, and that the scale of development for non-market housing should reflect that of the surrounding housing stock, being generally small scale and lower density. In accordance with the Plan objectives, the applicant is proposing a traditional architectural design for the townhouse units to ensure that this housing type fits in with the existing neighbourhood context.

In regards to site planning, the proposed four-storey building would front Grant Street, the five-storey building would be located in the middle of the site and the townhouses would front Gladstone and abut the adjacent single family dwellings. This is to maintain a respectful building transition and minimize potential privacy impacts on the neighbouring properties to the west.

Providing better access across the Vic High School site is also strongly encouraged in the *Fernwood Neighbourhood Plan*. This would be achieved with the proposed construction of a greenway linking Grant Street to Gladstone Avenue.

**Tree Preservation Bylaw and Urban Forest Master Plan**

The goals of the *Urban Forest Master Plan* include protecting, enhancing, and expanding Victoria's urban forest and optimizing community benefits from the urban forest in all neighbourhoods.

This application was received prior to October 24, 2019, and therefore falls under *Tree Preservation Bylaw* No. 05-106 consolidated June 1, 2015. The tree inventory for the proposal, outlined in the Arborist Report prepared by Talbot Mackenzie & Associates dated April 1, 2020, states that 59 trees may be impacted by this proposal, including 40 trees on the subject properties, 10 trees offsite on the neighbouring properties, eight trees on City property, and one shared tree. There are 30 trees on the subject properties proposed for removal including two bylaw-protected trees and one offsite tree growing on the north side of the community garden. All tree removals are a result of the excavation for the underground parkade, extension of Caledonia Avenue, and the construction of a new sidewalk on Vining Street.

Mitigation measures have been suggested in the arborist report for the retention of 28 trees, which include arborist supervision during construction, mechanisms to alleviate soil compaction, and methods to maintain existing grades within the critical root zones of trees.

A preliminary site servicing plan has been provided which excludes third-party servicing such as BC Hydro and telecommunications. There are significant servicing changes required for this proposed development and it is crucial that the applicant work with staff to ensure there are no impacts to the existing trees noted to be retained or the proposed new trees.

The applicant is proposing to plant 88 new trees with this development. This includes four new boulevard trees on Grant Street and four replacement trees as per the *Tree Preservation Bylaw*. A variety of canopy sizes from large to small, some fruit and nut bearing trees, are also being proposed. Along the greenway, the applicant would be planting a double row of 33 new municipal trees. The proposed tree placement would accommodate medium-large canopy trees. Tree species would be determined by Parks at the Building Permit stage.

**Other Policy**

Greenway

A north-south greenway connecting Grant Street and Gladstone Avenue is identified in the OCP and the City's *Greenways Plan* (2003). With the support from the School Board, the applicant is willing to construct an 8m wide greenway on the Vic High lands that directly abuts the subject property as part of this development. The proposed greenway is designed for all user groups and would include amenities such as outdoor seating, garbage bins, bike racks, lighting and a tree-lined border with shrub planting. The City would maintain the greenway after it is built.

The construction of a new greenway would result in an increase to the City's operational budget for the long-term maintenance of the pathway, landscaping, furnishings and lighting. The table below provides a summary of these incremental costs, which would take effect following completion of construction.

| **Caledonia Greenway Incremental Operating Costs** | **Cost** |
|---|---|
| Landscaping Maintenance | $19,569 |
| Maintenance of Assets and Amenities (furnishings, lighting, pathway maintenance, etc.) | $16,498 |
| **Impact to Operating Budget (2019)** | **$36,067** |

**Regulatory Considerations**

Statutory Right-of-Way

The applicant is willing to provide a Statutory Right-of-Way of 3.928m on the Grant Street frontage to improve the function of this street and help fulfill policies and objectives contained in the OCP, *Greenways Plan* (2003), *Pedestrian Master Plan* (2008), and the *Urban Forest Master Plan* (2013). A SRW of 10.85m on the proposed driveway on Grant Street is also proposed to allow for trucks to turnaround at the end of the street. This SRW may be increased or decreased depending on the revisions to the turnaround area prior to public hearing.

The applicant worked with staff on the site planning to minimize the number of driveways and amount of surface area dedicated to vehicles and ensure there is useable and attractive open site space throughout the development. Vining Street was determined to be the appropriate access point into the middle of the site for emergency vehicles, handydart buses and other accessible vehicles. To accommodate two-way traffic flow and provide a new sidewalk with

street lighting as well as curb and gutter on Vining Street, a SRW of 1.90m on the south side would be required to achieve a minimum road width of 8m that would allow for the required upgrades to make the road functional.

Road Closures

To facilitate this development, the closure and removal of highway dedication for the portions of Vining Street and North Park Street would be required as shown on the road closure plan attached to this report. The proposed closure of these portions of Vining and North Park Streets will have no impact on the neighbourhood transportation network and would allow for the expansion of community gardens and the Compost Education Centre within the closed portion of North Park Street in exchange for the loss of community gardens adjacent to Vining Street. The remaining portions of Vining and North Park Streets will continue to adequately service all adjacent properties.

Should Council wish to proceed with advancing the application to a Public Hearing then a road closure bylaw would be brought forward in conjunction with the zoning regulation bylaw amendments for Council's consideration.

## CONCLUSIONS

The proposal to increase the density and permit a multi-unit residential development consisting of approximately 158 affordable or below-market rental dwelling units further advances several policies and objectives in the OCP related to urban design and place-making, affordable housing, parks and open space, transportation, food security and multi-generational neighbourhoods. Staff recommend for Council's consideration that the application proceed to a Public Hearing.

## ALTERNATE MOTION

That Council decline Rezoning Application No. 00715 for the property located at 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue.

Respectfully submitted,

Leanne Taylor
Senior Planner
Development Services Division

Karen Hoese, Director
Sustainable Planning and Community
Development Department

Report accepted and recommended by the City Manager:

Date: April 30, 2020

**List of Attachments**

- Attachment A: Subject Map
- Attachment B: Aerial Map
- Attachment C: Plans, date stamped April 6, 2020
- Attachment D: Letter from applicant to Mayor and Council, dated September 26, 2019
- Attachment E: Proposal overview and design rationale from the applicant, dated September 2019
- Attachment F: Sustainability Features, dated September 27, 2019
- Attachment G: Transportation Study, dated September 24, 2019
- Attachment H: Tenant Assistance Plan
- Attachment I: Arborist Report, dated March 4, 2020 (Updated March 6, 2020 and April 1, 2020)
- Attachment J: Advisory Design Panel report, dated January 15, 2020
- Attachment K: Advisory Design Panel minutes, dated
- Attachment L: Letter from architect regarding the recommendations from the Advisory Design Panel, dated April 13, 2020
- Attachment M: Correspondence (Letters received from residents).

# Committee of the Whole Report
**For the Meeting of April 23, 2020**

| | | | |
|---|---|---|---|
| **To:** | Committee of the Whole | **Date:** | April 9, 2020 |
| **From:** | Karen Hoese, Director, Sustainable Planning and Community Development | | |
| **Subject:** | **Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue** | | |

## RECOMMENDATION

That, subject to:

1. the preparation and execution of legal agreements to secure housing affordability, unit types, accessible dwelling units, and amenity space, Statutory Right-of-Ways, and the construction of a greenway, to the satisfaction of the Director of Community Planning and Sustainable Development and Direction of Engineering and Public Works.
2. revisions to the driveway and underground parkade entrance of the four-storey, multi-unit residential building on Grant Street to accommodate the Grant Street turnaround, to the satisfaction of the Director of Community Planning and Sustainable Development and Director of Engineering and Public Works.

That Council, after giving notice and allowing an opportunity for public comment at a meeting of Council, consider the following motion:

> "That Council authorize the issuance of Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue, in accordance with:
>
> 1. Plans date stamped April 6, 2020.
> 2. The Development Permit lapsing two years from the date of this resolution."

## LEGISLATIVE AUTHORITY

In accordance with Section 489 of the *Local Government Act*, Council may issue a Development Permit in accordance with the applicable guidelines specified in the *Community Plan*. A Development Permit may vary or supplement the *Zoning Regulation Bylaw* but may not vary the use or density of the land from that specified in the Bylaw.

## EXECUTIVE SUMMARY

The purpose of this report is to present Council with information, analysis and recommendations for a Development Permit Application for the properties located at 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue. The proposal is to construct a residential development consisting of two multi-unit residential buildings and three blocks of townhouses ranging in heights from three to five storeys.

The following points were considered in assessing this application:

- the subject properties are within Development Permit Area (DPA) 16: General Form and Character. This DPA supports new multi-unit residential developments that provide a sensitive transition to adjacent and nearby areas and that are complementary to the established place character of a neighbourhood. A high quality of architecture, landscape and urban design are strongly encouraged. The DPA also encourages livable environments that are designed for the human-scale and incorporate quality open spaces, adequate privacy, safety and accessibility. The proposal is consistent with these objectives
- to create a sense of community on-site, the applicant is proposing outdoor amenity space for residents and visitors, including community gardens, allotment garden boxes, children's play area and gardens, interconnecting pathways, substantial tree planting, and outdoor seating
- this proposal significantly enhances the street and the proposed greenway frontages by introducing human-scale architectural elements, including ground-oriented dwelling units with individual front entryways and substantial landscaping
- the majority of off-street parking would be located underground (only three visitor and two accessible parking spaces are located at grade). As a result, the site primarily features building frontage accompanied by substantial landscaping and open site space.

## BACKGROUND

### Description of Proposal

The proposal is for a residential development consisting of two multi-unit residential buildings and three blocks of townhouses ranging in heights from three to five storeys. Specific details include:

<u>Four-storey multi-unit residential building</u>

- a low-rise building form consisting of contemporary architectural features including a flat and butterfly roofline and contemporary-style windows
- exterior building materials include fibre cement panel and lap-siding, brick veneer, painted concrete and aluminum soffit material
- main residential entryway facing Grant Street
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units.

Five-storey multi-unit residential building

- a mid-rise building form consisting of contemporary architectural features including a flat roofline and contemporary-style windows
- exterior materials include fibre cement panel and lap-siding, and aluminum soffit material
- a ground level amenity room for residents and community groups
- main residential entryway accessed from the breezeway
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units.

Townhouses

- architectural features include a pitched and gabled roofline and contemporary-style windows
- exterior materials include fibre cement panel and lap-siding, painted concrete and aluminum soffit material
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units.

Landscaping, vehicle and bicycle parking, loading and access

- east-west pathways connecting the site to the proposed greenway and surrounding streets
- extensive outdoor space and amenities including community gardens, allotment garden boxes, children's gardens and playground, several gathering places, outdoor seating, picnic tables, open space, rain gardens and substantial soft landscaping
- approximately 99 trees on-site (11 existing trees and 88 new trees)
- access to underground parkade from Caledonia Avenue and Grant Street
- loading, fire access, and service delivery from Vining Street
- one level of underground parking containing 112 parking spaces
- five surface parking spaces
- 195 long-term and 30 short-term bicycle parking spaces.

**Affordable Housing**

Affordable housing impacts are discussed in the concurrent Rezoning application report.

**Sustainability**

The applicant notes the following sustainability features as being associated with this application:

- Step 3 of the BC Energy Step Code (20% reduction in energy use and a high-performance building envelope)
- energy and air tightness testing throughout the project
- heat recovery ventilation system
- energy-efficient insulation, lighting and electrical systems, including motion sensor lighting and LED lighting

- low-flow and high-efficiency plumbing fixtures
- extensive use of raingardens for storm water management purposes.

**Active Transportation**

The application proposes to install 195 long-term and 30 short-term residential bicycle parking spaces which supports active transportation.

**Public Realm**

Proposed public realm improvements are discussed in association with the concurrent Rezoning Application associated with this property.

**Accessibility**

The British Columbia Building Code regulates accessibility as it pertains to buildings. The applicant is proposing 15 accessible dwelling units, including seven one-bedroom, seven two-bedroom, and one three-bedroom unit. The proposed outdoor areas and pathways surrounding the buildings are also designed to be accessible.

**Existing Site Development and Development Potential**

The site is presently occupied by townhouses and a two-storey, multi-unit residential building. A large portion of the site is vacant.

The subject properties that are currently zoned R-K, Medium Density Attached Dwelling District, could be developed as two and a half storey townhouses and the properties currently zoned R-2, Two-Family Dwelling District, could be developed as two-storey duplexes.

**Data Table**

The following data table compares the proposal with the existing R-K and R-2 Zones. An asterisk is used to identify where the proposal differs from the existing Zone.

| Zoning Criteria | Apartment | | Townhouse | | | Zone Standard R-K Zone | Zone Standard R-2 Zone |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 1 | 2 | 3 | | |
| Site area ($m^2$) – minimum | 8681.10 (total site) | | | | | 28,490 | 43,845 |
| Lot width (m) - minimum | 54.94 | | | | | 18 | 15 |
| Density (Floor Space Ratio) – maximum | **1.29:1*** | | | | | 0.6:1 | 0.5:1 |

| Zoning Criteria | Apartment | | Townhouse | | | Zone Standard R-K Zone | Zone Standard R-2 Zone |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 1 | 2 | 3 | | |
| Height (m) – maximum | **12*** | **14.78*** | **11.25*** | **10.65*** | **9.80*** | 8.50 (measured from average grade to the highest point of the finished ceiling height (interior)) | 7.60 |
| | (measured to exterior roof pitch) | | | | | | |
| Site coverage (%) – maximum | **41*** | | | | | 33 | 40 |
| Open site space (%) – minimum | 49 | | | | | 45 | 30 |
| **Setbacks** (m) – minimum | | | | | | | |
| North (Gladstone Avenue) | 147.30 | 99.80 | 44.80 | **7*** (building) **/ 1*** (stairs) | 48.50 | 7.50 (building) / 1.60 (stairs) | 3.50 |
| South (Grant Street) | **7* (living room)** | 54.60 | 100.50 | 155.60 | 115.90 | 2.50 (blank wall) / 4 (habitable room) / 7.5 (living room) | 10.70 or 35% of lot depth, whichever is greater |
| East | **3.60*** (living room) | **3.60*** (living room) | **2.50*** (living room) / **1** (stairs) | **2.50*** (living room) / **1** (stairs) | 28.60 | Same as south setbacks | 3 |
| West | **5.80*** (living room) | **4*** (living room) / **5.80*** (amenity room) | 27.50 | **4*** (living room) | 5.20 (habitable room) | Same as south setbacks | 4.55 |
| **Vehicle parking** – minimum | | | | | | | |
| Residential | 96 | | | | | 96 | |
| Visitor | 16 | | | | | 16 | |

| Zoning Criteria | Apartment | | Townhouse | | | Zone Standard R-K Zone | Zone Standard R-2 Zone |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 1 | 2 | 3 | | |
| Before and after school care | 5 | | | | | 2 | |
| **Bicycle parking stalls** – minimum | | | | | | | |
| Long-term | 195 | | | | | 195 | |
| Short-term | 30 | | | | | 17 | |

**Community Consultation**

Consistent with the *Community Association Land Use Committee (CALUC) Procedures for Processing Rezoning and Variance Applications*, on October 8, 2019 the Application was referred for a 30-day comment period to the Fernwood CALUC. At the time of writing this report, a letter from the CALUC had not been received.

**ANALYSIS**

**Development Permit Area and Design Guidelines**

The *Official Community Plan* (OCP, 2012) identifies the subject properties within Development Permit Area (DPA) 16: General Form and Character. This DPA supports multi-unit residential developments that provide a sensitive transition to adjacent and nearby areas and that are complementary to the established place character of a neighbourhood. A high quality of architecture, landscape and urban design are strongly encouraged. The DPA also encourages liveable environments that are designed for the human-scale and incorporate quality open spaces, adequate privacy, safety and accessibility.

To achieve a sensitive transition to the adjacent land uses, the applicant is locating the proposed four-storey multi-unit residential building on the south end of the site along Grant Street and adjacent to Haegart Park and the five-storey building adjacent to the Vic High track furthest away from the neighbouring single-family dwellings. The three-storey townhouses are situated on the north end of the site adjacent to the single-family dwellings and fronting Gladstone Avenue. The proposed site planning prioritizes pedestrians and minimizes the amount of space dedicated to vehicles by providing all the residential parking underground and limiting the amount of vehicular access on the site.

The design guidelines specify that new residential development should respect the character of established areas through the form, massing, building height, rooflines and exterior finishes. Breaking up larger and longer buildings into human-scaled proportions and ensuring that ground level residential uses have strong entry features are also encouraged in the design guidelines.

For the four and five-storey multi-unit residential buildings, the applicant is proposing an articulated L-shaped building form to break up the massing. The upper storeys are stepped back and finished with lighter exterior materials and colours, and the rooflines are reasonably flat to reduce the prominence of taller buildings in the neighbourhood. Both buildings have ground-oriented dwelling units with individual entryways that provide direct connections to the street, greenway and outdoor areas and adds visual interest to the public realm.

The townhouse blocks are slightly articulated at the entryways to break up the form and massing. The applicant is using materials, colours and window placement to break up the longer townhouse blocks. The pitched and gabled roofline fits in with the traditional character of the neighbourhood.

To create a sense of community on-site, the applicant is proposing extensive outdoor amenity areas for residents and visitors. The outdoor areas are framed by the buildings and connected by pathways. This usable, attractive and well-integrated space would include community gardens, allotment garden boxes, children's gardens and playground, several gathering places, outdoor seating, picnic tables, open space, rain gardens and soft landscaping.

**Local Area Plans**

The *Fernwood Neighbourhood Plan* (1994) supports the retention of the duplex zoning in order to preserve the current "look and image" of single-family homes and duplexes in the neighbourhood. The Plan states the importance of protecting traditional architectural elements, such as front porches, wood-shingle siding, wood window frames and pitched roofs. In accordance with the Plan objectives, the applicant is proposing a traditional architectural design for the townhouse units to ensure that this type of built form fits in with the existing neighbourhood context.

Maintaining views of heritage buildings in the neighbourhood is strongly encouraged in the Plan. Vic High School is considered a heritage landmark building in the city. Views of this heritage-designated building from the public realm was taken into consideration by the applicant, which resulted in preserving the views from North Park Street and from the intersections along the Greenway.

**Tree Preservation Bylaw and Urban Forest Master Plan**

This section on tree preservation and the urban forest is discussed in the concurrent Rezoning COTW report.

**Other Considerations**

Advisory Design Panel

The Advisory Design Panel (ADP) reviewed the Development Permit Application at their meeting on January 22, 2020 (minutes attached) and provided the following recommendation for Council's consideration:

*"That Development Permit Application No. 000567 for 1230 Grant Street & 1209,1218,1219,1220,1226 North Park Street & 1219 Vining Street & 1235 Caledonia Avenue & 1211 Gladstone Avenue be approved with the following changes:*

- *refine the relationship between landscape, architectural design and lighting to improve the alignment between walkway and breezeway*
- *emphasize the site entrance and the main pedestrian connections throughout the site*
- *further refine the hierarchy of the pathways between public and private space*
- *confirmation of gaps within the trees along the playing field avenue as presented*
- *consider window assemblies that will result in shadow and light*
- *ensure the pedestrian routes take precedence over parking and do not inhibit views over the site*
- *consider simplification and revision of exterior finishes on the townhouses."*

In response to ADP's recommendation above, the applicant made the following changes:

- realigned central walkway to create a strong continuous axis through the site and improved sightlines
- realigned three east-west walkways to improve connections with sidewalks on North Park Avenue, Vining Street and Caledonia Street
- added pedestrian-friendly lighting to the building and within the landscaped areas to address CPTED concerns
- incorporated decorative surface treatment at intersections where the east-west walkways connect to the main central walkway
- incorporated tree gaps where the east-west walkways connect to the greenway to maintain views through the site and of Vic High School
- changed cladding and window trim to project a minimum of two to three inches from the window frame to create desirable shadow lines
- relocated the children's playground to the south end of the site, adjacent to the amenity room, and away from the entrance to the underground parkade off of Caledonia Avenue
- demarcated walkways and vehicular access with different surface treatment to minimize conflicts between different user groups
- simplified exterior finishes on the townhouse units.

Grant Street Turnaround

Further refinements to the Grant Street turnaround in order to accommodate larger trucks (i.e. garbage trucks, moving trucks, handy-dart, emergency vehicles, etc.) will be required, which may result in changes to the slope of the driveway and the entrance to the underground parkade. If design changes are required, then staff will provide Council with an update report summarizing the proposed changes and attaching the revised drawings for Council's consideration.

## CONCLUSIONS

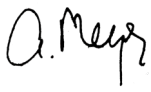
The proposal to construct a residential development consisting of two multi-unit residential buildings and three blocks of townhouses ranging in heights from three to five storeys is generally consistent with the design guidelines. The applicant has made some refinements to the proposal in response to the feedback provided at ADP, which improve the proposal. Staff

recommend for that this application proceed concurrently with the Rezoning Application for Council's further consideration.

**ALTERNATE MOTION**

That Council decline Development Permit Application No. 000567 for the property located at 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue.

Respectfully submitted,


Leanne Taylor
Senior Planner
Development Services Division

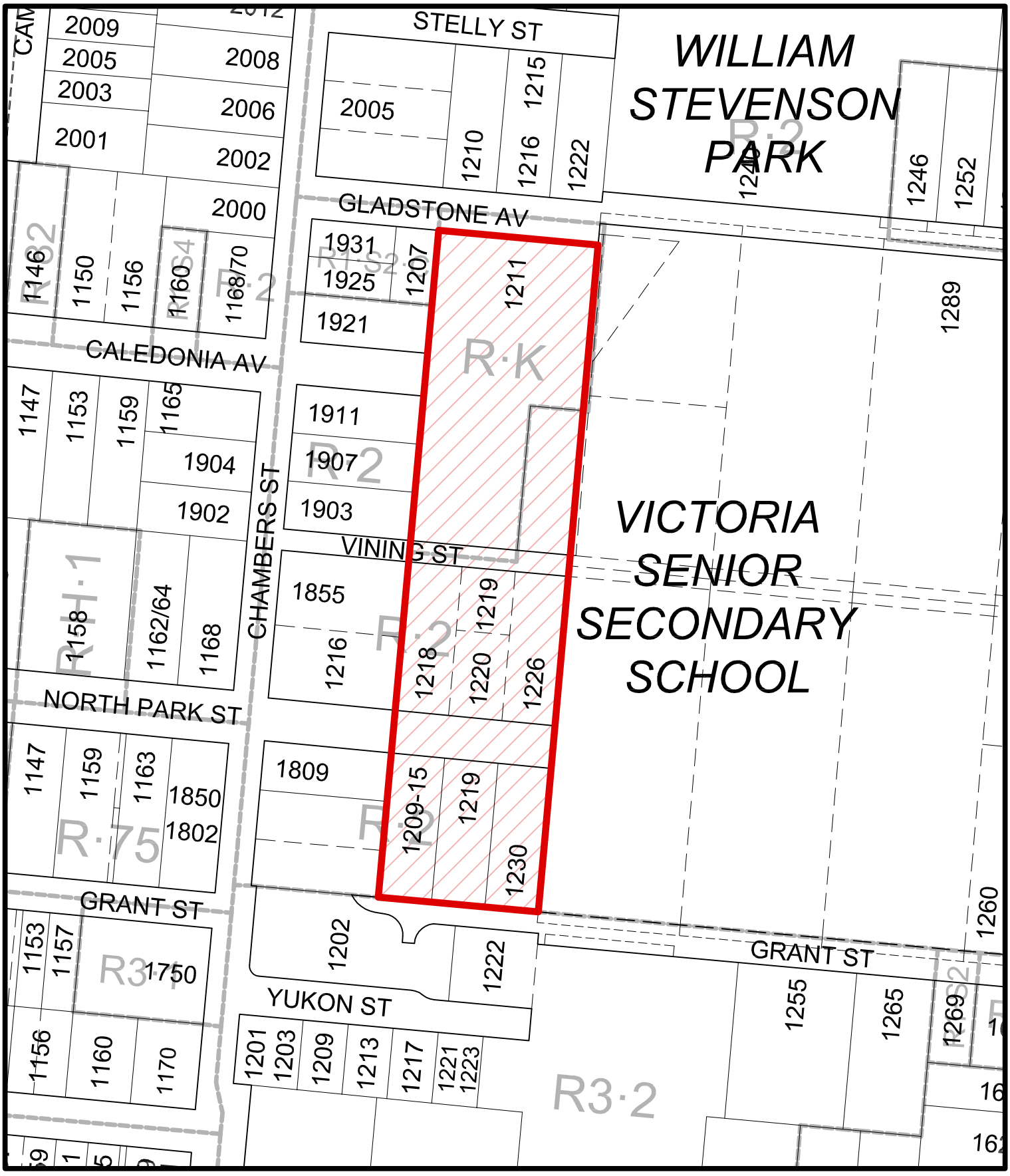
Karen Hoese, Director
Sustainable Planning and Community
Development Department

Report accepted and recommended by the City Manager: 

Date: April 30, 2020

**List of Attachments**

- Attachment A: Subject Map
- Attachment B: Aerial Map
- Attachment C: Plans, date stamped April 6, 2020
- Attachment D: Letter from applicant to Mayor and Council, dated September 26, 2019
- Attachment E: Proposal overview and design rationale from the applicant, dated September 2019
- Attachment F: Sustainability Features, dated September 27, 2019
- Attachment G: Transportation Study, dated September 24, 2019
- Attachment H: Tenant Assistance Plan
- Attachment I: Arborist Report, dated March 4, 2020 (Updated March 6, 2020 and April 1, 2020)
- Attachment J: Advisory Design Panel report, dated January 15, 2020
- Attachment K: Advisory Design Panel minutes from January 20, 2020
- Attachment L: Letter from applicant regarding the recommendations from the Advisory Design Panel, dated April 13, 2020
- Attachment M: Correspondence (Letters received from residents).




N

1211 Gladstone Ave, 1235 Caledonia Ave, 1219 Vining St,
1230 Grant St, and 1209 - 1226 North Park St
Rezoning No.00715

CITY OF VICTORIA


N

1211 Gladstone Ave, 1235 Caledonia Ave, 1219 Vining St,
1230 Grant St, and 1209 - 1226 North Park St
Rezoning No.00715

CITY OF VICTORIA

## PROJECT INFORMATION

**CIVIC ADDRESS**
1230 GRANT STREET
1209,1218,1219,1220, and 1226 NORTH PARK STREET
1219 VINING STREET
1235 CALEDONIA AVENUE
1211 GLADESTONE AVENUE

**LEGAL DESCRIPTION**
LOT 4 VIP205 SECTION SR VICTORIA
LOT 5 VIP205 SECTION SR VICTORIA
LOT 6 VIP205 SECTION SR VICTORIA
LOT 7 VIP205 SECTION SR VICTORIA
N 56' OF LOT 8 VIP205 SECTION SR VICTORIA
REM LOT 8 VIP205 SECTION SR VICTORIA
LOT 9 VIP205 SECTION SR VICTORIA
LOT 18 VIP205 SECTION SR VICTORIA
LOT A SECTION 53, SPRING RIDGE, VIP55528

**SITE AREA**
8681.1 SM

**PROJECT DESCRIPTION**
THE PROJECT INVOLVES THE DEVELOPMENT OF 158 AFFORDABLE HOUSING RESIDENTIAL UNITS AND SUPPORT FACILITIES IN 2 APARTMENT AND 3 TOWNHOUSE BUILDINGS OVER ONE BASEMENT LEVEL OF PARKADE.

| BUILDING HEIGHTS | BCBC | ZONING |
|---|---|---|
| APARTMENT 1 | 4 STOREYS | 4 STOREYS, 12.0 M |
| APARTMENT 2 | 5 STOREYS | 5 STOREYS, 14.78 M |
| TOWNHOUSE 1 | 3 STOREYS | 4 STOREYS, 11.25 M |
| TOWNHOUSE 2 | 3 STOREYS | 3 STOREYS, 10.65 M |
| TOWNHOUSE 3 | 3 STOREYS | 3 STOREYS, 9.8 M |

| BUILDING AREAS | BCBC |
|---|---|
| APARTMENT 1 | 872 SM |
| APARTMENT 2 | 875 SM |
| TOWNHOUSE 1 | 653 SM |
| TOWNHOUSE 2 | 652 SM |
| TOWNHOUSE 3 | 260 SM |

| GROSS BUILDING AREAS | BCBC | ZONING |
|---|---|---|
| PARKADE | 3905 SM | 275 SM* |

* AREA OF PARKADE EXCLUDING EXTERIOR WALLS, VEHICLE AND BICYCLE PARKING AND CIRCULATION.

| APARTMENT 1 | | |
|---|---|---|
| LEVEL 1 | 800 SM | 776 SM |
| LEVEL 2 | 872 SM | 850 SM |
| LEVEL 3 | 872 SM | 850 SM |
| LEVEL 4 | 723 SM | 704 SM |
| TOTAL | 3267 SM | 3180 SM |

| APARTMENT 2 | | |
|---|---|---|
| LEVEL 1 | 789 SM | 765 SM |
| LEVEL 2 | 656 SM | 637 SM |
| LEVEL 3 | 831 SM | 809 SM |
| LEVEL 4 | 831 SM | 809 SM |
| LEVEL 5 | 690 SM | 672 SM |
| TOTAL | 3797 SM | 3692 SM |

| TOWNHOUSE 1 | | |
|---|---|---|
| LEVEL 0 | 601 SM | 566 SM |
| LEVEL 1 | 603 SM | 581 SM |
| LEVEL 2 | 608 SM | 592 SM |
| LEVEL 3 | 645 SM | 633 SM |
| TOTAL | 2457 SM | 2372 SM |

| TOWNHOUSE 2 | | |
|---|---|---|
| LEVEL 0 | 645 SM | 606 SM** |
| LEVEL 1 | 607 SM | 590 SM |
| LEVEL 2 | 607 SM | 590 SM |
| LEVEL 3 | 645 SM | 632 SM |
| TOTAL | 2504 SM | 2418 SM |

** DOES NOT CONTRIBUTE TO FSR.

| TOWNHOUSE 3 | | |
|---|---|---|
| LEVEL 1 | 231 SM | 222 SM |
| LEVEL 2 | 243 SM | 235 SM |
| LEVEL 3 | 253 SM | 246 SM |
| TOTAL | 727 SM | 703 SM |

**RESIDENTIAL UNIT SUMMARY**

| APARTMENTS 1 & 2 | |
|---|---|
| 14 STUDIO @ | 34 SM |
| 38 ONE BED @ | 47 - 49 SM |
| 7 ACCESSIBLE ONE BED @ | 53 SM |
| 14 TWO BED @ | 61 - 76 SM |
| 5 ACCESSIBLE TWO BED @ | 71 SM |
| 12 THREE BED @ | 78 - 88 SM |
| 1 ACCESSIBLE THREE BED @ | 98 SM |
| 6 FOUR BED @ | 98 - 118 SM |
| 97 TOTAL | |

| TOWNHOUSES 1 -3 | |
|---|---|
| 55 TWO BED @ | 81 - 90 SM |
| 2 ACCESSIBLE TWO BED @ | 104 SM |
| 2 THREE BED @ | 118 SM |
| 4 FOUR BED @ | 130 SM |
| 61 TOTAL | |

**VEHICLE PARKING**
PARKADE 112
SURFACE 0
TOTAL 112

**BICYCLE PARKING**
LONG TERM 194
SHORT TERM 30
TOTAL 224

## VICTORIA ZONING BYLAW SUMMARY

**ZONING**
R-K
R-2

**USE**
RESIDENTIAL

**FLOOR SPACE RATIO**
GROSS BUILDING FLOOR AREA (ZONING) / SITE AREA
11759/8681.1 = 1.35

**SITE COVERAGE**
AREA OF LOT OCCUPIED BY ANY STRUCTURE/ SITE AREA
3544/8681.1 = 41%

**OPEN SITE SPACE**
SITE AREA - (BUILDING AREA + SURFACE PARKING AREA)
8681.1 - 3460 = 5221.1
OPEN SITE SPACE/ SITE AREA
5221.1/ 8681.1 = 49%

**AVERAGE GRADE** (GEODETIC)
(SEE SITE PLAN FOR GRADE CALCULATION).

| | |
|---|---|
| APARTMENT 1 | 33.5 M |
| APARTMENT 2 | 33.4 M |
| TOWNHOUSE 1 | 33.0 M |
| TOWNHOUSE 2 | 32.6 M |
| TOWNHOUSE 3 | 32.8 M |

**HEIGHT OF BUILDINGS**
(AS MEASURED FROM AVERAGE GRADE).

| | |
|---|---|
| APARTMENT 1 | 12.000 M |
| APARTMENT 2 | 14.780 M |
| TOWNHOUSE 1 | 11.250 M |
| TOWNHOUSE 2 | 10.650 M |
| TOWNHOUSE 3 | 9.800 M |

**VEHICLE PARKING**

| | |
|---|---|
| < 45 SM | .2 X 14 = 2.8 |
| 45 - 70 SM | .5 X 58 = 29 |
| > 70 SM | .75 X 86 = 64.5 |
| SUBTOTAL | 96.3 (96) |
| VISITOR | .1 X 158 = 15.8 (16) |
| TOTAL REQUIRED | 112 |
| PROVIDED | 117 |

**BICYCLE PARKING**

| LONG TERM | |
|---|---|
| < 45 SM | 14 X 11 = 14 |
| > 45 SM | 1.25 X 144 = 180 |
| TOTAL LONG TERM REQUIRED | 194 |
| TOTAL PROVIDED | 194 |

| SHORT TERM | |
|---|---|
| RESIDENTIAL (THE GREATER OF) | .1 X 158 OR 6 X 5 |
| TOTAL SHORT TERM REQUIRED | 30 |
| TOTAL PROVIDED | 30 |

## CODE ANALYSIS

REFERENCE DOCUMENT BCBC 2018,

PARKADE
**OCCUPANCY CLASSIFICATIONS** (TABLE 3.1.2.1)
BELOW GRADE PARKADE -
GROUP F, DIVISION 3 - LOW HAZARD INDUSTRIAL

**OCCUPANCY SEPARATIONS** (TABLE 3.1.3.1)
BELOW GRADE PARKADE CONSIDERED AS A SEPARATE BUILDING AND SEPARATED FROM THE FLOORS OF ALL BUILDINGS ABOVE BY A 2 HOUR FIRE SEPARATION IN ACCORDANCE WITH 3.2.1.2.

**BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY**
3.2.2.78 - GROUP F, DIVISION 3 - ANY HEIGHT, ANY AREA, SPRINKLERED
FIRE SUPPRESSION - FULL SPRINKLERED
ALLOWABLE HEIGHT - ANY HEIGHT
ALLOWABLE AREA - ANY AREA
CONSTRUCTION - NON COMBUSTIBLE
FLOOR ASSEMBLIES - 2 HOUR
SUPPORTING WALLS AND STRUCTURE - 2 HOUR

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULL SPRINKLERED
HEIGHT - 1 STOREY
AREA - 3905 SM
CONSTRUCTION - NON COMBUSTIBLE
FLOOR ASSEMBLY - 2 HOUR
SUPPORTING WALLS AND STRUCTURE - 2 HOUR

APARTMENT 1
**OCCUPANCY CLASSIFICATIONS** (TABLE 3.1.2.1)
GROUP C - RESIDENTIAL

**OCCUPANCY SEPARATIONS** (TABLE 3.1.3.1)

**BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY**
3.2.2.51 - GROUP C, UP TO 4 STOREYS, SPRINKLERED
FIRE SUPPRESSION - FULLY SPRINKLERED
ALLOWABLE HEIGHT - 4 STOREYS
ALLOWABLE AREA - 1800 SM (BASED ON FOUR STOREYS)
CONSTRUCTION - COMBUSTIBLE OR NON COMBUSTIBLE
FLOOR ASSEMBLIES - 1 HOUR
SUPPORTING WALLS AND STRUCTURE - 1 HOUR
ROOF ASSEMBLY - NONE

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULLY SPRINKLERED
HEIGHT - 4 STOREYS
AREA - 872 SM
CONSTRUCTION - COMBUSTIBLE
FLOOR ASSEMBLY - 1 HOUR
SUPPORTING WALLS AND STRUCTURE - 1 HOUR
ROOF ASSEMBLY - NONE

APARTMENT 2
**OCCUPANCY CLASSIFICATIONS** (TABLE 3.1.2.1)
GROUP C - RESIDENTIAL

**OCCUPANCY SEPARATIONS** (TABLE 3.1.3.1)

**BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY**
3.2.2.50 - GROUP C, UP TO 6 STOREYS, SPRINKLERED
FIRE SUPPRESSION - FULLY SPRINKLERED
ALLOWABLE HEIGHT - 6 STOREYS & 18 M
ALLOWABLE AREA - 1800 SM (BASED ON FIVE STOREYS)
CONSTRUCTION - COMBUSTIBLE OR NON COMBUSTIBLE
FLOOR ASSEMBLIES - 1 HOUR
SUPPORTING WALLS AND STRUCTURE - 1 HOUR
ROOF ASSEMBLY - 1 HOUR

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULLY SPRINKLERED
HEIGHT - 5 STOREYS, 14.96 M
AREA - 875 SM
CONSTRUCTION - COMBUSTIBLE
FLOOR ASSEMBLY - 1 HOUR
SUPPORTING WALLS AND STRUCTURE - 1 HOUR
ROOF ASSEMBLY - 1 HOUR

## CODE ANALYSIS CONTINUED

TOWNHOUSE 1
**OCCUPANCY CLASSIFICATIONS** (TABLE 3.1.2.1)
GROUP C - RESIDENTIAL

**OCCUPANCY SEPARATIONS** (TABLE 3.1.3.1)

**BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY**
3.2.2.54 - GROUP C, UP TO 3 STOREYS, SPRINKLERED
FIRE SUPPRESSION - FULLY SPRINKLERED
ALLOWABLE HEIGHT - 3 STOREYS
ALLOWABLE AREA - 1800 SM (BASED ON THREE STOREYS)
CONSTRUCTION - COMBUSTIBLE OR NON COMBUSTIBLE
FLOOR ASSEMBLIES - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF - NONE

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULLY SPRINKLERED
HEIGHT - 3 STOREYS WITH BASEMENT
AREA - 653 SM
CONSTRUCTION - COMBUSTIBLE
FLOOR ASSEMBLY - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF ASSEMBLY - NONE

TOWNHOUSE 2
**OCCUPANCY CLASSIFICATIONS** (TABLE 3.1.2.1)
GROUP C - RESIDENTIAL

**OCCUPANCY SEPARATIONS** (TABLE 3.1.3.1)

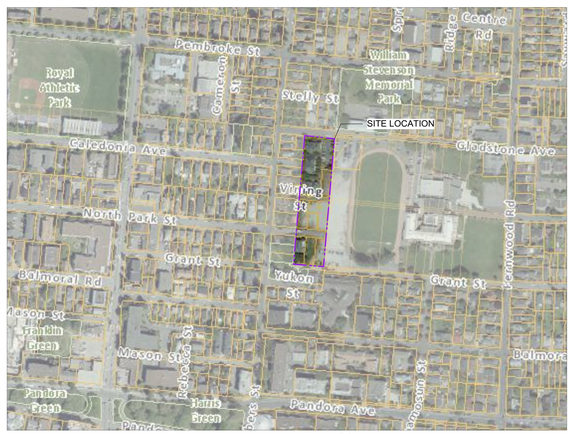
**BUILDING SIZE AND CONSTRUCTION RELATIVE TO OCCUPANCY**
3.2.2.54 - GROUP C, UP TO 3 STOREYS, SPRINKLERED
FIRE SUPPRESSION - FULLY SPRINKLERED
ALLOWABLE HEIGHT - 3 STOREYS
ALLOWABLE AREA - 1800 SM (BASED ON THREE STOREYS)
CONSTRUCTION - COMBUSTIBLE OR NON COMBUSTIBLE
FLOOR ASSEMBLIES - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF - NONE

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULLY SPRINKLERED
HEIGHT - 3 STOREYS WITH BASEMENT
AREA - 652 SM
CONSTRUCTION - COMBUSTIBLE
FLOOR ASSEMBLY - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF ASSEMBLY - NONE

TOWNHOUSE 3
**OCCUPANCY CLASSIFICATIONS** (TABLE 9.10.2.1)
GROUP C - RESIDENTIAL

**FIRE-RESISTANCE RATINGS** (TABLE 9.10.8.1)
USE - RESIDENTIAL (GROUP C)
MAXIMUM HEIGHT - 3 STOREYS
MAXIMUM AREA - 600 SM
CONSTRUCTION - COMBUSTIBLE OR NON COMBUSTIBLE
FLOOR ASSEMBLIES - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF ASSEMBLY - NONE

**ACTUAL SIZE AND CONSTRUCTION**
FIRE SUPPRESSION - FULLY SPRINKLERED
HEIGHT - 3 STOREYS WITH BASEMENT
AREA - 392 SM
CONSTRUCTION - COMBUSTIBLE
FLOOR ASSEMBLY - 45 MIN.
SUPPORTING WALLS AND STRUCTURE - 45 MIN.
ROOF ASSEMBLY - NONE




1 / A001 Location Plan
NTS

## DRAWING INDEX



CITY OF VICTORIA

**Revisions**
Bubbled areas indicate revisions compared to the previously submitted plans

**Received Date: April 6, 2020**

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 PROJECT INFORMATION |
| drawn by | FWP | checked by | RAW |
| scale | SEE DRAWING | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

ISSUED FOR DP & REZONING

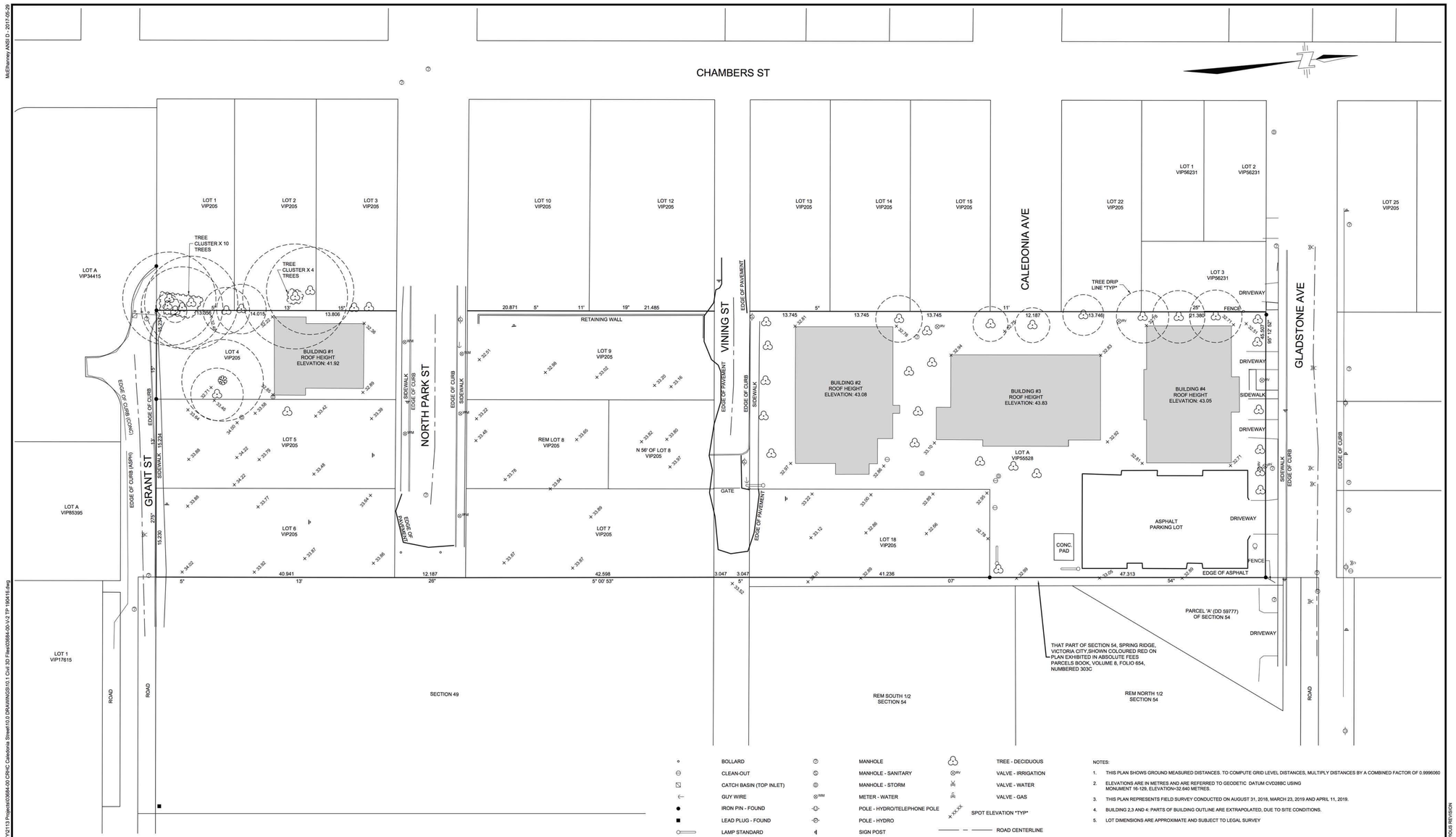

dHKarchitects
VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367
NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K6
T 1-250-585-5810


project name
Caledonia
Victoria, BC

drawing title
Project Information



drawing no. A001
revision no. 4




NOTES:

1. THIS PLAN SHOWS GROUND MEASURED DISTANCES. TO COMPUTE GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY A COMBINED FACTOR OF 0.9996060
2. ELEVATIONS ARE IN METRES AND ARE REFERRED TO GEODETIC DATUM CVD28SC USING MONUMENT 16-129, ELEVATION=32.640 METRES.
3. THIS PLAN REPRESENTS FIELD SURVEY CONDUCTED ON AUGUST 31, 2018, MARCH 23, 2019 AND APRIL 11, 2019.
4. BUILDING 2,3 AND 4: PARTS OF BUILDING OUTLINE ARE EXTRAPOLATED, DUE TO SITE CONDITIONS.
5. LOT DIMENSIONS ARE APPROXIMATE AND SUBJECT TO LEGAL SURVEY

| Rev | Date | Description | Drawn | Surv'd | App'd |
|---|---|---|---|---|---|
| 2 | 2019-04-16 | REVISED WITH ADDTIONAL SURVEY INFO | SA/LM | SM | GQ |
| 1 | 2019-03-29 | REVISED WITH ADDTIONAL SURVEY INFO | SA | SM | GQ |
| 0 | 2018-09-17 | ORIGINAL ISSUE | LM | JC | GQ |



0 1:300 15

ORIGINAL DWG SIZE: ANSI D (22" x 34")

McElhanney
McElhanney Consulting Services Ltd.
Suite 500
3960 Quadra Street
Victoria BC
Canada V8X 4A3
Tel 250 370 9221

Approved Sealed

CAPITAL REGIONAL HOUSING CORP
631 FISGARD ST, PO BOX 1000, VICTORIA, BC

RE-DEVELOPMENT OF CALEDONIA ST PROPERITES
SITE PLAN

1230 GRANT ST, 1209, 1218, 1219, 1220, AND 1226 NORTH PARK ST, 1219 VINING ST, 1235 CALENDONIA AVE

VICTORIA, BC

Drawing No. 03684-00-V-1 TP

Project Number 2113-03684-00 | Rev. 02

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawing file | 1907 PROJECT INFORATION |
| drawn by | FWP |
| checked by | RAW |
| scale | SEE DRAWING |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

dHKarchitects
VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367
NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810

project name: Caledonia
Victoria, BC

drawing title: Survey

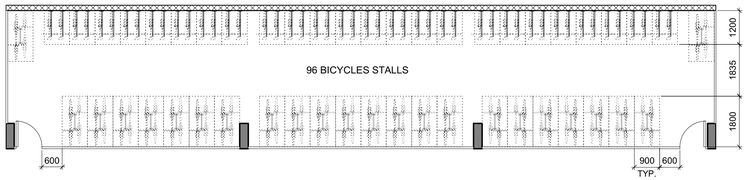


drawing no. A002 | revision no. 4

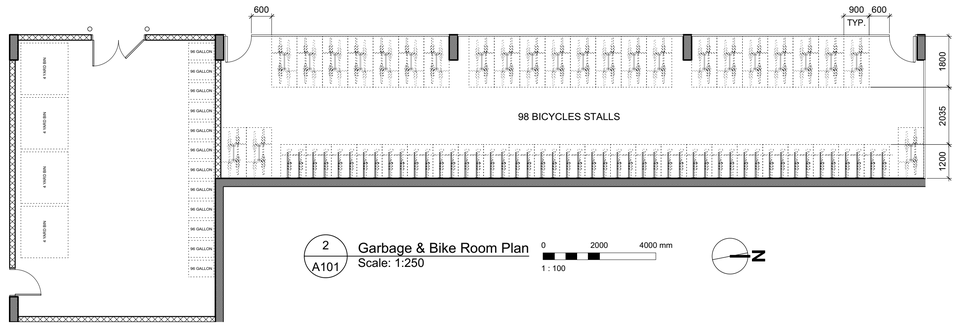
DATE: 2019-04-16, 14:08 FILE: P:\BUR\VER*21\113 Projects\03684-00 CRHC Caledonia Street\10.0 DRAWINGS\10.1 Civil 3D Files\03684-00-V-2 TP 190416.dwg

GRAPHIC LEGEND:

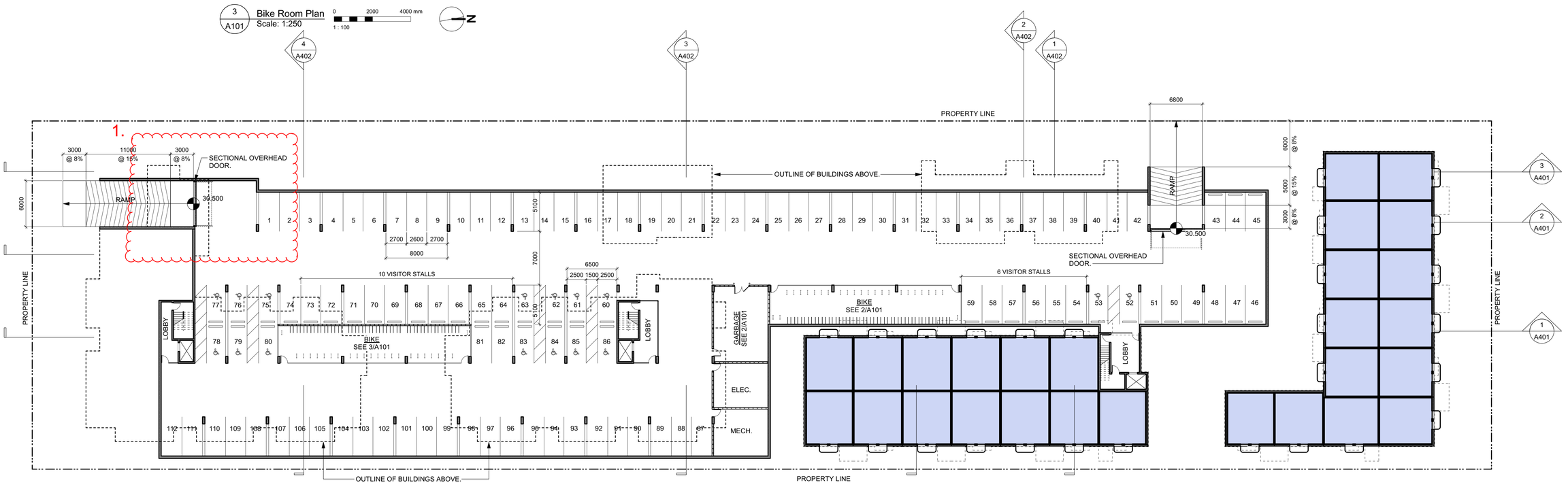
- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




3 / A101 Bike Room Plan
Scale: 1:250
0 2000 4000 mm
1 : 100




2 / A101 Garbage & Bike Room Plan
Scale: 1:250
0 2000 4000 mm
1 : 100




1 / A101 Parkade & LO Plan
Scale: 1:250
0 5000 10000 mm
1 : 250

VEHICLE PARKING CALCULATION

| | |
|---|---|
| UNITS < 45 SM | 14 X .2 = 2.8 |
| UNITS 45-70 SM | 58 X .5 = 29 |
| UNITS >70 SM | 86 X .75 = 64.5 |
| SUBTOTAL | 96.3 (96) |
| VISITOR | 158 X .1 = 15.8 (16) |
| TOTAL REQUIRED | 112 |
| PROVIDED | 117 (5 SURFACE) |

LONG TERM BIKE PARKING CALCULATION

| | |
|---|---|
| UNITS < 45 SM | 14 X 1 = 14 |
| UNITS > 45 SM | 144 X 1.25 = 180 |
| TOTAL REQUIRED | 194 |
| PROVIDED | 194 |

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawn by | FWP |
| scale | AS SHOWN |
| drawing file | 1907 A200 Plans.vwx |
| checked by | RAW |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING


dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K6
T 1-250-585-5810

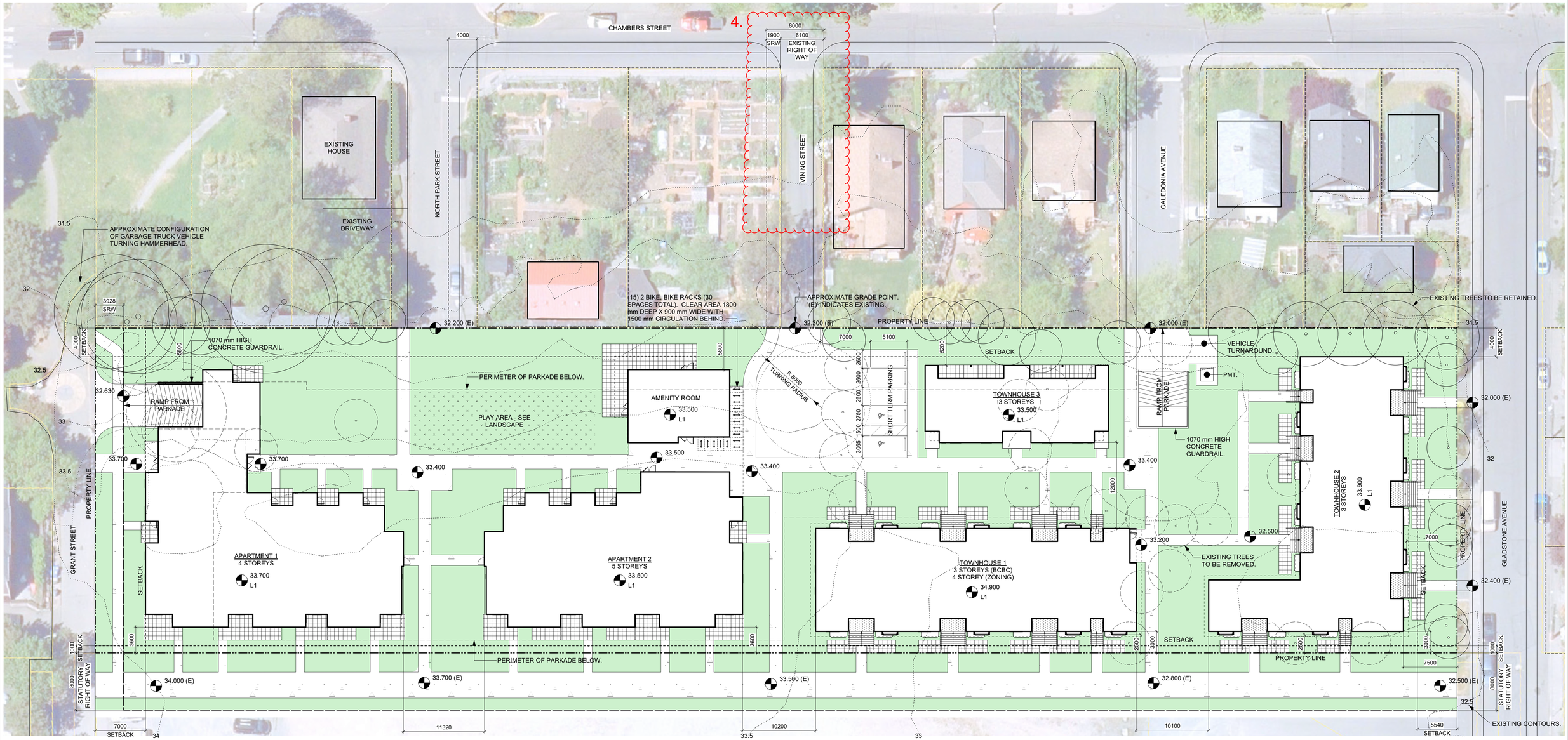

project name: Caledonia
Victoria BC

drawing title: Parkade & LO Plan



drawing no. A101

revision no. 4




1 / A201 Site Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

| PROJECT INFORMATION TABLE | | | |
|---|---|---|---|
| ZONE (EXISTING) | - | **MINIMUM NEW BUILDING SETBACKS (M)** | |
| PROPOSED ZONE | NEW ZONE | FRONT YARD (SOUTH) | 7.0 |
| SITE AREA (SM) | 8681.1 | REAR YARD (NORTH) | 5.54 |
| TOTAL NEW FLOOR AREA (SM) | 11759 | SIDE YARD (WEST) | 4 |
| COMMERCIAL FLOOR AREA (SM) | 0 | SIDE YARD (EAST) | 1 |
| FLOOR SPACE RATIO | 1.35 | COMBINED SIDE YARDS | 5 |
| SITE COVERAGE (%) | 41% | **NEW RESIDENTIAL USE DETAILS** | |
| OPEN SITE SPACE (%) | 49% | TOTAL NUMBER OF NEW UNITS | 158 |
| MAXIMUM HEIGHT OF NEW BUILDINGS (M) | 14780 AS MEASURED FROM AVERAGE GRADE | NEW UNIT TYPES | STUDIO, ONE, TWO, THREE, & FOUR BEDROOM |
| MAXIMUM NUMBER OF STOREYS | 5 | NEW GROUND ORIENTED UNITS | 46 |
| PARKING STALLS (NUMBER) ON SITE | 117 | MINIMUM NEW UNIT FLOOR AREA (SM) | 34 |
| BICYCLE PARKINGS NUMBER (CLASS 1 AND CLASS 2) | 224 | TOTAL NEW RESIDENTIAL FLOOR AREA (SM) | 10358 |

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

plot date: SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx
drawn by: FWP | checked by: RAW
scale: AS SHOWN | project number: 1907

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

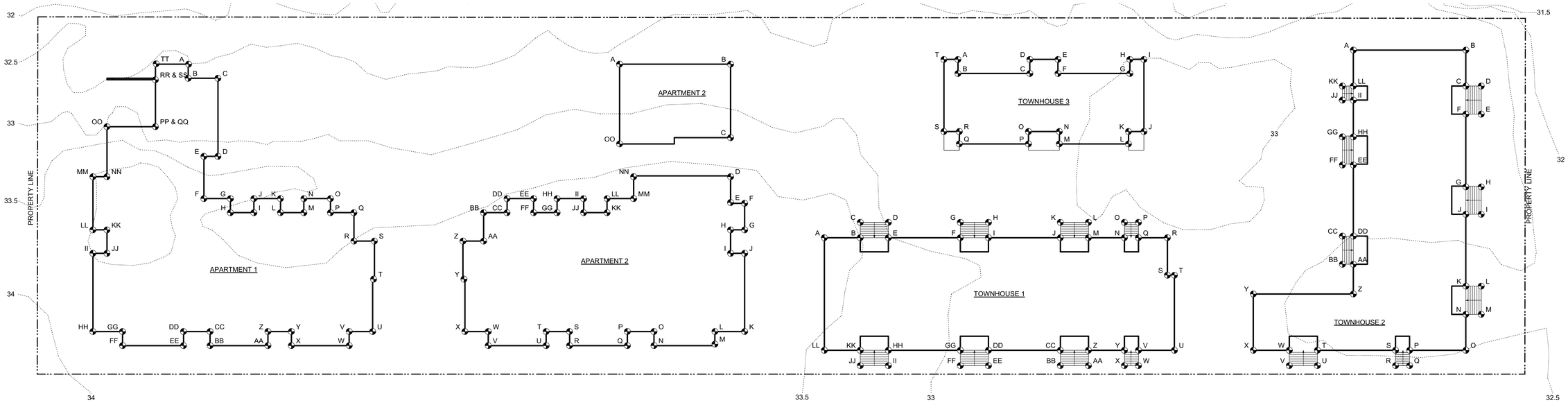
dHKarchitects
VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367
NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

project name: Caledonia
Victoria BC

drawing title: Architectural Site Plan



drawing no.: A201
revision no.: 4




1 / A202 Average Grade Calculation
Scale: 1:250

0 5000 10000 mm
1 : 250

N

**GRADE CALCULATION**
APARTMENT 1

| side | corner grade point | + corner grade point | / 2 | average grade per side | X length of side | TOTAL | |
|---|---|---|---|---|---|---|---|
| A&B | 32.5 | 32.6 | 2 | 32.6 | 1.8 | 58.6 | |
| B&C | 32.6 | 32.6 | 2 | 32.6 | 3.8 | 123.9 | |
| C&D | 32.6 | 33.3 | 2 | 33.0 | 10.0 | 329.5 | |
| D&E | 33.3 | 33.3 | 2 | 33.3 | 1.8 | 59.9 | |
| E&F | 33.3 | 33.8 | 2 | 33.6 | 5.4 | 181.2 | |
| F&G | 33.8 | 33.7 | 2 | 33.8 | 3.4 | 114.8 | |
| G&H | 33.7 | 33.5 | 2 | 33.6 | 1.8 | 60.5 | |
| H&I | 33.5 | 38.4 | 2 | 36.0 | 3.0 | 107.9 | |
| I&J | 38.4 | 33.5 | 2 | 36.0 | 1.8 | 64.7 | |
| J&K | 33.5 | 33.5 | 2 | 33.5 | 3.4 | 113.9 | |
| K&L | 33.5 | 33.4 | 2 | 33.5 | 1.8 | 60.2 | |
| L&M | 33.4 | 33.4 | 2 | 33.4 | 3.0 | 100.2 | |
| M&N | 33.4 | 33.5 | 2 | 33.5 | 1.8 | 60.2 | |
| N&O | 33.5 | 33.4 | 2 | 33.5 | 3.4 | 113.7 | |
| O&P | 33.4 | 33.3 | 2 | 33.4 | 1.8 | 60.0 | |
| P&Q | 33.3 | 33.3 | 2 | 33.3 | 3.0 | 99.9 | |
| Q&R | 33.3 | 33.5 | 2 | 33.4 | 3.6 | 121.4 | |
| R&S | 33.5 | 33.5 | 2 | 33.5 | 2.6 | 88.4 | |
| S&T | 33.5 | 33.7 | 2 | 33.6 | 4.9 | 163.6 | |
| T&U | 33.7 | 33.8 | 2 | 33.8 | 6.7 | 226.0 | |
| U&V | 33.8 | 33.8 | 2 | 33.8 | 3.0 | 101.4 | |
| V&W | 33.8 | 33.8 | 2 | 33.8 | 1.8 | 60.8 | |
| W&X | 33.8 | 33.8 | 2 | 33.8 | 7.4 | 250.1 | |
| X&Y | 33.8 | 33.8 | 2 | 33.8 | 1.8 | 60.8 | |
| Y&Z | 33.8 | 33.9 | 2 | 33.9 | 3.0 | 101.6 | |
| Z&AA | 33.9 | 33.9 | 2 | 33.9 | 1.8 | 61.0 | |
| AA&BB | 33.9 | 33.9 | 2 | 33.9 | 7.4 | 250.9 | |
| BB&CC | 33.9 | 33.9 | 2 | 33.9 | 1.8 | 61.0 | |
| CC&DD | 33.9 | 33.9 | 2 | 33.9 | 3.4 | 115.3 | |
| DD&EE | 33.9 | 33.9 | 2 | 33.9 | 1.8 | 61.0 | |
| EE&FF | 33.9 | 33.9 | 2 | 33.9 | 7.8 | 264.4 | |
| FF&GG | 33.9 | 33.9 | 2 | 33.9 | 1.8 | 61.0 | |
| GG&HH | 33.9 | 33.9 | 2 | 33.9 | 3.8 | 128.8 | |
| HH&II | 33.9 | 34.0 | 2 | 34.0 | 10.0 | 339.5 | |
| II&JJ | 34.0 | 34.0 | 2 | 34.0 | 1.9 | 62.9 | |
| JJ&KK | 34.0 | 34.0 | 2 | 34.0 | 3.0 | 100.3 | |
| KK&LL | 34.0 | 34.0 | 2 | 34.0 | 1.8 | 61.2 | |
| LL&MM | 34.0 | 34.0 | 2 | 34.0 | 6.8 | 231.2 | |
| MM&NN | 34.0 | 34.0 | 2 | 34.0 | 1.8 | 61.2 | |
| NN&OO | 34.0 | 33.0 | 2 | 33.5 | 6.3 | 211.6 | |
| OO&PP | 33.0 | 32.9 | 2 | 33.0 | 6.2 | 204.3 | |
| OO&RR | 31.2 | 31.2 | 2 | 31.2 | 6.2 | 191.9 | |
| SS&TT | 32.6 | 32.5 | 2 | 32.6 | 1.9 | 61.8 | |
| TT&A | 32.5 | 32.5 | 2 | 32.5 | 6.3 | 205.2 | |
| | | | | | | | GRADE = TOTAL/Perimeter |
| | | | | Perimeter | 167.5 | 5617.8 | 33.5 |

**GRADE CALCULATION**
APARTMENT 2

| side | corner grade point | + corner grade point | / 2 | average grade per side | X length of side | TOTAL | |
|---|---|---|---|---|---|---|---|
| A&B | 32.7 | 32.8 | 2 | 32.8 | 14.2 | 465.1 | |
| B&C | 32.8 | 33.3 | 2 | 33.1 | 9.4 | 310.7 | |
| C&D | 33.3 | 33.5 | 2 | 33.4 | 5.0 | 167.0 | |
| D&E | 33.5 | 33.5 | 2 | 33.5 | 3.4 | 113.9 | |
| E&F | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| F&G | 33.5 | 33.5 | 2 | 33.5 | 3.4 | 113.9 | |
| G&H | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| H&I | 33.5 | 33.5 | 2 | 33.5 | 3.0 | 100.5 | |
| I&J | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| J&K | 33.5 | 33.5 | 2 | 33.5 | 10.0 | 335.0 | |
| K&L | 33.5 | 33.6 | 2 | 33.5 | 3.8 | 127.4 | |
| L&M | 33.6 | 33.6 | 2 | 33.6 | 1.8 | 60.5 | |
| M&N | 33.6 | 33.6 | 2 | 33.6 | 7.8 | 262.1 | |
| N&O | 33.6 | 33.6 | 2 | 33.6 | 1.8 | 60.5 | |
| O&P | 33.6 | 33.6 | 2 | 33.6 | 3.4 | 114.2 | |
| P&Q | 33.6 | 33.6 | 2 | 33.6 | 1.8 | 60.5 | |
| Q&R | 33.6 | 33.7 | 2 | 33.7 | 7.4 | 249.0 | |
| R&S | 33.7 | 33.7 | 2 | 33.7 | 1.8 | 60.7 | |
| S&T | 33.7 | 33.7 | 2 | 33.7 | 3.0 | 101.1 | |
| T&U | 33.7 | 33.7 | 2 | 33.7 | 1.8 | 60.7 | |
| U&V | 33.7 | 33.7 | 2 | 33.7 | 7.4 | 249.4 | |
| V&W | 33.7 | 33.7 | 2 | 33.7 | 1.8 | 60.7 | |
| W&X | 33.7 | 33.7 | 2 | 33.7 | 3.0 | 101.1 | |
| X&Y | 33.7 | 33.6 | 2 | 33.7 | 6.7 | 225.3 | |
| Y&Z | 33.6 | 33.6 | 2 | 33.6 | 4.9 | 163.6 | |
| Z&AA | 33.6 | 33.6 | 2 | 33.6 | 2.6 | 88.7 | |
| AA&BB | 33.6 | 33.5 | 2 | 33.6 | 3.6 | 122.0 | |
| BB&CC | 33.5 | 33.5 | 2 | 33.5 | 3.0 | 100.5 | |
| CC&DD | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| DD&EE | 33.5 | 33.6 | 2 | 33.6 | 3.4 | 114.1 | |
| EE&FF | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| FF&GG | 33.5 | 33.5 | 2 | 33.5 | 3.0 | 100.5 | |
| GG&HH | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| HH&II | 33.5 | 33.5 | 2 | 33.5 | 3.4 | 113.9 | |
| II&JJ | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| JJ&KK | 33.5 | 33.5 | 2 | 33.5 | 3.0 | 100.5 | |
| KK&LL | 33.5 | 33.5 | 2 | 33.5 | 1.8 | 60.3 | |
| LL&MM | 33.5 | 33.5 | 2 | 33.5 | 3.4 | 113.9 | |
| MM&NN | 33.5 | 33.5 | 2 | 33.5 | 2.8 | 93.8 | |
| NN&OO | 33.5 | 33.3 | 2 | 33.5 | 4.6 | 153.1 | |
| OO&A | 33.3 | 32.7 | 2 | 33.0 | 10.2 | 336.6 | |
| | | | | | | | GRADE = TOTAL/Perimeter |
| | | | | Perimeter | 164.0 | 5482.6 | 33.4 |

**GRADE CALCULATION**
TOWNHOUSE 1

| side | corner grade point | + corner grade point | / 2 | average grade per side | X length of side | TOTAL | |
|---|---|---|---|---|---|---|---|
| A&B | 33.6 | 33.5 | 2 | 33.6 | 4.6 | 153.2 | |
| B&C | 33.5 | 33.4 | 2 | 33.5 | 2.0 | 65.6 | |
| C&D | 33.4 | 33.0 | 2 | 33.2 | 3.6 | 119.5 | |
| D&E | 33.0 | 33.0 | 2 | 33.0 | 2.0 | 64.7 | |
| E&F | 33.0 | 32.9 | 2 | 33.0 | 9.2 | 303.1 | |
| F&G | 32.9 | 32.9 | 2 | 32.9 | 2.0 | 64.5 | |
| G&H | 32.9 | 32.9 | 2 | 32.9 | 3.6 | 118.4 | |
| H&I | 32.9 | 32.9 | 2 | 32.9 | 2.0 | 64.5 | |
| I&J | 32.9 | 32.8 | 2 | 32.9 | 9.2 | 302.2 | |
| J&K | 32.8 | 32.9 | 2 | 32.9 | 2.0 | 64.4 | |
| K&L | 32.9 | 33.0 | 2 | 33.0 | 3.6 | 118.6 | |
| L&M | 33.0 | 32.8 | 2 | 32.9 | 2.0 | 64.5 | |
| M&N | 32.8 | 32.7 | 2 | 32.8 | 4.6 | 150.7 | |
| N&O | 32.7 | 32.8 | 2 | 32.8 | 2.0 | 64.2 | |
| O&P | 32.8 | 32.9 | 2 | 32.9 | 1.8 | 59.1 | |
| P&Q | 32.9 | 32.7 | 2 | 32.8 | 2.0 | 64.3 | |
| Q&R | 32.7 | 32.9 | 2 | 32.8 | 3.7 | 121.4 | |
| R&S | 32.9 | 32.7 | 2 | 32.8 | 4.8 | 157.4 | |
| S&T | 32.7 | 32.7 | 2 | 32.7 | 0.9 | 29.4 | |
| T&U | 32.7 | 32.7 | 2 | 32.7 | 9.6 | 313.9 | |
| U&V | 32.7 | 32.7 | 2 | 32.7 | 4.6 | 150.4 | |
| V&W | 32.7 | 32.7 | 2 | 32.7 | 2.0 | 64.1 | |
| W&X | 32.7 | 32.8 | 2 | 32.8 | 1.8 | 59.0 | |
| X&Y | 32.8 | 32.8 | 2 | 32.8 | 2.0 | 64.3 | |
| Y&Z | 32.8 | 32.8 | 2 | 32.8 | 4.6 | 150.9 | |
| Z&AA | 32.8 | 32.8 | 2 | 32.8 | 2.0 | 64.3 | |
| AA&BB | 32.8 | 32.9 | 2 | 32.9 | 3.6 | 118.3 | |
| BB&CC | 32.9 | 32.9 | 2 | 32.9 | 2.0 | 64.5 | |
| CC&DD | 32.9 | 32.9 | 2 | 32.9 | 9.2 | 302.7 | |
| DD&EE | 32.9 | 32.9 | 2 | 32.9 | 2.0 | 64.5 | |
| EE&FF | 32.9 | 33.0 | 2 | 33.0 | 3.6 | 118.6 | |
| FF&GG | 33.0 | 33.0 | 2 | 33.0 | 2.0 | 64.7 | |
| GG&HH | 33.0 | 33.2 | 2 | 33.1 | 9.2 | 304.5 | |
| HH&II | 33.2 | 33.2 | 2 | 33.2 | 2.0 | 65.1 | |
| II&JJ | 33.2 | 33.3 | 2 | 33.3 | 3.6 | 119.7 | |
| JJ&KK | 33.3 | 33.3 | 2 | 33.3 | 2.0 | 65.3 | |
| KK&LL | 33.3 | 33.4 | 2 | 33.4 | 4.6 | 153.4 | |
| LL&A | 33.4 | 33.6 | 2 | 33.5 | 14.5 | 484.1 | |
| | | | | | | | GRADE = TOTAL/Perimeter |
| | | | | Perimeter | 149.8 | 4941.8 | 33.0 |

**GRADE CALCULATION**
TOWNHOUSE 2

| side | corner grade point | + corner grade point | / 2 | average grade per side | X length of side | TOTAL | |
|---|---|---|---|---|---|---|---|
| A&B | 32.7 | 32.6 | 2 | 32.7 | 14.4 | 471.6 | |
| B&C | 32.6 | 32.6 | 2 | 32.6 | 4.6 | 150.0 | |
| C&D | 32.6 | 32.6 | 2 | 32.6 | 2.0 | 63.9 | |
| D&E | 32.6 | 32.6 | 2 | 32.6 | 3.6 | 117.4 | |
| E&F | 32.6 | 32.6 | 2 | 32.6 | 2.0 | 63.9 | |
| F&G | 32.6 | 32.6 | 2 | 32.6 | 9.2 | 299.9 | |
| G&H | 32.6 | 32.6 | 2 | 32.6 | 2.0 | 63.9 | |
| H&I | 32.6 | 32.6 | 2 | 32.6 | 3.6 | 117.4 | |
| I&J | 32.6 | 32.6 | 2 | 32.6 | 2.0 | 63.9 | |
| J&K | 32.6 | 32.5 | 2 | 32.6 | 9.2 | 299.5 | |
| K&L | 32.5 | 32.5 | 2 | 32.5 | 2.0 | 63.7 | |
| L&M | 32.5 | 32.5 | 2 | 32.5 | 3.6 | 117.0 | |
| M&N | 32.5 | 32.5 | 2 | 32.5 | 2.0 | 63.7 | |
| N&O | 32.5 | 32.5 | 2 | 32.5 | 4.6 | 149.5 | |
| O&P | 32.5 | 32.5 | 2 | 32.5 | 7.2 | 234.0 | |
| P&Q | 32.5 | 32.5 | 2 | 32.5 | 2.0 | 63.7 | |
| Q&R | 32.5 | 32.5 | 2 | 32.5 | 1.8 | 58.5 | |
| R&S | 32.5 | 32.5 | 2 | 32.5 | 2.0 | 63.7 | |
| S&T | 32.5 | 32.5 | 2 | 32.5 | 10.0 | 325.0 | |
| T&U | 32.5 | 32.5 | 2 | 32.5 | 2.0 | 63.7 | |
| U&V | 32.5 | 32.6 | 2 | 32.6 | 3.6 | 117.2 | |
| V&W | 32.6 | 32.6 | 2 | 32.6 | 2.0 | 63.9 | |
| W&X | 32.6 | 32.6 | 2 | 32.6 | 4.6 | 150.0 | |
| X&Y | 32.6 | 32.6 | 2 | 32.6 | 7.2 | 234.7 | |
| Y&Z | 32.6 | 32.4 | 2 | 32.5 | 12.8 | 416.0 | |
| Z&AA | 32.4 | 32.5 | 2 | 32.5 | 3.8 | 123.3 | |
| AA&BB | 32.5 | 32.5 | 2 | 32.5 | 1.4 | 45.5 | |
| BB&CC | 32.5 | 32.5 | 2 | 32.5 | 3.6 | 117.0 | |
| CC&DD | 32.5 | 32.5 | 2 | 32.5 | 1.4 | 45.5 | |
| DD&EE | 32.5 | 32.8 | 2 | 32.7 | 9.2 | 300.4 | |
| EE&FF | 32.8 | 32.8 | 2 | 32.8 | 1.4 | 45.9 | |
| FF&GG | 32.8 | 32.8 | 2 | 32.8 | 3.6 | 118.1 | |
| GG&HH | 32.8 | 32.8 | 2 | 32.8 | 1.4 | 45.9 | |
| HH&II | 32.8 | 32.8 | 2 | 32.8 | 4.6 | 150.9 | |
| II&JJ | 32.8 | 32.9 | 2 | 32.9 | 1.4 | 46.0 | |
| JJ&KK | 32.9 | 32.9 | 2 | 32.9 | 1.8 | 59.2 | |
| KK&LL | 32.9 | 32.8 | 2 | 32.9 | 1.4 | 46.0 | |
| LL&A | 32.8 | 32.7 | 2 | 32.8 | 4.6 | 150.7 | |
| | | | | | | | GRADE = TOTAL/Perimeter |
| | | | | Perimeter | 159.2 | 5189.9 | 32.6 |

**GRADE CALCULATION**
TOWNHOUSE 3

| side | corner grade point | + corner grade point | / 2 | average grade per side | X length of side | TOTAL | |
|---|---|---|---|---|---|---|---|
| A&B | 32.6 | 32.6 | 2 | 32.6 | 1.8 | 58.7 | |
| B&C | 32.6 | 32.6 | 2 | 32.6 | 9.2 | 299.9 | |
| C&D | 32.6 | 32.6 | 2 | 32.6 | 1.8 | 58.7 | |
| D&E | 32.6 | 32.7 | 2 | 32.7 | 3.6 | 117.5 | |
| E&F | 32.7 | 32.8 | 2 | 32.8 | 1.8 | 59.0 | |
| F&G | 32.8 | 33.0 | 2 | 32.9 | 9.2 | 302.7 | |
| G&H | 33.0 | 33.0 | 2 | 33.0 | 1.8 | 59.4 | |
| H&I | 33.0 | 33.0 | 2 | 33.0 | 1.8 | 59.4 | |
| I&J | 33.0 | 33.0 | 2 | 33.0 | 9.3 | 305.7 | |
| J&K | 33.0 | 33.0 | 2 | 33.0 | 2.0 | 65.2 | |
| K&L | 33.0 | 33.0 | 2 | 33.0 | 1.6 | 52.3 | |
| L&M | 33.0 | 32.9 | 2 | 33.0 | 8.9 | 291.6 | |
| M&N | 32.9 | 32.9 | 2 | 32.9 | 1.6 | 52.1 | |
| N&O | 32.9 | 32.9 | 2 | 32.9 | 4.0 | 130.0 | |
| O&P | 32.9 | 32.9 | 2 | 32.9 | 1.6 | 52.1 | |
| P&Q | 32.9 | 32.8 | 2 | 32.9 | 8.9 | 290.7 | |
| Q&R | 32.8 | 32.8 | 2 | 32.8 | 1.6 | 52.0 | |
| R&S | 32.8 | 32.8 | 2 | 32.8 | 2.0 | 64.8 | |
| S&T | 32.8 | 32.6 | 2 | 32.7 | 9.3 | 303.6 | |
| T&A | 32.6 | 32.6 | 2 | 32.6 | 1.8 | 58.7 | |
| | | | | | | | GRADE = TOTAL/Perimeter |
| | | | | Perimeter | 83.3 | 2734.1 | 32.8 |

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP |
| checked by | RAW |
| scale | AS SHOWN |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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T 1•250•658•3367

NANAIMO OFFICE
102-5195 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810


project name
Caledonia
Victoria BC

drawing title
Average Grade Calculations



drawing no. A202
revision no. 4


GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

UNIT COMPOSITION

APARTMENTS 1&2

| UNIT TYPE | L1 | L2 | L3 | L4 | L5 | TOTAL |
|---|---|---|---|---|---|---|
| STUDIO | 4 | 4 | 4 | 2 | - | 14 |
| 1 BED | 13 | 12 | 12 | 7 | 1 | 45 |
| 2 BED | 1 | 1 | 2 | 8 | 8 | 20 |
| 3 BED | 3 | 3 | 3 | 3 | - | 12 |
| 4 BED | - | 2 | 3 | 1 | - | 6 |
| TOTAL | 21 | 22 | 24 | 21 | 9 | 97 |

TOWNHOUSES 1-3

| UNIT TYPE | TOTAL |
|---|---|
| STUDIO | - |
| 1 BED | - |
| 2 BED | 57 |
| 3 BED | 2 |
| 4 BED | 2 |
| TOTAL | 61 |

OVERALL DEVELOPMENT

| UNIT TYPE | TOTAL |
|---|---|
| STUDIO | 14 |
| 1 BED | 45 |
| 2 BED | 77 |
| 3 BED | 14 |
| 4 BED | 8 |
| TOTAL | 158 |

ACCESSIBLE UNITS

| UNIT TYPE | TOTAL |
|---|---|
| STUDIO | - |
| 1 BED | 7 |
| 2 BED | 7 |
| 3 BED | 1 |
| 4 BED | - |
| TOTAL | 15 (9%) |

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| plot date | SEPTEMBER 2019 | drawing file 1907 A200 Plans.vwx |
| drawn by | FWP | checked by RAW |
| scale | AS SHOWN | project number 1907 |

NOTE: All dimensions are shown in millimeters.

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T 1-250-658-3367
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102-5190 Dublin Way
Nanaimo BC V9T 2X8
T 1-250-585-5810

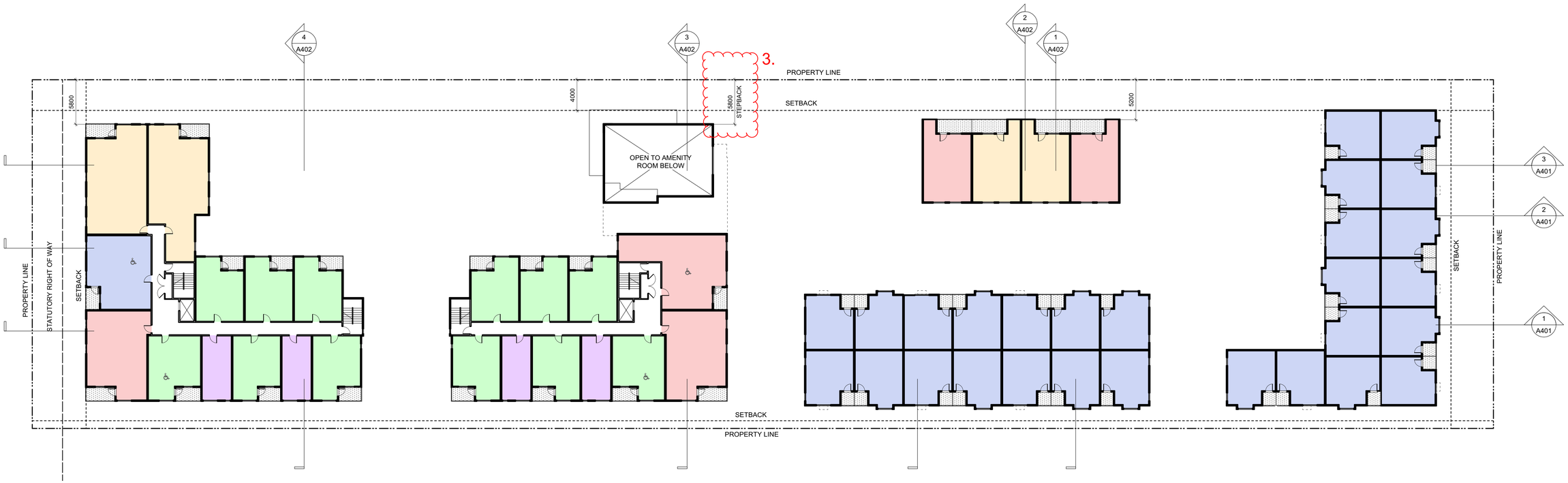
project name
Caledonia
Victoria BC

drawing title
L1 Plan



drawing no. A203

revision no. 4




1 / A204 L2 Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Victoria BC V8V 3K3
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NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2X8
T 1-250-585-5810

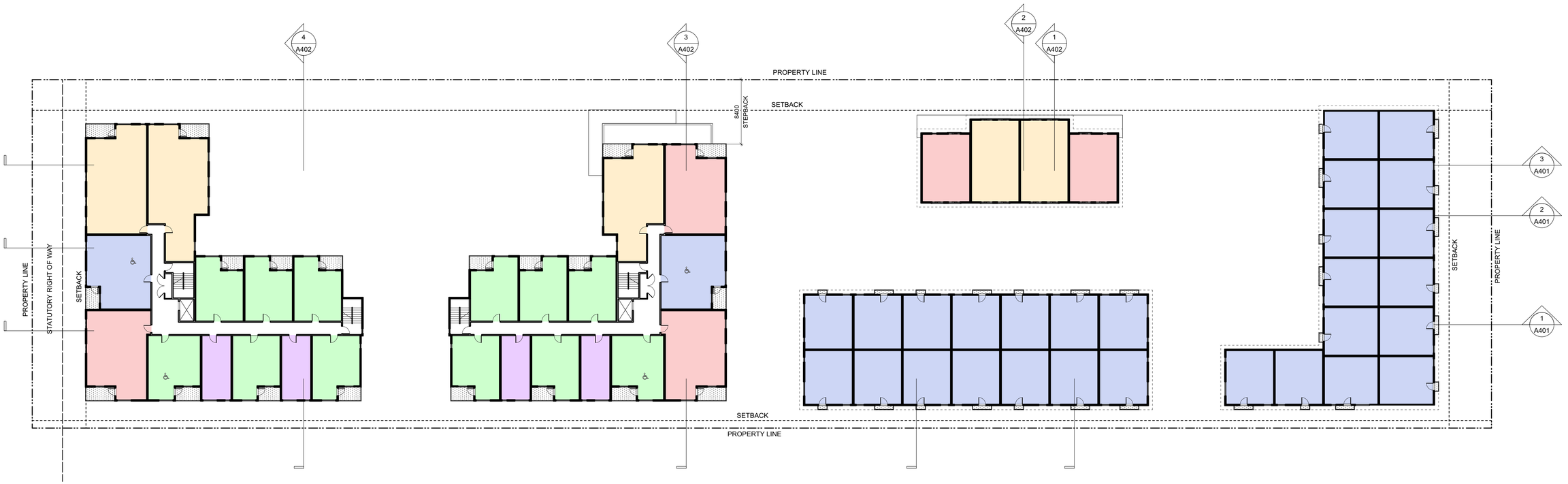
project name
Caledonia
Victoria BC

drawing title
L2 Plan



drawing no. A204

revision no. 4




1 / A205 L3 Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Nanaimo BC V9T 2X8
T 1-250-585-5810

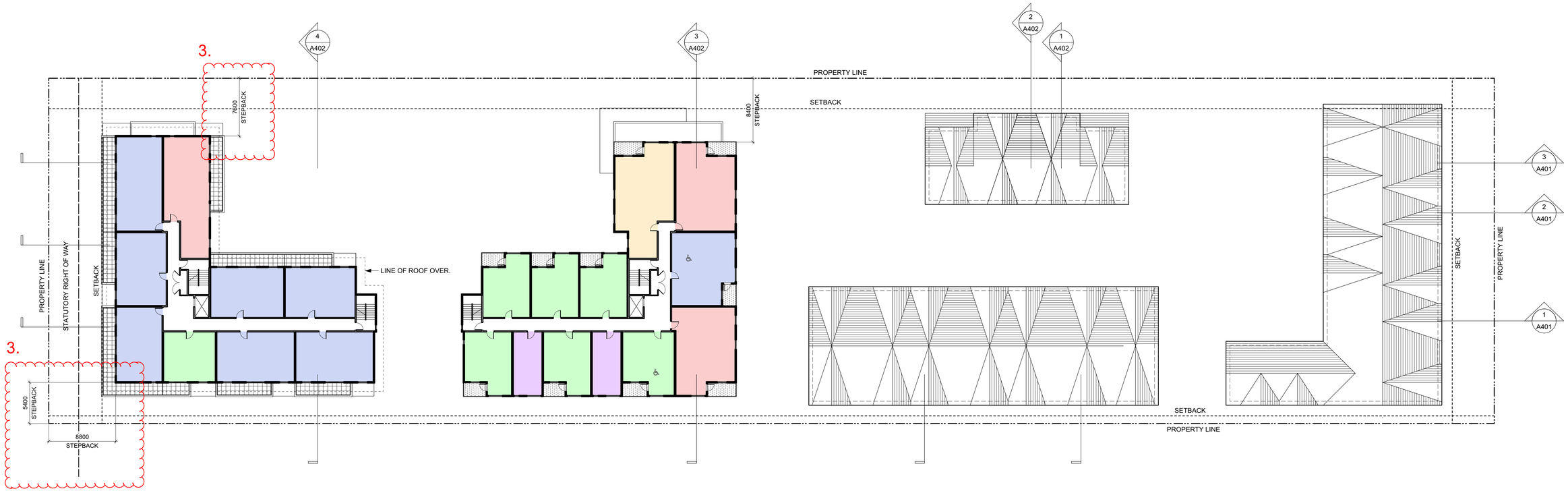
project name
Caledonia
Victoria BC

drawing title
L3 Plan



drawing no. A205

revision no. 4




1 / A206 L4 Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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NANAIMO OFFICE
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Nanaimo BC V9T 2K8
T 1-250-585-5810

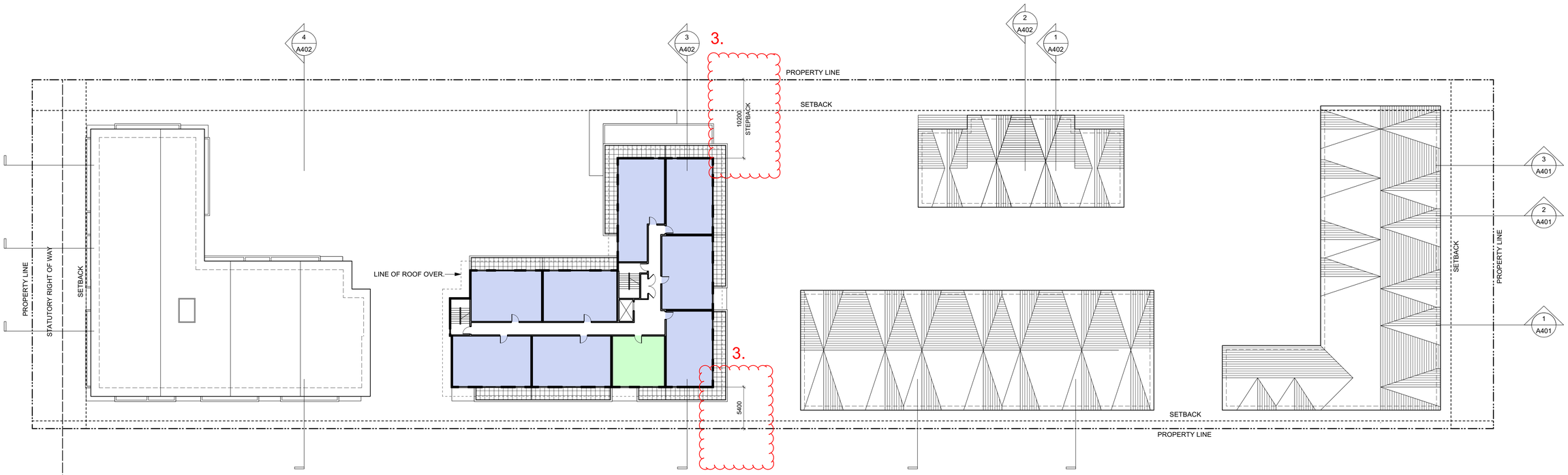
project name
Caledonia
Victoria BC

drawing title
L4 Plan



drawing no. A206

revision no. 4




1 / A207 L5 Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| plot date | SEPTEMBER 2019 | drawing file 1907 A200 Plans.vwx |
| drawn by | FWP | checked by RAW |
| scale | AS SHOWN | project number 1907 |

NOTE: All dimensions are shown in millimeters.

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NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2X8
T 1-250-585-5810

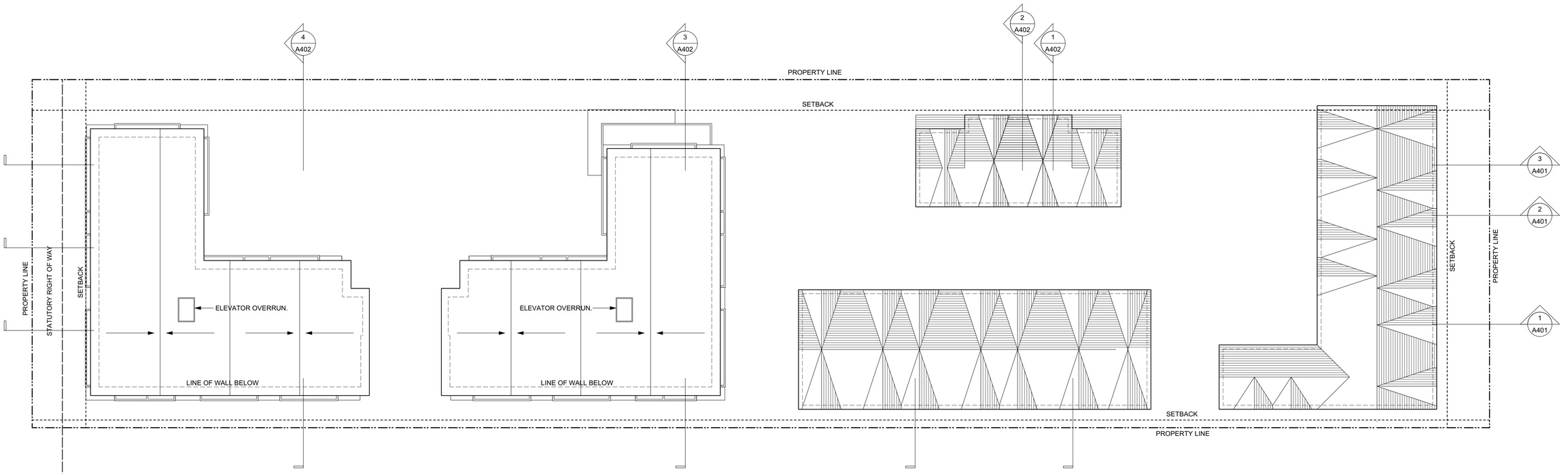
project name
Caledonia
Victoria BC

drawing title
L5 Plan



drawing no. A207

revision no. 4




1 / A208 Roof Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date: SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx | |
| drawn by: FWP | checked by: RAW | |
| scale: AS SHOWN | project number: 1907 | |

NOTE: All dimensions are shown in millimeters.

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NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2X8
T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
Roof Plan



drawing no. A208

revision no. 4


1 / A301 Apartment 1 - North
Scale: 1:100


2 / A301 Apartment 1 - East
Scale: 1:100


3 / A301 Apartment 1 - South
Scale: 1:100


4 / A301 Apartment 1 - West
Scale: 1:100

0 2500 5000mm
1 : 100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

| Rev. | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| print date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters

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Nanaimo BC V9T 2K5
T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
Elevations - Apartment 1



drawing no. A301
revision no. 4


1 / A302 Apartment 2 - North
Scale: 1:100


2 / A302 Apartment 2 - South
Scale: 1:100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

0 2500 5000mm
1 : 100

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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102-6160 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

project name
Caledonia
Victoria BC

drawing title
Elevations - Apartment 2



drawing no. A302

revision no. 4


1 / A303 Apartment 2 - East
Scale: 1:100


2 / A303 Apartment 2 - West
Scale: 1:100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

0 2500 5000mm
1 : 100

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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NANAIMO OFFICE
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Nanaimo BC V9T 2K8
T 1•250•585•5810

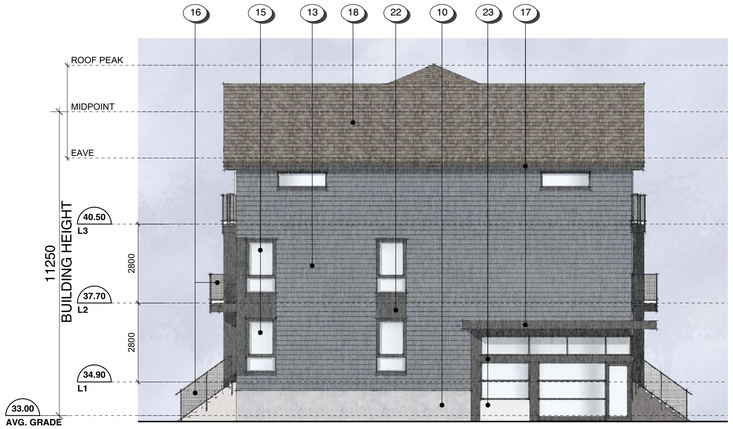
project name
Caledonia
Victoria BC

drawing title
Elevations - Apartment 2



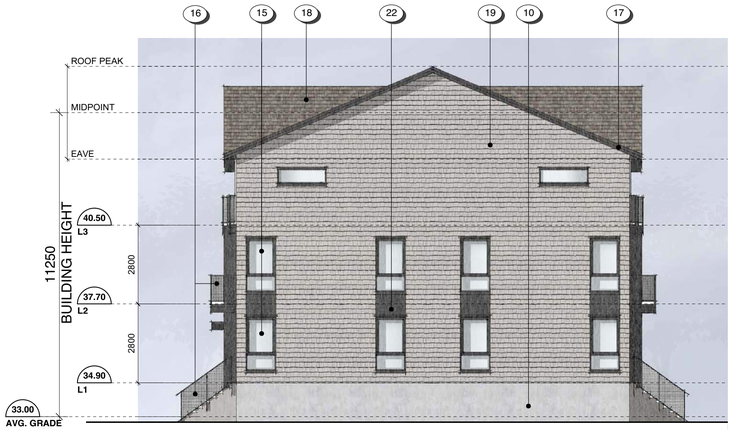
drawing no. A303

revision no. 4




1 / A304 Townhouse 1 - North
Scale: 1:100


2 / A304 Townhouse 1 - East
Scale: 1:100




3 / A304 Townhouse 1 - South
Scale: 1:100


4 / A304 Townhouse 1 - West
Scale: 1:100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

0 2500 5000mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| print date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

project name
Caledonia
Victoria BC

drawing title
Elevations - Townhouse 1



drawing no. A304
revision no. 4


1 A305 Townhouse 2 - North
Scale: 1:100


2 A305 Townhouse 2 - East
Scale: 1:100


3 A305 Townhouse 2 - South
Scale: 1:100


4 A305 Townhouse 2 - West
Scale: 1:100

0 2500 5000mm
1 : 100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

| Rev | Date | Description |
|---|---|---|
| | | |
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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| print date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Victoria, BC V8V 3K3
T 1-250-658-3367
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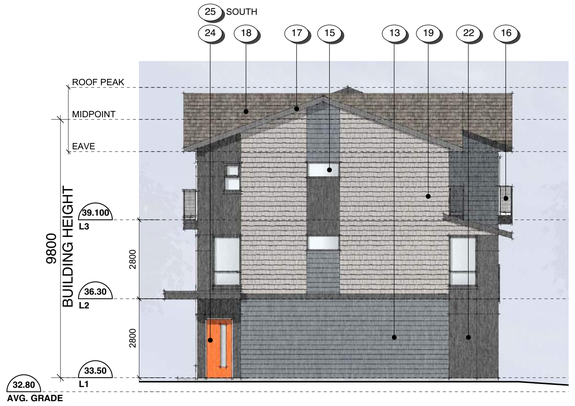
102-6190 Dublin Way
Nanaimo, BC V9T 2K8
T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
Elevations - Townhouse 2



drawing no. A305
revision no. 4




1 / A306 Townhouse 3 - North (South sim.)
Scale: 1:100


2 / A306 Townhouse 3 - East
Scale: 1:100




3 / A306 Townhouse 3 - West
Scale: 1:100

## COLOUR & MATERIALS LEGEND

1. BRICK VENEER - Red - *Apartment 1 Only*
2. FIBRE CEMENT PANEL - Teal
3. VINYL WINDOWS & DOORS - Teal
4. PREFINISHED ALUMINUM GUARD, FRAME & PICKETS - Teal
5. METAL FLASHING - Teal
6. ACCENT PAINT COLOUR - Rust
7. FIBRE CEMENT LAP SIDING - Soft Brown
8. FIBRE CEMENT PANEL - Warm Grey - *Apartment 2 Only*
9. SOFFIT - Warm Grey - *Apartment 2 Only*
10. PAINTED CONCRETE - Warm Grey
11. FIBRE CEMENT PANEL - Warm White
12. SOFFIT - Warm White
13. FIBRE CEMENT LAP SIDING - Medium Blue-Grey
14. FIBRE CEMENT LAP SIDING - White
15. VINYL WINDOWS & DOORS - Dark Grey
16. PREFINISHED ALUMINUM GUARD & FRAME - Dark Grey
17. METAL FLASHING - Dark Grey
18. ASPHALT SHINGLES - Warm Grey
19. FIBRE CEMENT SHINGLES - Warm Grey
20. VINYL WINDOWS & DOORS - White
21. METAL DOWNSPOUT & FLASHING - Light Warm Grey
22. FIBRE CEMENT PANEL - Dark Grey
23. FIBRE CEMENT PANEL - Light Grey
24. ACCENT PAINT COLOUR - Bright Orange
25. ACCENT PAINT COLOUR - Bright Blue
26. ACCENT PAINT COLOUR - Chartreuse

0 2500 5000mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A300 Elevations.vwx |
| drawn by | NLC | checked by | RAW |
| scale | 1:100 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Nanaimo BC V9T 2K8
T 1•250•585•5810

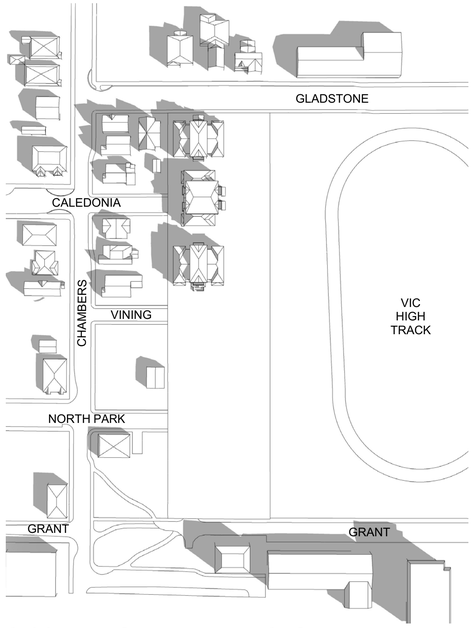
project name
Caledonia
Victoria BC

drawing title
Elevations - Townhouse 3



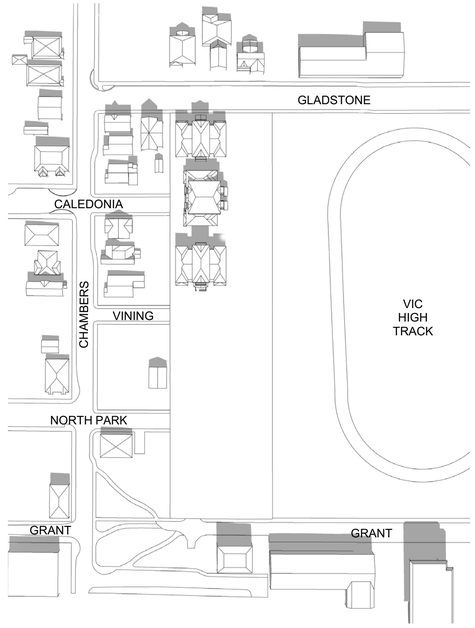
drawing no. A306
revision no. 4

## EXISTING



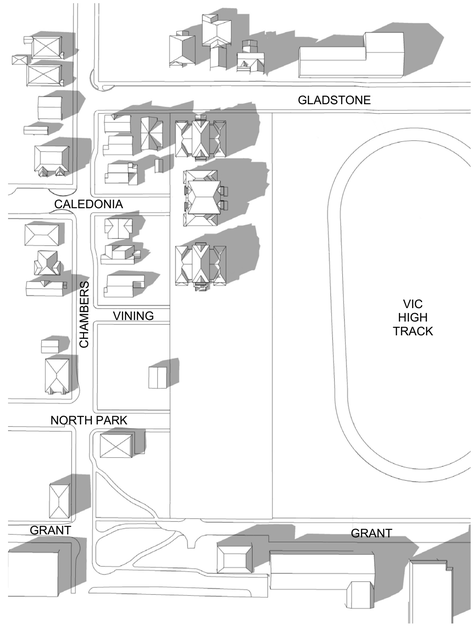

**9:00AM - SEPTEMBER 21ST**

## EXISTING



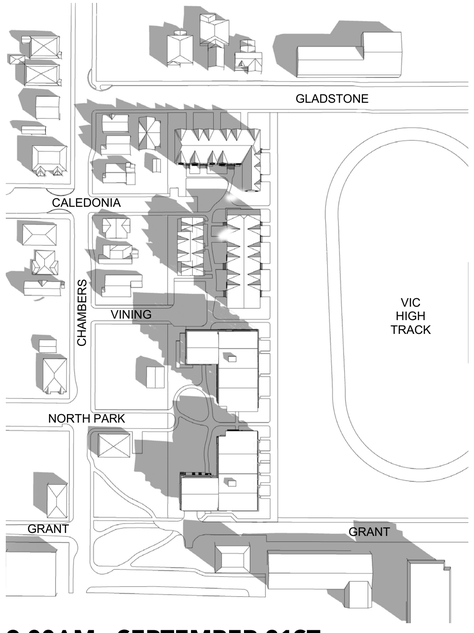

**12:00PM - SEPTEMBER 21ST**

## EXISTING



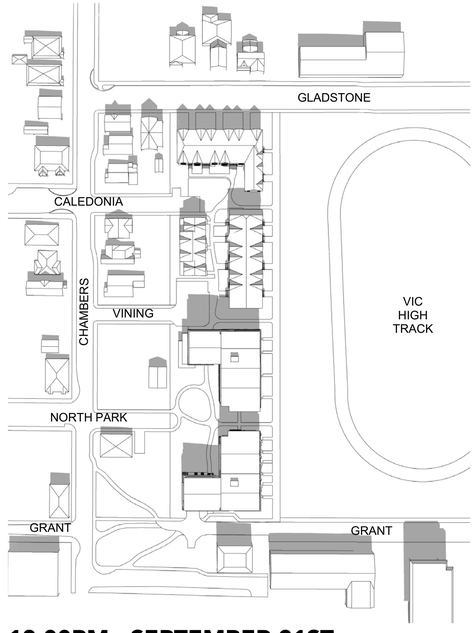

**4:00PM - SEPTEMBER 21ST**

## PROPOSED



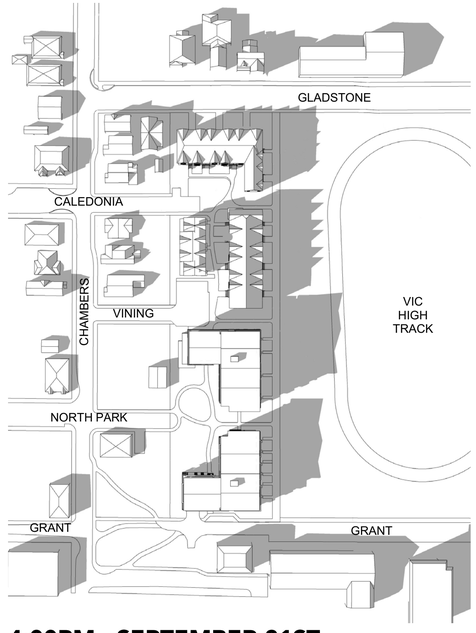

**9:00AM - SEPTEMBER 21ST**

## PROPOSED




**12:00PM - SEPTEMBER 21ST**

## PROPOSED




**4:00PM - SEPTEMBER 21ST**

| Rev. | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawing file | 1907 A307 Shadow Studies.vwx |
| drawn by | NLC |
| checked by | RAW |
| scale | n.t.s. |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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& REZONING

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977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

project name
Caledonia
Victoria BC

drawing title
Shadow Studies



drawing no. A307

revision no. 4

**BEFORE - LOOKING WEST - FROM VIC HIGH**

**AFTER - LOOKING WEST - FROM VIC HIGH**

4.

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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date: SEPTEMBER 2019 | | drawing file: 1907 A307 Shadow Studies.vwx |
| drawn by: NLC | | checked by: RAW |
| scale: n.t.s. | | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

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dHKarchitects

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977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810


project name: Caledonia
Victoria BC

drawing title: View Analysis

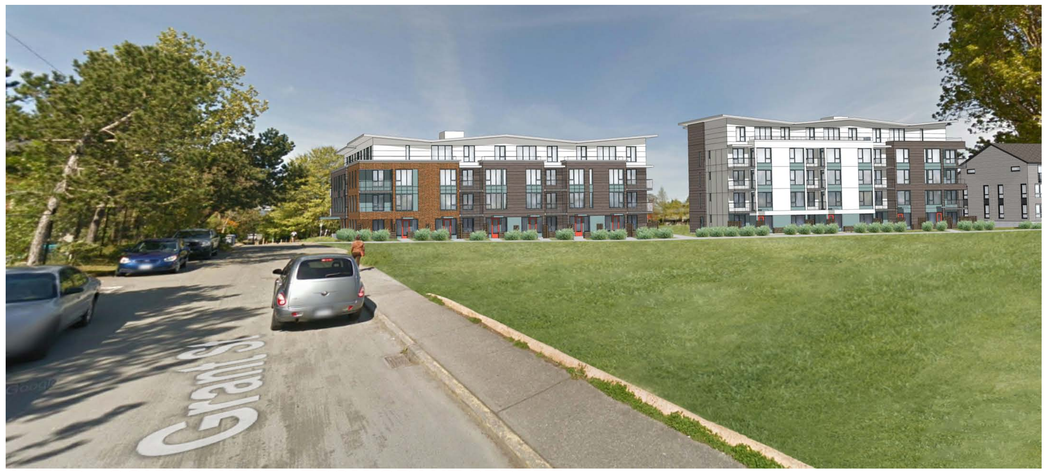


drawing no.: A308

revision no.: 4


**BEFORE LOOKING WEST - FROM GRANT STREET**


**BEFORE - LOOKING WEST - FROM GLADSTONE AVENUE**




**AFTER LOOKING WEST - FROM GRANT STREET**


**AFTER LOOKING WEST - FROM GLADSTONE AVENUE**

4.

| | | |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A307 Shadow Studies.vwx |
| drawn by | NLC | checked by | RAW |
| scale | n.t.s. | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

**ISSUED FOR DP & REZONING**

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977 Fort Street
Victoria, BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo, BC V9T 2K6
T 1-250-585-5810

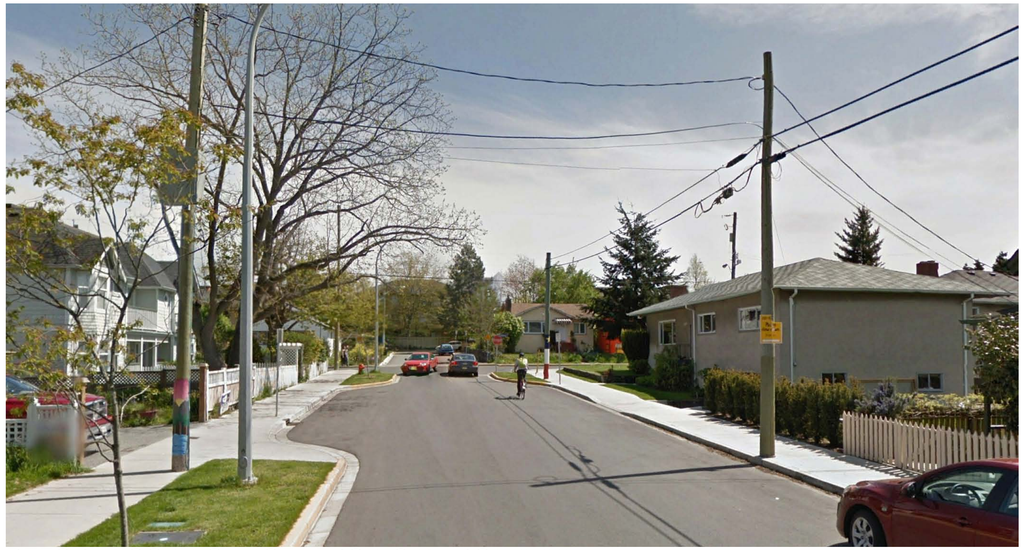
project name
Caledonia
Victoria BC

drawing title
View Analysis



drawing no. A309

revision no. 4



BEFORE LOOKING EAST - FROM CALEDONIA AVE.

BEFORE LOOKING EAST - FROM NORTH PARK ST.

AFTER LOOKING EAST - FROM CALEDONIA AVE.

AFTER LOOKING EAST - FROM NORTH PARK ST.

| Rev | Date | Description |
|---|---|---|
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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

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|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A307 Shadow Studies.vwx |
| drawn by | NLC | checked by | RAW |
| scale | n.t.s. | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

ISSUED FOR DP
& REZONING


dHKarchitects

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977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810


project name
Caledonia
Victoria BC

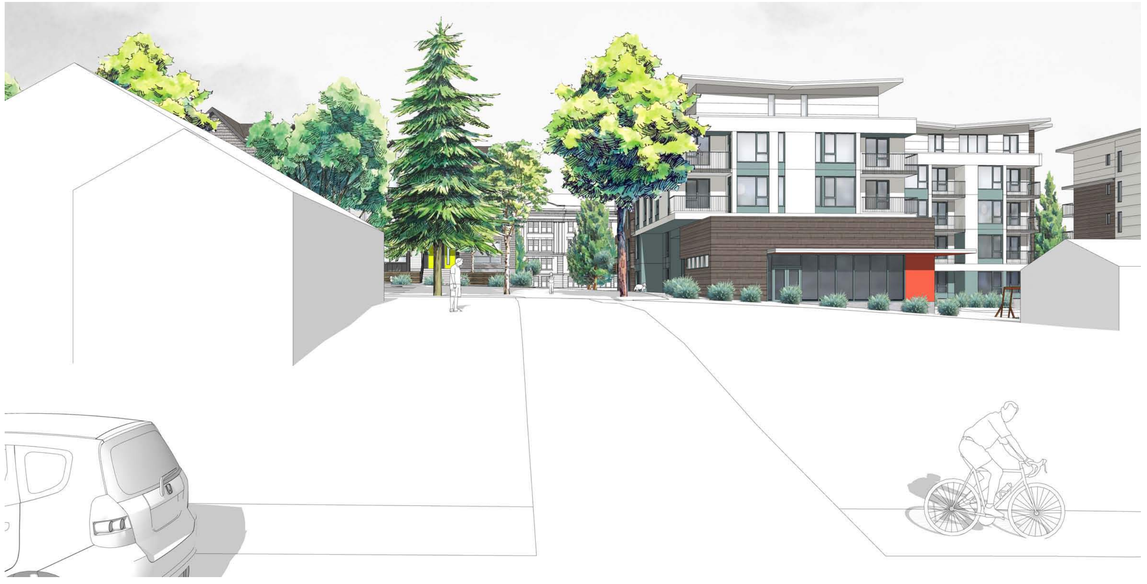
drawing title
View Analysis



| drawing no. | revision no. |
|---|---|
| A310 | 4 |

**LOOKING SOUTH - GLADSTONE AVENUE**

**LOOKING EAST - NORTH PARK STREET**



**LOOKING EAST - VINING STREET**

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date: SEPTEMBER 2019 | | drawing file: 1907 A307 Shadow Studies.vwx |
| drawn by: NLC | | checked by: RAW |
| scale: n.t.s. | | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

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977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810


project name
Caledonia
Victoria BC

drawing title
Perspective Studies



drawing no. A311

revision no. 4

TOWNHOUSES - AT GLADSTONE AVENUE

APARTMENT - AT GRANT STREET

INTERIOR COURTYARD - LOOKING NORTH

PLAYGROUND & AMENITY AREA - LOOKING NORTH

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |

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|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A307 Shadow Studies.vwx |
| drawn by | NLC | checked by | RAW |
| scale | n.t.s. | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

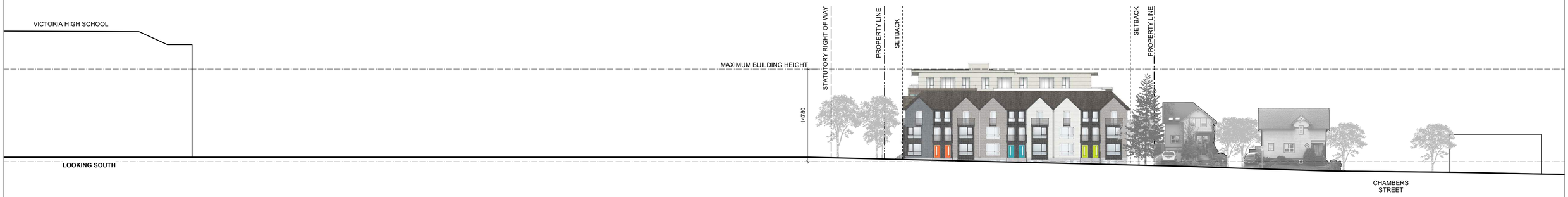
project name
Caledonia
Victoria BC

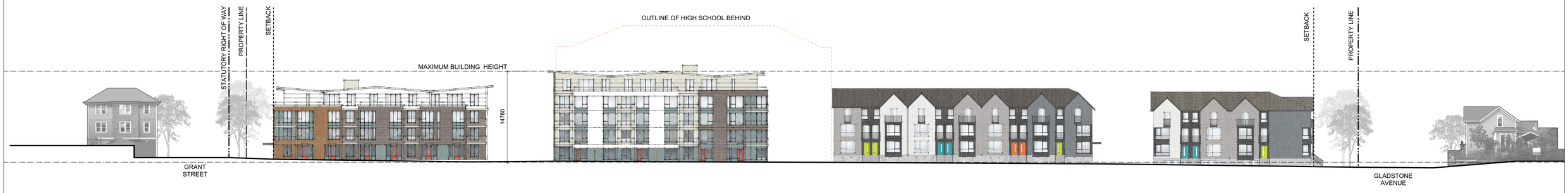
drawing title
Perspective Studies



drawing no. A312

revision no. 4




1 / A313 Context Elevations
Scale: 1: 300

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |
| plot date: SEPTEMBER 2019 | | drawing file: 1907 A308 Streetscape Elevations.vwx |
| drawn by: FWP/NLC | | checked by: RAW |
| scale: 1:300 | | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

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977 Fort Street
Victoria BC V8V 3K3
T 1+250+656+3367
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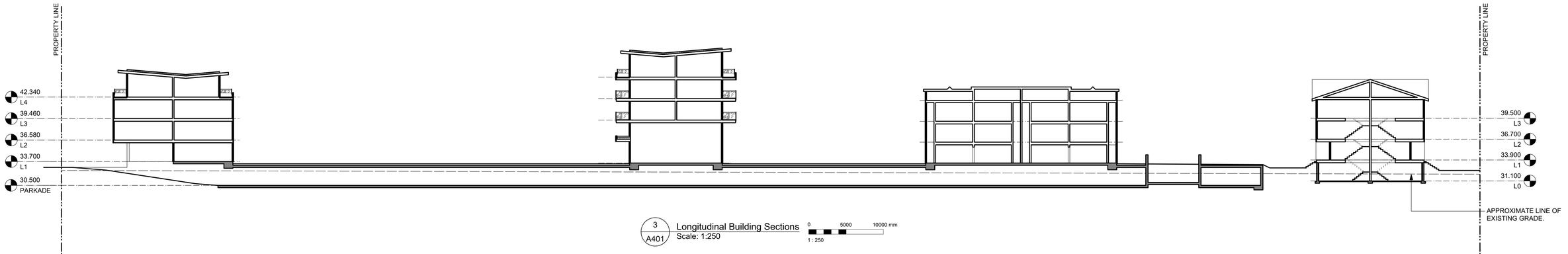
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1+250+585+5810

project name
Caledonia
Victoria BC

drawing title
Streetscape Elevations

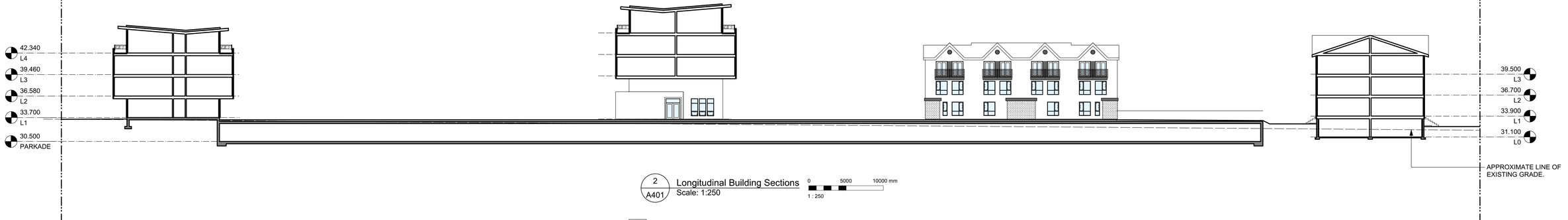


drawing no. A313
revision no. 4



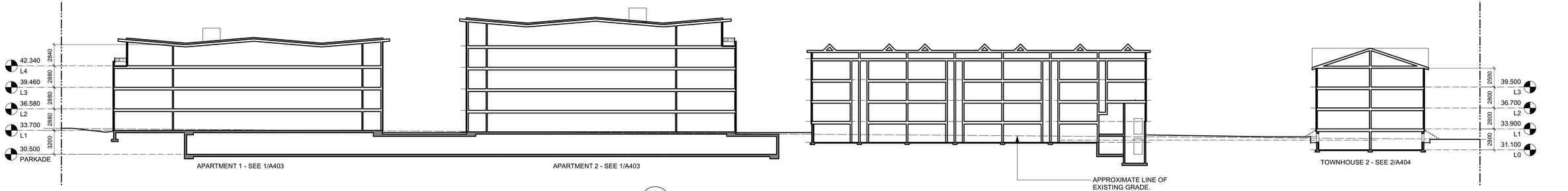

3 / A401 Longitudinal Building Sections
Scale: 1:250

0 5000 10000 mm
1 : 250




2 / A401 Longitudinal Building Sections
Scale: 1:250

0 5000 10000 mm
1 : 250




1 / A401 Longitudinal Building Sections
Scale: 1:250

0 5000 10000 mm
1 : 250

| Rev | Date | Description |
|---|---|---|
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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 Current Elevations & Sections.vwx |
| drawn by | FWP | checked by | RAW |
| scale | 1:250 | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Victoria BC V8V 3K3
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NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

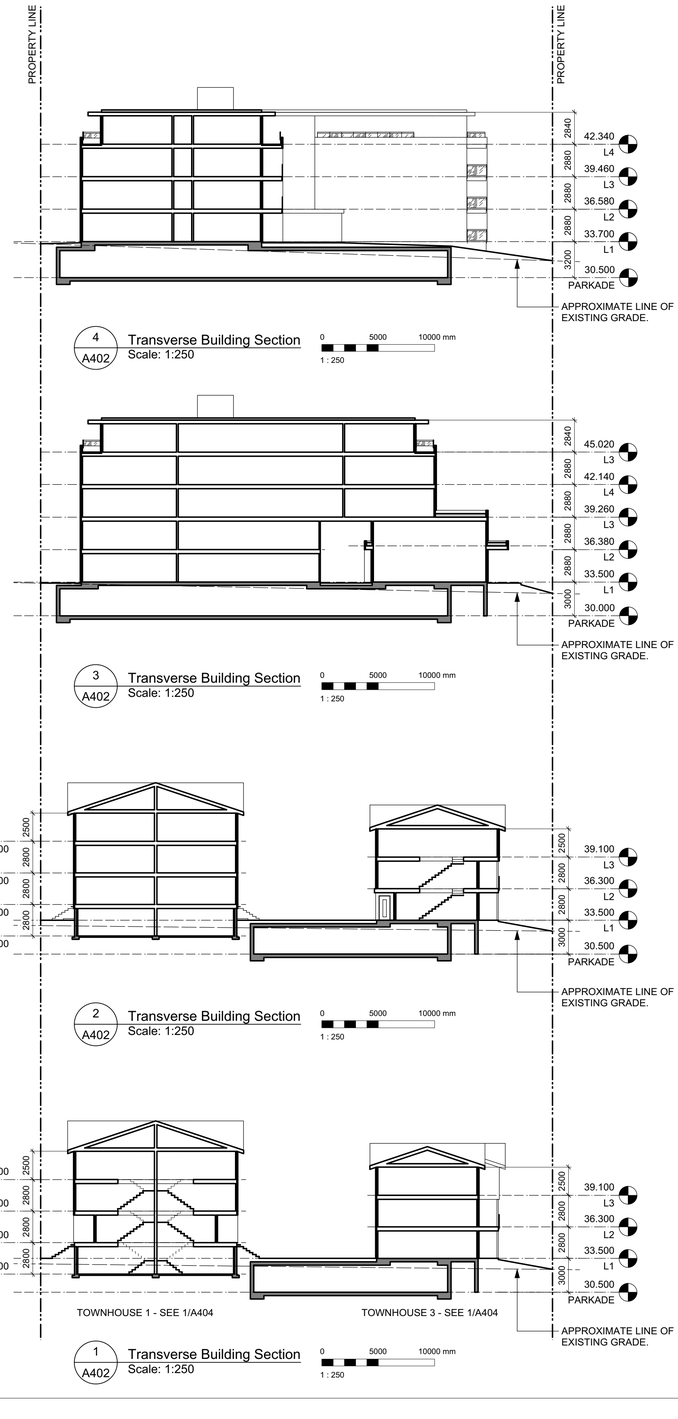
project name
Caledonia
Victoria BC

drawing title
Building Sections



drawing no. A401

revision no. 4

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file 1907 Current Elevations & Sections.vwx |
| drawn by | FWP | checked by RAW |
| scale | 1:250 | project number 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

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Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2X8
T 1-250-585-5810

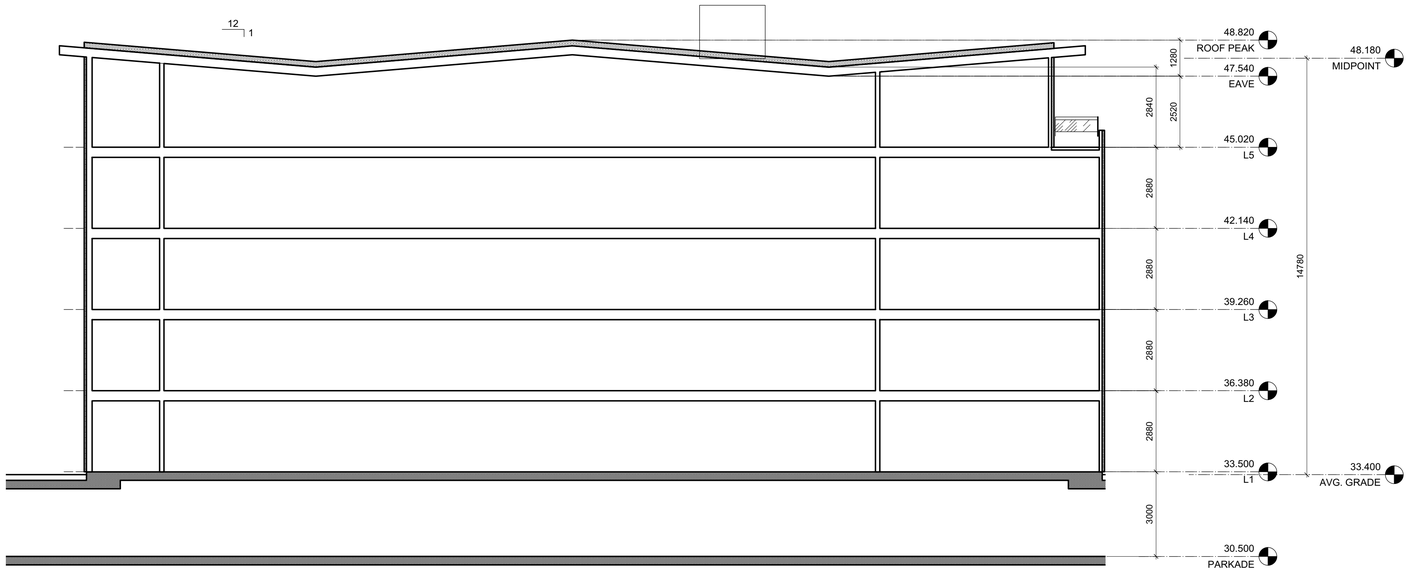
project name
Caledonia
Victoria BC

drawing title
Building Sections



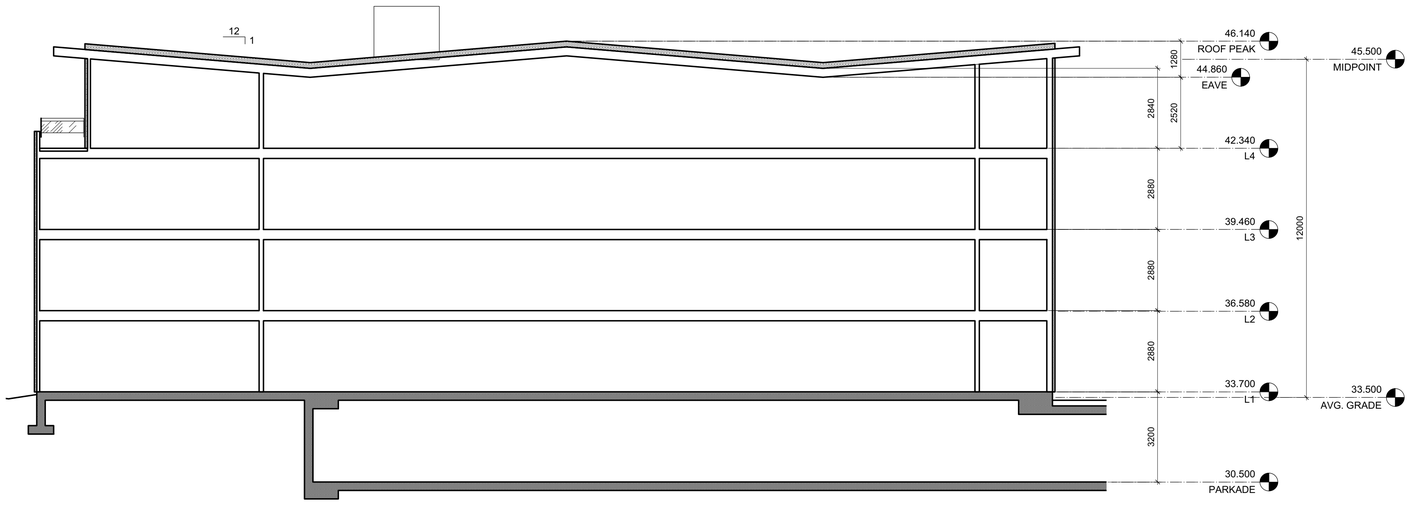
drawing no. A402

revision no. 4




2 / A403 Apartment 2 Building Section
Scale: 1:100

0 2000 4000 mm
1 : 100




1 / A403 Apartment 1 Building Section
Scale: 1:100

0 2000 4000 mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawing file | 1907 Current Elevations & Sections.vwx |
| drawn by | FWP |
| checked by | RAW |
| scale | 1:100 |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1+250+658+3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1+250+585+5810

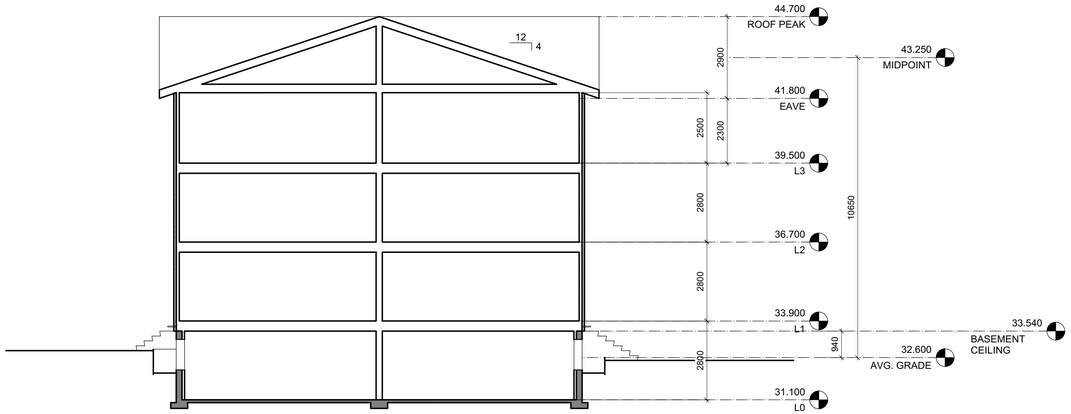
project name
Caledonia
Victoria BC

drawing title
Building Sections



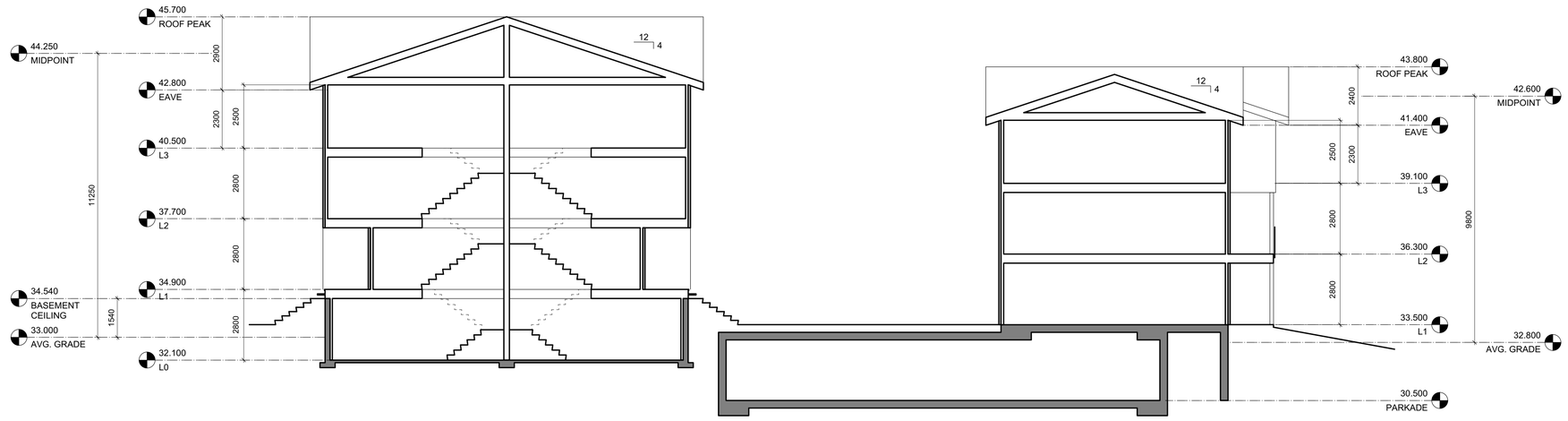
drawing no. A403

revision no. 4




2 / A404 Townshouse 2 Building Section
Scale: 1:100

0 2000 4000 mm
1 : 100




1 / A404 Townhouses 1 & 3 Building Section
Scale: 1:100

0 2000 4000 mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | |
|---|---|
| plot date | SEPTEMBER 2019 |
| drawing file | 1907 Current Elevations & Sections.vwx |
| drawn by | FWP |
| checked by | RAW |
| scale | 1:100 |
| project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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Nanaimo BC V9T 2K8
T 1•250•585•5810

project name
Caledonia
Victoria BC

drawing title
Building Sections



drawing no. A404

revision no. 4


2 / A601 L1 Plan - Apartment 1
Scale: 1:100

0 2000 4000 mm
1 : 100


1 / A601 L1 Plan - Apartment 2
Scale: 1:100

0 2000 4000 mm
1 : 100

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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx |
| drawn by | FWP | checked by: RAW |
| scale | AS SHOWN | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

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T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
L1 Plan - Apartments



drawing no. A601

revision no. 4


2 / A602 L2 Plan - Apartment 1
Scale: 1:100

0 2000 4000 mm
1 : 100


1 / A602 L2 Plan - Apartment 2
Scale: 1:100

0 2000 4000 mm
1 : 100

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| plot date | SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx |
| drawn by: | FWP | checked by: RAW |
| scale: | AS SHOWN | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

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T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
L2 Plan - Apartments



drawing no. A602

revision no. 4


2 A603 L3 Plan - Apartment 1
Scale: 1:100

0 2000 4000 mm
1 : 100


1 A603 L3 Plan - Apartment 2
Scale: 1:100

0 2000 4000 mm
1 : 100

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev | Date | Description |
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| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

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|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
L3 Plan - Apartments



drawing no. A603

revision no. 4


2 / A604 L4 Plan - Apartment 1
Scale: 1:100

0 2000 4000 mm
1 : 100


1 / A604 L4 Plan - Apartment 2
Scale: 1:100

0 2000 4000 mm
1 : 100

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev. | Date | Description |
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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

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|---|---|---|---|
| print date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

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T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
L4 Plan - Apartments



drawing no. A604
revision no. 4


1 / A605 L5 Plan - Apartment 2
Scale: 1:100

0 2000 4000 mm
1 : 100

N

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE

| Rev. | Date | Description |
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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

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|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

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project name
Caledonia
Victoria BC

drawing title
L5 Plan - Apartments

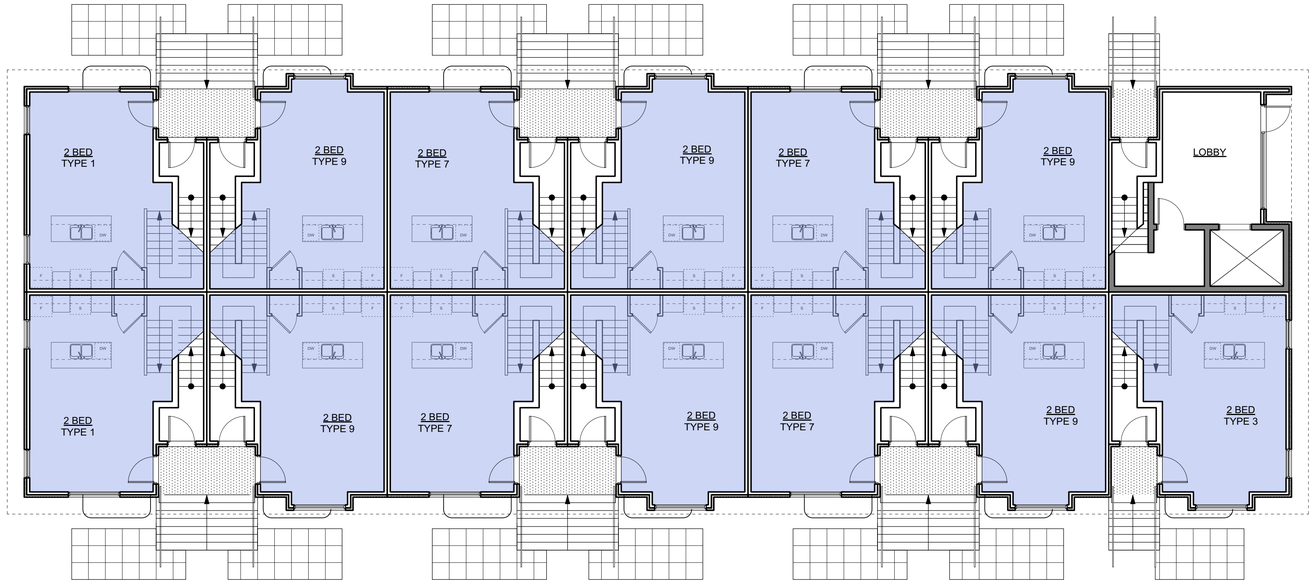


drawing no. A605

revision no. 4

GRAPHIC LEGEND:

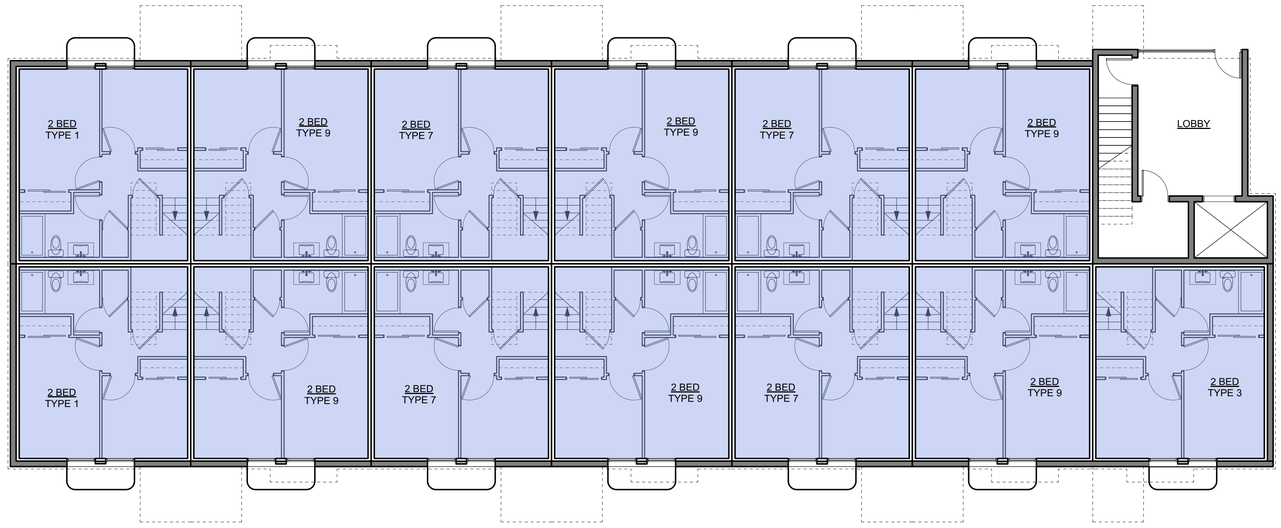
- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




2 / A606 L1 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100

N




1 / A606 L0 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100

N

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx |
| drawn by | FWP | checked by: RAW |
| scale | AS SHOWN | project number: 1907 |

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T 1•250•585•5810


project name
Caledonia
Victoria BC

drawing title
Townhouse 1

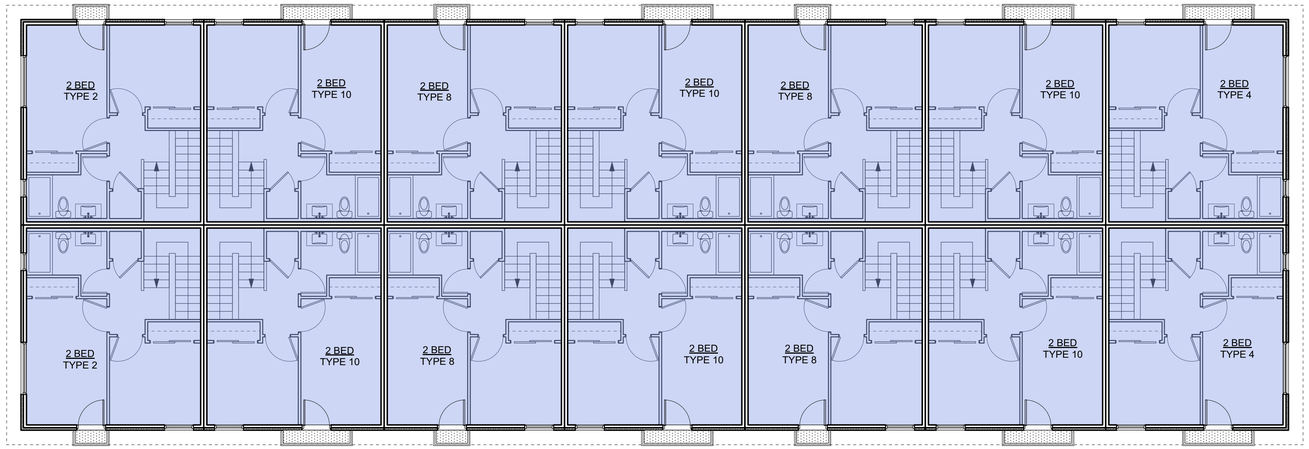


drawing no. A606

revision no. 4

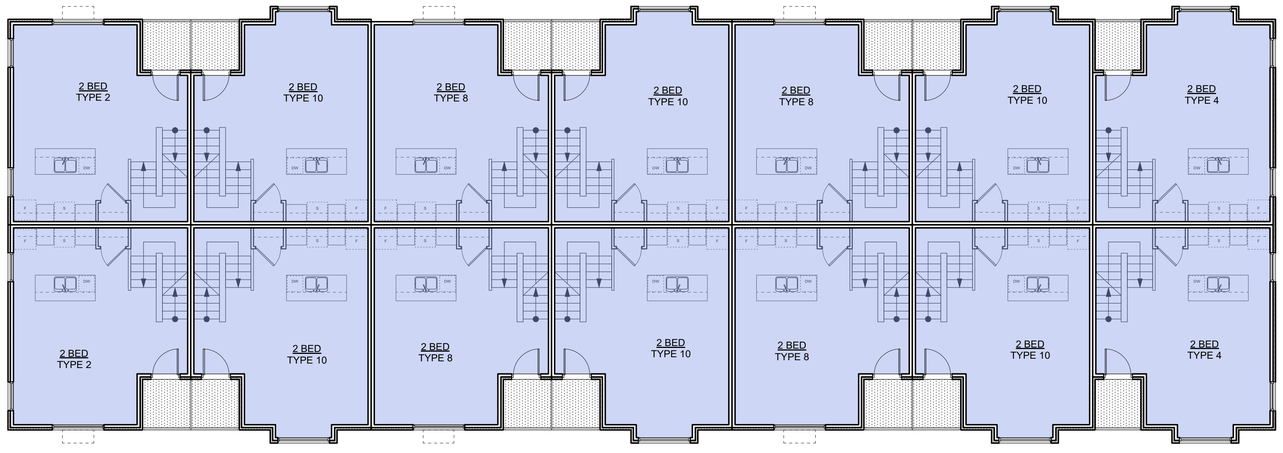
GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




2 / A607 L3 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100




1 / A607 L2 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx |
| drawn by | FWP | checked by: RAW |
| scale | AS SHOWN | project number: 1907 |

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Nanaimo BC V9T 2K8
T 1+250+585+5810


project name
Caledonia
Victoria BC

drawing title
Townhouse 1

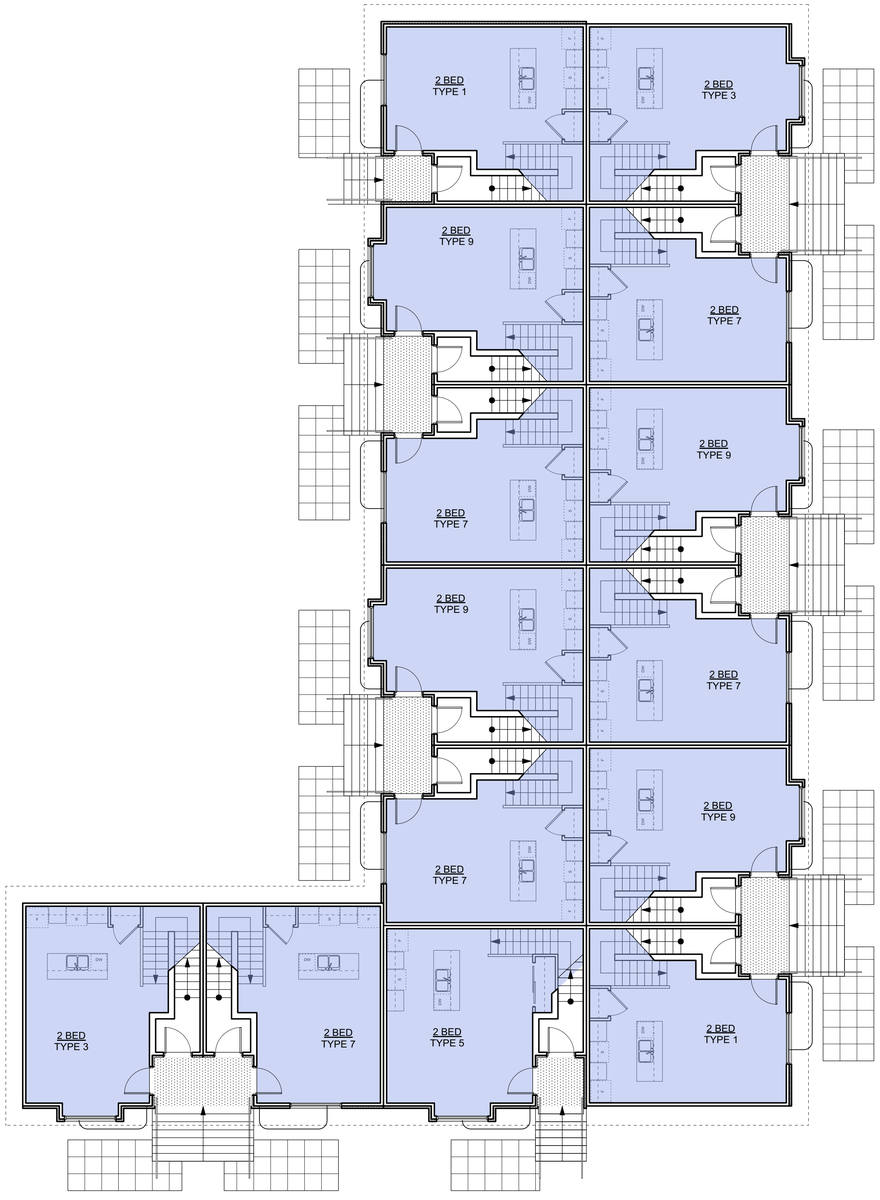


drawing no. A607

revision no. 4

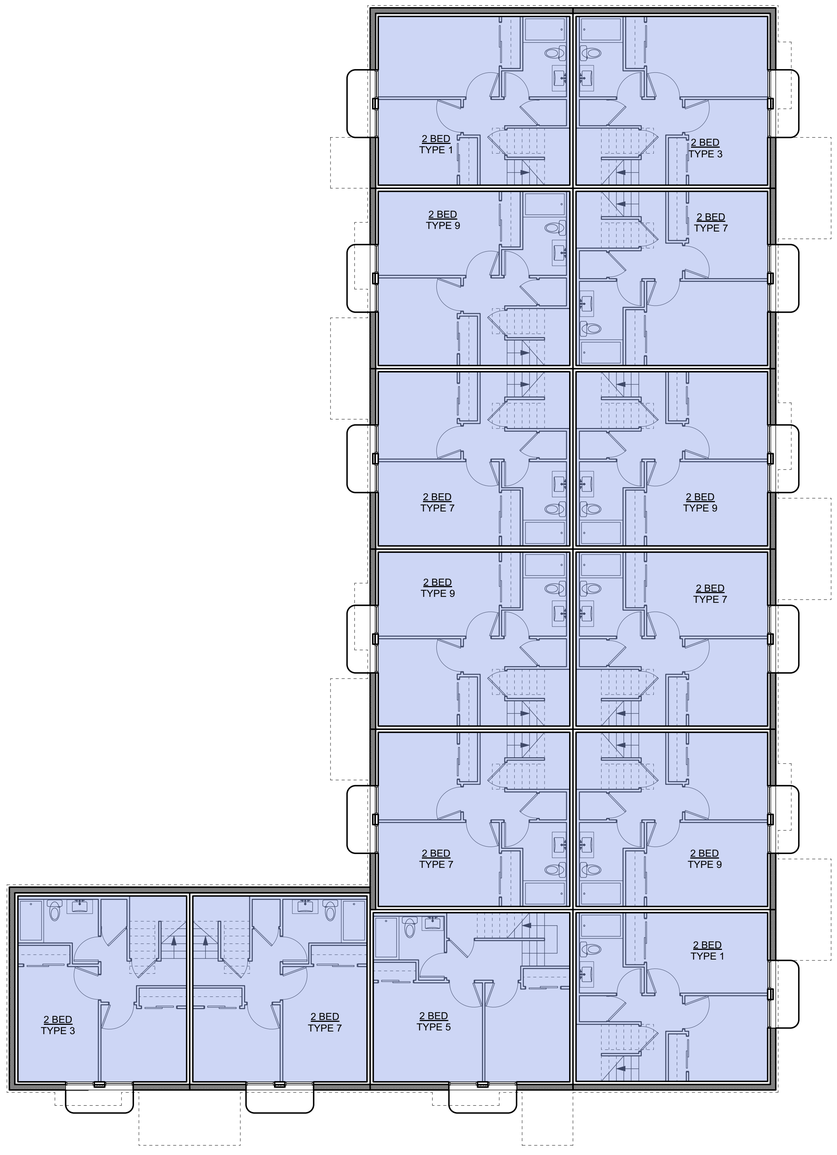
GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




3 / A608 L1 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100




1 / A608 L0 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100

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| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |

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|---|---|---|---|
| print date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

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T 1-250-585-5810


project name
Caledonia
Victoria BC

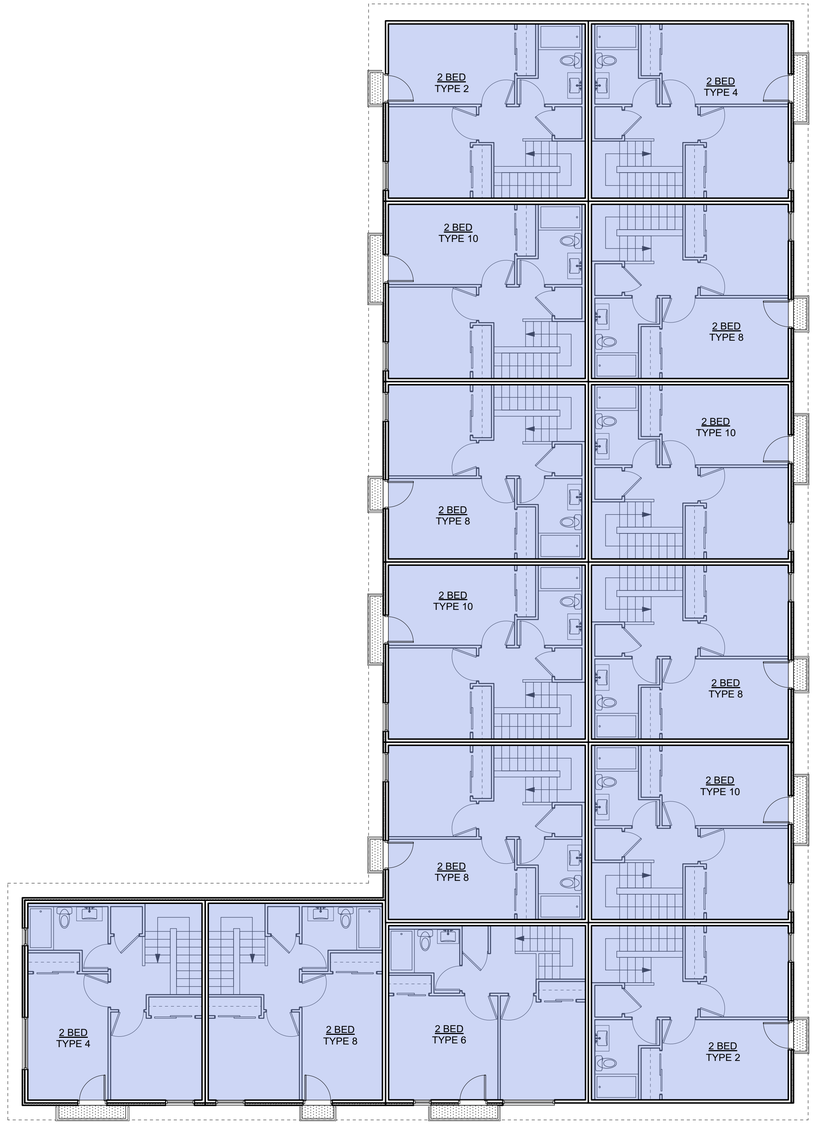
drawing title
Townhouse 2



drawing no. A608
revision no. 4

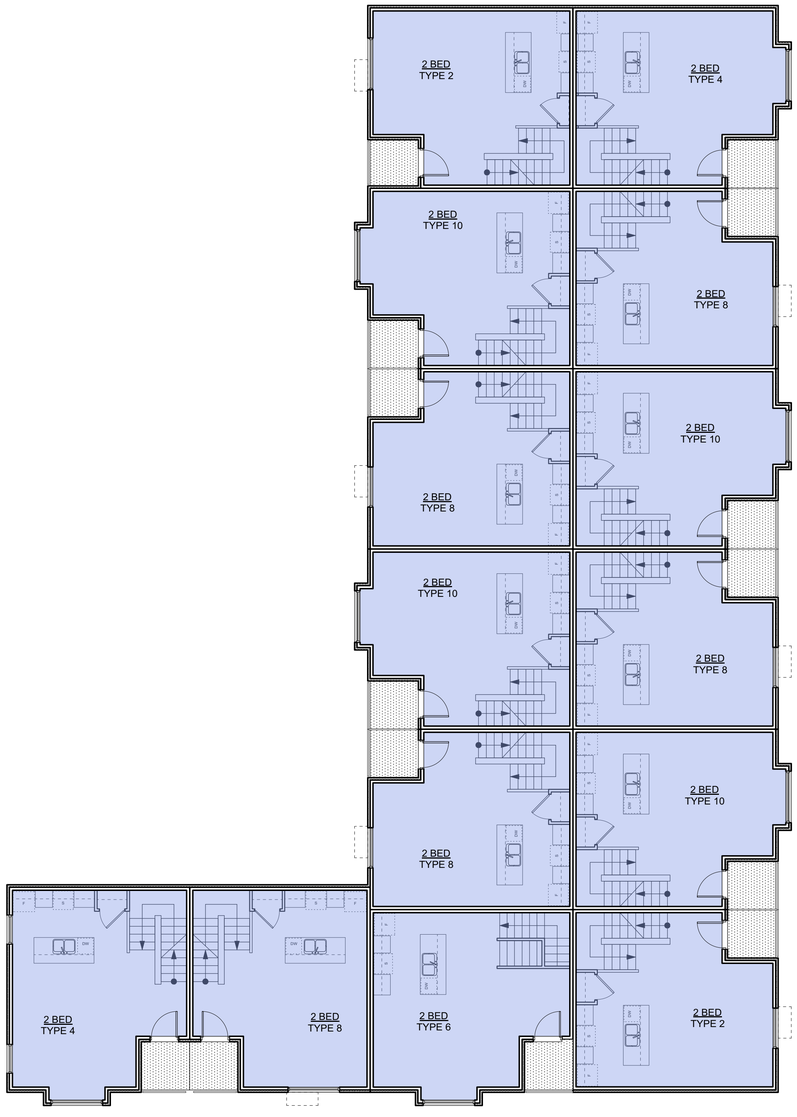
GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




3 / A609 L3 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100




1 / A609 L2 Plan
Scale: 1:100

0 2000 4000 mm
1 : 100

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file 1907 A200 Plans.vwx |
| drawn by | FWP | checked by RAW |
| scale | AS SHOWN | project number 1907 |

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Nanaimo BC V9T 2K8
T 1-250-585-5810


project name
Caledonia
Victoria BC

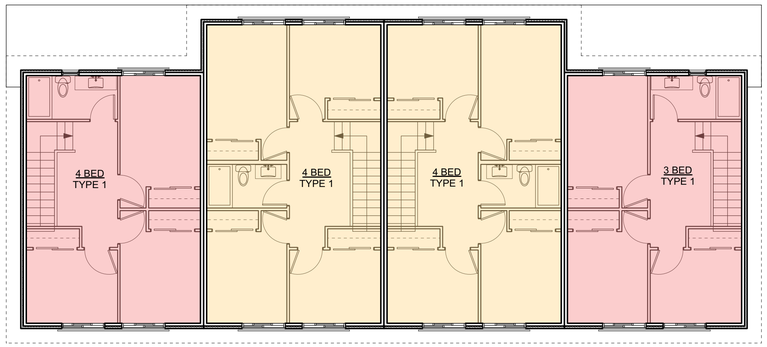
drawing title
Townhouse 2



drawing no. A609
revision no. 4

GRAPHIC LEGEND:

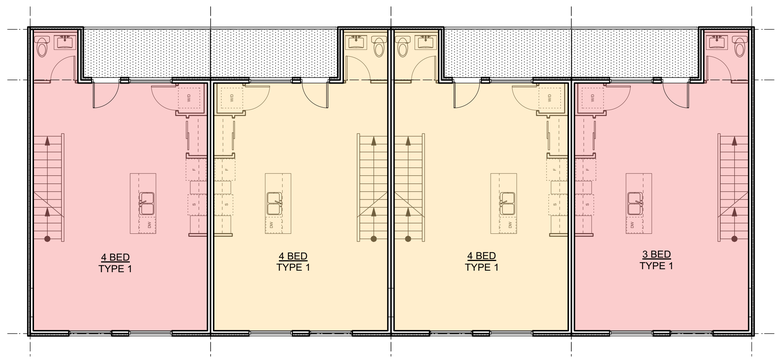
- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE




3 / A610 L3 Plan - Townhouse 3
Scale: 1:100

0 2000 4000 mm
1 : 100

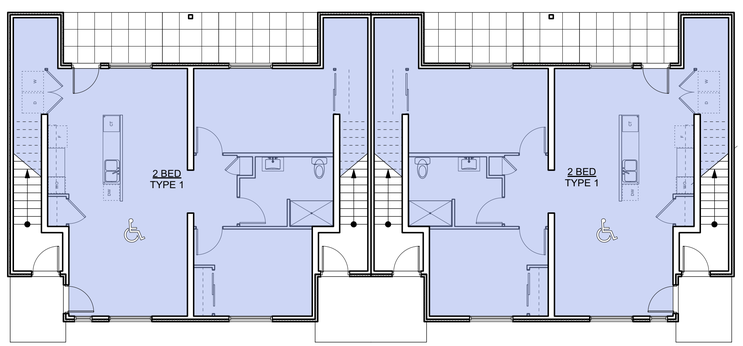
N




2 / A610 L2 Plan - Townhouse 3
Scale: 1:100

0 2000 4000 mm
1 : 100

N




1 / A610 L1 Plan - Townhouse 3
Scale: 1:100

0 2000 4000 mm
1 : 100

N

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| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file 1907 A200 Plans.vwx |
| drawn by | FWP | checked by RAW |
| scale | AS SHOWN | project number 1907 |

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T 1-250-585-5810

project name
Caledonia
Victoria BC

drawing title
Townhouse 3

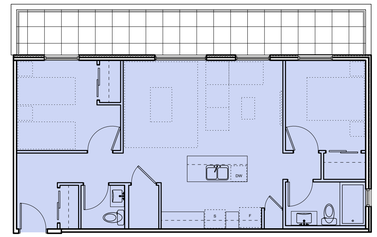


drawing no. A610

revision no. 4

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE



AREA 78 SM
QUANTITY 1

14 / A701 — 2 Bed Type 7
Scale: 1:100



AREA 76 SM
QUANTITY 1

13 / A701 — 2 Bed Type 6
Scale: 1:100



AREA 61 SM
QUANTITY 3

12 / A701 — 2 Bed Type 5
Scale: 1:100



AREA 70 SM
QUANTITY 4

11 / A701 — 2 Bed Type 4
Scale: 1:100



AREA 66 SM
QUANTITY 4

10 / A701 — 2 Bed Type 3
Scale: 1:100



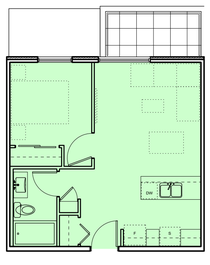
AREA 63 SM
QUANTITY 2

9 / A701 — 2 Bed Type 2
Scale: 1:100



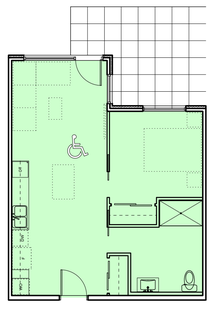
AREA 77 SM
QUANTITY 5

8 / A701 — 2 Bed Type 1 - Accessible
Scale: 1:100



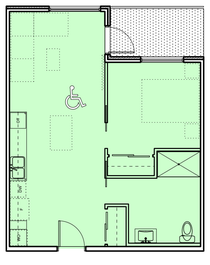
AREA 47 SM
QUANTITY 2

7 / A701 — 1 Bed Type 3
Scale: 1:100



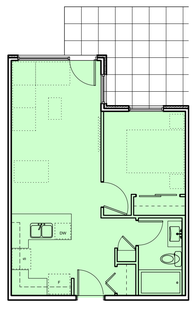
AREA 53 SM
QUANTITY 2

6 / A701 — 1 Bed Type 2B - Accessible
Scale: 1:100



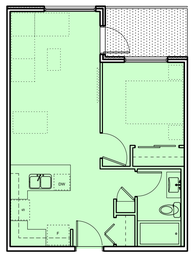
AREA 53 SM
QUANTITY 5

5 / A701 — 1 Bed Type 2A - Accessible
Scale: 1:100



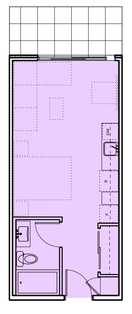
AREA 49 SM
QUANTITY 4

4 / A701 — 1 Bed Type 1B
Scale: 1:100



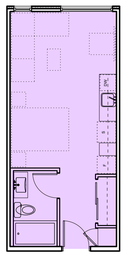
AREA 49 SM
QUANTITY 32

3 / A701 — 1 Bed Type 1A
Scale: 1:100



AREA 34 SM
QUANTITY 4

2 / A701 — Studio Type 1B
Scale: 1:100



AREA 34 SM
QUANTITY 10

1 / A701 — Studio Type 1A
Scale: 1:100

0 2000 4000 mm
1 : 100

| Rev | Date | Description |
|---|---|---|
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| job date | SEPTEMBER 2019 | drawing file 1907 A200 Plans.vwx |
| drawn by | FWP | checked by RAW |
| scale | AS SHOWN | project number 1907 |

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T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810


project name
Caledonia
Victoria BC

drawing title
Apartment Unit Plans

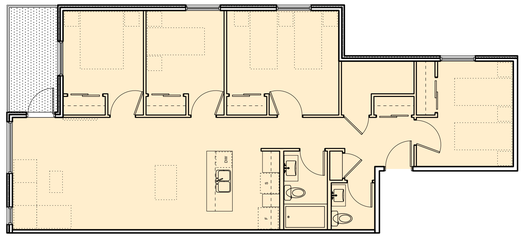


drawing no. A701

revision no. 4

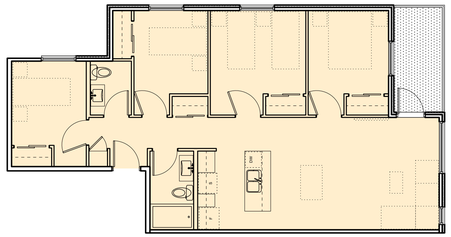
GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE



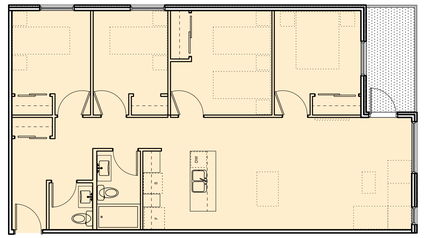
AREA 118 SM
QUANTITY 2

9 / A702 — 4 Bed Type 3
Scale: 1:100



AREA 98 SM
QUANTITY 2

8 / A702 — 4 Bed Type 2
Scale: 1:100



AREA 108 SM
QUANTITY 2

7 / A702 — 4 Bed Type 1
Scale: 1:100



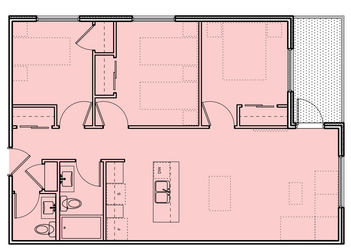
AREA 88 SM
QUANTITY 1

6 / A702 — 3 Bed Type 5
Scale: 1:100



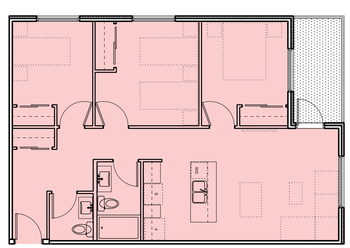
AREA 98 SM
QUANTITY 1

5 / A702 — 3 Bed Type 4 - Accessible
Scale: 1:100



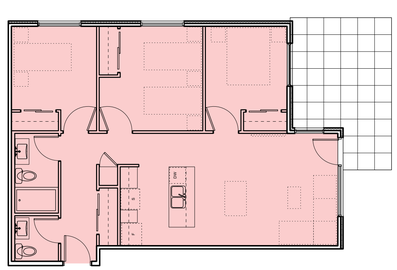
AREA 88 SM
QUANTITY 1

4 / A702 — 3 Bed Type 3
Scale: 1:100



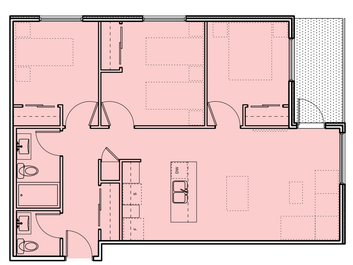
AREA 88 SM
QUANTITY 2

3 / A702 — 3 Bed Type 2
Scale: 1:100



AREA 88 SM
QUANTITY 2

2 / A702 — 3 Bed Type 1B
Scale: 1:100



AREA 88 SM
QUANTITY 5

1 / A702 — 3 Bed Type 1A
Scale: 1:100

0 2000 4000 mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING


dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810


project name
Caledonia
Victoria BC

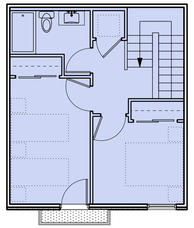
drawing title
Apartment Unit Plans



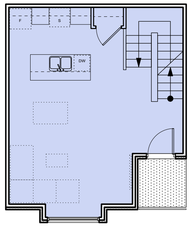
drawing no. A702
revision no. 4

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE



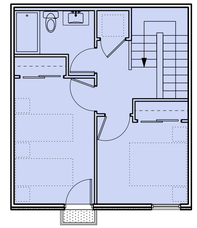
L3 - SECOND FLOOR



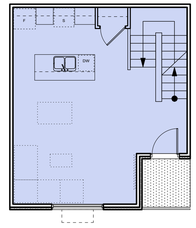
L2 - FIRST FLOOR

AREA 90 SM
QUANTITY 10

10 / A703 — 2 Bed Type 10
Scale: 1:100



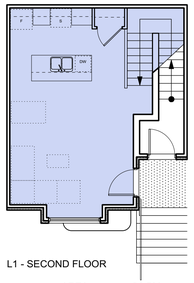
L3 - SECOND FLOOR



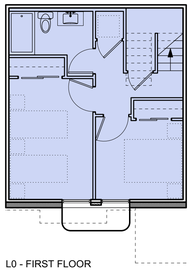
L2 - FIRST FLOOR

AREA 89 SM
QUANTITY 9

9 / A703 — 2 Bed Type 8
Scale: 1:100



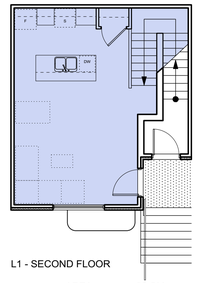
L1 - SECOND FLOOR



L0 - FIRST FLOOR

AREA 84 SM
QUANTITY 10

8 / A703 — 2 Bed Type 9
Scale: 1:100



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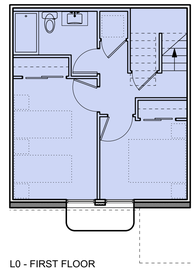
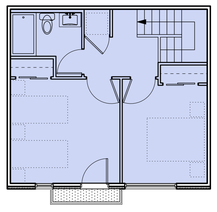


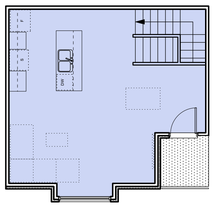
L0 - FIRST FLOOR

AREA 83 SM
QUANTITY 9

7 / A703 — 2 Bed Type 7
Scale: 1:100



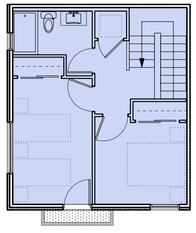
L3 - SECOND FLOOR



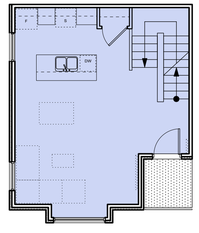
L2 - FIRST FLOOR

AREA 89 SM
QUANTITY 1

6 / A703 — 2 Bed Type 6
Scale: 1:100



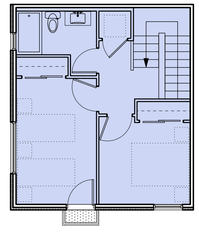
L3 - SECOND FLOOR



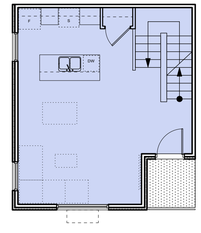
L2 - FIRST FLOOR

AREA 90 SM
QUANTITY 4

5 / A703 — 2 Bed Type 4
Scale: 1:100



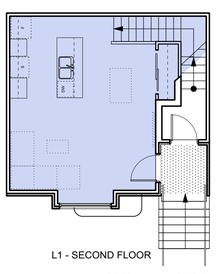
L3 - SECOND FLOOR



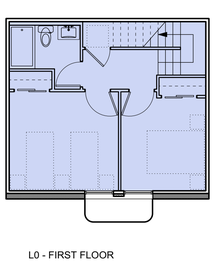
L2 - FIRST FLOOR

AREA 89 SM
QUANTITY 4

4 / A703 — 2 Bed Type 2
Scale: 1:100



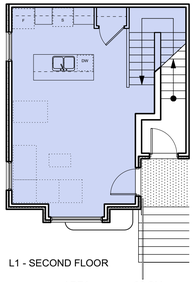
L1 - SECOND FLOOR



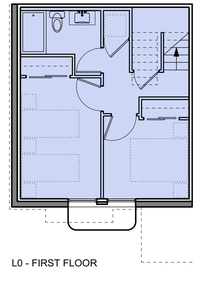
L0 - FIRST FLOOR

AREA 81 SM
QUANTITY 1

3 / A703 — 2 Bed Type 5
Scale: 1:100



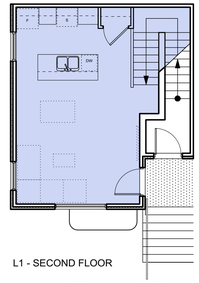
L1 - SECOND FLOOR



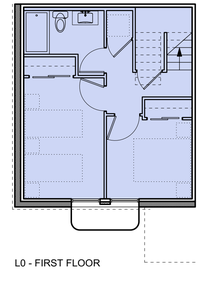
L0 - FIRST FLOOR

AREA 82 SM
QUANTITY 3

2 / A703 — 2 Bed Type 3
Scale: 1:100



L1 - SECOND FLOOR



L0 - FIRST FLOOR

AREA 81 SM
QUANTITY 4

1 / A703 — 2 Bed Type 1
Scale: 1:100

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |
| Rev. | Date | Description |
| plot date | SEPTEMBER 2019 | drawing file: 1907 A200 Plans.vwx |
| drawn by | FWP | checked by: RAW |
| scale | AS SHOWN | project number: 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING


dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810


project name
Caledonia
Victoria BC

drawing title
Townhouses 1 & 2 Unit Plans

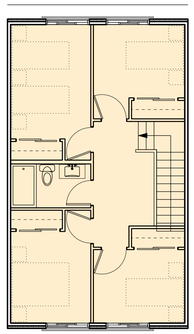


drawing no. A703

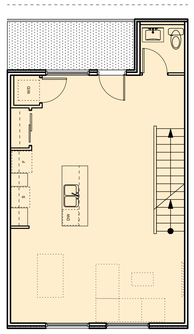
revision no. 4

GRAPHIC LEGEND:

- STUDIO
- 1 BEDROOM
- 2 BEDROOM
- 3 BEDROOM
- 4 BEDROOM
- ACCESSIBLE



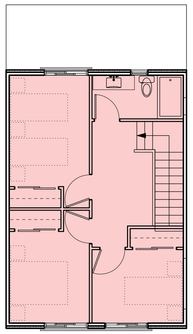
L1 - SECOND FLOOR



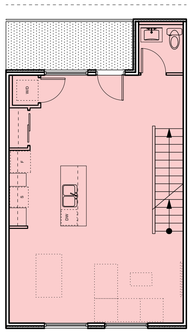
L0 - FIRST FLOOR

AREA 130 SM
QUANTITY 2

3 / A704 — 4 Bed Type 1
Scale: 1:100



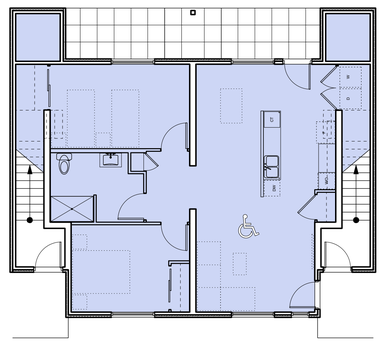
L1 - SECOND FLOOR



L0 - FIRST FLOOR

AREA 118 SM
QUANTITY 2

2 / A704 — 3 Bed Type 1
Scale: 1:100



AREA 104 SM
QUANTITY 2

1 / A704 — 2 Bed Type 1 - Accessible
Scale: 1:100

0 2000 4000 mm
1 : 100

| Rev. | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING


dHKarchitects

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977 Fort Street
Victoria BC V8V 3K3
T 1-250-658-3367

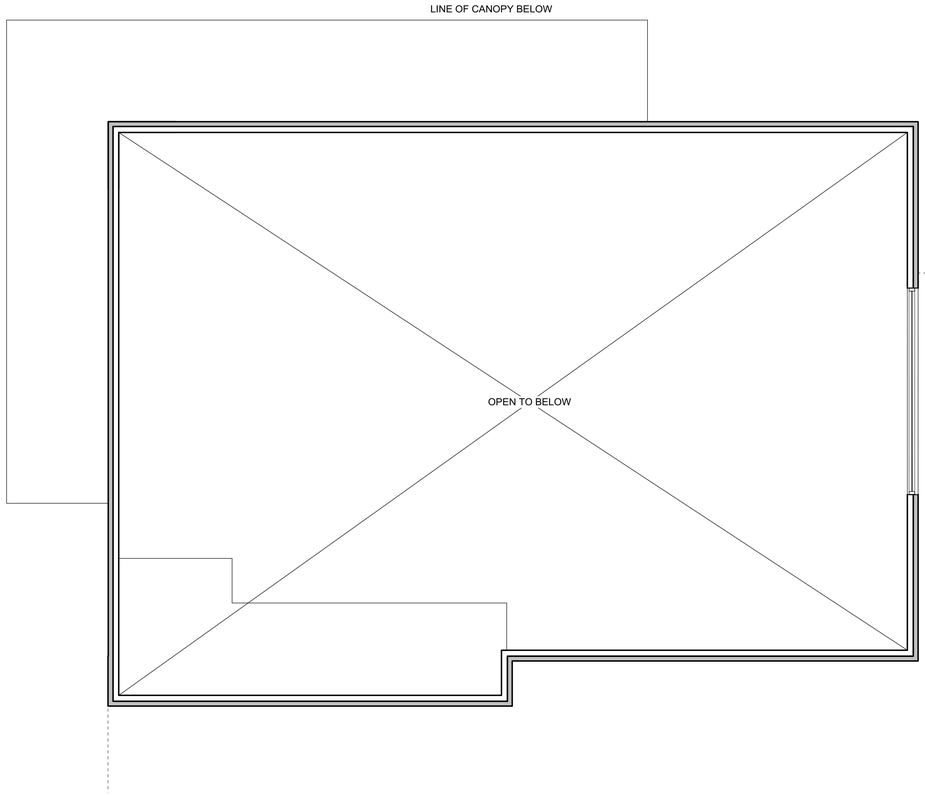
NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1-250-585-5810

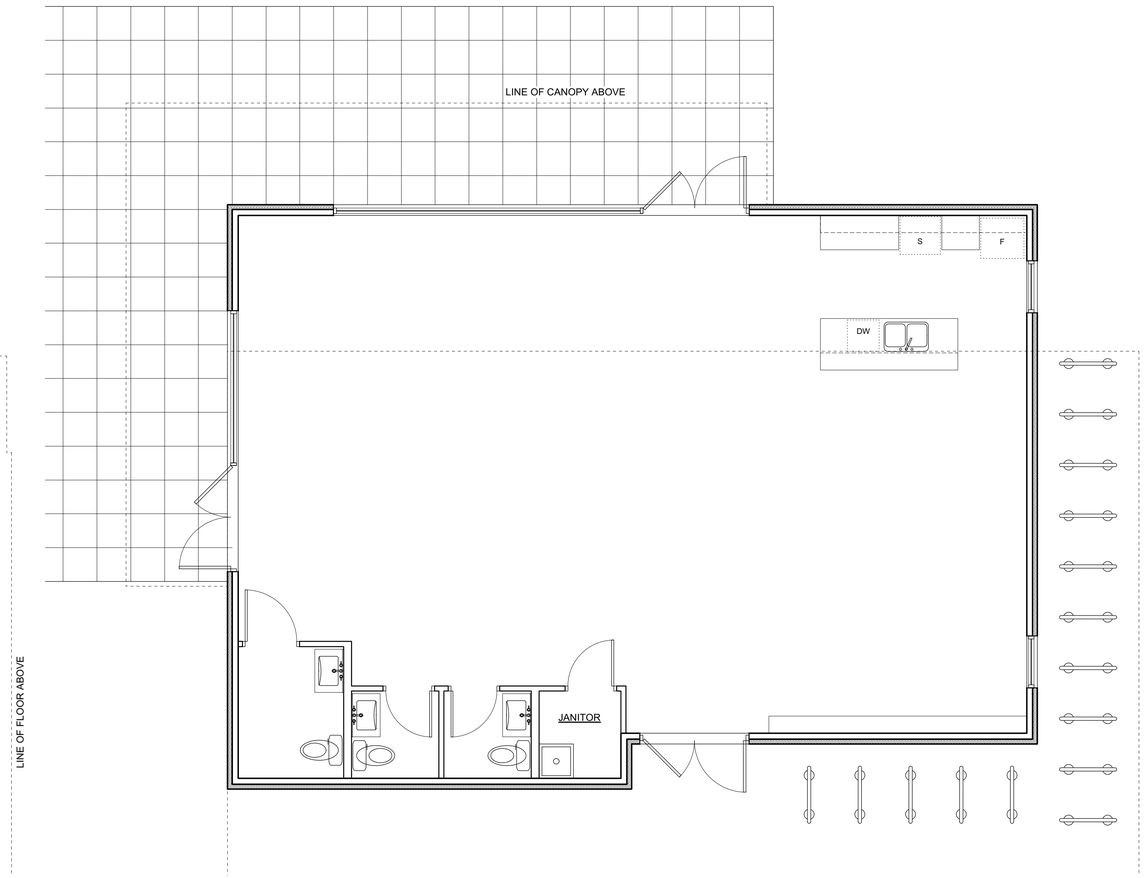

project name
Caledonia
Victoria BC

drawing title
Townhouse 3 Unit Plans



drawing no. A704
revision no. 4




2 / A705 Amenity Room - L2
Scale: 1:50

0 1000 2000 mm
1 : 50

N

GROSS AREA: 139 SM

1 / A705 Amenity Room - L1
Scale: 1:50

0 1000 2000 mm
1 : 50

N

| Rev | Date | Description |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| 4 | 20/03/13 | RE-ISSUED FOR COTW |
| 3 | 20/02/06 | ISSUED FR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K8
T 1•250•585•5810

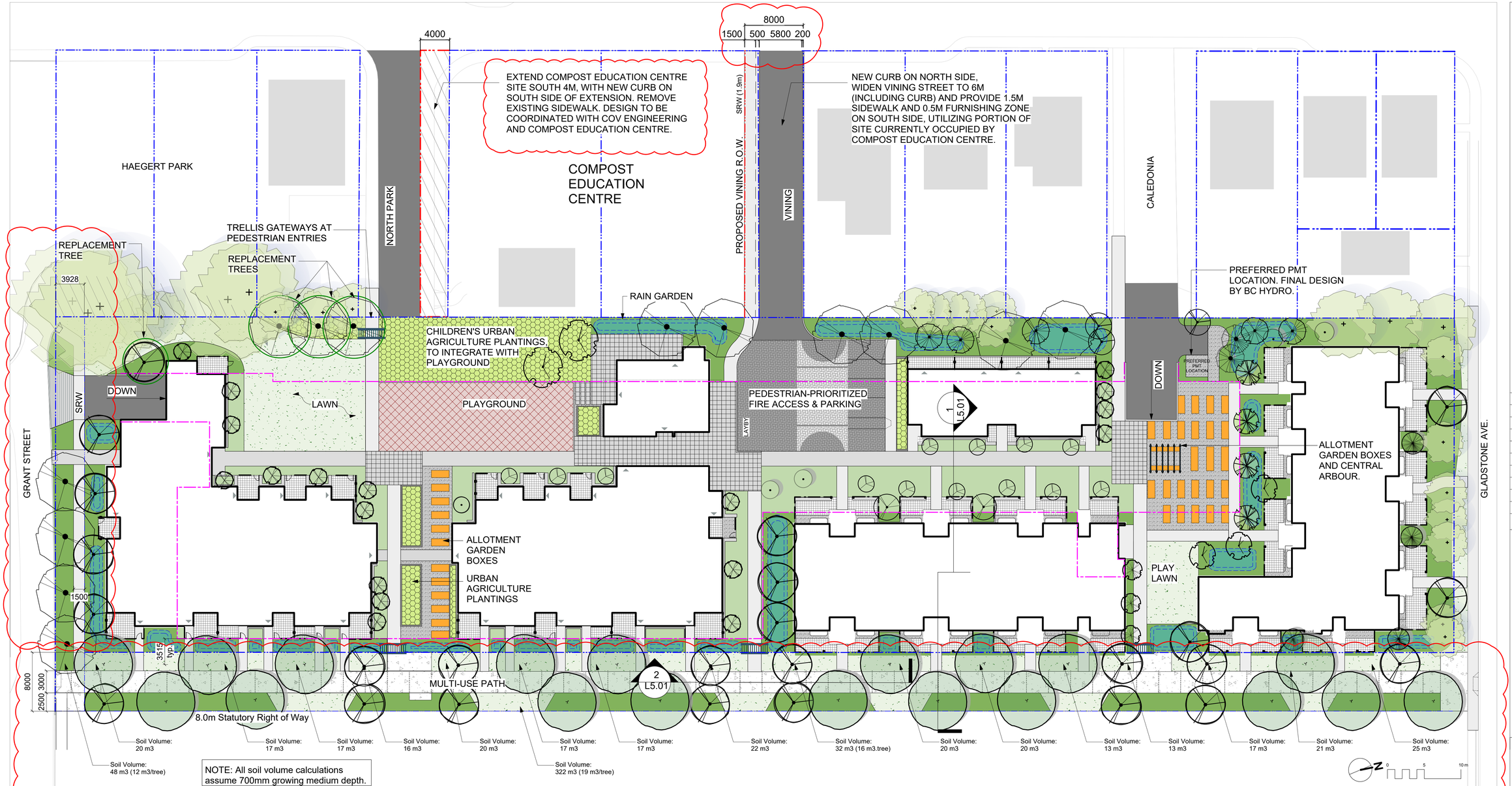
project name
Caledonia
Victoria BC

drawing title
Amenity Room



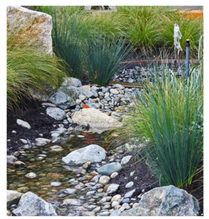
drawing no. A705

revision no. 4




## LANDSCAPE TYPOLOGIES

PLAY PLACES that foster fun and creativity.



RAIN GARDENS that slow & cleanse rainwater.

PERSONAL OUTDOOR AREAS that can be modified, beautified and funkified.

GATHERING PLACES that help neighbours get to know each other and support each other.

BICYCLE FACILITIES that make it easy for people of all ages to hop on their bikes.

PLANTINGS that provide food for birds, bees and butterflies.

OUTDOOR SOCIAL SPACES for gethering and sharing food.

PLANTINGS that provide beauty and food for people.

ACTIVE PLAY SPACES that support community sports.


PUBLIC ART that celebrates Fernwood's artistic spirit.

COMMUNITY GARDEN PLOTS that boost local food security.

NOT FOR CONSTRUCTION

| rev no | description | date |
|---|---|---|
| 6 | RZ/DP Revision | 20.04.03 |
| 5 | For COTW | 20.02.04 |
| 4 | Issued for ADP | 20.01.15 |
| 3 | Issued for ADP | 20.01.15 |
| 2 | RZ/DP Revision | 19.12.16 |
| 1 | Rezoning/DP | 19.09.26 |

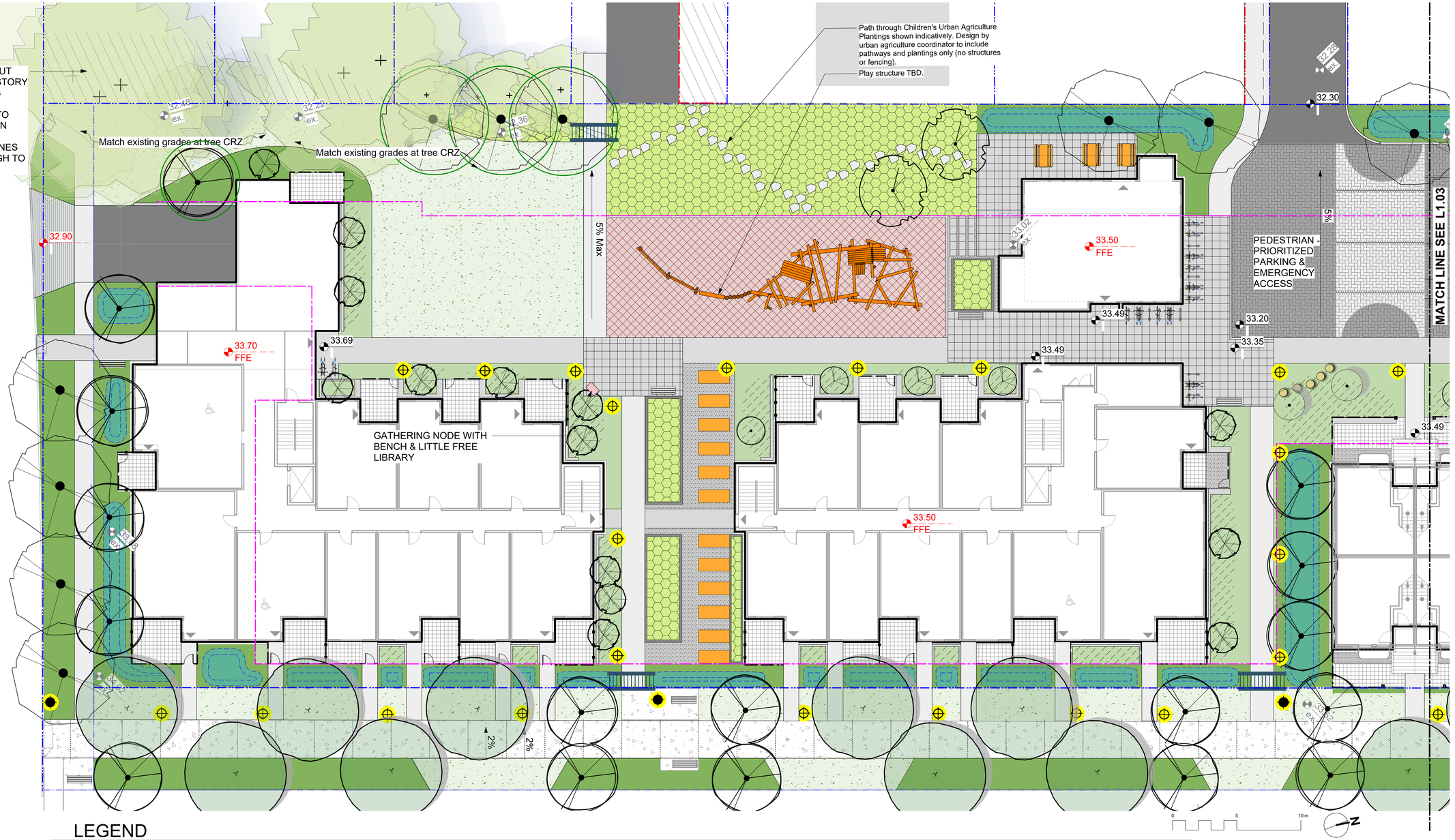
Murdoch de Greeff INC
Landscape Planning & Design
200 - 524 Culduthel Road
Victoria, BC V8Z 1G1
Phone: 250.412-2891
Fax: 250.412-2892

client
**CRD Housing Corporation**
631 Fisgard Ave.
Victoria, BC

project
Caledonia Redevelopment
Caledonia Ave.
Victoria, BC

sheet title
**Landscape Overview Plan**

| | |
|---|---|
| project no. | 119.18 |
| scale | 1: 250 @ 24"x36" |
| drawn by | TB |
| checked by | PdG |
| revison no. | 6 |
| sheet no. | **L1.01** |




## LEGEND

- Property line
- Extent of Parkade, below
- Rain garden - TOP OF POOL
- Rain garden - BOTTOM OF POOL
- 45.00 ex. — Existing Landscape Grade
- 45.00 — Architectural grade, provided for reference only
- 45.00 — Proposed Landscape Grade

| | | | |
|---|---|---|---|
| TW | Top of Wall | TP | Top of Pool |
| BW | Bottom of Wall | BP | Bottom of Pool |
| TOC | Top of Curb | TS | Top of Stairs |
| BC | Bottom of Curb | BS | Bottom of Stairs |

- Retaining/Planter Wall
- Retaining/Planter Seating Wall
- Landscape Screen, 1800 mm height.
- Wood Picket Fence, 1000 mm height.

- Cast in Place Concrete Paving
- Cast in Place Concrete Paving: Greenway. Tooled control joints on 3m. spacing with Broom Finish applied after tooling to increase path smoothness.
- Concrete Unit Paving, Type 1
- Concrete Unit Paving, Type 2
- Crushed Gravel Surfacing (Unbound)
- Vehicular Concrete Unit Paving
- Asphalt Paving
- Rubber Playground Surfacing
- Rain Garden Area

- Proposed Urban Agriculture Plantings
- Raised Planter for Common Urban Agriculture
- Lawn Area
- Native Plant & Pollinator Planting Area: On Grade
- Native Plant, Herb & Pollinator Planting Area: On Slab, 300mm depth.
- Native Plant, Herb & Pollinator Planting Area: Mounded Soil on Slab, to 600mm depth.

**Existing Tree for Retention**
*(Refer to Arborist Report and Tree Retention & Removal Plan for full details and management strategies).*

+10 — Critial Root Zone

- Trellis Gateway at Entries
- Picnic Table
- Allotment Garden Box
- Bench
- Bike Rack (2 Stalls): Total 44 Stalls
- Gravel Maintenance Edge, 300mm wide.
- Bollard Light: Landscape Forms Ashbery Path Light.
- Pedestrian Pole Light: Ashbury fixture on B cluster pole, to be suppliedby COV.

**Replacement Tree**
Indicated schematically. Replacement trees to be selected with direction from City of Victoria Parks.

**DRAWING NOTES**

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10. Tree protection fencing, for existing trees, to be installed prior to commencement of all site work

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| 6 | RZ/DP Revision | 20.04.03 |
| 5 | For COTW | 20.02.04 |
| 4 | Issued for ADP | 20.01.15 |
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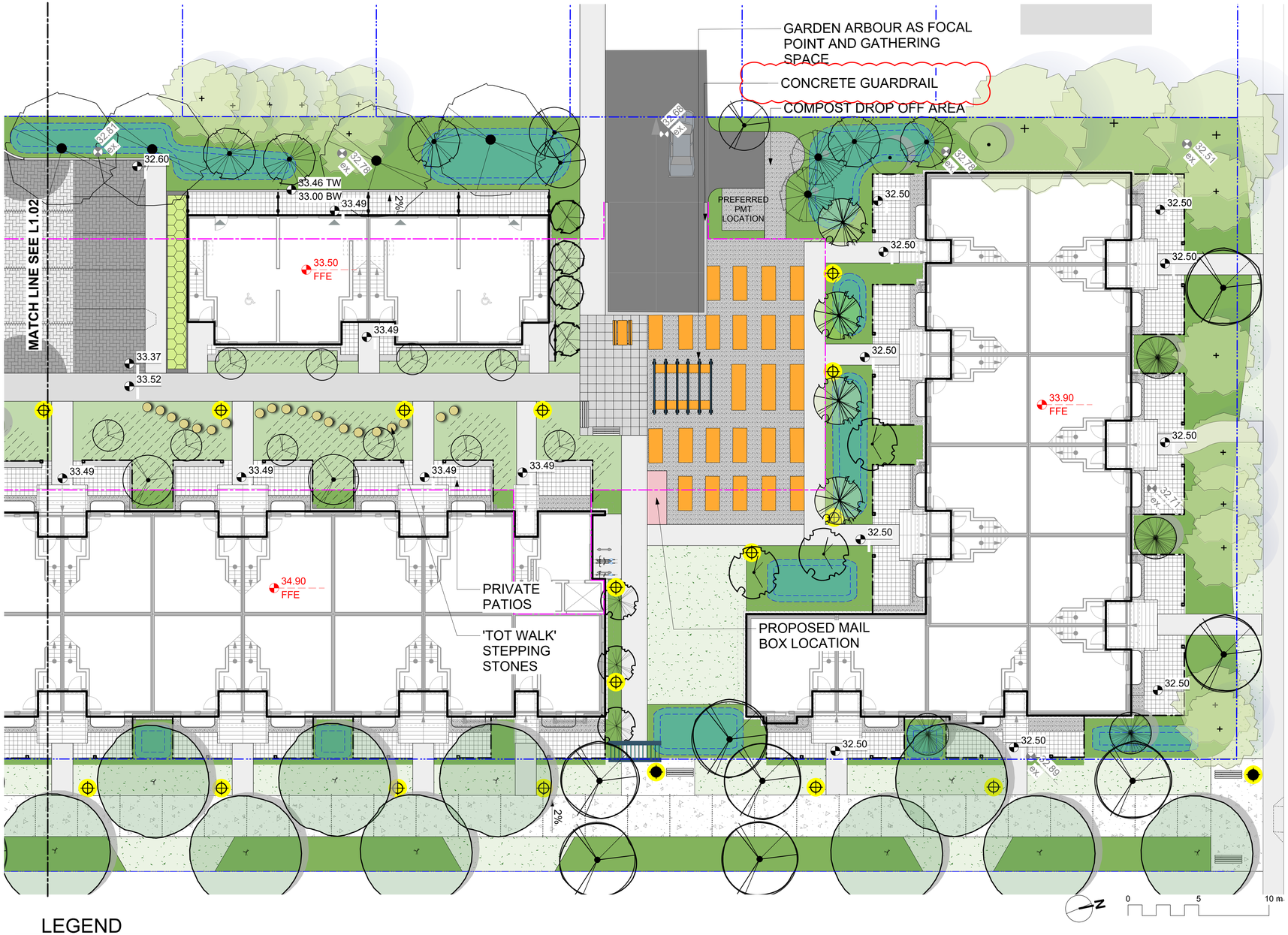
Murdoch de Greeff INC
Landscape Planning & Design
200 - 524 Culduthel Road
Victoria, BC V8Z 1G1
Phone: 250.412-2891
Fax: 250.412-2892

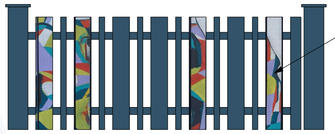
client
**CRD Housing Corporation**
631 Fisgard Ave.
Victoria, BC

project
Caledonia Redevelopment
Caledonia Ave.
Victoria, BC

sheet title
**Landscape Materials South**

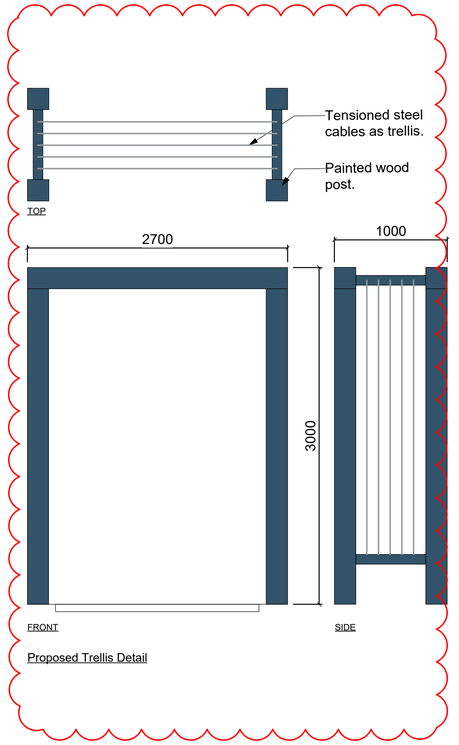
| | |
|---|---|
| project no. | 119.18 |
| scale | 1: 150 @ 24"x36" |
| drawn by | TB |
| checked by | PdG |
| revison no. | sheet no. |
| 6 | **L1.02** |





Proposed Picket Fence Detail




Proposed Trellis Detail

## LEGEND

- Property line
- Extent of Parkade, below
- Rain garden - TOP OF POOL
- Rain garden - BOTTOM OF POOL
- 45.00 ex. — Existing Landscape Grade
- 45.00 — Architectural grade, provided for reference only
- 45.00 — Proposed Landscape Grade

| | | | |
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| TOC | Top of Curb | TS | Top of Stairs |
| BC | Bottom of Curb | BS | Bottom of Stairs |

- Retaining/Planter Wall
- Retaining/Planter Seating Wall
- Landscape Screen, 1800 mm height.
- Wood Picket Fence, 1000 mm height.
- Cast in Place Concrete Paving
- Cast in Place Concrete Paving: Greenway. Tooled control joints on 3m. spacing with Broom Finish applied after tooling to increase path smoothness.
- Concrete Unit Paving, Type 1
- Concrete Unit Paving, Type 2
- Crushed Gravel Surfacing (Unbound)
- Vehicular Concrete Unit Paving
- Asphalt Paving
- Rubber Playground Surfacing
- Rain Garden Area
- Proposed Urban Agriculture Plantings
- Raised Planter for Common Urban Agriculture
- Lawn Area
- Native Plant & Pollinator Planting Area: On Grade
- Native Plant, Herb & Pollinator Planting Area: On Slab, 300mm depth.
- Native Plant, Herb & Pollinator Planting Area: Mounded Soil on Slab, to 600mm depth.
- **Existing Tree for Retention** (*Refer to Arborist Report and Tree Retention & Removal Plan for full details and management strategies).*
- + 10 — Critial Root Zone
- Trellis Gateway at Entries
- Picnic Table
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sheet title
**Landscape Materials North**

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| project no. | 119.18 |
| scale | 1: 150 @ 24"x36" |
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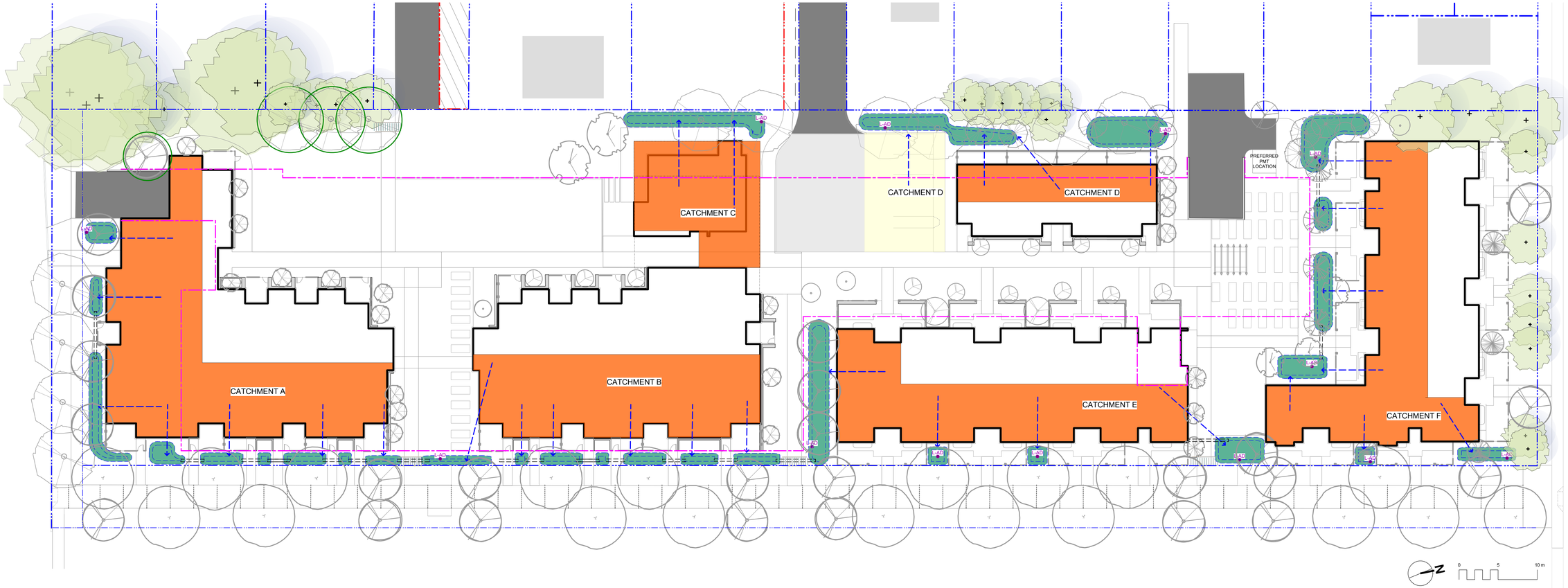



**Rain Garden Capacity Calculations**

| Catchment Area | Contributing Impervious Area | Design Storm Runoff Volume Contributing to Rain Garden | Planter Growing Medium Depth | Stormwater Treatment Capacity per sq. m. of Rain Garden | Rain Garden Area | Rain Garden Capacity | Excess (+) or Deficient (-) Capacity | Soil Volume |
|---|---|---|---|---|---|---|---|---|
| | (sq. m.) | (cu. m./day) | ( m.) | (cu. m./day) | (sq. m.) | (cu. m./day) | (cu.m./day) | (cu.m.) |
| Catchment A | 560.0 | 28.0 | 0.60 | 0.8 | 40.0 | 30.0 | 2.0 | 24.0 |
| Catchment B | 360.0 | 18.0 | 0.60 | 0.8 | 25.0 | 18.8 | 0.8 | 15.0 |
| Catchment C | 220.0 | 11.0 | 0.60 | 0.8 | 34.0 | 25.5 | 14.5 | 20.4 |
| Catchment D | 280.0 | 14.0 | 0.60 | 0.8 | 30.0 | 22.5 | 8.5 | 18.0 |
| Catchment E | 365.0 | 18.3 | 0.60 | 0.8 | 33.0 | 18.5 | 0.3 | 19.8 |
| Catchment F | 415.0 | 20.8 | 0.60 | 0.8 | 63.0 | 47.3 | 26.5 | 37.8 |
| total | 2200.0 | 110.0 | | | 225.0 | 162.5 | 52.5 | 135.0 |

Assumptions

1 Design storm is a 2 year storm event which equals 5 cm of water, in a 24 hr period.

2 Rain Garden design based on 150 mm live ponding plus 20% of the sand/ compost growing medium volume (assuming growing medium has 20% void space) with a minimum infiltration rate of 2 cm/hour (or 48 cm per day), via perforated underdrain.

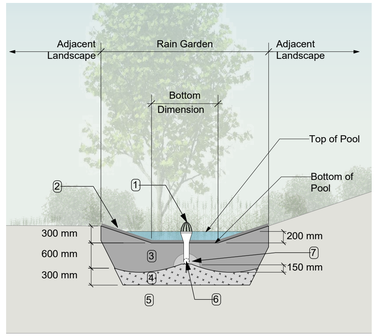
**RAIN WATER MANAGEMENT NOTES**

Water collected from portions of the building roofs flow to the rain gardens located throughout the site. Rain gardens have been situated on-grade.

Rain gardens are designed to capture, slow flows, and treat runoff. Rain gardens will be designed with underdrains and a high□capacity overflow drain that will be connected to the onsite piped drainage system. The rain gardens are sized such that the bottom of the rain garden is 5% of the impervious area, which is the area required to manage Victoria's 2 year storm event.

Walkways will be sloped to drain to adjacent absorbant landscape. Larger paved areas such as driveways and turnarounds will be drained directly to the storm system.

Portions of the roof which cannot be easily connected to rain gardens will be drained directly to the storm system. The roof catchments are shown schematically and will be refined during detailed design.




RAIN GARDEN MATERIALS
1. Overflow drain, 200 mm domed grate + adapter
2. Composted mulch, 50 -70 mm depth
3. Bio-retention growing medium, 600 mm depth
4. Scarified/tilled subgrade, 300 mm depth
5. Existing subgrade/native material
6. 100 mm diameter (min) perforated pipe
7. 25 mm diameter drain rock, 100 mm depth

1 Typical Rain Garden
Scale: 1:50

## LEGEND

- Property line
- Extent of Parkade, below
- Rain garden - TOP OF POOL
- Rain garden - BOTTOM OF POOL
- 24.31 ex. — Existing Landscape Grade
- 23.77 — Architectural grade, provided for reference only
- 24.31 — Proposed Landscape Grade

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- Rain Garden on Grade
- Roof Drains to Rain Garden
- Hardscape Drains to Rain Garden
- Roof / Road / Hardscape Drains Directly to Storm System
- Flow Path (Schematic)
- L-AD — Rain Garden Overflow Drain to Storm System
- Culvert Rain Garden Connection

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**Stormwater Management**

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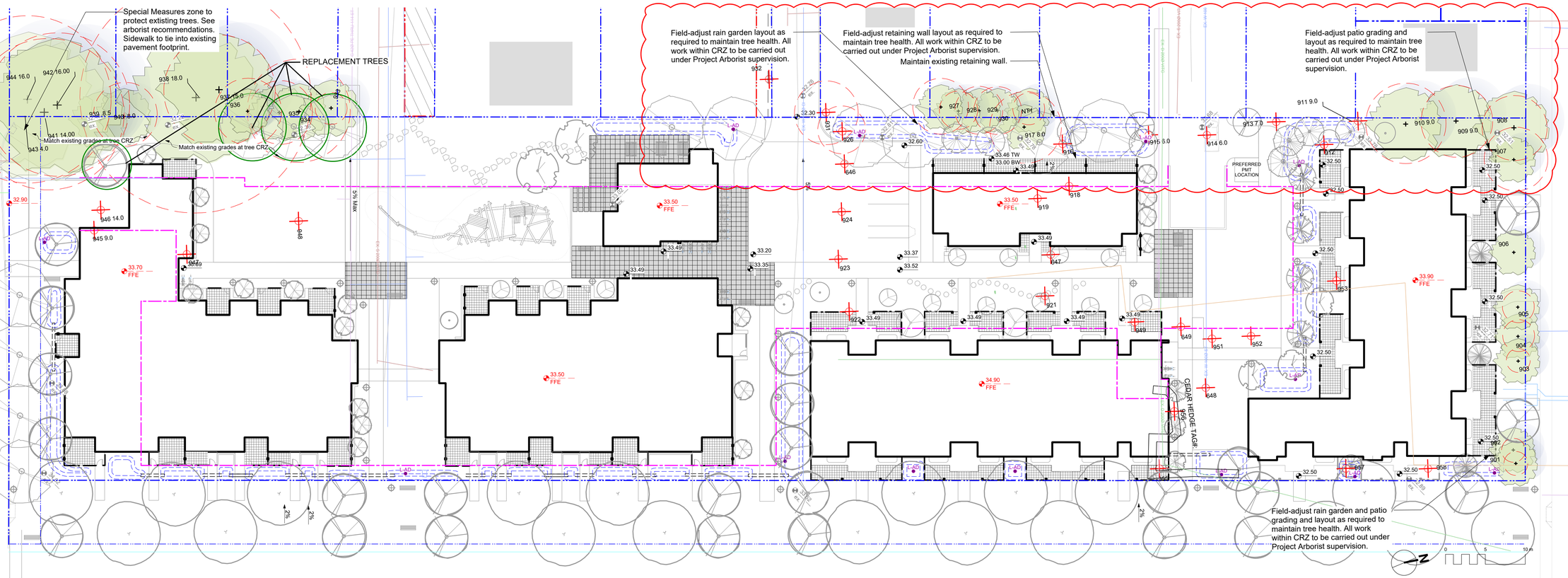


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**TREE SUMMARY***

| | |
|---|---|
| **TOTAL TREES TO BE REMOVED:** | 31 |
| **TOTAL TREES TO BE RETAINED:** | 27 |
| **TOTAL BYLAW-PROTECTED TREES TO BE REMOVED:** | 2 |
| **TOTAL PROPOSED REPLACEMENT TREES:** | 4 |

* Based on Arborist's Report recieved from Talbot Mackenzie & Associates, 03/04/2020. Refer to Arborist report for details and Arborist recommendations.

## LEGEND

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**Existing Tree for Retention**
*(Refer to Arborist Report for full details and management strategies).*
10 — Critical Root Zone, Tree Tag

**Existing Tree to be Removed**
*(Refer to Arborist Report and Tree Retention & Removal Plan for full details and management strategies).*
10 — Tree Tag

**Replacement Tree**
*(Species and location to be determined with City of Victoria Parks)*

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**Tree Retention & Removal Plan**

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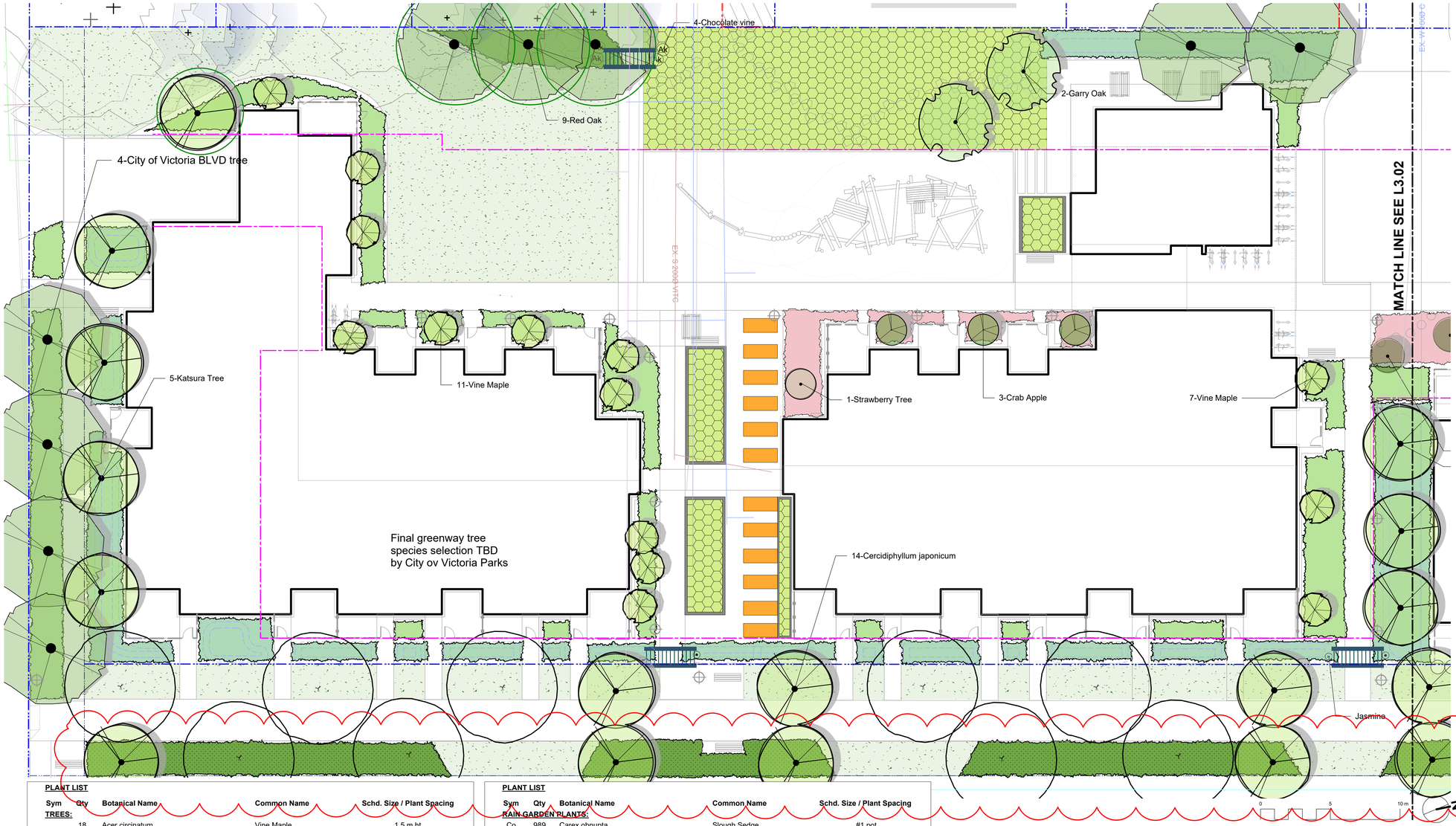


**PLANT LIST**

| Sym | Qty | Botanical Name | Common Name | Schd. Size / Plant Spacing |
|---|---|---|---|---|
| **TREES:** | | | | |
| | 18 | Acer circinatum | Vine Maple | 1.5 m ht. |
| | 1 | Arbutus unedo | Strawberry Tree | 1.2 m ht, b&b |
| | 4 | Calocedrus decurrens | Incense Cedar | 1.5 m ht,b&b |
| | 25 | Cercidiphyllum japonicum | Katsura Tree | 5.0cm cal, b&b |
| | 5 | Chamaecyparis nootkatensis 'Pendula' | Nootka False Cypress | 2.5 m ht |
| | 4 | City of Victoria BLVD tree | As PER COV Parks | 5.0cm cal, b&b |
| | 2 | Cornus kousa 'Milky Way' | Milky Way Kousa Dogwood | multistem, 1.2 m ht, b&b |
| | 2 | Cornus mas 'Golden Glory' | Cornelian Cherry Dogwood | 4.0 cm cal, b&b |
| | 1 | Corylus 'Felix' | Felix Hazlenut | 1.5m height, b&b |
| | 3 | Corylus 'Jefferson' | Jefferson Hazlenut | 1.5m height, b&b |
| | 2 | Ficus carica 'Mission' | Black Mission Fig | #10 pot |
| | 13 | Malus 'Sugar tyme' | Crab Apple | #10 pot, Min 1.2m ht |
| | 3 | Oxydendrum arboreum | Sourwood Tree | multistem, 1.5m ht, b&b |
| | 3 | Picea omorika | Serbian Spruce | 1.5m ht, b&b |
| | 19 | Platanus acerifolia | London Planetree | 4.0 cm cal, b&b |
| | 2 | Pseudotsuga menziesii | Douglas Fir | 1.5m ht, b&b |
| | 5 | Quercus garryana | Garry Oak | 4.0cm cal, b&b |
| | 9 | Quercus rubra | Red Oak | 5.0cm cal, b&b |
| **HERB & POLLINATOR PLANTINGS** | | | | |
| Ana | 134 | Aster novae-angliae | New England Aster | #1 pot |
| Cx | 15 | Calamagrostis x acutiflora 'Karl Foerster' | Feather Reed Grass | #1 pot / 1.8 m O.C. |
| Ep | 144 | Echinacea purpurea | Purple Coneflower | #1 pot |
| Lws | 110 | Lavandula x intermedia 'White Spike' | White Spike Lavandin | #1 pot |
| Ol | 15 | Origanum laevigatum 'Herrenhausen' | Garden Oregano | #1 pot |
| Rrs | 144 | Rosa rugosa 'Schneekoppe' | Snow Pavement Rose | #2 pot |
| Rof | 33 | Rosmarinus officinalis | Rosemary | #2 pot |
| Rf | 144 | Rudbeckia fulgida | Black-Eyed Susan | #1 pot |
| Ssm | 134 | Salvia ´ sylvestris 'Mainacht' | May Night Salvia | #1 pot |
| Slo | 15 | Salvia officinalis | Culinary Sage | #1 pot |
| St | 184 | Stipa tenuissima | Mexican Feathergrass | #1 pot |
| Vsb | 15 | Vaccinium 'Sunshine Blue' | Blueberry | #3 pot |
| **VINES** | | | | |
| Pac | 2 | Passiflora caerulea | Blue Passionflower | #1 pot |
| Jn | 4 | Jasminum nudiflorum | Jasmine | #1 pot |
| Ak | 4 | Akebia quinata | Chocolate vine | #2 pot |
| Act | 4 | Actinidia arguta | Hardy Kiwi | #2 pot |

**PLANT LIST**

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|---|---|---|---|---|
| **RAIN GARDEN PLANTS:** | | | | |
| Co | 989 | Carex obnupta | Slough Sedge | #1 pot |
| Csc | 110 | Cornus sericea | Red-twig Dogwood | #3 pot |
| Csk | 440 | Cornus sericea 'Kelseyii' | Dwarf Red-twigged Dogwood | #1 pot |
| Jcg | 989 | Juncus 'Carmen's Grey' | Soft Common Rush | Sp3 |
| Spn | 23 | Salix purpurea 'Nana' | Dwarf Arctic Blue Leaf Willow | #1 pot |
| Sd | 23 | Spiraea douglasii | Hardhack | #1 pot |
| **NATIVE & EDIBLE SHRUB PLANTINGS** | | | | |
| Fve | 188 | Fragaria vesca | Woodland Strawberry | Sp3 30cm o.c. |
| Gsh | 421 | Gaultheria shallon | Salal | #1 pot |
| Myc | 103 | Myrica californica | Pacific Wax Myrtle | #3 pot |
| Oo | 292 | Oxalis oregana | Redwood Sorrel | Sp3, 30cm o.c. |
| Phl | 45 | Philadelphus lewisii | Mock Orange | #3 pot |
| Pm | 534 | Polystichum munitum | Sword Fern | #1 pot |
| Ruc | 188 | Ribes uva-crispa | Gooseberry | #2 pot |
| Rn | 113 | Rosa nutkana | Nootka Rose | #1 pot |
| Sd | 45 | Spiraea douglasii | Hardhack | #1 pot |
| Sa | 113 | Symphoricarpos alba | Snowberry | #1 pot |
| Vsb | 33 | Vaccinium 'Sunshine Blue' | Blueberry | #3 pot |
| Bbd | 26 | Vaccinium 'Blue Crop' & 'Duke' | Blueberry 'Blue Crop' & 'Duke' | #3 pot |
| Vo | 107 | Vaccinium ovatum 'Thunderbird' | Evergreen Huckleberry | #3 pot |
| Vh | 292 | Vancouveriana hexandra | Inside-out Flower | Sp3 |
| | 0 | | | |
| **GREENWAY NATIVE PLANTS:** | | | | |
| Gsh | 128 | Gaultheria shallon | Salal | #1 pot, 40cm o.c. |
| Ma | 128 | Mahonia aquifolium | Oregon Grape | #2 pot |
| Mar | 128 | Mahonia repens | Prostrate Oregon Grape | #1 pot |
| Sa | 128 | Symphoricarpos alba | Snowberry | #1 pot |

## PLANTING LEGEND

NATIVE SHRUB PLANTINGS
Sword Fern
Snowberry
Evergreen Huckleberry
Salal

RAIN GARDEN PLANTINGS
Soft Common Rush
Hardhack
Slough Sedge
Dwarf Arctic Blue Leaf Willow
Red-twig Dogwood
Dwarf Red-twigged Dogwood

URBAN AGRICULTURE ZONE
Plantings to be designed & managed by Community Partner, Volunteers and Residents.

ALLOTMENT GARDEN BOX

GREENWAY NATIVE PLANTINGS
Snowberry
Oregon Grape
Salal
Prostrate Oregon Grape
One species per bed

HERBS & POLLINATOR PLANTINGS
Purple Coneflower
White Spike Lavandin
New England Aster
Black-Eyed Susan
May Night Salvia
Snow Pavement Rose
Mexican Feathergrass
Feather Reed Grass
Blueberry
Rosemary
Culinary Sage
Garden Oregano

SHADY NATIVE & EDIBLE PLANTINGS
Salal
Gooseberry
Sword Fern
Hardhack
Woodland Strawberry
Mock Orange
Evergreen Huckleberry
Redwood Sorrel
Inside-out Flower

SCREENING HEDGE
Pacific Wax Myrtle

LAWN AREA

**BOULEVARD PLANTING NOTES**

1. Boulevard trees have been placed to avoid existing and proposed infrastructure. Trees planted within 1m of an existing underground municipal service will have a root barrier installed between the root ball and the existing infrastructure.
2. Boulevard trees will be place a minimum of 1.5m from an above ground municipal service such as fire hydrant, streetlight or driveway.
3. Final selection and placement of boulevard trees to be determined through consultation with municipal parks staff.
4. Irrigation to be installed as per Municipal Specifications, for all boulevard planting areas (unless otherwise indicated).
5. Design/build drawings for boulevard irrigation to be submitted to Landscape Architect in PDF and .dwg formats, at least two weeks prior to commencement of irrigation installation and will be reviewed by municipal staff.
6. Boulevard irrigation point of connection to be 19 mm service from existing water connection on Grant Street, refer to Civil drawings for location. Separate water meter and timer/controller, to be provided at point of connection. Timer/controller for boulevard areas must be readily accessible to municipal staff.
7. Boulevard irrigation to be inspected as per municipal specification by municipal staff. Boulevard tree irrigation system will be maintained and operated by municipality, after it is inspected and approved by municipal staff.

**GENERAL PLANTING NOTE**

1. Plant quantities and species may change between issuance of DP and Construction due to plant availability and design changes.

**ON-SLAB TREE PLANTING NOTES**

1. For on-slab landscape and rain planter installations, a root barrier will be installed to protect exposed water proof membranes. A dimple board (drain mat) will be installed over the root barrier in most applications.
2. Parkade walls and foundation walls will be protected with a dimple board (drain mat) to convey water to the perimeter drain and protect wall from roots.
3. A root barrier will be installed between the tree roots and perimeter drain, to minimize tree root interference with the drain, where the follow conditions exist in on-grade planting areas: a)where trees less than 8m tall are located closer than 2m from a parkade or foundation wall; b) where trees more than 8m tall are located closer than 3m from a parkade or foundation wall; and c) where perimeter drains are less than 2m deep.

NOT FOR CONSTRUCTION

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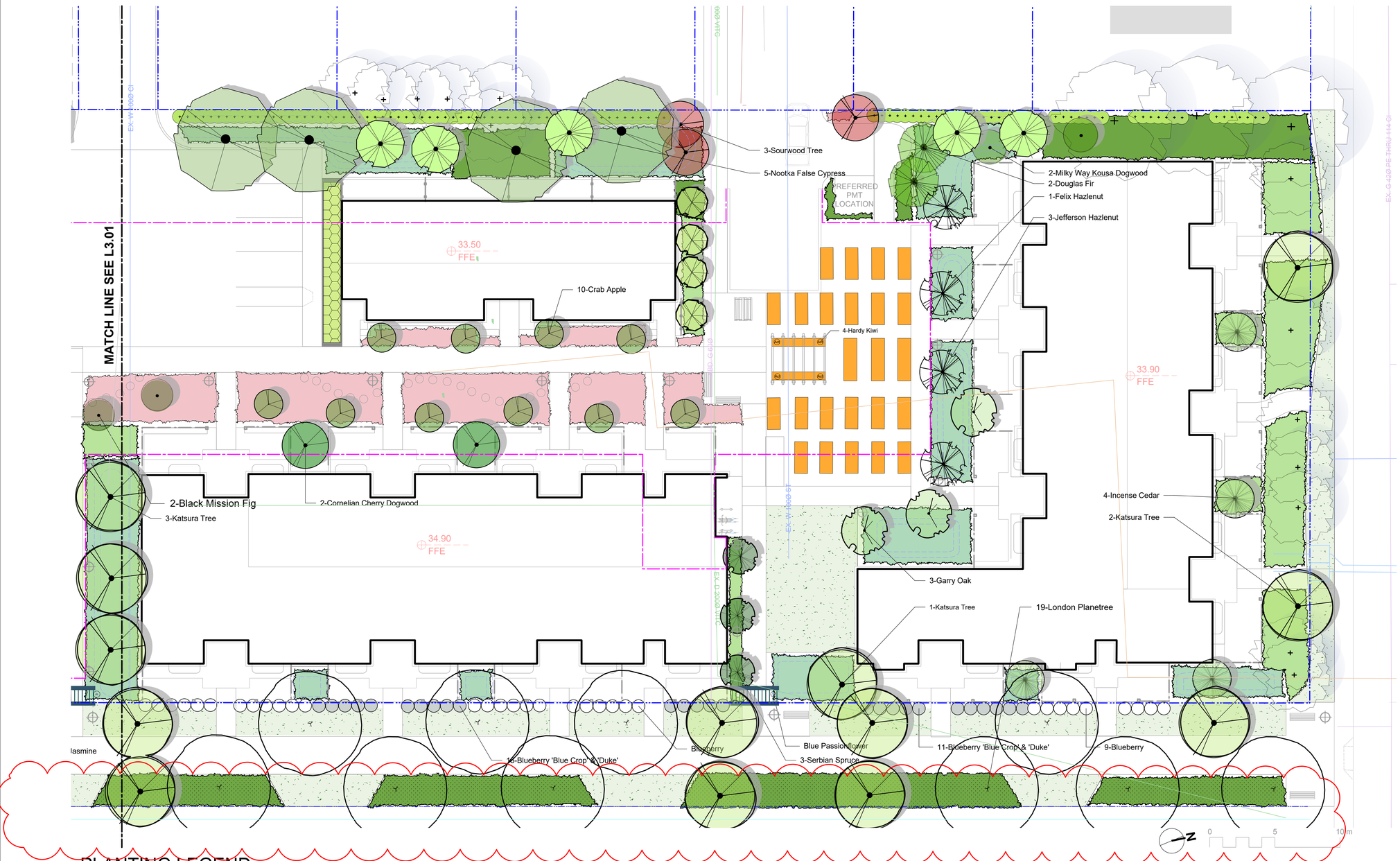
| revison no. | sheet no. |
| 6 | **L3.01** |




## BOULEVARD PLANTING NOTES

1. Boulevard trees have been placed to avoid existing and proposed infrastructure. Trees planted within 1m of an existing underground municipal service will have a root barrier installed between the root ball and the existing infrastructure.
2. Boulevard trees will be place a minimum of 1.5m from an above ground municipal service such as fire hydrant, streetlight or driveway.
3. Boulevard tree species have been picked from the municipality's list of recommended boulevard trees or have been selected due their site-adapted qualities. Final selection of boulevard trees to be determined through consultation with municipal parks staff.
4. Irrigation to be installed as per Municipal Specifications, for all boulevard planting areas (unless otherwise indicated).
5. Design/build drawings for boulevard irrigation to be submitted to Landscape Architect in PDF and .dwg formats, at least two weeks prior to commencement of irrigation installation and will be reviewed by municipal staff.
6. Boulevard irrigation point of connection to be 19 mm service, refer to Civil drawings for location. Separate water meter and timer/controller, to be provided at point of connection. Timer/controller for boulevard areas must be readily accessible to municipal staff.
7. Boulevard irrigation to be inspected as per municipal specification by municipal staff. Boulevard tree irrigation system will be maintained and operated by municipality, after it is inspected and approved by municipal staff.

## GENERAL PLANTING NOTE

1. Plant quantities and species may change between issuance of DP and Construction due to plant availability and design changes.

## ON-SLAB TREE PLANTING NOTES

1. For on-slab landscape and rain planter installations, a root barrier will be installed to protect exposed water proof membranes. A dimple board (drain mat) will be installed over the root barrier in most applications.
2. Parkade walls and foundation walls will be protected with a dimple board (drain mat) to convey water to the perimeter drain and protect wall from roots.
3. A root barrier will be installed between the tree roots and perimeter drain, to minimize tree root interference with the drain, where the follow conditions exist in on-grade planting areas: a)where trees less than 8m tall are located closer than 2m from a parkade or foundation wall; b) where trees more than 8m tall are located closer than 3m from a parkade or foundation wall; and c) where perimeter drains are less than 2m deep.

# PLANTING LEGEND

**NATIVE SHRUB PLANTINGS**
Sword Fern
Snowberry
Evergreen Huckleberry
Salal

**RAIN GARDEN PLANTINGS**
Soft Common Rush
Hardhack
Slough Sedge
Dwarf Arctic Blue Leaf Willow
Red-twig Dogwood
Dwarf Red-twigged Dogwood

**URBAN AGRICULTURE ZONE**
Plantings to be designed & managed by Community Partner, Volunteers and Residents.

**ALLOTMENT GARDEN BOX**

**GREENWAY NATIVE PLANTINGS**
Snowberry
Oregon Grape
Salal
Prostrate Oregon Grape
One species per bed

**HERBS & POLLINATOR PLANTINGS**
Purple Coneflower
White Spike Lavandin
New England Aster
Black-Eyed Susan
May Night Salvia
Snow Pavement Rose
Mexican Feathergrass
Feather Reed Grass
Blueberry
Rosemary
Culinary Sage
Garden Oregano

**SHADY NATIVE & EDIBLE PLANTINGS**
Salal
Gooseberry
Sword Fern
Hardhack
Woodland Strawberry
Mock Orange
Evergreen Huckleberry
Redwood Sorrel
Inside-out Flower

**SCREENING HEDGE**
Pacific Wax Myrtle

**LAWN AREA**

PLANT LIST SEE L3.01

NOT FOR CONSTRUCTION

| rev no | description | date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| 6 | RZ/DP Revision | 20.04.03 |
| 5 | For COTW | 20.02.04 |
| 4 | Issued for ADP | 20.01.15 |
| 2 | RZ/DP Revision | 19.12.16 |
| 1 | Rezoning/DP | 19.09.26 |


Murdoch de Greeff INC
Landscape Planning & Design
200 - 524 Culduthel Road
Victoria, BC V8Z 1G1
Phone: 250.412-2891
Fax: 250.412-2892


client
**CRD Housing Corporation**
631 Fisgard Ave.
Victoria, BC

project
Caledonia Redevelopment
Caledonia Ave.
Victoria, BC

sheet title
**Planting Plan North**

| | |
|---|---|
| project no. | 119.18 |
| scale | 1: 150 @ 24"x36" |
| drawn by | TB |
| checked by | PdG |
| revison no. | 6 |
| sheet no. | **L3.02** |


1 Section at Pedestrian Allee and Townhouses
Scale: 1:50


2 Section at Pedestrian Walkway
Scale: 1:50

NOT FOR CONSTRUCTION

| | | |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| 6 | RZ/DP Revision | 20.04.03 |
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client
**CRD Housing Corporation**
631 Fisgard Ave.
Victoria, BC

project
Caledonia Redevelopment
Caledonia Ave.
Victoria, BC

sheet title
**Landscape Sections**

| | |
|---|---|
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| drawn by | TB |
| checked by | PdG |
| revison no. | sheet no. |
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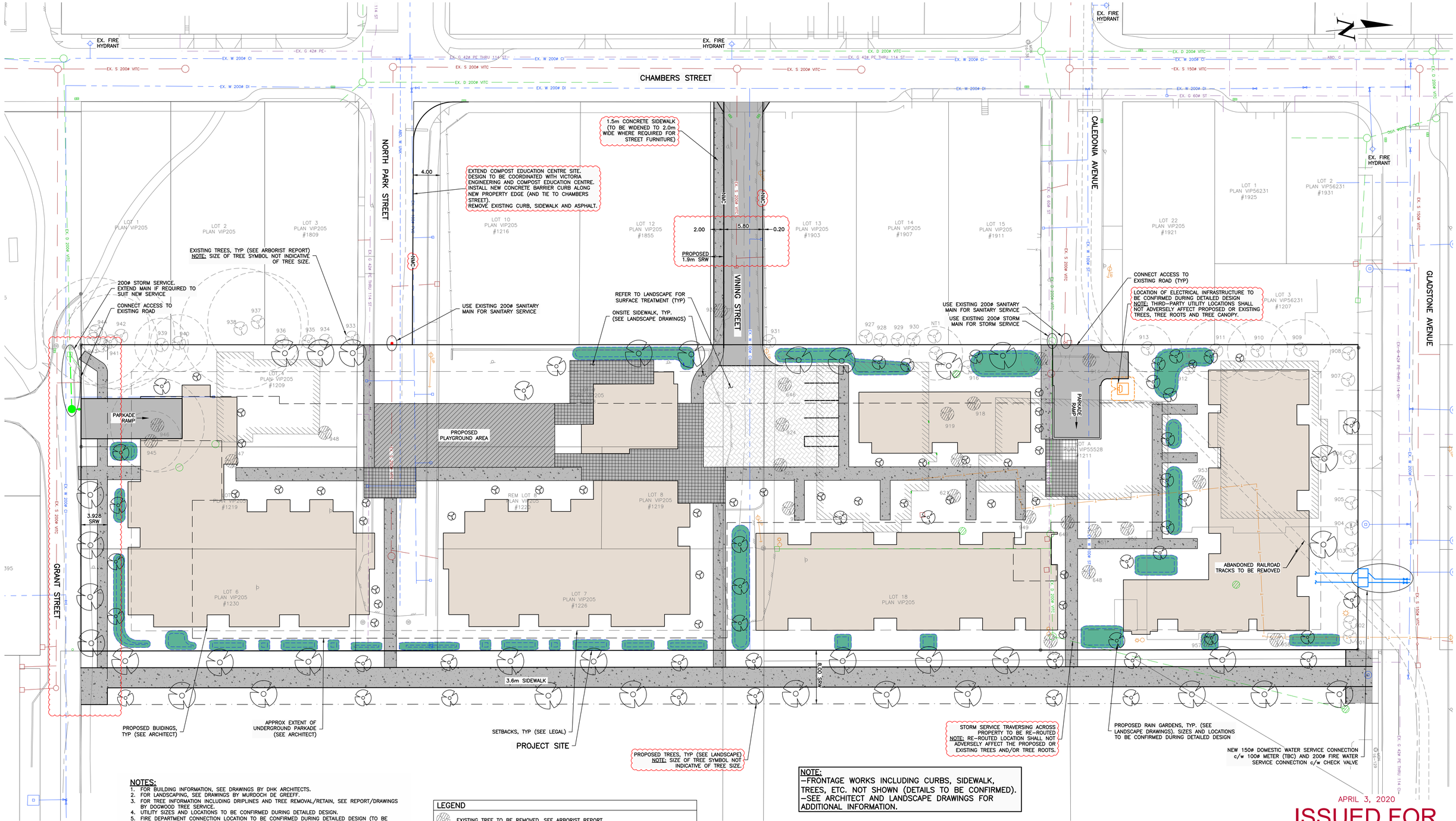


PLAN
1:250

NOTES:
1. FOR BUILDING INFORMATION, SEE DRAWINGS BY DHK ARCHITECTS.
2. FOR LANDSCAPING, SEE DRAWINGS BY MURDOCH DE GREEFF.
3. FOR TREE INFORMATION INCLUDING DRIPLINES AND TREE REMOVAL/RETAIN, SEE REPORT/DRAWINGS BY DOGWOOD TREE SERVICE.
4. UTILITY SIZES AND LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN.
5. FIRE DEPARTMENT CONNECTION LOCATION TO BE CONFIRMED DURING DETAILED DESIGN (TO BE WITHIN 45m OF FIRE HYDRANT.
6. ALL EXISTING ON-SITE BUILDINGS, DRIVEWAYS, PARKING LOTS, RAMPS, ETC. TO BE REMOVED AND DISPOSED OFF-SITE (NOT SHOWN FOR CLARITY).
7. EXISTING STORM, SANITARY AND WATER SERVICES TO BE CAPPED AND ABANDONED.
8. BASE INFORMATION SHOWN IS PRODUCED FROM A COMBINATION OF FIELD SURVEY AND GIS INFORMATION PROVIDED BY THE CITY OF VICTORIA. ALL INFORMATION TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION (INCLUDING COMPLETING A BCONECALL).

LEGEND
- EXISTING TREE TO BE REMOVED. SEE ARBORIST REPORT.
- PROPOSED TREE. SEE LANDSCAPE.

NOTE: SIZE OF TREE SYMBOL (EXISTING AND PROPOSED) NOT INDICATIVE OF TREE SIZE.

NOTE:
-FRONTAGE WORKS INCLUDING CURBS, SIDEWALK, TREES, ETC. NOT SHOWN (DETAILS TO BE CONFIRMED).
-SEE ARCHITECT AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.

SEE ARCHITECTURAL AND LANDSCAPING, DRAWINGS FOR ADDITIONAL INFORMATION

LEGAL PLAN & TOPOGRAPHIC SURVEY PROVIDED BY MCELHANNEY LTD.

APRIL 3, 2020

# ISSUED FOR REZONING

1:500 0 10 30m



| NO. | DATE | BY | ISSUED |
|---|---|---|---|

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|

McElhanney
500 - 3960 QUADRA STREET
VICTORIA, BC V8X 4A3 PH (250) 370-9221

SEAL

PROJECT:
CAPITAL REGION HOUSING CORPORATION
CALEDONIA REDEVELOPMENT

TITLE:
CONCEPTUAL SERVICING

SCALE
HORIZ: 1:500 VERT:

PROJECT NO. 19-028 | ISSUED/REVISION

APPROVING AUTHORITY FILE NO.

DRAWING NO.
19-028-REZONING

CRHC
The Capital Region's Housing Corporation

Capital Region Housing Corporation
631 Fisgard Street
Victoria, BC, Canada V8W 1R7

T 250.388.6422
F 250.361.4970
www.crd.bc.ca/housing

September 26, 2019

Mayor and Council
City of Victoria
1 Centennial Square
Victoria BC, V8W 1P6

Dear Mayor Helps and Council,

**Re: Proposed Caledonia Redevelopment**

The proposed development site consists of assembling nine under-utilized properties. The assembled parcel will span from Gladstone Avenue to Grant Street. The property at 1211 Gladstone Avenue currently holds three attached townhouse buildings with 18 units. The property at 1209 North Park Street currently holds a two storey 4 unit house. The remaining seven properties are vacant brownfield lots. All nine properties will be consolidated into a single parcel for the purpose of this affordable housing project. The consolidated lot offers an ideal opportunity to replace of the existing 22 units on the site with 154 units.

The proposed development abuts single family homes, Haegert Park and the Compost Education Centre to the west, Spring Ridge Commons, single family homes and the Fernwood Community Centre to the north, the Victoria High School track to the east, and apartment buildings to the south.

The proposed site layout includes five separate buildings, consisting of three 3-3½ storey attached townhouses, one 5 storey apartment building, and one 4 storey apartment building. The townhouses are positioned at the north end of site, adjacent to single family lots. The apartment buildings are positioned towards the south end of site, adjacent to the Vic High track, Haegert Park and neighbouring apartments along Grant Street. Massing was carefully considered to maximize the use of the site without disrupting the character of the neighbourhood. The sole 5 storey building is located between North Park Street and Vining Street. This section of site does not border residential properties. The 4 storey apartment building is located at the south section of site. At the top floor, the building steps back on all sides to reduce the massing effect, as seen from street level.

The School District 61 (SD61), BC Housing and the City of Victoria have signed a letter of intent and letters of authorization to facilitate with rezoning application and subsequent land swap. The land swap and lot consolidation are subject to successfully rezoning the property. The final agreement will see the SD61 as the sole owner of the consolidated lot and the Capital Region Housing Corporation signing a new 60 year lease agreement.

CRHC
The Capital Region's Housing Corporation

Capital Region Housing Corporation
631 Fisgard Street
Victoria, BC, Canada V8W 1R7

T 250.388.6422
F 250.361.4970
www.crd.bc.ca/housing

The consolidated lot will require rezoning form the current R-K and R-2 zones to a site specific zone. The proposal increases the allowable density from an FSR of up to 0.6:1, allowing for up to 78 units, to 1.29 which would allow for the proposed 154 units.

The request for additional density on this site is warranted in view the significant need for affordable housing and in response to the City's Strategic Objectives. The proposed development will fully respect the City's policies and guidelines. Furthermore, the project will achieve the Energy Performance Benchmark as set out in B.C.'s Energy Step Code and in keeping with City of Victoria's energy reduction targets. However, the proposal requires an Official Community Plan amendment to change the land use designations from Traditional Residential and Parks to Urban Residential.

On-site parking will be limited to approximately 109 underground stalls. This parking arrangement satisfies the City Schedule "C" bylaws for affordable housing projects. There will be two separate underground parkade entrances, accessed from Caledonia Avenue and Grant Street.

Considerable design changes have been integrated into the current design as a result of the feedback received from existing tenants and community members. Highlights include eliminating an apartment building and replacing it with an additional townhouses block, increasing the connectivity of the site, and changing the scale of buildings.

Executing on the need to address a very low vacancy rate across the City, this application meets several goals and initiatives set out by the City of Victoria, SD61, BC Housing, and CRHC. This proposal is compelling and supportable as it increases the supply of affordable housing, is compatible with existing land use in the immediate area, and is centrally located to a number of key amenities.

Sincerely,

Paul Kitson
Manager, Development, Capital Region Housing Corporation

Attachment: E

# CALEDONIA

## REZONING APPLICATION

September 2019

# TABLE OF CONTENTS

# 01 PROJECT INTRODUCTION

# 1.1 - LETTER TO COUNCIL

September 17, 2019

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City of Victoria
1 Centennial Square
Victoria BC, V8W 1P6
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Sincerely,

Paul Kitson
Manager, Development, Capital Region Housing Corporation

# 1.2 - NEED & DEMAND

**REGIONAL DEMOGRAPHICS**

**RESPONDING TO ONGOING HOUSING AFFORDABILITY CHALLENGES**

**Different Households Experience Housing Affordability Challenges in Different Ways**
Housing affordability is linked to both a household's ability to pay for their housing and to find housing in suitable condition and size at an affordable price. As shown in Figure 3 of the 2018 Regional Housing Affordability Strategy, of the 20,870 households in core housing need in 2011:

**Families accounted for approximately 40% of households in core housing need:**
Approximately 8,330 (40%) were family households including 3,935 lone parent family households. Of these families, approximately 5,020 (66%) were renters.

**Single person households accounted for approximately 54% of households in core housing need:**
Of these single person or nonfamily households (both single senior and non-senior) the majority (75%) were renters.

**Older generations and households living on a fixed income can face significant housing challenges:**
Approximately (45%) were senior or near senior households (55 and older), the majority of which were renters.

**People with disabilities are more likely to be in core housing need:**
Almost half (10,710) reported that they had a health and activity limitation with the majority of these households (almost 70%) being renters.

**Indigenous Peoples:**
Indigenous peoples face disproportionately higher levels of homelessness in the region, with nearly 33% claiming Indigenous ancestry (Point in Time Count, 2016). The Canadian Human Rights Commission also reports that 20.4% of Canada's Indigenous peoples are in core housing need while only 12.4% of non-Indigenous populations face the same challenges. Indigenous peoples are also more likely to report discrimination in access to all forms of housing.

**Newcomers to Canada frequently experience housing challenges:**
Approximately 1 in 5 people experiencing core housing need were immigrants or recent immigrants who had moved to Canada within the previous 10 years.

**Ongoing population and household growth pressures:**
The capital region has grown by more than 38,000 individuals (17,000 households) over the past 10 years and grew at a faster rate than the provincial average over the past five years.

**DIFFICULT RENTAL MARKET CONDITIONS:**

The region has an overall vacancy rate of 1.2 per cent including a vacancy rate of zero for 3-bedroom units which creates upward pressure on rents, fewer housing choices for low to moderate income households and a worsening of the overall affordability profile.

Even with the strong rental housing starts across the capital region in recent years, the creation of new purpose-built rental housing stock is extremely vulnerable to external market forces including changes in interest rates and other factors.

While local governments can help to enable and encourage new rental housing supply they do not have the financial resources or regulatory authority needed to address affordability challenges on their own. As a result, there is the need for all levels of government to work together to address ongoing housing affordability challenges including the specific needs of households with low to moderate incomes.

The Regional Housing Affordability Strategy identified that the region would require over 34,000 units of rental housing in the next 20 years. Half of them will be for low to moderate income households.

**Table 5: Rental Targets & Demand Estimates by Income Ranges – 2016-2038**
*Source: Calculated based on the 2015 Median Household Income for the capital region reported by Statistics Canada in the 2016 Census*

| Income Range | Threshold (% of AMI) | Annual Income | Affordable Monthly Rental Target | 2016 Income Distribution | Unit Demand Estimate |
|---|---|---|---|---|---|
| VERY LOW | < 30% | Less than $20,000 | Less than $500 | 11% | 4,564 |
| LOW | 30% to 50% | $20,000 to $35,000 | $500 to $875 | 13% | 5,124 |
| LOW TO MODERATE | 50% to 80% | $35,000 to $55,000 | $875 to $1,375 | 15% | 7,419 |
| MODERATE AND ABOVE | Above 80% | Over $55,000 | More than $1,375 | 61% | 17,060 |
| TOTAL ESTIMATED RENTAL DEMAND | | | | 100% | 34,167 |

**The Caledonia redevelopment is an example of multiple levels of government, across ministries, partnering to address the need for affordable housing in our community.**

[1]Capital Regional District, *Regional Housing Affordability Strategy 2018* https://www.crd.bc.ca/docs/default-source/housing-pdf/2234-rhas_v20_pgs_sml.pdf?sfvrsn=61711cca_8
[2]Capital Regional District, Regional Housing Affordability Strategy 2018 https://www.crd.bc.ca/docs/default-source/housing-pdf/2234-rhas_v20_pgs_sml.pdf?sfvrsn=61711cca_8

# 1.3 - STRATEGIC OBJECTIVES

**CITY OF VICTORIA – STRATEGIC PLAN (2019 – 2022)**

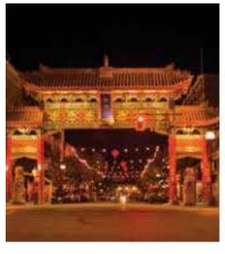
**Affordable Housing**
- Increase in rental apartment and housing vacancy rate
- Neighbourhoods are diverse, accessible and affordable across all ages, incomes and abilities
- Decrease in number of people spending more than 30 per cent of income on housing

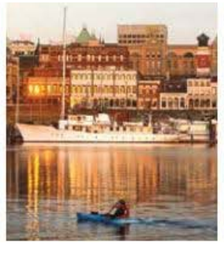
**Prosperity and Economic Inclusion**
- People who work in Victoria can afford to live in Victoria
- Health, Well-Being and a Welcoming City
- Increase sense of belonging and participation in civic life among all demographic groups
- Increase in number of people who feel safe and part of the community

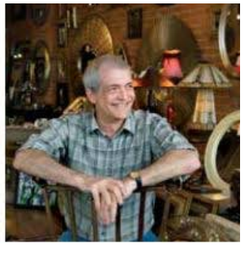
**Climate Leadership and Environmental Stewardship**
- Citizens and businesses are empowered and inspired to take meaningful action to reduce carbon pollution
- There are optimized local compost solutions in place for both food and garden waste
- Increase in tree canopy on public and private property

**Sustainable Transportation**
- Increase in residents using public transit, walking and cycling
- Decrease in transportation-related GHG emissions
- Decrease in annual household spending on transportation
- Increase in public and private EV charging stations

**Strong, Liveable Neighbourhoods**
- Increase in number of opportunities for engagement with neighbourhoods
- People feel listened to and consulted about what makes a neighbourhood distinctive
- People feel that their neighbourhood is safe and walkable
- Increase number of people walking compared to other modes of getting around within neighbourhoods
- All neighbourhoods are thriving, distinctive, appealing, viable and have amenities







**PROJECT ADDRESSES SEVERAL OCP PLAN OBJECTIVES SUCH AS:**
- Housing: Ensure that residents have access to appropriate, secure, affordable housing
- Climate Change and Energy: Ensure new buildings are energy efficient and produce few greenhouse gas emissions
- Ensures residents can enjoy convenient access to basic needs, community parks and amenities
- Community Capacity Building: Strengthen the natural, human, economic, social and cultural resources of Victoria to build, develop and shape a resilient community.
- Engaged Citizens: Actively engage citizens and community stakeholders and value and respect their contributions
- Strong Local Communities: Support and enhance Victoria's vibrant character and unique sense of place
- Be responsive to Victoria's geographic context and existing pattern of development to create memorable places.
- That the built environment is beautified and softened through natural features in the public realm.
- Social vibrancy is fostered and strengthened through human scale design of buildings, streetscapes and public spaces.
- Vitality and Livability
- Consistent with OCP Policy and RGS Strategic Direction for Compact Urban Settlements.

# 1.3 - STRATEGIC OBJECTIVES, CONTINUED

## OFFICIAL COMMUNITY PLAN

**OCP Amendment:**

- From traditional and public facilities to Urban Residential
- Proposal meets several OCP objectives

**OCP 6.1.6**

- Urban residential generally located within 400m of large urban village

**OCP 6.23.2**

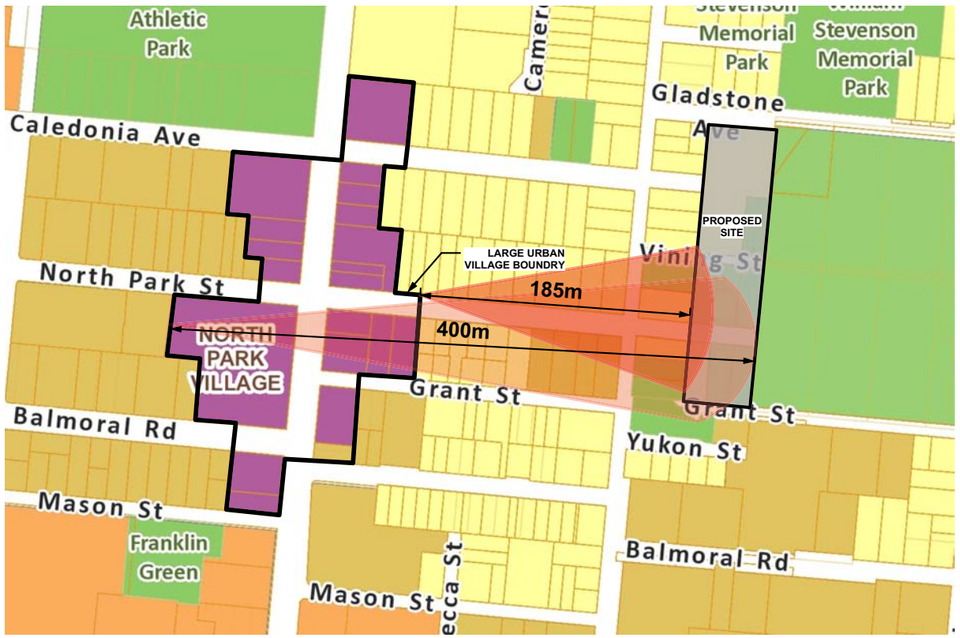
- Generally supports new developments within 200m of large urban villages

**Change in Zoning:**

- From R-K, R-2 to site specific
- from FSR (0.6) to (1.29)

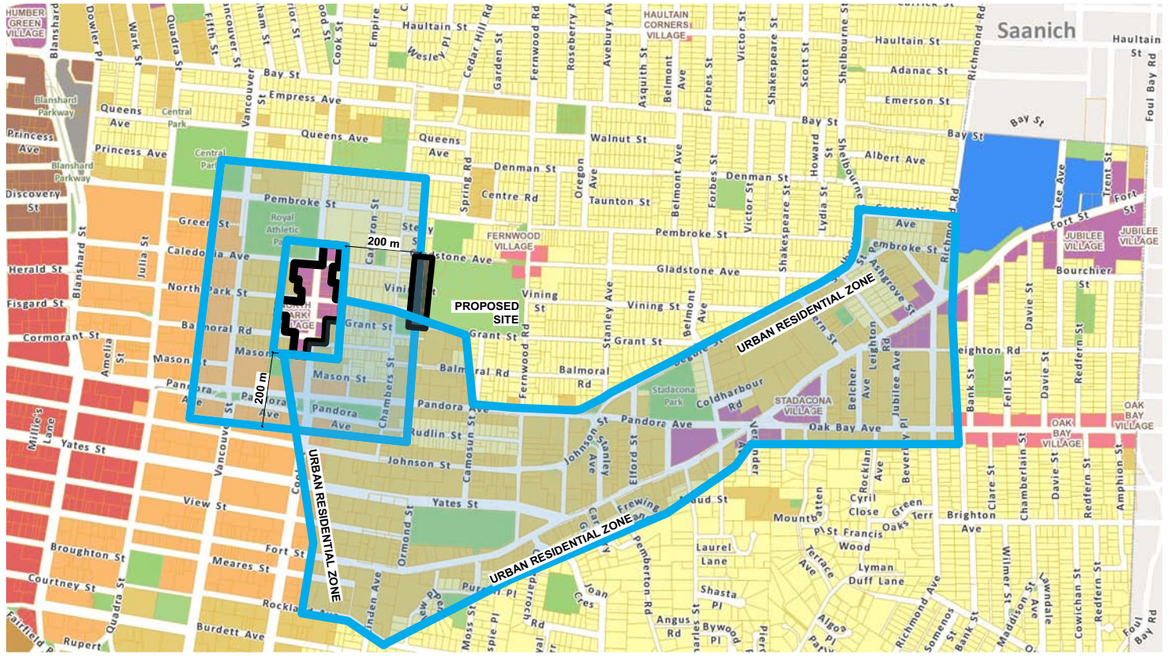
**OCP Amendment:**

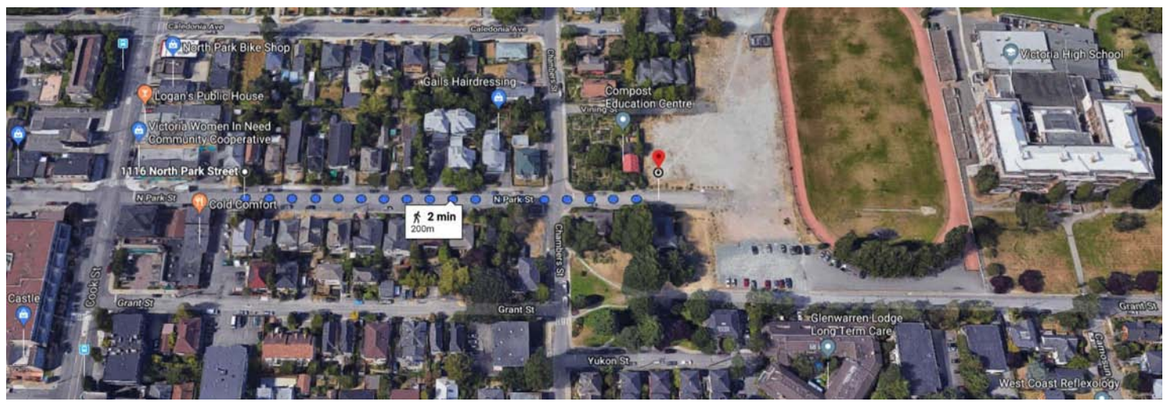
- From traditional and public facilities to urban residential
- Proposal meets several OCP objectives


## URBAN CONTEXT

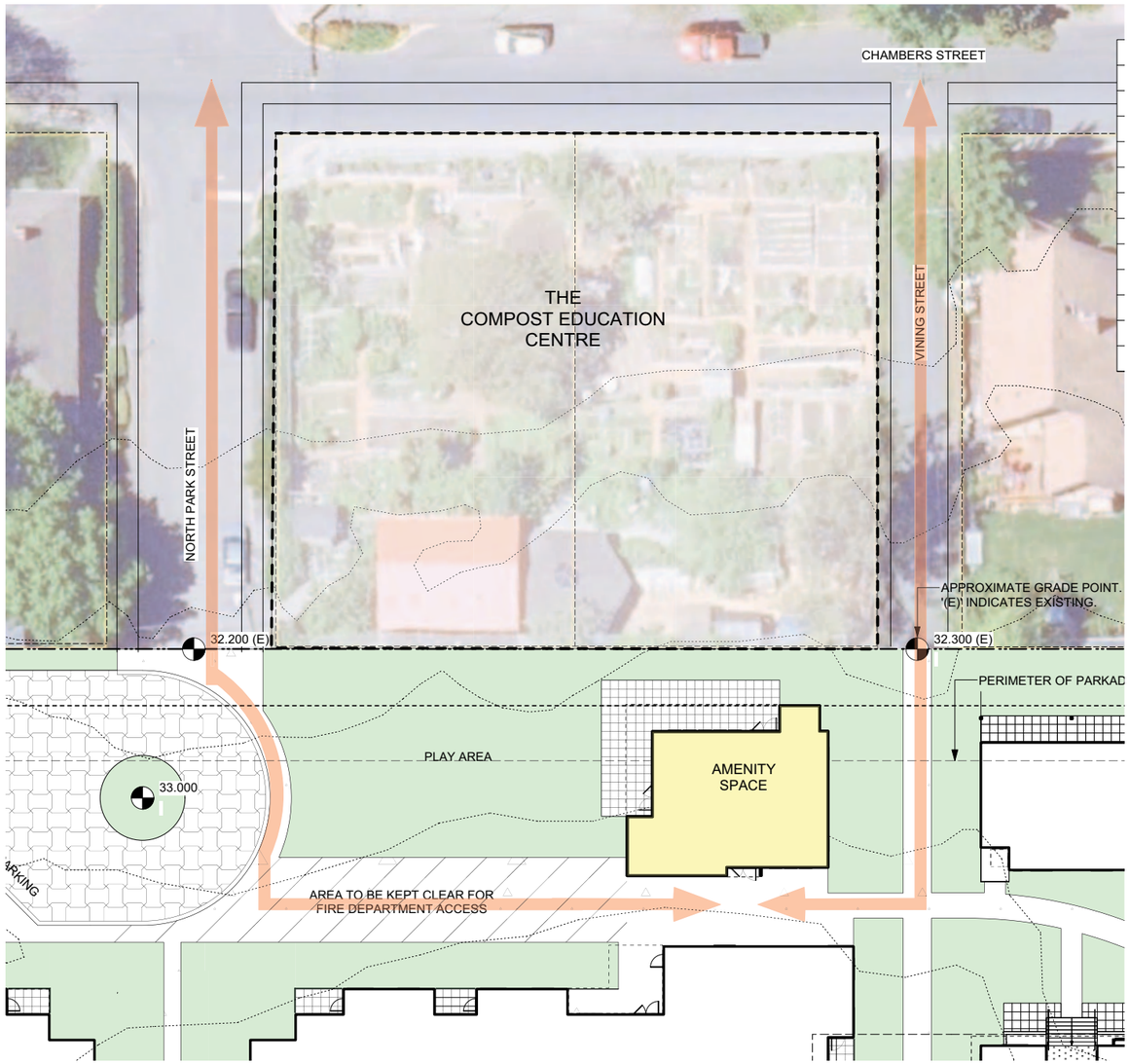
- The proposed site falls into area of urban residential allowed by the City of Victoria guidelines.
- Urban residential from Fort Street corridors transitions into the south portion of the allowable North Park Village urban residential zone
- The site borders several R3-2 properties to the south and west.



# 1.4 - PARTNERSHIPS

**PROXIMITY TO PARTNERS**




**COMMUNITY PARTNERS**

**Fernwood NRG** is a social enterprising non-profit organization which has for over 30 years been committed to families, the community, and the environment. Some of the programs they offer include childcare, food security, recreation, family programs and affordable housing. Additionally, Fernwood NRG is known for hosting FernFest, managing the Good Food Box program and operating the Fernwood Community Center, amongst other community based initiatives.

During several public consultation sessions, Fernwood residents have proposed a shared amenity space as part of the Caledonia Redevelopment. The CRHC has since designed a centralized 1450 ft² amenity room with a 14 ft ceiling.  This amenity space has been specifically sized to suit the needs of the Fernwood NRG and proposed tenants. The CRHC is in discussions with the NRG which see the NRG operating the space for community use in the daytime and tenant in the evening and on weekends. This will add much needed community space within the Fernwood Community.

**The Compost Education Centre (CEC)** is a non-profit organization which provides composting, ecological gardening and conservation education to residents of the Capital Regional District (CRD). The CEC completes food system education by teaching children, youths and adults about growing good soil, in order to support healthful ecosystems. The Compost Education Centre is situated directly adjacent to the project lands and is open to the public as a retail and resource space, learning lab and demonstration site.

The CRHC is in discussion with the CEC which would see CEC overseeing the programmatic components of the Caledonia redevelopment urban agriculture space and tenant allotment gardens. This agreement will also see CEC ensure the physical and aesthetic maintenance of the plants throughout the development.

**Partner for Accessible Suites:** The CRHC is in discussion with the Independent Living Housing Society (ILHS) to supply up to fifteen accessible units to be operated by the Society. The project has also been designed to take into consideration the goals of various non-profits to support adults with diverse abilities in order to live independently in a variety of accessible settings. Some of these accessible suites have multiple bedrooms to allow live-in or family caretakers.

# 1.4 - PARTNERSHIPS, CONTINUED

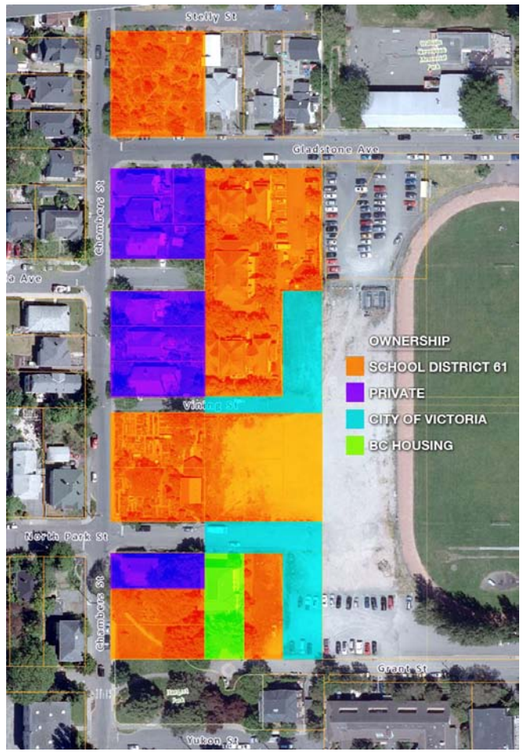
**LAND ASSEMBLY – CITY OF VICTORIA, SD61, BC HOUSING, CRHC**

In 1992, the School District 61 (SD61) entered into a 60-year lease agreement with CRHC for the 18 unit Caledonia townhouse complex located at 1211 Gladstone Ave. CRHC has 32 years remaining on the 60 year lease agreement, as well as 10 years remaining on the current operating agreement. The property is in critical need of immediate repair, which has prompted this redevelopment proposal.

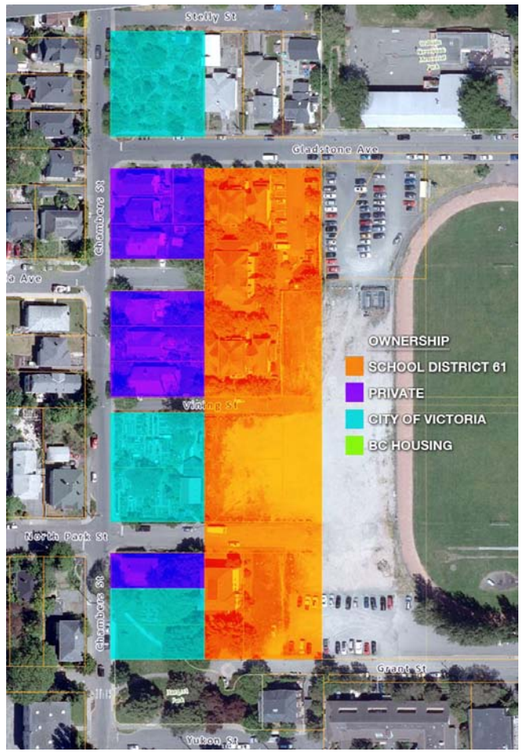
The CRHC is currently working with SD61, the City of Victoria and BC Housing to consolidate all the lots between Gladstone Avenue and Grant Street, spanning the width of the 1211 Gladstone avenue property to increase the units from 18 to 154 units. The current land owners are SD61, the City of Victoria and BC Housing. The proposed land agreement between the City of Victoria and School District 61 would see the City transfer four vacant city lots within the housing project area in exchange for nearby School District 61 properties that currently support community gardens, the Compost Education Centre as well as the School District 61 property adjoining Haegert Park. Additionally, the land agreement would see BC Housing transferring one lot to SD61.

SD61 will be the primary owner of all the lots, while CRHC will lease the consolidated property under a 60 year lease agreement. Currently, there is a Letter of Intent (LoI) between the SD61 and the City of Victoria outlining the intent to enter into a land transfer. The project is subject to the parties completing the necessary agreements for land dispositions, SD61's regulatory approvals related to transferring land, which includes public consultation, as well as CRHC successfully completing the necessary rezoning process.

**OWNERSHIP OF LAND PARCELS**
**BEFORE**




**OWNERSHIP OF LAND PARCELS**
**AFTER**



# 1.5 - PROJECT OVERVIEW

| PROJECT INFORMATION TABLE | |
|---|---|
| Zone (existing) | - |
| Proposed zone or site specific zone<br>If unsure, state “new zone” | NEW ZONE |
| Site area ($m^2$) | 8681.1$m^2$ |
| Total floor area ($m^2$) | 3325 $m^2$ |
| Commercial floor area ($m^2$) | N/A |
| Floor space ratio | 1.29 : 1 |
| Site coverage (%) | 41% |
| Open site space (%) | 49% |
| Height of building (m) | APT.1: 12.8m, APT.2: 14.96m, TH.1: 12.2m, TH. 2: 11.7m, TH.3: 10.2m |
| Number of storeys | APT.1: 4 STOREYS, APT.2: 5 STOREYS, TH.1, 2 & 3: 3 STOREYS |
| Parking stalls (number) on site | 109 |
| Bicycle parking number (Class 1 and Class 2) | 220 |
| **Building Setbacks (m)** | |
| Front yard | - |
| Rear yard | - |
| Side yard (indicate which side) | - |
| Side yard (indicate which side) | - |
| Combined side yards | - |
| **Residential Use Details** | |
| Total number of units | 93 |
| Unit type, e.g., 1 bedroom | STUDIO , 1 BEDROOM, 2 BEDROOM & 3 BEDROOM |
| Ground-orientated units | |
| Minimum unit floor area ($m^2$) | 34 $m^2$ (STUDIO) |
| Total residential floor area ($m^2$) | 9810.4 $m^2$ |

| CATEGORY | GREEN ITEMS |
|---|---|
| **Rating System** | ○ All new buildings will meet Step 3 of the BC Energy Step Code |
| **Site Selection & Design** | ○ The proposal is to rebuild and densify an existing affordable housing project within an already densely populated centralized urban location with strong pre-existing infrastructure and amenity.<br>○ Rather than building on a greenfield site this project is situated on the site of the former Fairey Tech building, now demolished and left unimproved. |
| **Innovation & Design** | ○ Hard surfaces have been designed to fulfill multiple functions, so that hardscape can be minimized and so that pedestrian and cyclist-friendly spaces take priority over vehicular zones.<br>○ The prime example of this innovation is the woonerf plaza area, which allows moving trucks, fire trucks and handi darts to access the site while providing a pedestrian-friendly feel. |
| **Transportation** | ○ The densification of this centralized site in Fernwood means that a higher number of residents will be within close walking distance to well-established neighbourhood services and amenities, including the North Park Neighbourhood and Downtown Core. Personal vehicle usage will be low relative to walking and transit usage.<br>○ The underground parkade will have dedicated areas for bicycle and scooter parking.<br>○ Additional electrical circuit capacity and conduit rough-in will provide scalability for electrical vehicle charging stations to keep pace with rising demand. |
| **Energy Efficiency** | ○ Step 3 of the BC Energy Step Code<br>○ Energy modeling will be conducted at multiple stages during the pre-construction stage to validate compliance.<br>○ Air tightnedd testing will be conducted prior to occupancy to verify that building performance meets modeled criteria.<br>○ All ventilation is mechanical rather than passive, with heat recovery exchangers at every exhaust vent. This ensures all makeup air is pre-conditioned and reheating energy loads are minimized.<br>○ The Heat Recovery Ventilators (HRV) system is decentralized into individual suites, reducing rooftop air handling equipment and providing an overall reduction in noise pollution. |
| **Renewable Energy** | ○ Multifamily buildings designed to step 3, with all units either stacked or back-to-back or both minimizes heat loss and energy use and provides the most long-term sustainable form of housing. |
| **Water** | ○ All interior plumbing fixtures will be low water, low flow fixtures, including dual flush toilets (4.8LpF).<br>○ Water efficient (Enery Star) Clothes Washers will be specified (89 litres per load or less).<br>○ Hot water piping will be insultated and will run on a recirculating loops.<br>○ High efficiecy irrigation system will be customized for the site using Smart Timer Technology to tailor the irrigation flow to the present climatic conditions. |
| **Site Permeability** | ○ Stormwater runoff for this project will be managed on site as much as possible. Rain gardens have been included where there is space outside of the parkade footprint, and outside of the root zone of retained trees.<br>○ Roof runoff from the buildings will be directed to these rain gardens where feasible, where it will be slowed, treated and infiltrated.<br>○ Rain gardens will overflow to the Municipal storm water system during large rain events. |
| **Landscaping & Urban Forest** | ○ All trees with compromised health are being more than replaced with healthy new site-appropriate species.<br>○ New plants will be drought-tolerant, non-invasive indigenous species selected for quality of appearance and ease of maintenance. |
| **Urban Agriculture** | ○ Urban agriculture boxes are distributed throughout the property to both green the site and provide food security and recreation opportunities for residents. |

# 02 COMMUNITY FEEDBACK

# 2.1 - CALUC MEETING & OPEN HOUSE

**COMMENTS RECEIVED THROUGH PUBLIC CONSULTATION**

- Development too dense
- Five storey not appropriate for Fernwood
- Not just low income housing
- Too much / too little parking
- Where are all the kids going to go to school
- The development will increase the traffic on Chambers Street
- Include more urban gardening
- Include centralized play area and amenity room
- Design the south end of site with the same scale as the north end of site
- Fernwood needs more daycares
- Add more studios
- Add more greenspace
- Provide more 3 and 4 bedroom family units
- Incorporate the character, aesthetics and personality of Fernwood within the design

**Caledonia Design Changes between April 2nd & June 5th:**

1. Changed site layout to reduce the number of apartment buildings from 3 to 2
2. Re-positioned townhouses to face Gladstone, creating better frontage and reducing shadows on neighbouring properties to the west.
3. Included continuous internal pathways north-south and east-west.
4. Added a centralized amenity building, and playground.
5. Added a separate elevator for direct access to parkade from the townhouse buildings.
6. Eliminated the site entrance at North Park to create the new access point off Grant St.
7. Eliminated all long-term surface parking on the site.
8. Added accessible townhouse units and increased the number of accessible units on the site.
9. Increased the setback on the 5th storey of the apartment buildings to reduce the overall massing.
10. Hired a traffic consultant to study the issues on Chambers St, parking requirements and trips generated by the proposed development.

**Caledonia Design Changes between June 5th & June 26th:**

1. Changed landscape plans to include garden planter boxes, increased urban agriculture and unit paving woonerf plaza.
2. Adjusted the exterior building designs to have colour schemes more aligned with the surrounding areas.
3. Included more brick cladding on apartment buildings to match neighbourhood character.
4. Added variety of material finishing to the townhouses including hardie plank siding, board and batten and metal panel siding with black vinyl windows.

**Caledonia Design Changes After June 26th:**

1. Adjusted the unit mix to include more studios, in order to reduce the 5 storey apartment, bordering Grant St to a 4 storey apartment building. The four storey apartment building was also stepped back to create the illusion of a 3 storey building.
2. Added additional design elements and site furnishings that are representative of the artistic nature of Fernwood.
3. Relocated the Grant St parkade ramp from the courtyard to within the footprint of the building. This arrangement provides more usable space at grade and reduced vehicle/pedestrian interactions in the courtyard area. Relocating the parkade ramp also allowed for more tree retention adjacent to Haegert Park.
4. Provided additional floor space for the amenity building to meet requirements of potential user groups.
5. Included urban agriculture areas within the landscape design.
6. Added private outdoor space for all units.

# 2.2 - TENANT RELOCATION PLAN

Vulnerable tenants, those occupying rent-geared-to-income (RGI) units such as seniors, persons with disabilities, or those living on very low incomes are among the most affected by redevelopment or renovation. These tenants often require more assistance in the relocation process as there are fewer choices available to them. These individuals also tend to be longer-term residents, and the process of moving may be challenging for them. CRHC is committed to working with current tenants in developing individual relocation plans in order to reduce the impacts of displacement and preventing homelessness.

All tenants within Caledonia are Rent-Geared-to-Income Tenants. All efforts will be made to accommodate tenants in rent-geared-to-income (RGI) housing within the CRHC or with another social housing provider unless the tenant indicates that they would prefer to live with a private housing provider. Efforts will be made to support the tenant in their application for the RAP or SAFER rent supplement program. Additional support will be provided for special circumstances. Tenants will also have first option to move back into an RGI unit within the new building.

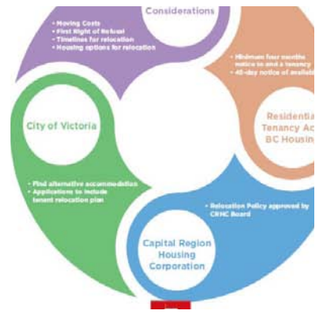
**CURRENT TENANT COMMUNICATION**
Monthly updates will be provided in writing, at the property, and through an online subscription informing the tenants of activities associated with the redevelopment.

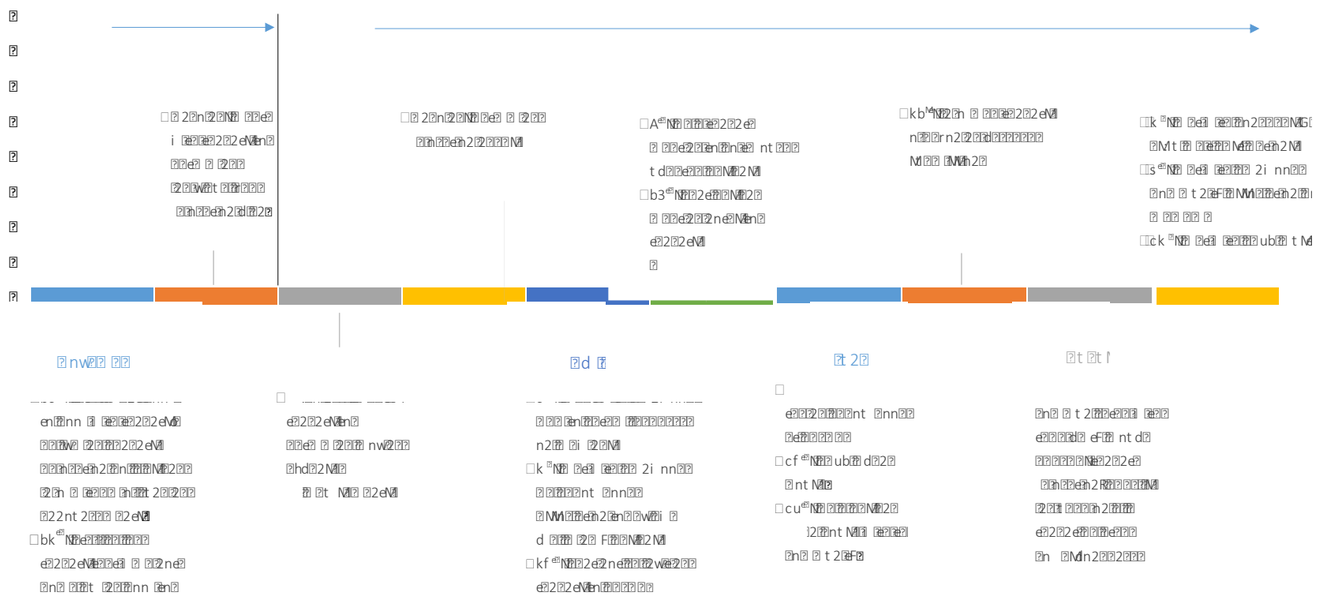
**TARGET POPULATION FOR REDEVELOPMENT**
The target populations for this project are families, seniors and individuals living independently without onsite supports. These populations align with the housing that is currently onsite.

**RESIDENT SELECTION FOR REDEVELOPMENT**
Current tenants will be prioritized with the right of first refusal to move back into Caledonia. New residents for RGI units and deep subsidy units will be selected from the housing registry. Residents for the affordable market will be selected through a chronological waitlist held by the CRHC. These conditions are outlined in the CRHC Tenant Relocation Policy.

**SUMMARY**

- Financial compensation based on length of tenancy
- Minimum four (4) months' notice to end tenancy
- Assistance with moving costs
- First right of refusal
- Additional relocation supports for tenants with special circumstances



# 2.3 - AFFORDABILITY

## *AFFORDABLE HOUSING CRISIS IN VICTORIA*

**Victoria is experiencing a housing crisis** which has put students, seniors, families at increased risk of homelessness.

**1%** **Victoria's Rental Vacancy Rate** has been at or below 1% for the past decade. A healthy vacancy rate is 3% to 4%.

**30%** **Families** in Core Housing Need.

**50%** **Singles** in Core Housing Need.

**$35K** **Median Income** of Victoria Renters

**$69K** **Median Income** of Victoria Homeowners

**49%** **49% of renter households** are spending more than 30% of their annual income on rent and utilities.

**25%** 25% of renter households are spending more than 50% of their income on rent and utilities.

## Affordable Housing Spectrum


The Caledonia Redevelopment has received approval under the Building BC: Community Housing Fund program which facilitates the development of mixed income, affordable rental housing projects for independent individuals, families and seniors.

**Under this funding model, projects must reflect the following mix of rents and incomes:**

- 30% Affordable housing (moderate income)
- 50% Rent geared to income (housing income limit)
- 20% Deep subsidy (refers to provincial income assistance rates)

| Unit Type | Number of units |
|---|---|
| Deep Subsidy | 30 |
| RGI | 75 |
| Affordable | 49 |
| | 154 |

**CALEDONIA UNIT COMPOSITION**

| Unit Type | Number of units | Avg. Rent | BCH Income Threshold | CoV Income Threshold |
|---|---|---|---|---|
| Studio - Very low | 2 | $375 | $21,000 - $25,920 | <$19,999 |
| Studio - Low (HILs) | 4 | $500 - $641 | $21,000 - $25,920 | $20,000 - $34,999 |
| Studio - Moderate / Median | 5 | $875 - $1,266 | $54,000 | $35,000 - $54,999 |
| One Bedroom - Very low | 8 | $375 - $425 | $21,000 - $25,920 | <$19,999 |
| One Bedroom - Low | 21 | $650 - $739 | $21,000 - $25,920 | $20,000 - $34,999 |
| One Bedroom Moderate / Median | 13 | $1,050 - $1,345 | $54,000 | $35,000 - $54,999 |
| Two Bedrooms - Very low | 16 | $570 - $575 | $24,000 - $33,600 | <$19,999 |
| Two Bedrooms - Low | 38 | $850 - $960 | $24,000 - $33,600 | $20,000 - $34,999 |
| Two Bedrooms - Moderate / Median | 24 | $1,300 - $1,669 | $71,200 | $35,000 - $54,999 |
| Three Bedrooms - Very low | 3 | $660 - $700 | $24,000 - $48,320 | <$19,999 |
| Three Bedrooms - Low | 8 | $1000 - $1,380 | $24,000 - $48,320 | $20,000 - $34,999 |
| Three Bedrooms - Moderate / Median | 4 | $1,750 - $2,284 | $84,000 | $35,000 - $54,999 |
| Four Bedrooms - Very low | 1 | $700 | $28,000 - $64,000 | $ - |
| Four Bedrooms - Low | 4 | $1,569 | $28,000 - $64,000 | $ - |
| Four Bedrooms - Moderate / Median | 3 | $2,480 | $99,200 | $ - |

# 03 URBAN CONTEXT

# 3.1 - BUILDING HEIGHT - CONTEXT

**LEGEND**

3 Storey Building

4 Storey Building

# 3.2 - FAIREY TECH BUILDINGS (DEMOLISHED 2011)

*Fairey Tech Buildings (demolished)*

**HISTORY OF THE FAIREY TECH BUILDINGS**

- Purpose-built in 1943 for trades education as part of the Second World War training effort.
- Constructed by trainee soldiers and Vic High students.
- Named for Col. F.T. Fairey the former Deputy Minister of Education, the then-current provincial Director of Industrial and Technical Education and also the Regional Director of the Canadian Vocational Training Program.
- The building became a centre for trades education for both highschool and continuing education students. An addition was made in 1949 to provide more classrooms for the industrial arts.
- During the 1950's the automotive shop was expanded and electronics shops and classrooms were added.
- The building also housed art, dance and industrial design classes.
- In 2011, the building was demolished and replaced with a brand new 57,000 sq. f.t. facility at the north side of the site.

*Aerial View (prior to demolition)*

**FIGURE/GROUND STUDIES**

*Previous Development*

- Approx. 41% Site Coverage
- 32% was paved or gravel

**vs.**

*Proposed Development*

- 41% Site Coverage
- 12% paved (parking underground)

**Therefore, with similar amounts of site coverage, the difference is approximately a 20% increase in outdoor useable space**

# 3.3 - FERNWOOD - WALKABILITY


**WALKABILITY**

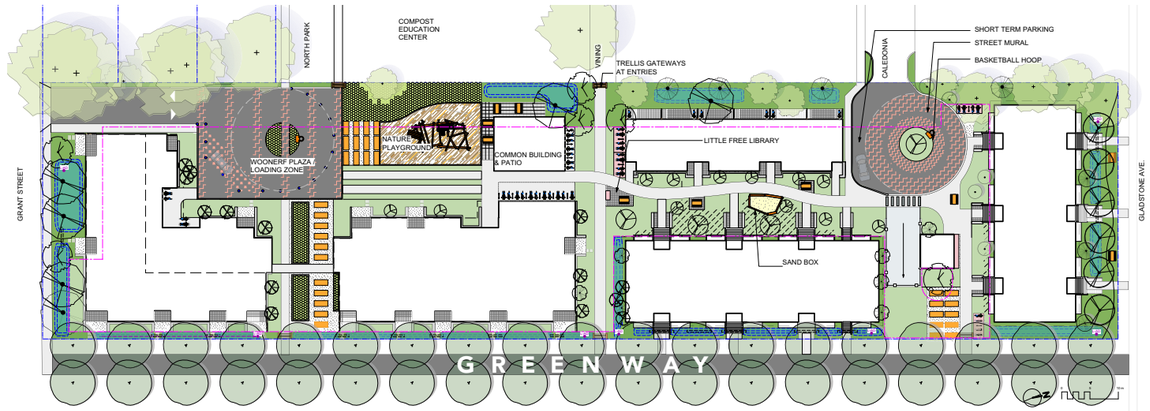
The site is located at the centre of Fernwood approximately mid-way between the North Park Village and Fernwood Village. Both Villages are less than a 5-minute walk and include restaurants and cafes, groceries, hardware and other retail uses, a theatre, and a variety of personal and professional services (i.e., medical, dental, fitness, etc).

Victoria High School is immediately adjacent the subject site, Central Middle School is a 10-minute walk (approx. 800m) and George Jay Elementary School is a 7-minute walk (approx. 400m). The Crystal Pool site is a 12-minute walk (approx. 600m). Downtown Victoria is a 15-minute walk (approx. 800 to 1,600m).

The site's WalkScore is 93 ("Walker's Paradise, daily errands do not require a car"), indicating an exceptionally high level of walkability. Reduced reliance on cars and transit means further affordability.

**GREENWAY**

Included in the proposed development is the creation of a public greenway on a new 9.0m easement along the west side of the Vic High site from Grant to Gladstone.  This greenway will be built to City of Victoria standards with a paved multi-modal surface and a row of trees on each side. This new segment will complete one section identified in the "Greenways Plan".



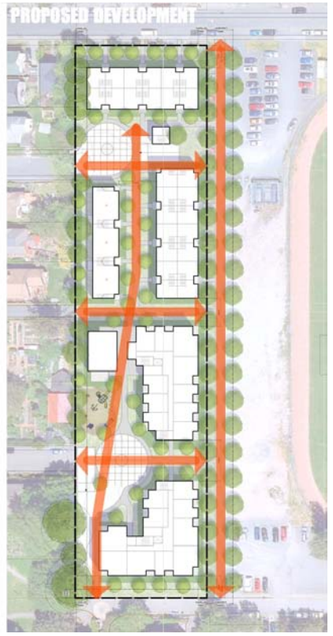
# 3.4 - CIRCULATION & ACCESS

**PUBLIC PATHWAYS**

HISTORICALLY THE SITE WAS LARGELY OBSTRUCTED BY THE FAIREY TECH BUILDING.

THE PROPOSED PLAN REESTABLISHES A NETWORK OF PUBLIC PATHS ACROSS THE SITE, RUNNING BOTH NORTH-SOUTH AND EAST-WEST.

A NEW CITY GREENWAY IS PLANNED NEXT TO THE SCHOOL TRACK THAT RUNS FROM GLADSTONE TO GRANT.


**NEIGHBORHOOD CONNECTIVITY**

PREVIOUS AND EXISTING BUILDINGS BLOCK STREET RIGHT OF WAYS.

THE PROPOSED PLAN SITUATES BUILDING FOOTPRINTS OUTSIDE OF STREET ALIGNMENTS TO EXTEND THE VIEWS AND PUBLIC PATHWAYS OF THE LARGER CITY GRID THROUGH THE SITE AND BEYOND.

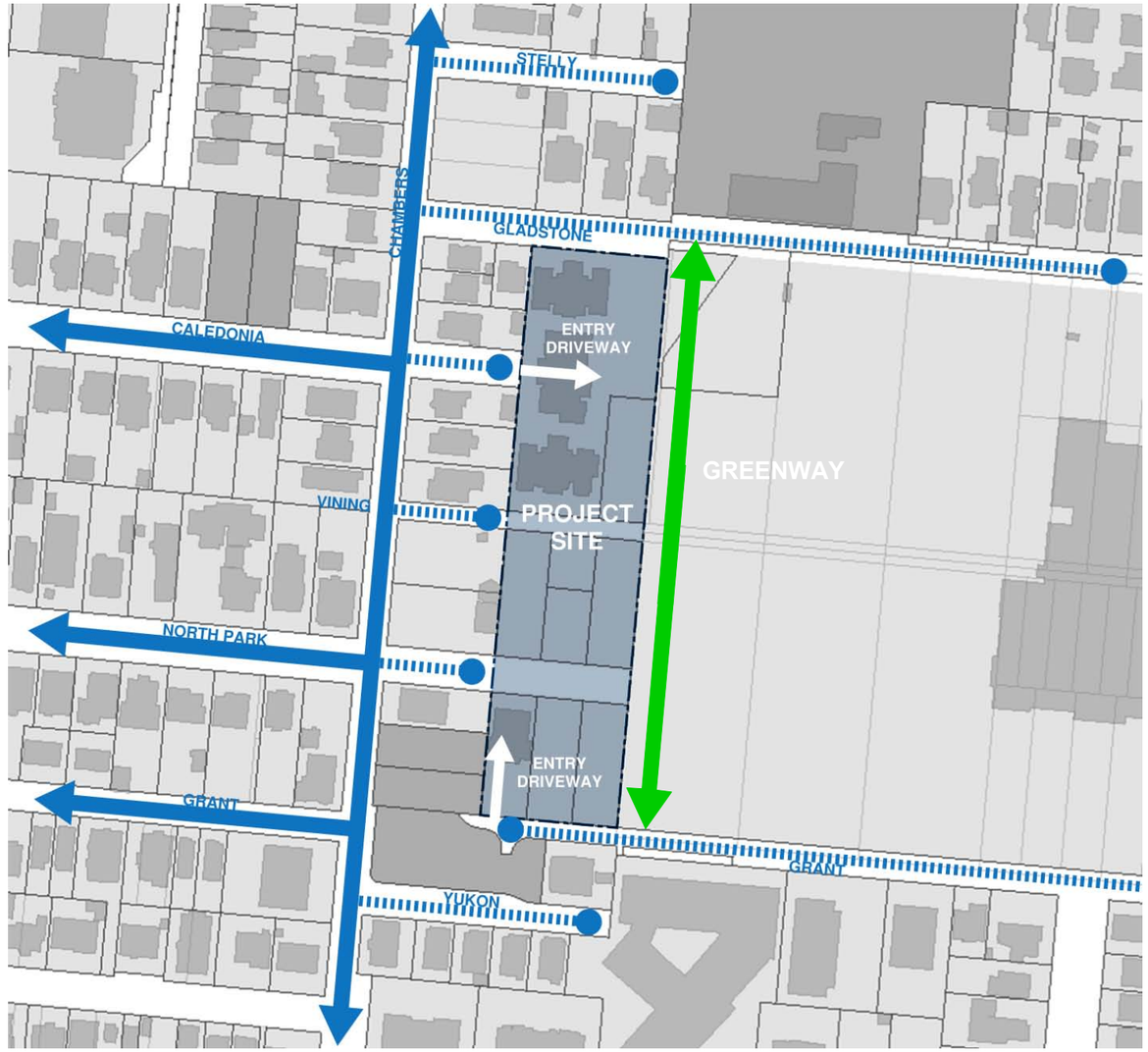
IMPROVED POROSITY AND FREEDOM OF MOVEMENT IS ESPECIALLY IMPORTANT CLOSE TO SCHOOLS.



**SITE CIRCULATION**

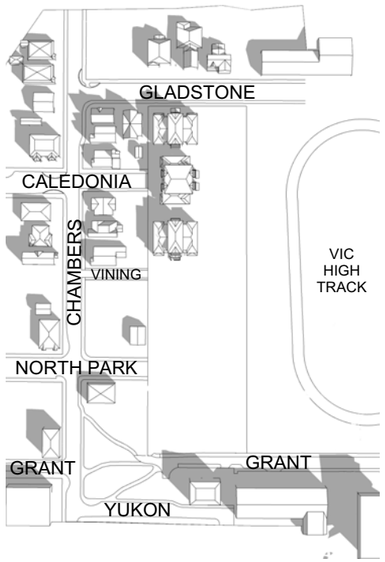
Where the planning of this site could easily create an inward-looking circulation pattern with building sizes optimized for cost efficiency, this proposal meshes the plan with the existing neighbourhood grid, creating public pathways and view corridors clear across the site

Considering the traffic volumes on Chambers the main parkade access is off Caledonia, where site-generated traffic is expected to cross Chambers and continue west towards downtown. Another parking ramp is accessed off Grant Street, providing an alternative eastbound option.



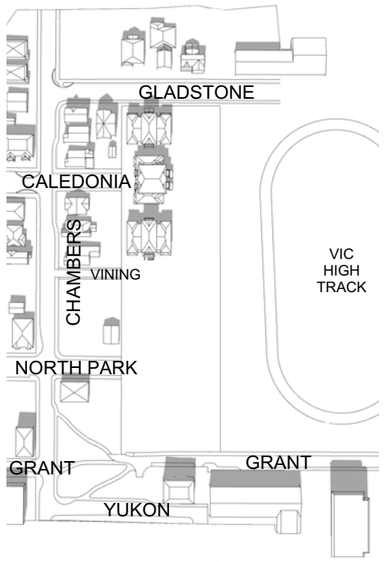
# 3.5 - SHADOW STUDIES

## EXISTING




*9:00am - September 21st*

## EXISTING

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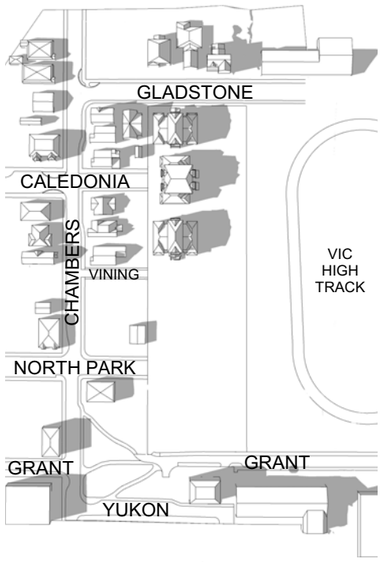


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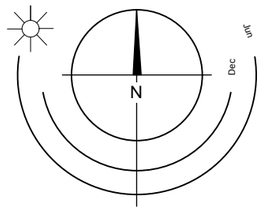
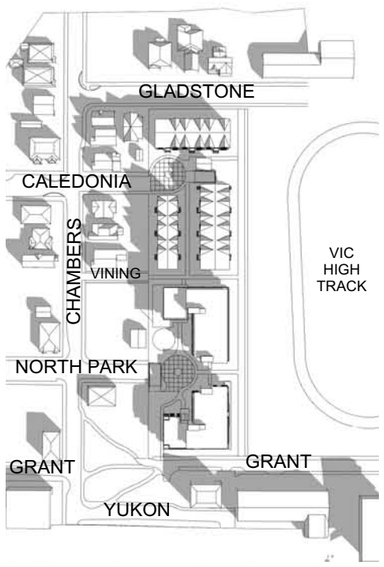
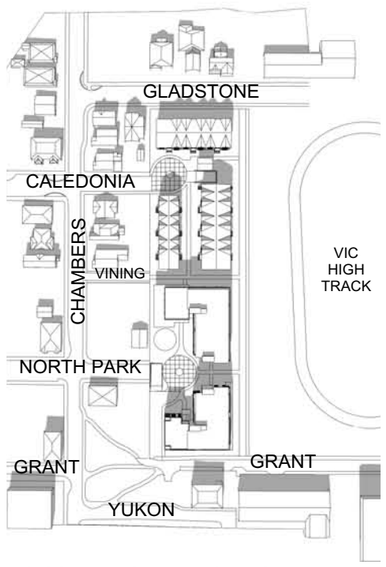



## PROPOSED




*9:00am - September 21st*

## PROPOSED

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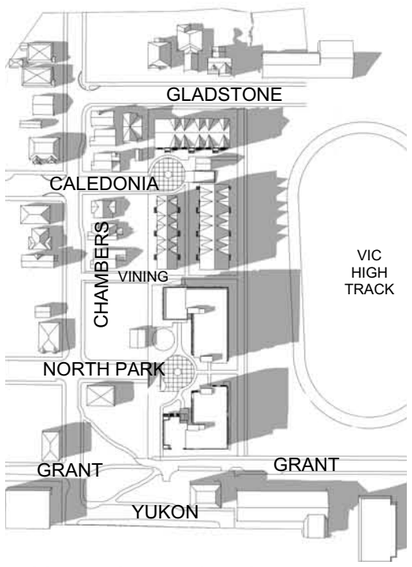
## PROPOSED

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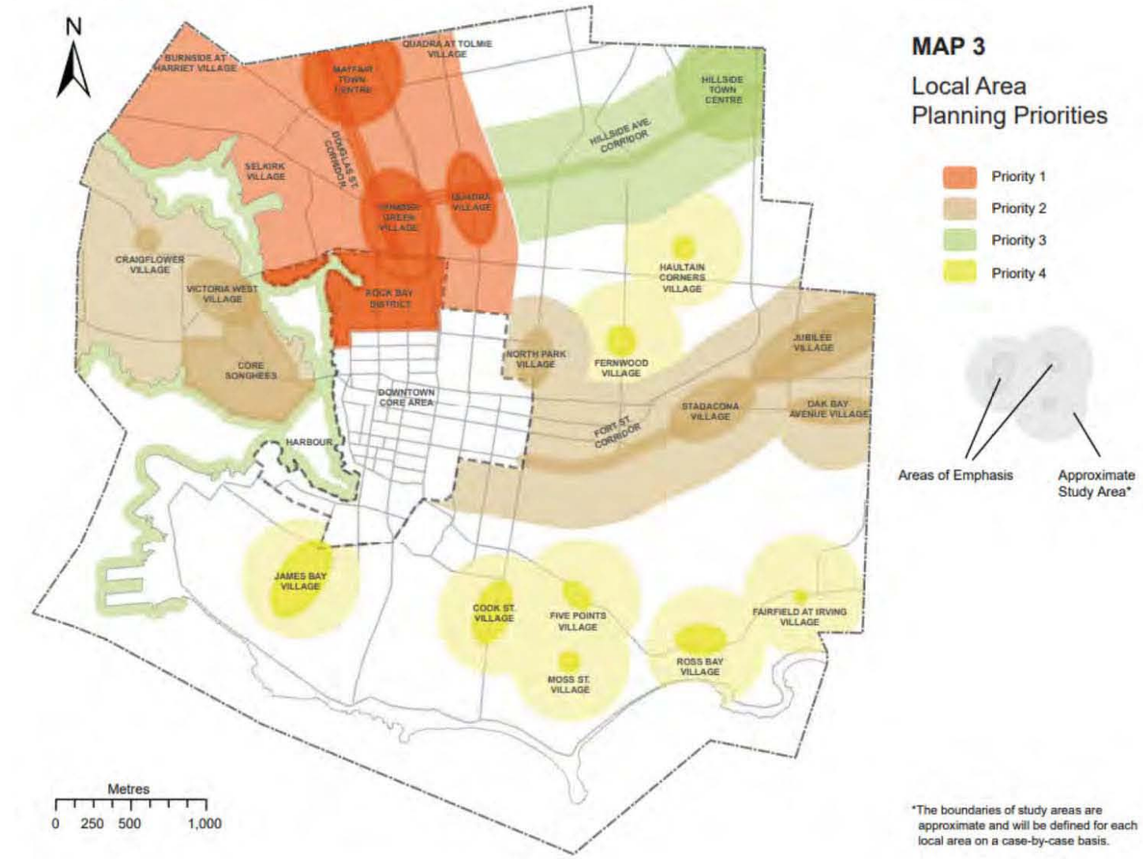
# 3.6 - NEIGHBOURHOOD CHARACTER


# 04 POLICY CONTEXT

# 4.1 - FUTURE POPULATION GROWTH

**URBAN CONTEXT**




**MAP 3**

Local Area Planning Priorities

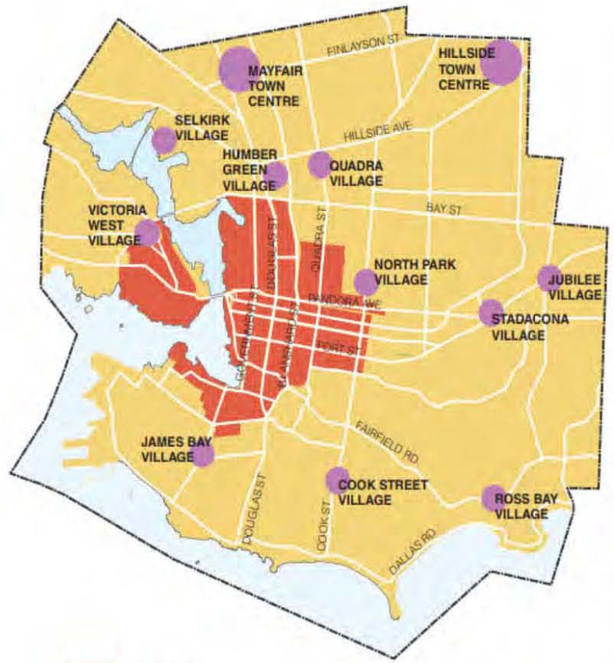
- Priority 1
- Priority 2
- Priority 3
- Priority 4

Areas of Emphasis

Approximate Study Area*

*The boundaries of study areas are approximate and will be defined for each local area on a case-by-case basis.

**Figure 3:** Thirty Year Growth Management Concept





**ESTIMATED POPULATION GROWTH**

Over the next 30 years, Victoria is expected to grow by an additional 20,000 residents through building on the advantages of its harbour location, compact urban form, and human-scaled neighbourhoods, undergoing a deeper transition, to become a leader in urban sustainability while remaining one of Canada's most livable cities. The foundation for this transition is a growth management concept, illustrated in Figure 3, based on a strong Urban Core and network of walkable Town Centres and Urban Villages.

OCP Section 6.18: Prioritize local area planning for Town Centres, Large Urban Villages and Small Urban Villages as illustrated on Map 3, giving consideration to residential and commercial land forecasts to determine the pace of phasing, and the scope of local area plans proposed.

OCP Section 6.22: Generally support new development in areas designated Urban Residential that seeks densities toward the upper end of the range identified in Figure 8 where the proposal significantly advances the objectives in this plan and is:

- within 200 metres of the Urban Core; or
- within 200 metres of Town Centres or Large Urban Villages; or
- along arterial or secondary arterial roads

# 4.2 - TRANSPORTATION STUDY

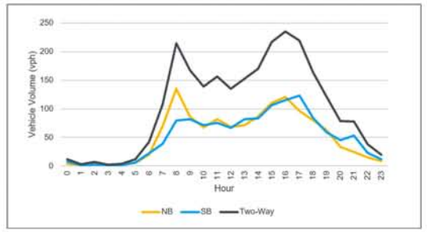
## Traffic Volumes on Chambers Street

- Chambers Street is a Local Street
- Local Streets are intended to accommodate up to 1,000 vehicles / day
- Traffic volumes on Chambers Street exceed the upper limit

**Historic Traffic Volumes, Chambers Street**

| | Two-Way Traffic Volume (approx.) |
|---|---|
| 1996 | 2,000 |
| 2011 | 1,900 |
| 2019 | 2,500 |

**Chambers Street 24-hr Traffic Profile**
weekday, 2019




## Neighbourhood Short-Cutting

Short-cutting describes vehicle trips that:

1. Do not begin or end in the neighbourhood
2. Use local streets to travel through the neighbourhood

**Short-Cutting Study Locations**


**Summary of Short-Cutting on Chambers St**

| | Traffic Volume on Chambers Street | | Short Cutting Traffic | | |
|---|---|---|---|---|---|
| | Northbound | Two-Way | Volume (veh/hr) | % of Northbound | % of Two-way |
| AM | 135 | 215 | 46 | 34% | 21% |
| PM | 121 | 236 | 30 | 25% | 13% |
| All Day | 1,254 | 2,494 | 416 | 33% | 17% |

## Traffic Review

The following was undertaken in studying the traffic impacts of the proposed development:

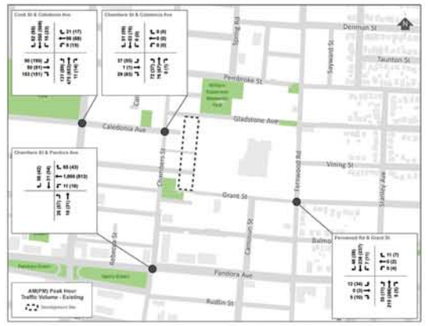
1. Count current traffic patterns
2. Assess performance at key intersections
3. Estimate new traffic generated using technical manual and local observations
4. Assign new traffic to the network based on current trip making patterns
5. Re-assess performance at key intersections

The following intersections were reviewed:

1. Chambers St / Caledonia Ave
2. Cook St / Caledonia Ave
3. Pandora Ave / Caledonia Ave
4. Fernwood Rd / Grant St

The analysis of post-development traffic conditions concluded that all intersections will operate at an acceptable level of service

**AM (PM) Peak Hour Traffic Volumes, 2019**




**Proposed Site Access Scenario**


## Site Parking Demand

Resident parking demand based on study of:

1. CRHC sites in Victoria
2. Other affordable housing sites in Victoria

**Summary of Expected Parking Demand**

| | Expected Parking Demand | |
|---|---|---|
| | Rate | Total |
| Residents | 0.64 / unit | 60 |
| Visitors | 0.1 / unit | 10 |
| **Total** | | 70 |

## On-Street Parking Inventory

# 4.2 - POLICY

**OFFICIAL COMMUNITY PLAN**

**Section 6: Land Management and Development**

6.1.6 Urban Residential areas are generally located within 400 metres of the Urban Core, a Large Urban Village, Town Centre, or frequent transit route, or within 800 metres of a rapid transit station.

6.23 Generally support new development in areas designated Urban Residential that seeks densities toward the upper end of the range identified in Figure 8 where the proposal significantly advances the objectives in this plan and is: 6.23.1 within 200 metres of the Urban Core;

**Section 7: Walking, Cycling and other personal mobility**

7.15.3 Shared Greenways are located on primary and secondary arterial and primary collector roads, and are designed for pedestrians, bicycles, and other non-motorized rolling traffic, and motor vehicles consistent with the related Walkable Urban Thoroughfares Guidelines described in Figure 11

**Section 8: Placemaking – Urban Design and Heritage**

8.58.1 Maintaining or increasing the planting of regularly spaced trees aligned with the development and implementation of an Urban Forest Master Plan;

**Section 9: Parks and Recreation**

9.12 Seek to maintain partnerships, policies and fee structures for parks and recreational facilities that encourage the participation of people of all ages, incomes, abilities, backgrounds and lifestyles.

9.13 Work closely with community centres, senior centres, community organizations, the public library and residents to seek innovative opportunities to sustain and enhance community-based recreation services and programs.

**Section 10: Environment**

10.22 Encourage the broad development of the knowledge and skills necessary for more sustainable behaviors and practices by working with a wide variety of partners to:
10.22.1 Promote household practices and skills such as water conservation, food production, native landscaping, recycling and composting;

**Section 12: Climate Change and Energy**

12.17 Continue to support and enable the private development of green buildings, subject to development control and building regulation, with features that may include but are not limited to:
12.17.2 Sustainable landscaping;
12.17.5 Energy efficiency technology;
12.17.8 Efficient plumbing fixtures and systems.

**Section 13: Housing and Homelessness**

13.1 Seek to accommodate population growth in the strategic locations, as identified in Map 2, including an additional 10,000 residents in the Urban Core; 8,000 residents in and within close walking distance of Town Centres and Large Urban Villages, and 2,000 in Small Urban Villages and the remainder of residential areas in the city.

13.9 Support a range of housing types, forms and tenures across the city and within neighbourhoods to meet the needs of residents at different life stages, and to facilitate aging in place.

13.10 Encourage a mix of residents, including households with children, by increasing opportunities for innovative forms of ground-oriented multi-unit residential housing.

13.11 Encourage partnerships that address the need for affordable nonmarket and market housing suitable for households with children.

13.16 Provide a range of housing choice for persons with mobility challenges by developing voluntary guidelines for enhanced adaptable housing to provide a higher standard of adaptability and accessibility for all housing types.
13.20 Continue to work in partnership with all levels of government, public agencies, crown corporations, organizations and the private sector to identify and leverage properties for the provision of non-market housing, including innovative approaches to blend non-market housing with other housing types and uses

13.23 Support the retention of existing rental units in buildings of four units or more by considering higher density redevelopment proposals on these sites only if, as a voluntary amenity:
13.23.1 The same number of rental self-contained dwelling units is maintained on-site, and the general rent level identified, through a housing agreement; or,

**Section 15: Community Well-Being**

15.5 Encourage senior governments, and community and business partners to improve the physical accessibility of public and private property, including places of employment, housing, transportation facilities, and visitor-oriented sites.

# 4.2 - POLICY, CONTINUED

**Section 16: Arts and Culture**

16.9 Seek opportunities to partner and collaborate with the Songhees and Esquimalt First Nations on initiatives that acknowledge and celebrate the traditional territory and cultural values of First Peoples.

**Section 17: Food Systems**

17.11 Encourage the provision of gardens and other food production spaces for the use of residents in new multi-unit housing.

**Section 21: Fernwood Neighbourhood Direction**

21.8 Strategic directions include:
21.8.1 Accommodate new population and housing growth within walking distance of North Park Village and improve pedestrian and cycling connections to the Downtown Core Area.
21.8.2 Consider a new Development Permit Area for the North Park Village

21.8.5 Explore opportunities to use neighbourhood school sites as community facilities for services serving the broader city population

21.8.7 Retain neighbourhood heritage character, buildings and streetscapes of significance.

21.8.8 Enhance east-west bike connection through the neighbourhood.

**Design Guidelines For: Multi-Unit Residential, Commercial and Industrial**

General guidelines
1.1 New development should be compatible with and improve the character of established areas through design that is unifying, sensitive and innovative:
1.1.1 The architectural approach should provide unity and coherence in relation to existing place character and patterns of development through the use of appropriate forms, massing, building articulation, features, and materials.

2.1 New development should contribute to cohesion, visual identity and the quality of streetscapes, particularly when adjacent and nearby buildings are similar in scale, proportion, rhythm, and pattern:
2.1.2 New development is encouraged to add interest to the streetscape through variations in building height, rooflines and massing.

2.2 New development should avoid long unvaried stretches of frontages in ways that include, but are not limited to:
2.2.1 Massing that gives the impression of small blocks.

2.3.5 Visual and physical connections between the public street and buildings should be developed (e.g. patios and spill-out activity, views to and from interior spaces, awnings and canopies).

2.4 Residential use at street level should have strong entry features and building designs that encourage interaction with the street.

3.2 Building facades along streets should include architectural features that provide pedestrian interest. This location and design of service (“back-of-house”) functions should therefore be carefully considered, including, but are not limited to:
1.1.1 Parking, vehicular entrances and garage doors.
1.1.2 Fire exits.
1.1.3 Refuse and recycling receptacles.

3.3 Perceived building mass should be mitigated through the use of architectural elements, visually interesting rooflines, stepping back of upper floors, detailing that creates rhythm and visual interest, or other design solutions.

3.5 For areas where mid-rise and high-rise buildings are permitted, upper levels should be stepped back to enable sunlight penetration to the street and public open space, mitigate the perception of building mass and minimize the impacts of wind.

3.6 Porches, steps, alcoves or other design features are encouraged to make transitions from the public realm of the street and sidewalk, to the private realm of residences.

3.7 The use of building elements such as raised terraces, forecourts or landscaping should be considered to enhance residential entrances.

3.8 Mid-rise and high-rise residential buildings are encouraged to be stepped in order to provide opportunities for balconies and rooftop terraces that take advantage of sunlight and views.

5.1 Open space should be usable, attractive and well-integrated with the design of the building.

5.2 Public and semi-public spaces should be distinguished from private spaces through design elements, including, but not limited to:
5.2.1 Building and site design.
5.2.2 Changes in paving or grading.
5.2.3 Architectural features.
5.2.4 Changes in landscape, raised planters or other landscaping features.

# 4.2 - POLICY, CONTINUED

5.3 Consideration should be given to landscaped open space, accessible from the adjacent right-of-way, to soften the impact of larger and longer buildings. Possible locations include the corners of lots, at building entrances and walkway entrances.

5.5 Landscape design should preserve existing native vegetation where possible, or use plant species suited to the local climate and site specific conditions.

5.8 Consideration should be given to the inclusion of private open space in residential developments in the form of courtyards, recessed balconies, terraced balconies or rooftop gardens.

7.1 A high standard of accessibility in site, building and landscape design is encouraged to address the needs of all users, including people who have disabilities.

7.3 New development should be designed to maximize opportunities for casual surveillance and “eyes on the street” through placement of windows, balconies and street-level uses.

7.4 Crime Prevention through Environmental Design practices should be incorporated as they relate to architecture, site and landscape design.

8.1 Where possible, parking should be located underground or to the rear of buildings to minimize the impact on streetscape appearance and pedestrian amenity path and continuity, and maximize ground level space for landscaping.

8.4 The use of alternative modes of transportation should be promoted in site design (e.g. prominent bicycle racks for convenience and security; transit-supportive design features; building entrances orientated to pedestrian areas).

9.1 Site access and internal circulation should be designed to emphasize public safety at the intersections of public and private domains, internal security and efficient flows.

9.4 The use of gathering places for pedestrians is encouraged. Buildings should be connected and integrated with pedestrian-oriented open spaces, such as courtyards, gardens, patios and other landscaped areas.

**Development Permit Guidelines:**

The following are applicable excerpts from the Development Permit Area 16 (DPA 16):
3. The special conditions that justify this designation include:
The special conditions that justify this designation include:
(c) Commercial, industrial and multi-unit residential buildings often share an interface with Traditional Residential areas with low-rise built form and established character that require consideration for sensitive transition

4. The objectives that justify this designation include:
(d) To achieve more livable environments through considerations for human-scaled design, quality of open spaces, privacy impacts, safety and accessibility.

# 05 DESIGN RATIONALE

# 5.1 - EXISTING/PROPOSED - COMPARISON

**EXISTING VS. PROPOSED**

The proposed site coverage is roughly equal to the previous built out condition, prior to demolition of the Fairey Tech building.

The apartment buildings are located on the South half of the site, proximate to other three and four storey multifamily buildings. The five storey apartment is centered in the site, where it has the least impact on views and shadowing of neighbours. The four-storey apartment is at the South end of the site. The top floor of both apartments is stepped back on all sides to greatly diminish the impact and presence relative to the lower floors.

The north half of the site is new townhouses, replacing the existing townhouse development and undeveloped lands. The new townhouses 3.5 storey townhouses are only 0.5 storeys taller than the current CRHC development.  The dotted red line in the graphic shows the current townhouse profile overplayed on the proposed buildings.


# 5.2 - INSPIRATION

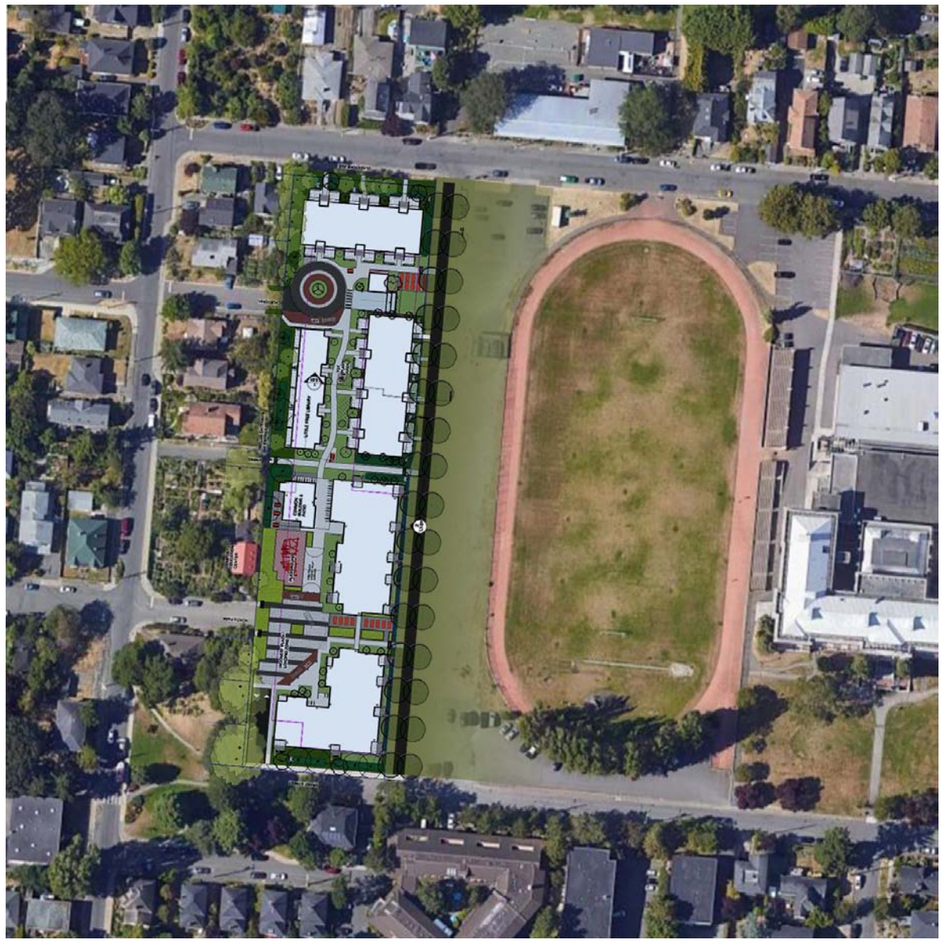





# 5.3 - INSPIRATION - CASE STUDY

The scale and context of our proposal is very similar to the western portion of Arbutus Walk in Vancouver, where new multi-family infill blends harmoniously with surrounding lower density development and adjacent recreational and institutional uses (Aerial imagery shown at the same scale)

**PROPOSED SITE AT CALEDONIA**



**SIMILAR CONDITION IN VANCOUVER - ARBUTUS WALK**

N

# 5.4 - PUBLIC REALM

TOWNHOUSES - AT GLADSTONE AVENUE

APARTMENT - AT GRANT STREET

INTERIOR COURTYARD - LOOKING NORTH

PLAYGROUND & AMENITY AREA - LOOKING NORTH

# 5.5 - SKYLINE

NORTH PARK STREET - LOOKING EAST

FROM VICTORIA HIGH - LOOKING WEST

AERIAL VIEW - LOOKING SOUTH

AERIAL VIEW - LOOKING SOUTHWEST

# 06 LANDSCAPE

# 6.1 - LANDSCAPE - DESIGN RATIONALE

**Spaces for Residents**
The proposed development provides many opportunities to enhance the outdoor environment, both for neighbourhood residents and for future residents of Caledonia housing. For those living in the proposed townhouses or apartments, the landscape design offers private patios as well as semi-public spaces around which neighbours can gather and get to know one another. Ground level patios will be designed with low picket fences and screening plantings, to encourage a sense of neighbourliness while providing some privacy. Gathering spaces include a tot play area, little free library, play spaces and gardening plots, connected through a system of pedestrian walkways that create safe routes through the site for people of all ages.

**Neighbourhood Connections**
An important focus of the landscape design for this project has been on connecting the site to the rest of the Fernwood community. A north-south pedestrian 'Allee' is included adjacent to the Vic High grounds, and east-west connections are included to link the school grounds to North Park, Vining, Caledonia Streets, and the neighbourhoods beyond. The proposed development also includes a common building, which will offer programming available to the general public. The landscape design has responded to the common building by including a hub of amenities adjacent to it. A patio, play surface, playground, and large shared-use (woonerf) plaza will allow community programming to extend beyond the bounds of the building itself and make use of valuable outdoor space.

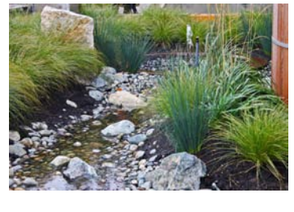
**Fernwood Character**
Another way that the proposed project connects to its neighbourhood is through the inclusion of elements that reflect the unique character of Fernwood. Outdoor spaces will be designed using informal, simple and durable materials and will include opportunities for placemaking and urban gardening. The Compost Education Center (CEC) borders the site, and the CEC has expressed interest in partnering with CRD Housing to manage urban agriculture areas within the development. These spaces will help provide the ability for people to garden and engage creatively with their surroundings.

**Landscape Sustainability**
The proposed plantings for the site focus on plants that contribute to the environment and people's well-being, and include species that are edible, provide habitat, or are beneficial to pollinators. Native plant species have been prioritized in many of these plantings. While some plantings are designed to be maintained by contracted staff, the allotment plots and urban gardening areas will encourage residents and garden volunteers to engage with nature in their daily lives.
Hard surfaces have been designed to fulfill multiple functions, so that hardscape can be minimized and so that pedestrian and cyclist-friendly spaces take priority over vehicular zones. The prime example of this is the woonerf plaza area, which allows moving trucks, fire trucks and handi darts to access the site while providing a pedestrian-friendly feel. This plaza has gone through numerous design iterations that explored minimizing hardscape, leaving as much room for planting outside of the parkade boundary as possible, providing space for social functions adjacent to the common building, all achieved while also maintaining required vehicular and fire truck access.

Stormwater runoff for this project will be managed on site as much as possible. Rain gardens have been included where there is space outside of the parkade footprint, and outside of the root zone of retained trees. Roof runoff from the buildings will be directed to these rain gardens where feasible, where it will be slowed, treated and infiltrated. These rain gardens will overflow to the Municipal storm water system during large rain events.

One other sustainability feature of this project is the underground parkade. While the parkade makes it possible to avoid surface parking on the site, it does pose some particular challenges to the construction of the landscape. Because installing trees and plants over the parking structure is more difficult than over grade, the siting and landscape design for this project has sought to maximize the on-grade areas for the highest-value plantings. Large trees, buffer plantings and rain gardens have been positioned in such areas, while hard surfaces have been positioned over the parkade footprint where possible. Landscape retaining walls have been strategically combined with patio enclosures so that growing medium can be mounded over the parkade structure, creating planting depth for herbs, shrubs and small trees.

**REFER TO FULL LANDSCAPE PLAN SET IN APPENDIX**



**Sept 27, 2019**

City of Victoria
Sustainable planning and Community Development
Development Services division
1 Centennial Square
Victoria, BC V8W 1p6

dHKarchitects

**Victoria**
977 Fort Street V8V 3K3
**T** +1 250-658-3367
**Nanaimo**
102-5190 Dublin Way V9T 2K8
**T** +1 250-585-5810
mail@dhk.ca
www.dhk.ca

**Re: Caledonia Green Building Features**

To whom it may concern:

Regarding our development application for the CRHC Caledonia site in Fernwood, please note that the project will include the following Green Building Features:

1. **Step 3 of the BC Energy Step Code**
   - As a BC Housing-funded development this project will be built to comply with Step 3 of the BC Energy Step Code; operating at a 20% reduction in energy use and with substantially increased envelope performance relative to prescribed references.
   - Energy modeling will be conducted at multiple stages during the pre-construction stage to validate compliance.
   - Air tightness testing will be conducted prior to occupancy to verify that building performance meets modelled criteria.
   - All ventilation is mechanical rather than passive, with heat recovery exchangers at every exhaust vent. This ensures all makeup air is pre-conditioned and reheating energy loads are minimized.
   - The Heat Recovery Ventilation (HRV) system is decentralized into individual suites, reducing rooftop air handling equipment and providing an overall reduction in noise pollution.

2. **Site selection and design**
   - The proposal is to rebuild and densify an existing affordable housing project within an already densely populated centralized urban location with strong pre-existing infrastructure and amenity.
   - Rather than building on a greenfield site this project is situated on the site of the former Fairey Tech building, now demolished and left unimproved.

3. **Green Spaces**
   - Urban agriculture boxes are distributed throughout the property to both green the site and provide food security and recreation opportunities for residents.
   - All trees with compromised health are being more than replaced with healthy new site-appropriate species.
   - New plants will be drought-tolerant, non-invasive indigenous species selected for quality of appearance and ease of maintenance.

- The extent of grass turf will be minimized, with a combination of less water-intensive landscaping treatments used instead.

4. **Transportation**
   - The densification of this centralized site in Fernwood means that a higher number of residents will be within close walking distance of well-established neighbourhood services and amenities. Personal vehicle usage will be low relative to walking and transit usage.
   - The underground parkade will have dedicated areas for secured bicycle parking.
   - Additional electrical circuit capacity and conduit rough-in will provide scalability for electrical vehicle charging stations to keep pace with rising demand.

5. **Storm water management**
   - Storm water management design will be provided on site to limit post-development flow rates to pre-development flow rates – rain gardens will be utilized.
   - An erosion and sediment control plan will be developed for the duration of construction.
   - All patios and sidewalks will be designed to discharge to landscaped areas or the storm water detention system.
   - The paved driveway and parking areas will be designed to discharge to the storm water detention system.

6. **Water usage**
   - All interior plumbing fixtures will be low water, low flow fixtures, including dual flush toilets (4.8 LpF).
   - Water efficient (Energy Star) Clothes Washers will be specified (95 litres per load or less).
   - All hot water piping will be insulated and will be on a recirculating loop.
   - A high efficiency irrigation system will be customized for the site, using Smart Timer Technology to tailor the irrigation flow to the present climatic conditions.

7. **Sustainable Materials**
   - Concrete will contain 30% - 50% fly ash.
   - Timber framing will use finger jointed studs, engineered wood products (LSL, SCL, wood I-Joists, pre-engineered wood trusses).
   - Thermal wall assemblies will use insulation meeting EPP guidelines where possible.
   - Millwork panel products will be free of urea-formaldehyde.
   - SCS Floor Score Certified hard flooring products will be used throughout (no carpet will be used).
   - New paints and finishes will meet low V.O.C. contents (i.e. flat paint – 50g/l, non flat – 150 g/l, clear wood finish – 350g/l, floor coatings – 100 g/l, stains – 250 g/l).

dHKarchitects

**Victoria**
977 Fort Street V8V 3K3
**T** +1 250-658-3367
**Nanaimo**
102-5190 Dublin Way V9T 2K8
**T** +1 250-585-5810
mail@dhk.ca
www.dhk.ca

- Low VOC adhesives will be used (wood floor adhesive – 100 g/l, Construction adhesives – 70 g/l, ceramic tile adhesive – 65 g/l, subfloor adhesives – 50 g/l, VCT adhesive – 50 g/l).

**8. Energy Efficient Detailing**

- Window specification is energy star vinyl windows– double-glazed units with Low E coatings and argon fill for best energy conservation. U value of 0.31 or lower.
- Increased levels of insulation in walls and roof: R22 – R28 in exterior walls; R40+ in roof.
- CFL / LED light bulbs in energy efficient light fixtures specified throughout, with motion detectors in public areas for reduced energy usage.
- Energy Star rated appliances for unit kitchens and the common laundry rooms.
- Central high efficiency gas fired condensing hot water heater(s).

In conclusion the owners and consultant team are fully committed to sustainability in aspects of this redevelopment, and believe it this a key factor and providing exceptional new affordable housing units in Fernwood.

Regards,

Rob Whetter
Architect AIBC RAIC

dHKarchitects

**Victoria**
977 Fort Street V8V 3K3
**T** +1 250-658-3367
**Nanaimo**
102-5190 Dublin Way V9T 2K8
**T** +1 250-585-5810
mail@dhk.ca
www.dhk.ca

Attachment: G

312 - 645 Fort Street, Victoria, BC V8W 1G2
| T: 250.220.7060

urbansystems.ca

# Caledonia Housing Redevelopment
# TRANSPORTATION STUDY

Prepared for
**Capital Region Housing Corporation (CRHC)**

**September 24 2019**

File no.
4686.0001.01

# Contents

# 1.0 Introduction

Urban Systems Ltd was retained by the Capital Region Housing Corporation ("CRHC") to complete a transportation study of the proposed redevelopment of the Caledonia Housing site at 1211 Gladstone Avenue in the Fernwood neighbourhood. The study is a comprehensive review of the potential transportation impacts on the surrounding community, with specific consideration of the following:

- Nearby intersection performance and potential impacts on the surrounding road network, including on nearby local streets;
- Neighbourhood traffic concerns, including traffic volumes on Chambers Street and neighbourhood short-cutting;
- The proposed parking supply and expected parking demand associated with the site redevelopment;
- On-street parking conditions and neighbourhood parking management; and
- Opportunities to limit road network and parking impacts through transportation demand management ("TDM").

## 1.1 Location

The redevelopment site is located at 1211 Gladstone Avenue and includes associated properties south to Grant Street[1]. See **Figure 1**.

[1] The redevelopment site includes the 1211 Gladstone Avenue (currently CRHC Caledonia townhouse site) property, as well as the 1219 Vining Street and 1215 / 1218 / 1219 / 1220 / 1226 North Park Street, and 1230 Grant Street properties

**FIGURE 1**. STUDY AREA

## 1.2 Context

### 1.2.1 Land Use

The subject site is within the Fernwood neighbourhood, immediately adjacent Victoria High School.

The Official Community Plan ("OCP") identifies the site primarily as **Traditional Residential**. See **Figure 2**. The **North Park Village** (Large Urban Village) and **Fernwood Village** (Small Urban Village) are both within 300m of the subject site and include a range of retail, restaurant and service uses.

**FIGURE 2**. URBAN PLACE DESIGNATIONS, VICTORIA OCP[2]


[2] City of Victoria, Official Community Plan (OCP), Section 6: Land Management and Development, pg 37

### 1.2.2 Travel Options

The following is an overview of the transportation infrastructure / services in proximity to the site and the travel options available that would be available to site residents.

**Walking**

The subject site is located at the centre of Fernwood approximately mid-way between the North Park Village and Fernwood Village identified in the OCP. Both Villages are no more than a 5-minute walk from the subject site (< 300m) and include restaurants and cafes, groceries, hardware and other retail uses, a theatre, and a variety of personal and professional services (i.e., medical, dental, fitness, etc).

Victoria High School is immediately adjacent the subject site, Central Middle School is a 10-minute walk (approx. 800m) and George Jay Elementary School is a 5-minutes walk (approx. 400m). The Crystal Pool site is a 5- to 10-minute walk (approx. 600m). Downtown Victoria is a 10- to 20-minute walk (approx. 800 to 1,600m).

The subject site's WalkScore is 93 ("Walker's Paradise, daily errands do not require a car")[3], indicating a very high level of walkability.

Sidewalks are provided on the both sides of most streets in the vicinity of the site, with the exception of Caledonia Avenue and Vining Street east of Chambers Street.

Chambers Street (north-south), and Grant Street, Gladstone Avenue and Caledonia Avenue (east-west) are identified in the OCP as People Priority Greenways, meaning they are located on secondary and traffic-calmed streets and designed specifically for pedestrians, bicycles and other non-motorized rolling traffic[4].

**Cycling**

The subject site is approximately 1.0-km from downtown Victoria, 1.5-km from the Royal Jubilee Hospital, 3.0-km Camosun College (Lansdowne Campus) and 5.0-km from the University of Victoria. Each of these commuter destinations is well within comfortable cycling distance for most.

Cycling is primarily facilitated on low-volume local streets throughout the Fernwood neighbourhood. Cycling facilities are included on Vancouver Street (signed bike route), as well as many of the major streets on the eastern approach to downtown (Pandora Ave, Begbie St, Johnson St, Yates St, Fort St). Recent buffered and protected bicycle lane improvements on Fort Street, Pandora Avenue and Begbie Street facilitate cycling to/from

[3] More information on the site's WalkScore is available online at: www.walkscore.com/score/1211-gladstone-ave-victoria-bc

[4] City of Victoria, Official Community Plan, Section 7.1.5, pg 62. Available online: www.victoria.ca/assets/Departments/Planning~Development/Community~Planning/OCP/Replaced/OCP_Sec7_Jul2017_web.pdf

downtown Victoria. Upcoming cycling infrastructure improvements on Vancouver Street will provide an enhanced north-south route.

**Public Transit**

The No.24 – Cedar Hill / Admirals Walk and No.25 – Maplewood / Admirals Walk are local transit routes that are accessed from bus stops (100172, 100179) on Cook Street approximately 300m from the subject site. These routes provide service between Saanich (Cedar Hill / Shelbourne-McKenzie areas) and View Royal via downtown Victoria.

The No.22 – Vic General / Hillside Mall is a local transit route that is accessed from bus stops (100240, 100245) on Fernwood Road approximately 300m from the subject site and provides service to Hillside Mall, the Royal Jubilee and Victoria General Hospitals, and downtown Victoria.

Other transit routes that can be accessed within 500m of the subject site include the 27 – Gordon Head / Downtown and 28 – Majestic / Downtown (Frequent Services, 15-munites or better) on Pandora Avenue and Johnson Street, as well as the 2 – James Bay / South Oak Bay / Willows and 10 – James Bay / Royal Jubilee routes.

**Carshare**

The most prevalent local two-way carshare service is Modo, with approximately 70 vehicles in the Capital Region (as of January 2019)[5]. Members can access any vehicle within the fleet and pay usage based on the length of time and distance of their trip.

Three vehicles are located within one-block of the subject site and may be conveniently accessed by site residents:

- Gladstone Avenue adjacent the Fernwood Community Centre (2 vehicles); and
- Yukon Street at Chambers Street (1 vehicle).

[5] Count based on Modo "Car Map", available online at: www.modo.coop/map

## 1.3 Proposed Redevelopment

### 1.3.1 Land Use

The site is currently occupied by a series of 18 townhouse units on the 1211 Gladstone Avenue property and a single multi-unit residential building on the 1209 Vining Street property. All other portions of the redevelopment site are currently undeveloped.

The redevelopment proposal is for 154 multi-family residential units. Units will be a mix of Deep Subsidy (19%), Rent-Geared-to-Income (49%), and Affordable (32%). The unit breakdown is identified in **Table 1**.

**TABLE 1**. SUMMARY OF PROPOSED LAND USE

| Income Level | Number of Bedrooms | | | | | Total |
|---|---|---|---|---|---|---|
| | Studio | One | Two | Three | Four | |
| **Deep Subsidy** | 2 | 8 | 16 | 3 | 1 | **30**<br>19% |
| **Rent Geared to Income** | 4 | 21 | 38 | 8 | 4 | **75**<br>49% |
| **Affordable** | 5 | 13 | 24 | 4 | 3 | **49**<br>32% |
| **Total** | **11**<br>7% | **42**<br>27% | **78**<br>51% | **15**<br>10% | **8**<br>5% | |

Deep subsidy and rent-geared-to-income (RGI) are considered subsidized units, and rents are subsidized by BC Housing and determined based on the income of tenants. Affordable units (32%) is near market rent units and we will be able to charge higher rents[6].

### 1.3.2 Parking

The proposal includes a total of 120 parking spaces. The bicycle parking supply includes 190 long-term spaces and 30 short-term spaces.

### 1.3.3 Access

Site access is proposed via Caledonia Avenue and Grant Street, as these locations were considered to facilitate convenient, direct access and minimize impacts on the surrounding road network.

[6] Description of housing types provided by Capital Region Housing Corporation by email, April 10 2019

# 2.0 Traffic + Road Network

Background and post-development intersection performance has been assessed for the Chambers Street / Caledonia Avenue, Cook Street / Caledonia Avenue, Grant Street / Fernwood Road and Chambers Street / Pandora Avenue intersections. The results are presented below.

## 2.1 Background Conditions

### 2.1.1 Road Network

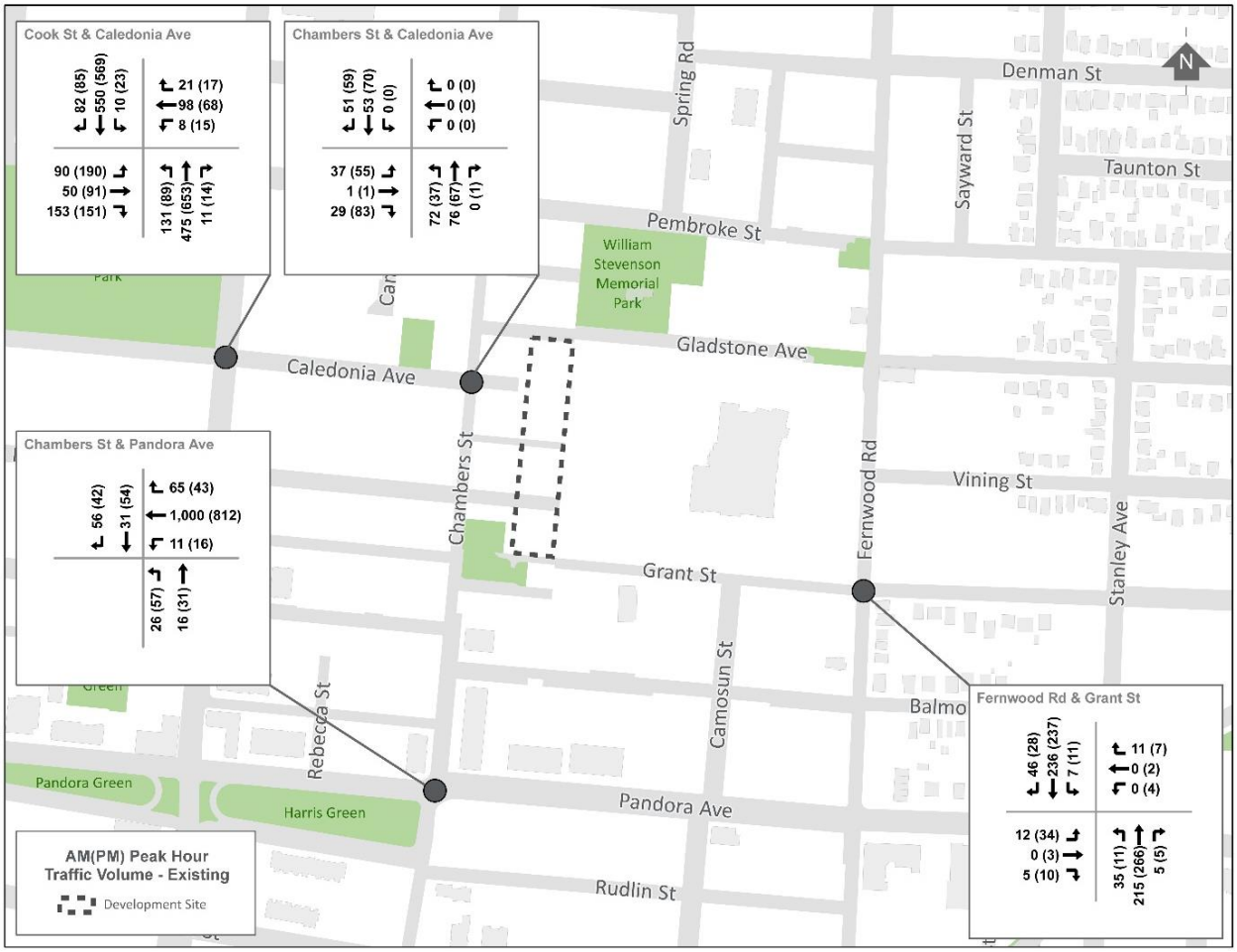
The road network is bounded by Cook Street, Pembroke Street, Fernwood Road and Pandora Avenue. All roads within this area are two-lane undivided local roads[7], including Caledonia Avenue and Chambers Street. On-street parking is available along most of the roads in the vicinity of the site (refer to Section 4.0 for a detailed account of on-street parking). The nearest signalized intersection to the subject site is at Caledonia Avenue / Cook Street.

### 2.1.2 Traffic Volumes

Intersection turning movement counts were collected for the Chambers Street / Caledonia Avenue, Cook Street / Caledonia Avenue, and Grant Street / Fernwood Road intersections on Wednesday May 1, 2019 from 7:00 to 9:00am and 3:00 to 6:00pm. Traffic counts were also collected at the Pandora Avenue / Chambers Street intersection from 8:00 to 9:00am and 3:00 to 4:00pm on Tuesday May 7, 2019 (completed specifically for a short-cutting analysis, discussed in Section 2.4). **Figure 3** illustrates the background traffic volumes during the morning and afternoon peak hours.

[7] Road Classification Map, https://www.victoria.ca/EN/main/residents/transportation/transportation-reference-documents.html

**FIGURE 3**. BACKGROUND AM (PM) PEAK HOUR TRAFFIC VOLUMES




A week of 24-hour traffic counts was also collected on Chambers Street south of Caledonia Avenue between April 30 to May 6, 2019. The two-way weekday traffic has two distinct peaks - 8:00am (just over 200 vehicles per hour) and 4:00pm (almost 250 vehicles per hour). See **Figure 4**. The average weekday traffic volume is approximately 2,500 vehicles per day[8]. The peak hour factor was estimated to be approximately 11% (average of AM and PM peak hour traffic represents approximately 11% of the average weekday traffic).

The two-way weekend traffic is generally lower than the weekday traffic and does not have distinct peaks throughout the day. See **Figure 5**.

[8] 24-hour traffic counts were completed by the City of Victoria from May 01 to May 08 2019 on Chambers Street between Gladstone Avenue and Caledonia Avenue (one block north of the location used as the basis for this study). The City counts found the average weekday traffic volume to be approximately 2,800 vehicles per day, approximately 10% (300 vehicles per day) higher than the count completed one block south.

**FIGURE 4**. 24-HOUR TRAFFIC PROFILE ON CHAMBERS STREET (WEEKDAY)

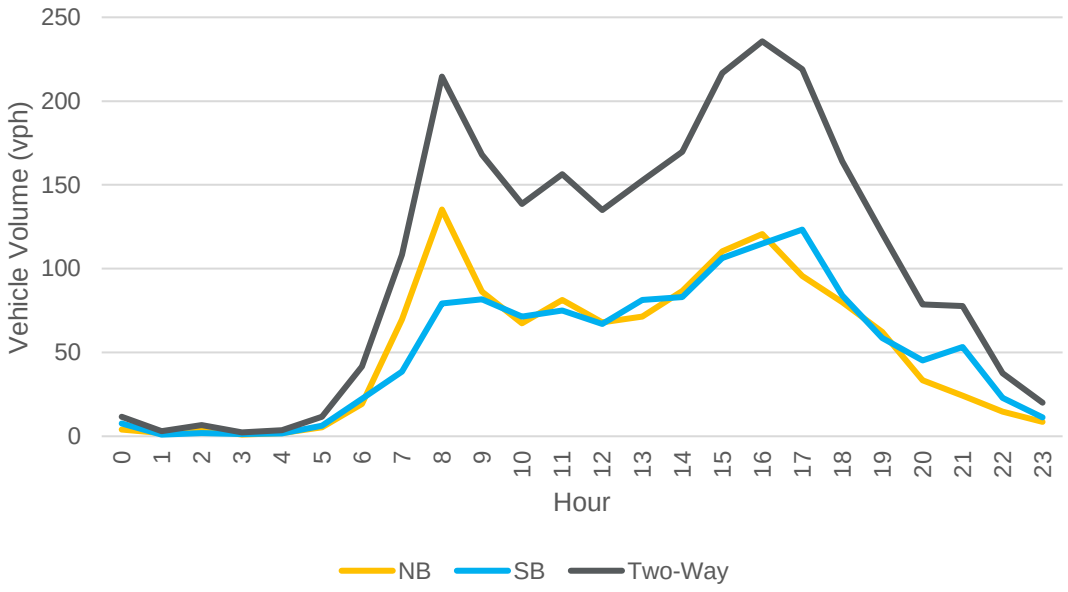
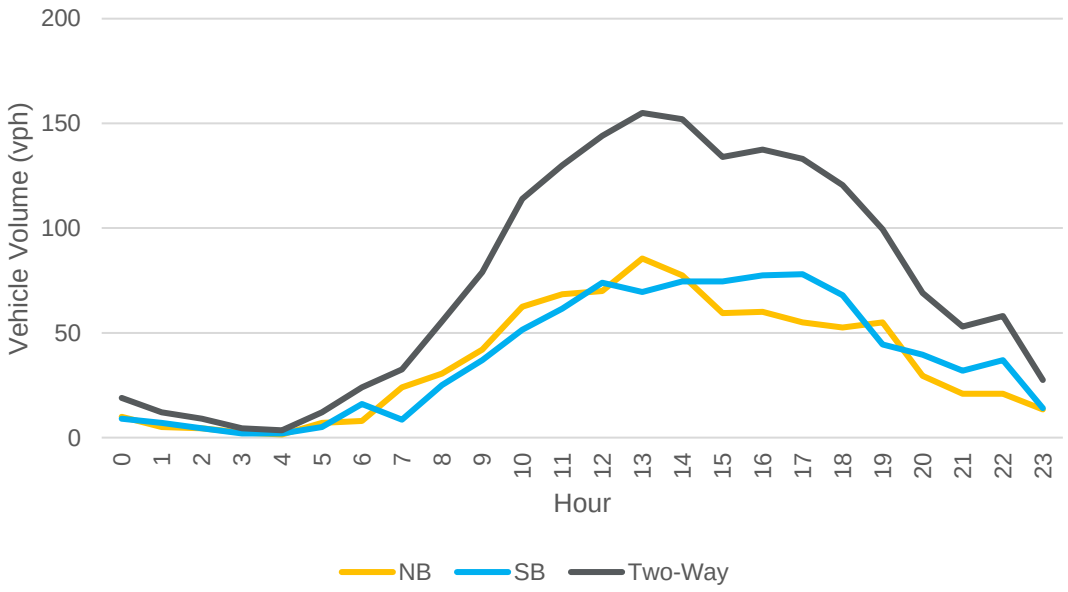



**FIGURE 5**. 24-HOUR TRAFFIC PROFILE ON CHAMBERS STREET (WEEKEND)



### 2.1.3 Historical Volume Review

Historical traffic volumes were reviewed to understand change in traffic volumes over time. The 1996 volumes of Caledonia Avenue and Cook Street from the *Fernwood Neighbourhood Transportation Management Study (1996)* indicate that the peak hour traffic volumes on Cook Street have decreased by approximately 20% to 25% (approximately 250 to 550 vehicle per hour less since 1996), and the traffic on Caledonia Street has increased by approximately 40% to 50% (approximately 60 to 70 vehicles per hour more since 1996).

A review of daily traffic on Chambers Street showed 2,020 and 1,900 vehicles per day in 1996 and 2011[9], respectively, which are approximately 300 vehicles per hour less than current average daily traffic (approximately 2,300 vehicles per day) and 500 vehicles per hour less than current average weekday traffic (approximately 2,500 vehicle per day).

The comparison between the historical and current traffic volumes indicates that while the north-south major street, Cook Street, has experienced a decrease in traffic volumes, the north-south local street, Chambers Street, has experienced some notable increase in the past 25 years or so. The change in traffic volume on Caledonia Avenue is moderate.

### 2.1.4 Intersection Performance

Synchro v10.1 was used to evaluate the traffic operational performance under the existing condition. Key traffic measures including Level of Service (LOS), delay, volume-to-capacity (v/c), and queue length are summarized in **Table 2**. Detailed Synchro reports are provided in **Appendix A**.

The model results indicate that under the existing condition, all four intersections operate at LOS “A/B” at the intersection level. Individual movements all operate at LOS “C” or better with less than 30 seconds of delays. 95$^{th}$ percentile queue lengths at the signalized intersection (Cook Street & Caledonia Avenue) appear to be moderate and the queue lengths at the three unsignalized intersections appear to be minimal.

[9] Email from the City dated on May 2, 2019.

**TABLE 2**. BACKGROUND AM (PM) SYNCHRO RESULTS (BACKGROUND)[10]

| Road | Approach | Control Type | Movement | V/C | Delay (sec/veh) | LOS | 95th% Queue (m) |
|---|---|---|---|---|---|---|---|
| **Cook St & Caledonia Ave** | | | | | | | |
| Caledonia Ave | EB | Signalized | L | 0.36 (0.61) | 19.4 (25.1) | B (C) | 19.2 (38.9) |
| | | Signalized | T,R | 0.47 (0.48) | 9.1 (11.2) | A (B) | 18.5 (27.8) |
| | WB | Signalized | L | 0.04 (0.06) | 15.2 (15.3) | B (B) | 3.5 (5.0) |
| | | Signalized | T,R | 0.31 (0.18) | 15.3 (13.3) | B (B) | 20.9 (15.3) |
| Cook St | NB | Signalized | L | 0.53 (0.48) | 16.4 (18.0) | B (B) | 27.0 (18.8) |
| | | Signalized | T,R | 0.53 (0.79) | 9.4 (17.3) | A (B) | 58.8 (95.3) |
| | SB | Signalized | L | 0.03 (0.13) | 6.0 (9.0) | A (A) | 2.5 (4.9) |
| | | Signalized | T,R | 0.70 (0.79) | 12.8 (17.1) | B (B) | 87.7 (92.5) |
| Overall Intersection | | | | | 12.1 (17.0) | B (B) | - |
| **Chambers St & Caledonia Ave** | | | | | | | |
| Caledonia Ave | EB | Stop | L, T, R | 0.12 (0.22) | 11.9 (11.5) | B (B) | 3.3 (6.4) |
| | WB | Stop | L, T, R | 0.01 (0.01) | 12.0 (11.5) | B (B) | 0.1 (0.1) |
| Chambers St | NB | Free | L | 0.06 (0.03) | 0.5 (0.2) | A (A) | 1.4 (0.7) |
| | | Free | T,R | 0.06 (0.03) | 4.0 (2.9) | A (A) | 1.4 (0.7) |
| | SB | Free | L | 0.00 (0.00) | 0.0 (0.0) | A (A) | 0.0 (0.0) |
| | | Free | T,R | 0.00 (0.00) | 0.1 (0.1) | A (A) | 0.0 (0.0) |
| Overall Intersection | | | | | 4.4 (5.2) | A (A) | - |
| **Fernwood Rd & Grant St** | | | | | | | |
| Grant St | EB | Stop | L, T, R | 0.05 (0.15) | 15.5 (17.6) | C (C) | 1.3 (4.2) |
| | WB | Stop | L, T, R | 0.02 (0.05) | 11.1 (13.7) | B (B) | 0.6 (0.8) |
| Fernwood Rd | NB | Free | L | 0.03 (0.01) | 0.3 (0.1) | A (A) | 0.8 (0.2) |
| | | Free | T,R | 0.03 (0.01) | 1.4 (0.4) | A (A) | 0.8 (0.2) |
| | SB | Free | L | 0.01 (0.01) | 0.1 (0.1) | A (A) | 0.2 (0.3) |
| | | Free | T,R | 0.01 (0.01) | 0.3 (0.4) | A (A) | 0.2 (0.3) |
| Overall Intersection | | | | | 1.5 (2.0) | A (A) | - |
| **Chambers St & Pandora Ave** | | | | | | | |
| Pandora Ave | WB | Free | L | 0.01 (0.01) | 0.1 (0.1) | A (A) | 0.2 (0.3) |
| | | Free | T | 0.36 (0.29) | 0.1 (0.2) | A (A) | 0.2 (0.3) |
| | | Free | R | 0.36 (0.29) | 0.0 (0.0) | A (A) | 0.0 (0.0) |
| Chambers St | NB | Stop | L, T | 0.20 (0.33) | 24.4 (23.7) | C (C) | 5.6 (11.2) |
| | SB | Stop | T,R | 0.31 (0.31) | 21.6 (20.5) | C (C) | 10.0 (10.3) |
| Overall Intersection | | | | | 2.5 (4.0) | A (A) | - |

[10] For movement with zero volumes, assumption of 1 vehicle per hour was used in Synchro model to obtain model results.

## 2.2 Post-Development Conditions

### 2.2.1 Trip Generation

Trip generation refers to the number of new trips that will be generated by the proposed land use. Trip generation rates and directional split (% in/out) are based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *10th Edition* and compared against a trip rate generated based on observation of a local site[11].

The trip generation rates used for the purpose of this study are 0.25 vehicles per unit (AM) and 0.30 vehicles per unit (PM). Refer to **Table 3**. These rates are mid-way between the local and ITE trip rates, and may represent a conservative estimate of traffic generated by the subject site.

**TABLE 3.** SUMMARY OF TRIP GENERATION RATES (VEHICLES PER HOUR)

| Source | AM | PM |
|---|---|---|
| ITE Land Use 221: Multifamily (Mid-Rise) | 0.36 | 0.44 |
| Local Property: 105 Wilson Street | 0.14 | 0.18 |
| **Rate used for Analysis** | **0.25** | **0.30** |

Using the customized trip rates and in / out splits from the ITE manual, the proposed development is anticipated to generate 39 trips (10 in and 29 out) in the AM peak hour and 46 trips (28 in and 18 out) in the PM peak hour. See **Table 4**.

**TABLE 4**. SUMMARY OF POST-DEVELOPMENT TRIP GENERATION (WEEKDAY) [12]

| Peak | Trip Rate | Quantity | Unit | Total Trips | In% | Out% | Trips In | Trips Out |
|---|---|---|---|---|---|---|---|---|
| **AM** | 0.25 | 155 | DU | **39** | 26% | 74% | 10 | 29 |
| **PM** | 0.30 | 155 | DU | **46** | 61% | 39% | 28 | 18 |

It should also be noted that traffic associated with the current site land use (18 townhouses) has not be removed from the network.

[11] The 105 Wilson Street site (in Vic West) was observed on Tuesday April 7, 2019 from 8:00 to 9:00am and 3:00 to 5:00pm. This site is an affordable housing site similar to the land uses proposed at the subject site, is in an urban neighbourhood at the fringe of downtown Victoria, and is similar in size/scale (159 units).

[12] Note: Trip generation based on preliminary unit count (155 units) rather than final unit count (154 unit), and therefore represents a conservative estimate of trips generated.

### 2.2.2 Trip Distribution + Assignment

The site trip distribution was developed using StreetLight Data, a data service that collects records based on Location-Based Service and Navigation-GPS data[13]. The following distribution assumptions were developed for each scenario based on 2018 StreetLight data. See **Table 5**.

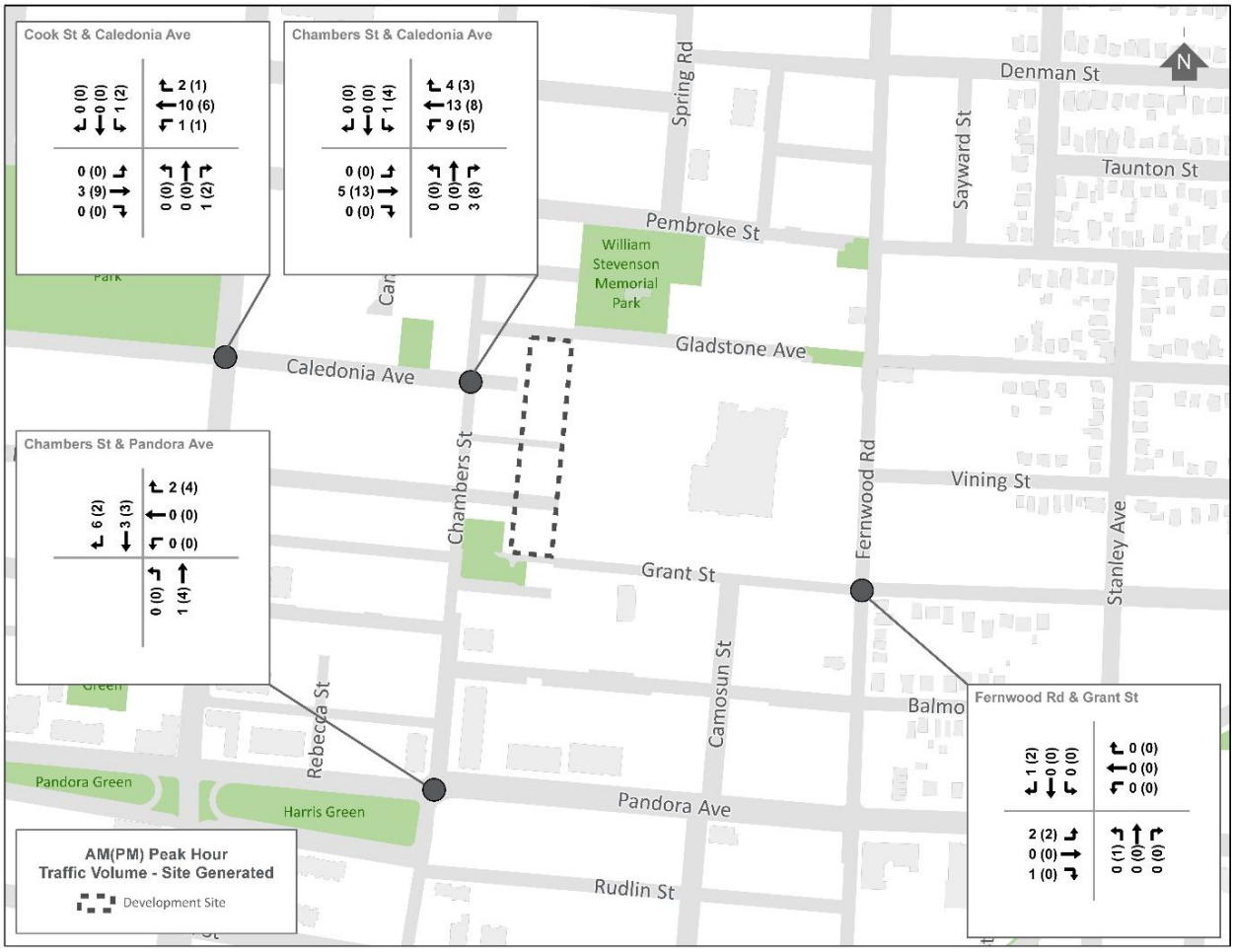
**TABLE 5**. TRIP DISTRIBUTION SUMMARY

| From / To | Distribution % |
|---|---|
| North via Chambers Street | 15% |
| South via Chambers Street | 30% |
| East via Grant Avenue | 10% |
| West via Caledonia Avenue | 45% |
| **Total** | **100%** |

Trip assignment at the movement level was based on the intersection counts at each intersection. **Figure 6** illustrates the site generated trips.

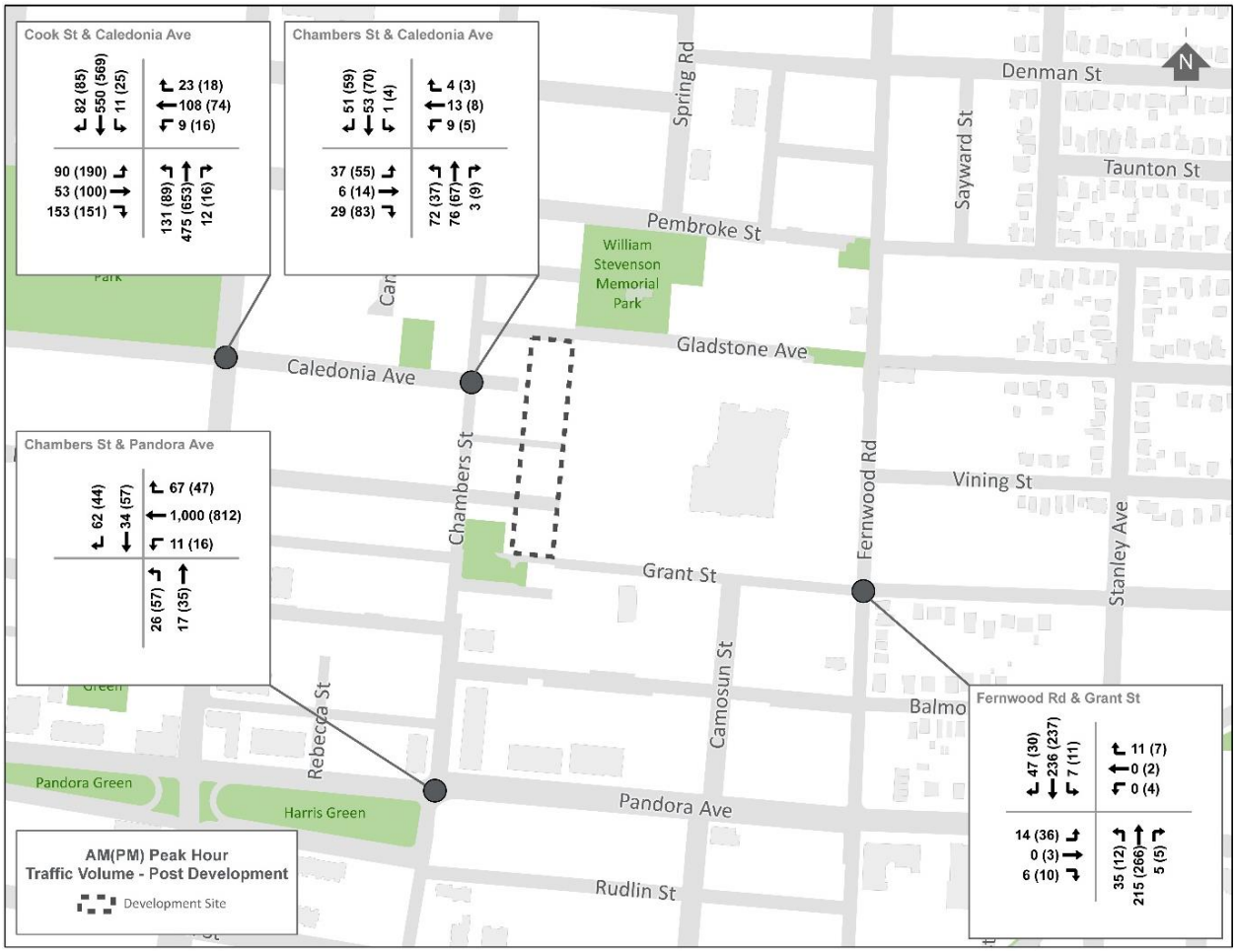
[13] Streetlight processes over 60-billion new location records every month from Location-Based Service data and Navigation-GPS Data. Altogether, Streetlight's sample size represents 23% of travel activity in the US and Canada. Streetlight Data has been independently validated by Fehr and Peers. The consulting firm validated *StreetLight Insight* Origin/Destination Travel Metrics against data collected through a license plate scan and an origin-destination matrix derived from modeling and surveys. The results had a better than 95% correlation between data sets. Additionally, the BC Ministry of Transportation & Infrastructure has trialed Streetlight Data in the Enderby area. Streetlight data was found to closely mirror patterns collected by Bluetooth readers.

**FIGURE 6.** AM (PM) SITE GENERATED TRIPS




Total post development (background + site generated trips) are illustrated in **Figure 7**.

**FIGURE 7.** AM (PM) TOTAL TRIPS




## 2.2.3 Intersection Performance

A summary of post-development network conditions is provided in **Table 6**. The analysis indicates that with the additional site generated trips, the study intersections are expected to continue operate at acceptable conditions with moderate delays and queues.

The analysis concludes that the increase in traffic associated with the proposed development will not tangibly impact conditions at any of the four intersections. Since the study intersections operates at acceptable condition with no significant operational issues, intersection improvement is not required.

While only a small number of new trips are anticipated to/from Grant Street, it is acknowledged that Grant Street is underdeveloped and certain turn movements at the Grant Street / Fernwood intersection are challenging for larger vehicles (particularly the eastbound right-turn). Design improvements may be considered for Grant Street.

**TABLE 6**. POST-DEVELOPMENT AM (PM) SYNCHRO RESULTS[14]

| Road | Approach | Control Type | Movement | V/C | Delay (sec/veh) | LOS | 95th% Queue (m) |
|---|---|---|---|---|---|---|---|
| **Cook St & Caledonia Ave** | | | | | | | |
| Caledonia Ave | EB | Signalized | L | 0.36 (0.61) | 19.4 (25.4) | B (C) | 19.3 (39.0) |
| | | Signalized | T,R | 0.47 (0.51) | 9.2 (12.5) | A (B) | 19.1 (31.0) |
| | WB | Signalized | L | 0.04 (0.06) | 15.2 (15.4) | B (B) | 3.7 (5.4) |
| | | Signalized | T,R | 0.33 (0.20) | 15.7 (13.4) | B (B) | 22.6 (16.2) |
| Cook St | NB | Signalized | L | 0.54 (0.48) | 17.0 (17.9) | B (B) | 27.2 (18.8) |
| | | Signalized | T,R | 0.54 (0.79) | 9.6 (17.4) | A (B) | 58.9 (96.0) |
| | SB | Signalized | L | 0.03 (0.14) | 6.0 (9.2) | A (A) | 2.6 (5.2) |
| | | Signalized | T,R | 0.71 (0.78) | 13.0 (17.1) | B (B) | 87.7 (92.5) |
| Overall Intersection | | | | | 12.4 (17.2) | B (B) | - |
| **Chambers St & Caledonia Ave** | | | | | | | |
| Caledonia Ave | EB | Stop | L, T, R | 0.14 (0.25) | 12.4 (12.1) | B (B) | 3.8 (7.6) |
| | WB | Stop | L, T, R | 0.06 (0.03) | 13.2 (12.3) | B (B) | 1.5 (0.8) |
| Chambers St | NB | Free | L | 0.06 (0.03) | 0.5 (0.2) | A (A) | 1.4 (0.7) |
| | | Free | T,R | 0.06 (0.03) | 3.9 (2.7) | A (A) | 1.4 (0.7) |
| | SB | Free | L | 0.00 (0.00) | 0.0 (0.0) | A (A) | 0.0 (0.1) |
| | | Free | T,R | 0.00 (0.00) | 0.1 (0.2) | A (A) | 0.0 (0.1) |
| Overall Intersection | | | | | 5.2 (5.7) | A (A) | - |
| **Fernwood Rd & Grant St** | | | | | | | |
| Grant St | EB | Stop | L, T, R | 0.06 (0.16) | 15.4 (17.9) | C (C) | 1.6 (4.4) |
| | WB | Stop | L, T, R | 0.02 (0.03) | 11.1 (13.7) | B (B) | 0.6 (0.8) |
| Fernwood Rd | NB | Free | L | 0.03 (0.01) | 0.3 (0.1) | A (A) | 0.8 (0.3) |
| | | Free | T,R | 0.03 (0.01) | 1.4 (0.4) | A (A) | 0.8 (0.3) |
| | SB | Free | L | 0.01 (0.01) | 0.1 (0.1) | A (A) | 0.2 (0.3) |
| | | Free | T,R | 0.01 (0.01) | 0.3 (0.4) | A (A) | 0.2 (0.3) |
| Overall Intersection | | | | | 1.5 (2.1) | A (A) | - |
| **Chambers St & Pandora Ave** | | | | | | | |
| Pandora Ave | WB | Free | L | 0.01 (0.01) | 0.1 (0.1) | A (A) | 0.2 (0.3) |
| | | Free | T | 0.36 (0.29) | 0.1 (0.2) | A (A) | 0.2 (0.3) |
| | | Free | R | 0.36 (0.29) | 0.0 (0.0) | A (A) | 0.0 (0.0) |
| Chambers St | NB | Stop | L, T | 0.21 (0.35) | 25.3 (24.6) | D (C) | 2.9 (12.2) |
| | SB | Stop | T,R | 0.34 (0.33) | 22.3 (20.9) | C (C) | 11.3 (11.0) |
| Overall Intersection | | | | | 2.7 (4.2) | A (A) | - |

[14] For movement with zero volumes, assumption of 1 vehicle per hour was used in Synchro model to obtain model results.

## 2.3 Neighbourhood Traffic Concerns

Discussion at the February 2019 Community and Land Use Community (CALUC) meeting identified pre-existing neighbourhood traffic concerns, specifically traffic volumes on Chambers Street and neighbourhood short-cutting via Chambers Street. Each is studied in the following sections.

### 2.3.1 Chambers Street Traffic Volumes

Chambers Street is identified as a Local Street, per the City's *Official Community Plan, Section 7*. The City's Road Classification Map[15] indicates that a Local Street is intended to accommodate less than 1,000 vehicles per day. The average weekday traffic volume on Chambers Street was observed to be approximately 2,500 vehicles per day (as was described in Section 2.1.2), which exceeds the desired daily traffic volume for a Local Street and suggests that traffic management / traffic calming may be appropriate to reduce the number of vehicles on Chambers Street.

### 2.3.2 Short-Cutting Traffic Analysis

The recent traffic volume counts on Chambers Street (described above) represent an increase of approximately 25% in the average weekday traffic volume on Chambers Street since the 2011 count. The change in traffic control at the Pandora Avenue / Cook Street intersection in 2017 to restrict right-turns on red (associated with the Pandora Avenue cycling improvements) may have resulted in increased short-cutting via Chambers Street to avoid increased wait time making the westbound right-turn at the Pandora Avenue / Cook Street intersection. Analysis was undertaken to better understand the nature and magnitude of short-cutting.

The short-cutting traffic analysis was conducted using 2018 StreetLight data (refer to Section 2.2.2 for a description of the StreetLight data service), with the Pandora Avenue westbound right-turn to Chambers Street as the origin point (or "gate") and Chambers Street north of Caledonia Avenue as well as Balmoral Street, Grant Street, North Park Street and Caledonia immediately east of Cook Street as the destination points. See **Figure 8**.

The results indicated that approximately 30% of the traffic that turned right onto Chambers Street from Pandora Avenue continued northbound on Chambers Street to beyond Caledonia Avenue. These vehicles are assumed to be destined for the neighbourhood and are not short-cutting. The remaining 70% used Balmoral Road, Grant Street, North Park Street or Caledonia Avenue to access Cook Street or destinations west of Cook Street, and are considered to be short-cutting.

[15] Available online at: https://www.victoria.ca/assets/Departments/Engineering~Public~Works/Documents/Road%20Classification%20Map%2011x17.pdf

**FIGURE 8**. ORIGIN – DESTINATION GATES


The intersection turn movement counts at the Pandora Avenue / Chambers Street intersection were used to understand the magnitude of the potential short-cutting traffic. The traffic counts together with the StreetLight data, potential short-cutting traffic were estimated to be approximately 30 to 45 vehicles per hour in the peak hours, summarized in **Table 7**. Using the peak hour factor of 11 calculated in the previous section (Section 2.1.2), the daily short cutting traffic was estimated to be approximately 420 vehicles per day.

**TABLE 7**. SHORT-CUTTING TRAFFIC ESTIMATES

| | **Westbound Right-Turn** (Pandora Ave / Chambers St) | **Estimated Short-Cutting Traffic** |
|---|---|---|
| AM | 65 | 46 |
| PM | 43 | 30 |
| All Day | 594 | 416 |

Using the 24-hour traffic counts on Chambers Street, it was estimated that the short-cutting traffic generally makes up approximately 25 to 35% of the northbound traffic and 15% to 20% of the total two-way traffic. See **Table 8**.

**TABLE 8**. SUMMARY OF SHORT-CUTTING TRAFFIC ON CHAMBERS STREET

| | Traffic Volume on Chambers Street | | Short Cutting Traffic | | |
|---|---|---|---|---|---|
| | Northbound | Two-Way | Volume (veh/hr) | % of Northbound | % of Two-way |
| AM | 135 | 215 | 46 | 34% | 21% |
| PM | 121 | 236 | 30 | 25% | 13% |
| All Day | 1,254 | 2,494 | 416 | 33% | 17% |

# 3.0 Site Parking Demand

## 3.1 Parking Requirement

The required off-street parking supply is determined through the City's Zoning Bylaw no.80-159, Schedule C: Off-Street Parking Requirements[16]. The site parking requirement is estimated to be 114 spaces[17], as shown in **Table 9**.

**TABLE 9**. SUMMMARY OF OFF-STREET PARKING REQUIREMENT

| Land Use | Quantity | Minimum Parking Supply | |
|---|---|---|---|
| | | Rate | Total |
| Affordable (less than 45m$^2$) | 11 units | 0.20 Per unit | 2.2 |
| Affordable (between 45m$^2$ and 70m$^2$) | 42 units | 0.50 per unit | 21.0 |
| Affordable (greater than 70m$^2$) | 101 units | 0.75 per unit | 75.8 |
| Visitor | 154 units | 0.1 per unit | 15.4 |
| **Total** | | | **114** |

[16] Available online at: https://www.victoria.ca/assets/Departments/Planning~Development/Development~Services/Zoning/Bylaws/Schedule%20C.pdf

[17] Exact unit floor areas had not been determined at the time this study was undertaken. For the purposes of calculating the site's parking demand it was assumed that all studio units are less than 45m$^2$, all one-bedroom units are between 45m$^2$ and 70m$^2$ and all two-, three- and four-bedroom units are greater than 70m$^2$.

## 3.2 Parking Demand

The following section describes estimating residential parking demand using two methods - observations at representative sites and vehicle ownership data.

### 3.2.1 Residents, Parking Demand at Other CRHC Sites

Resident parking demand is estimated based on parking demand experienced at six CRHC sites in the City of Victoria (representing 278 units). CRHC study sites were selected that are in similar urban neighbourhoods as the subject site and with a similar ratio of one-, two-, three- and four-bedroom units.

The average parking demand rate among the study sites is 0.64 vehicles per unit. See **Table 10**. The average parking demand suggests resident parking demand will be 99 vehicles.

**TABLE 10**. PARKING DEMAND AT CRHC SITES[18]

| Site | Area | Units | | | | | Vehicle Ownership Rate[19] (vehicles per unit) |
|---|---|---|---|---|---|---|---|
| | | Total | 1-bed | 2-bed | 3-bed | 4-bed | |
| "Castanea" 2860 Quadra St | Quadra Village | 59 | 54% | 24% | 19% | 3% | 0.49 |
| "Harbour Lane" 324 Kingston St | James Bay | 28 | 4% | 68% | 29% | - | 0.86 |
| "Kings Place" 1070 Kings Rd | Quadra Village | 35 | 3% | 63% | 31% | 3% | 0.77 |
| "Leblond Place" 390 Waterfront Cres | Gorge / Selkirk | 53 | 72% | 19% | 2% | 8% | 0.43 |
| "Michigan Square" 330-360 Michigan St | James Bay | 62 | 39% | 66% | 5% | - | 0.77 |
| "Rotary House" 1855 Quadra St | Downtown | 41 | 39% | 61% | - | - | 0.49 |
| | | | | | | | **0.64** vehicles per unit |

[18] Parking demand data provided by CRHC, current as of March 2019

[19] Data provided by CRHC as % of units with a car

### 3.2.2 Residents, Vehicle Ownership Data

Anticipated resident parking demand is estimated below based on vehicle ownership data from representative sites in the City of Victoria. All referenced vehicle ownership data was provided by the Insurance Corporation of British Columbia (ICBC) through the *Vehicle Ownership Request* program, as contained in *Working Paper no.3* that was prepared in 2016 / 2017 as part of the City's review of off-street parking regulations[20].

Anticipated parking demand for the residential units is based on vehicle ownership data for affordable housing sites in areas classified as "Remainder" or "Village / Centre" as the site ("Traditional Residential") is located outside of downtown or town centre but is also adjacent to Large / Small Village Centre lands. The average vehicle ownership rate for the fifteen (one for "Village / Centre" and fourteen for "Remainder") sites surveyed (representing 548 units) is 0.56 vehicles per unit. See **Table 11**. Applied to the subject site, this suggests the resident parking demand will be approximately 86 vehicles, which is slightly lower than the parking demand estimate from CRHC data identified in Section 3.2.1 (above).

**TABLE 11**. VEHICLE OWNERSHIP AT REPRESENTATIVE MULTI-FAMILY RESIDENTIAL SITES[21]

| Site | No. Units | Owned Vehicles | |
|---|---|---|---|
| | | Total | Rate (vehicles / unit) |
| 918 Collinson Street[(a)] | 102 | 23 | 0.23 |
| 1025 North Park Street[(a)] | 10 | 5 | 0.50 |
| 510 Dalton Street[(a)] | 11 | 5 | 0.45 |
| 2105 Dowler Place[(a)] | 68 | 17 | 0.25 |
| 3015 Jutland Rd[(a)] | 30 | 18 | 0.60 |
| 35 Gorge Road E[(a)] | 69 | 45 | 0.65 |
| 950 Humboldt Street[(a)] | 45 | 15 | 0.33 |
| 1150 Yates Street[(b)] | 8 | 7 | 0.88 |
| 1132 Johnson Street[(b)] | 34 | 31 | 0.91 |
| 450 Superior Street[(b)] | 32 | 25 | 0.78 |
| 2980 Jutland Road[(b)] | 17 | 7 | 0.41 |
| 21 Gorge Road East[(a)] | 52 | 42 | 0.81 |
| 1130 Fort Street[(c)] | 21 | 10 | 0.48 |
| 1253 Johnson Street[(c)] | 21 | 12 | 0.57 |
| 1134 Queens Avenue[(c)] | 28 | 17 | 0.61 |
| | | **Average** | **0.56** |

Note: Vehicle ownership data current as of March 31 2016 (a), April 30 2014 (b), and December 31 2013 (c)

[20] Review of Zoning Regulations Bylaw Off-Street Parking Requirements (Schedule C), Working Paper No.3: Parking Demand Assessment, prepared by Boulevard Transportation / Watt Consulting Group, September 2016.

[21] Based on data from Review of Zoning Regulations Bylaw Off-Street Parking Requirements (Schedule C), Working Paper No.3: Parking Demand Assessment, prepared by Boulevard Transportation / Watt Consulting Group, September 2016, Appendix A.

Using the parking demand data from other CRHC sites (the higher of the two measures), the parking demand associated with residents is anticipated to be 99 vehicles.

### 3.2.3 Visitor Parking

Visitor parking demand rates have been demonstrated in the range of 0.05 to 0.07 vehicles per unit for multi-family residential uses[22]. More recent research completed as part of the City of Victoria review of off-street parking requirements found peak visitor parking rates to be 0.1 vehicles per unit at condominium sites[23]. Applied to the subject site (154 units), this suggests visitor parking demand will be approximately 15 or 16 vehicles.

### 3.2.4 Summary

The analysis contained in the previous sections suggests that the site parking demand will be approximately 115 vehicles (99 residents and 16 visitors). This is 5 fewer vehicles than the proposed parking supply and suggests that site parking demand will be accommodated without impacting neighbourhood parking.

[22] Based on observations of visitor parking from the 2012 Metro Vancouver *Apartment Parking Study* (Table 31, pg50) available at: www.metrovancouver.org/services/regionalplanning/PlanningPublications/Apartment_Parking_Study_TechnicalReport.pdf

[23] Based on data from Review of Zoning Regulations Bylaw Off-Street Parking Requirements (Schedule C), Working Paper No.3: Parking Demand Assessment, prepared by Boulevard Transportation / Watt Consulting Group, September 2016, Appendix E.

# 4.0 Off-Site Parking

Off-site parking conditions were reviewed to determine the availability of on-street parking nearby the subject site.

## 4.1.1 Neighbourhood Parking Inventory

An on-street parking inventory was developed for an approximately one-black radius surrounding the subject site. See **Figure 9**. The inventory includes a total of 220 on-street parking spaces. The majority of nearby on-street parking is Resident Parking Only (57%).

**FIGURE 9**. ON-STREET PARKING INVENTORY

### 4.1.2 Off-Site Parking Utilization

On-street parking utilization was assessed for the approximately one-black radius surrounding the subject site. Observations were completed on Monday, April 22 2019 at 8:30pm.

The review concluded that on-street parking in the area was approximately 50% occupied during nighttime. Short-term parking spaces (i.e., all spaces excluding resident parking only) were observed at approximately 40% occupied during the weekday nighttime observations.

The areas most immediately adjacent the subject site are Caledonia Avenue east of Chambers Street (33% occupied during nighttime) and Grant Street west of Camosun Street (25% occupied during nighttime). While Chambers Street between Grant Street and Caledonia Avenue fronting the subject site was approximately 85% occupied during the observation, most of the rest of nearby streets were observed no higher than 65% occupied in general in the weekday night time observations.

The full results are summarized in **Table 12**.

It should also be noted that the City has indicated that all parking spaces along the site frontages – presumably on Gladstone Avenue (approximately 5 spaces) – will be changed from their current Resident Parking Only restriction to time limited consistent with Council policy for residential development sites in urban neighbourhoods[24].

[24] Communicated by City staff at a meeting on April 15 2019

## TABLE 12. SUMMARY OF ON-STREET PARKING UTILIZATION

| Street Segment | | | Restriction | Parking Supply | Observed Vehicles | |
|---|---|---|---|---|---|---|
| | | | | | Mon, Apr 22 8:30pm | |
| **Chambers St** | Pembroke St to Stelly St | W | RPO | 5 | 2 | 40% |
| | | E | n/a | - | - | - |
| | Stelly St to Gladstone Ave | W | n/a | - | - | - |
| | | E | RPO | 6 | 4 | 67% |
| | Gladstone Ave to Caledonia Ave | W | n/a | - | - | - |
| | | E | | - | - | - |
| | Caledonia Ave to North Park St | W | RPO | 4 | 4 | 100% |
| | | E | RPO | 3 | 3 | 100% |
| | North Park St to Grant St | W | n/a | - | - | - |
| | | E | RPO | 5 | 2 | 40% |
| | Grant St to Balmoral Rd | W | n/a | - | - | - |
| | | E | n/a | - | - | - |
| **Gladstone Ave** | Chambers St to Fernwood Rd | N | RPO (W) | 10 | 4 | 40% |
| | | | RPO (E) | 13 | 8 | 62% |
| | | | Unrestricted | 7 | 2 | 29% |
| | | S | RPO | 5 | 5 | 100% |
| | | | Unrestricted | 13 | 3 | 23% |
| | | | 1hr | 9 | 4 | 44% |
| **Caledonia Ave** | Cook St to Chambers St | N | RPO | 11 | 7 | 64% |
| | | S | | 17 | 11 | 65% |
| | Chambers St to subject site | N | n/a | - | - | - |
| | | S | RPO | 6 | 2 | 33% |
| **North Park St** | Cook St to Chambers St | N | RPO | 18 | 12 | 67% |
| | | S | | 19 | 14 | 74% |
| | Chambers St to subject site | N | 2hr | 6 | 1 | 17% |
| | | S | RPO | 7 | 1 | 14% |
| **Grant St** | Cook St to Chambers St | N | RPO | 15 | 4 | 27% |
| | | S | | 19 | 5 | 26% |
| | Chambers Street to Camosun St | N | n/a | - | - | - |
| | | S | RPO | 8 | 2 | 25% |
| **Yukon St** | Chambers St to east | N | 2hr | 5 | 0 | 0% |
| | | S | RPO | 9 | 5 | 56% |
| **Total** | | | | **220** | **105** | **48%** |

Restriction Codes:

**RPO** – "Residential Parking Only"
**1hr** – 1 hr, 8am – 6pm, Mon – Fri
**2hr** – 2hr, 8am – 6pm, Mon – Sat

# 5.0 Transportation Demand Management

Transportation demand management ("TDM") refers to the use of policies, programs, services and products to influence whether, why, when, where and how people travel[25]. Most commonly TDM is employed to encourage walking, cycling, public transit and other sustainable travel modes to reduce parking demand and traffic congestion. The opportunities to reduce the site's traffic and parking demand through TDM are considered in the following sections.

## 5.1 Carshare

The most prevalent local two-way carshare service is Modo, with approximately 70 vehicles in Greater Victoria (as of January 2019)[26]. Members may access any vehicle within the fleet and pay based on the length of time and distance of their trip. Three vehicles are located within one-block of the subject site and may be conveniently accessed by site residents - Gladstone Avenue adjacent the Fernwood Community Centre (2 vehicles) and Yukon Street at Chambers Street (1 vehicle).

The applicant may consider purchasing non-refundable Modo memberships for residential units (up to 156 total memberships) to facilitate carsharing among site residents.

## 5.2 Bus Stops

The many transit routes and bus stops within walking distance of the subject site are introduced in *Section 1.2*. Consideration may be given to contributing to bus stop improvements in the vicinity of the site to support transit use among site residents and employees.

[25] Transport Canada, Transportation Demand Management for Canadian Communities: A Guide to Understanding, Planning and Delivering TDM Programs, March 2011.
Available online: http://publications.gc.ca/collections/collection_2011/tc/T22-206-2011-eng.pdf

[26] Count based on Modo "Car Map", available online at: www.modo.coop/map

# 6.0 Summary

The subject site is currently occupied by a series of 18 townhouse units on the 1211 Gladstone Avenue property and a single multi-unit residential building on the 1209 Vining Street property. All other portions of the redevelopment site are currently underdeveloped.

The proposed redevelopment fronting Chambers Street consists of 154 multi-family residential units with a mixture of Deep Subsidy, Rent-Geared-to-Income and Affordable housing units. The proposed redevelopment includes a total of 120 parking spaces.

Pre- and post-development traffic conditions were assessed for the Caledonia Avenue / Chambers Street, Caledonia Avenue / Cook Street, Grant Street / Fernwood Rd and Pandora Avenue / Chambers Street intersections. The results indicate that all intersections will continue to operate at a good level of service with the additional traffic generated by the proposed redevelopment. The traffic analysis does not indicate a need for operational improvements, although design improvements may be considered for Grant Street.

A review of neighbourhood traffic concerns concluded that traffic volumes on Chambers Street exceed the target threshold for a Local Street and that traffic management / calming may be appropriate. It was also determined that a number of vehicles use Chambers Street and other neighbourhood streets to short-cut between nearby major roads, with historical traffic data suggesting this may have increased as a result of operational changes to the Cook Street / Pandora Avenue intersection in 2017.

The site's expected parking demand was calculated based on data from other CRHC sites and vehicle ownership data from similar affordable housing sites. The analysis concluded an estimated parking demand of 115 vehicles (99 resident, 16 visitor), which is 5 fewer vehicles than the proposed parking supply. The proposed parking supply exceeds the required off-street parking supply.

Transportation demand management (TDM) options were identified for the applications consideration that would help reduce site traffic and parking demand. Options include a new carshare vehicle and Modo carshare memberships for each residential unit, as well as contributions to improve area bus stops.

## 6.1 Recommendations

1. The proposed redevelopment will not negatively impact nearby traffic conditions and no improvements are recommended;
2. The proposed parking supply is appropriate and will not negatively impact neighbourhood parking conditions; and
3. Given the traffic volumes on Chambers Street and the magnitude of neighbourhood short-cutting, it is recommended that the City consider initiating a neighbourhood traffic management process to address measured issues.

# APPENDIX A.

Synchro Traffic Model Reports

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 90 | 50 | 153 | 8 | 98 | 21 | 131 | 475 | 11 | 10 | 550 | 82 |
| Future Volume (vph) | 90 | 50 | 153 | 8 | 98 | 21 | 131 | 475 | 11 | 10 | 550 | 82 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | 25.0 | | 45.7 | 10.0 | | 45.7 | 20.0 | | 45.7 | 20.0 | | 45.7 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.94 | 0.90 | | 0.92 | 0.98 | | 0.97 | 1.00 | | 0.95 | 0.98 | |
| Frt | | 0.887 | | | 0.973 | | | 0.997 | | | 0.981 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1789 | 1501 | 0 | 1789 | 1804 | 0 | 1789 | 1871 | 0 | 1789 | 1814 | 0 |
| Flt Permitted | 0.674 | | | 0.621 | | | 0.277 | | | 0.401 | | |
| Satd. Flow (perm) | 1197 | 1501 | 0 | 1071 | 1804 | 0 | 505 | 1871 | 0 | 714 | 1814 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 166 | | | 18 | | | 3 | | | 19 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 48 | | | 48 | |
| Link Distance (m) | | 88.9 | | | 220.3 | | | 99.5 | | | 95.2 | |
| Travel Time (s) | | 6.7 | | | 16.5 | | | 7.5 | | | 7.1 | |
| Confl. Peds. (#/hr) | 41 | | 70 | 70 | | 41 | 75 | | 84 | 84 | | 75 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 98 | 54 | 166 | 9 | 107 | 23 | 142 | 516 | 12 | 11 | 598 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 98 | 220 | 0 | 9 | 130 | 0 | 142 | 528 | 0 | 11 | 687 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 37.0 | 37.0 | | 37.0 | 37.0 | |
| Total Split (%) | 38.3% | 38.3% | | 38.3% | 38.3% | | 61.7% | 61.7% | | 61.7% | 61.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Min | Min | | Min | Min | |
| Act Effct Green (s) | 10.1 | 10.1 | | 10.1 | 10.1 | | 23.5 | 23.5 | | 23.5 | 23.5 | |
| Actuated g/C Ratio | 0.23 | 0.23 | | 0.23 | 0.23 | | 0.53 | 0.53 | | 0.53 | 0.53 | |
| v/c Ratio | 0.36 | 0.47 | | 0.04 | 0.31 | | 0.53 | 0.53 | | 0.03 | 0.70 | |
| Control Delay | 19.4 | 9.1 | | 15.2 | 15.3 | | 16.4 | 9.4 | | 6.0 | 12.8 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 19.4 | 9.1 | | 15.2 | 15.3 | | 16.4 | 9.4 | | 6.0 | 12.8 | |
| LOS | B | A | | B | B | | B | A | | A | B | |
| Approach Delay | | 12.3 | | | 15.3 | | | 10.9 | | | 12.6 | |
| Approach LOS | | B | | | B | | | B | | | B | |

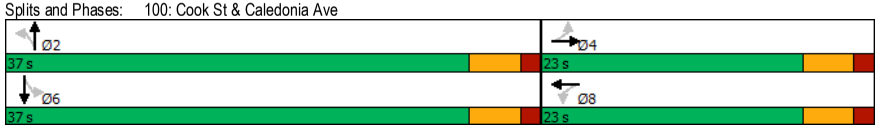




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Length 50th (m) | 5.5 | 2.9 | | 0.5 | 6.1 | | 5.5 | 20.5 | | 0.3 | 29.6 | |
| Queue Length 95th (m) | 19.2 | 18.5 | | 3.5 | 20.9 | | 27.0 | 58.8 | | 2.5 | 87.7 | |
| Internal Link Dist (m) | | 64.9 | | | 196.3 | | | 75.5 | | | 71.2 | |
| Turn Bay Length (m) | 25.0 | | | 10.0 | | | 20.0 | | | 20.0 | | |
| Base Capacity (vph) | 513 | 739 | | 459 | 784 | | 384 | 1425 | | 543 | 1385 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.19 | 0.30 | | 0.02 | 0.17 | | 0.37 | 0.37 | | 0.02 | 0.50 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 44.1 | | | |
| Natural Cycle: 60 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.70 | | | |
| Intersection Signal Delay: 12.1 | | Intersection LOS: B | |
| Intersection Capacity Utilization 71.2% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 100: Cook St & Caledonia Ave



HCM Unsignalized Intersection Capacity Analysis — Existing Base
200: Chambers St & Caledonia Ave — AM Peak Hour

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 37 | 1 | 29 | 1 | 1 | 1 | 72 | 76 | 1 | 1 | 53 | 51 |
| Future Volume (Veh/h) | 37 | 1 | 29 | 1 | 1 | 1 | 72 | 76 | 1 | 1 | 53 | 51 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 40 | 1 | 32 | 1 | 1 | 1 | 78 | 83 | 1 | 1 | 58 | 55 |
| Pedestrians | | 38 | | | 53 | | | 18 | | | 26 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 5 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 392 | 418 | 142 | 430 | 446 | 162 | 151 | | | 137 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 392 | 418 | 142 | 430 | 446 | 162 | 151 | | | 137 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 92 | 100 | 96 | 100 | 100 | 100 | 94 | | | 100 | | |
| cM capacity (veh/h) | 482 | 458 | 863 | 436 | 442 | 823 | 1383 | | | 1381 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 73 | 3 | 162 | 114 |
| Volume Left | 40 | 1 | 78 | 1 |
| Volume Right | 32 | 1 | 1 | 55 |
| cSH | 597 | 520 | 1383 | 1381 |
| Volume to Capacity | 0.12 | 0.01 | 0.06 | 0.00 |
| Queue Length 95th (m) | 3.3 | 0.1 | 1.4 | 0.0 |
| Control Delay (s) | 11.9 | 12.0 | 4.0 | 0.1 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 11.9 | 12.0 | 4.0 | 0.1 |
| Approach LOS | B | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 4.4 | | | |
| Intersection Capacity Utilization | 31.4% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



HCM Unsignalized Intersection Capacity Analysis — Existing Base
300: Fernwood Rd & Grant St — AM Peak Hour

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 12 | 1 | 5 | 1 | 1 | 11 | 35 | 215 | 5 | 7 | 236 | 46 |
| Future Volume (Veh/h) | 12 | 1 | 5 | 1 | 1 | 11 | 35 | 215 | 5 | 7 | 236 | 46 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 13 | 1 | 5 | 1 | 1 | 12 | 38 | 234 | 5 | 8 | 257 | 50 |
| Pedestrians | | 35 | | | 29 | | | 2 | | | 38 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 2 | | | 0 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 696 | 677 | 319 | 647 | 700 | 304 | 342 | | | 268 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 696 | 677 | 319 | 647 | 700 | 304 | 342 | | | 268 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 96 | 100 | 99 | 100 | 100 | 98 | 97 | | | 99 | | |
| cM capacity (veh/h) | 305 | 341 | 699 | 345 | 331 | 695 | 1181 | | | 1264 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 19 | 14 | 277 | 315 |
| Volume Left | 13 | 1 | 38 | 8 |
| Volume Right | 5 | 12 | 5 | 50 |
| cSH | 360 | 603 | 1181 | 1264 |
| Volume to Capacity | 0.05 | 0.02 | 0.03 | 0.01 |
| Queue Length 95th (m) | 1.3 | 0.6 | 0.8 | 0.2 |
| Control Delay (s) | 15.5 | 11.1 | 1.4 | 0.3 |
| Lane LOS | C | B | A | A |
| Approach Delay (s) | 15.5 | 11.1 | 1.4 | 0.3 |
| Approach LOS | C | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.5 | | | |
| Intersection Capacity Utilization | 47.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 11 | 1000 | 65 | 26 | 16 | 0 | 0 | 31 | 56 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 11 | 1000 | 65 | 26 | 16 | 0 | 0 | 31 | 56 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 12 | 1087 | 71 | 28 | 17 | 0 | 0 | 34 | 61 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (m) | | | | | | | | | | | | |
| Walking Speed (m/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1158 | | | 0 | | | 646 | 1182 | 0 | 1155 | 1146 | 579 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1158 | | | 0 | | | 646 | 1182 | 0 | 1155 | 1146 | 579 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 90 | 91 | 100 | 100 | 83 | 87 |
| cM capacity (veh/h) | 599 | | | 1622 | | | 267 | 187 | 1084 | 141 | 196 | 458 |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 556 | 614 | 45 | 95 |
| Volume Left | 12 | 0 | 28 | 0 |
| Volume Right | 0 | 71 | 0 | 61 |
| cSH | 1622 | 1700 | 230 | 310 |
| Volume to Capacity | 0.01 | 0.36 | 0.20 | 0.31 |
| Queue Length 95th (m) | 0.2 | 0.0 | 5.6 | 10.0 |
| Control Delay (s) | 0.2 | 0.0 | 24.4 | 21.6 |
| Lane LOS | A | | C | C |
| Approach Delay (s) | 0.1 | | 24.4 | 21.6 |
| Approach LOS | | | C | C |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.5 | | | |
| Intersection Capacity Utilization | 45.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 190 | 91 | 151 | 15 | 68 | 17 | 89 | 653 | 14 | 23 | 569 | 85 |
| Future Volume (vph) | 190 | 91 | 151 | 15 | 68 | 17 | 89 | 653 | 14 | 23 | 569 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | 25.0 | | 45.7 | 10.0 | | 45.7 | 20.0 | | 45.7 | 20.0 | | 45.7 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.93 | 0.93 | | 0.94 | 0.98 | | 0.98 | 1.00 | | 0.97 | 0.99 | |
| Frt | | 0.906 | | | 0.971 | | | 0.997 | | | 0.981 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1789 | 1590 | 0 | 1789 | 1795 | 0 | 1789 | 1872 | 0 | 1789 | 1821 | 0 |
| Flt Permitted | 0.697 | | | 0.567 | | | 0.224 | | | 0.212 | | |
| Satd. Flow (perm) | 1224 | 1590 | 0 | 1004 | 1795 | 0 | 412 | 1872 | 0 | 388 | 1821 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 142 | | | 18 | | | 3 | | | 19 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 48 | | | 48 | |
| Link Distance (m) | | 88.9 | | | 220.3 | | | 99.5 | | | 95.2 | |
| Travel Time (s) | | 6.7 | | | 16.5 | | | 7.5 | | | 7.1 | |
| Confl. Peds. (#/hr) | 46 | | 55 | 55 | | 46 | 57 | | 78 | 78 | | 57 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 207 | 99 | 164 | 16 | 74 | 18 | 97 | 710 | 15 | 25 | 618 | 92 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 207 | 263 | 0 | 16 | 92 | 0 | 97 | 725 | 0 | 25 | 710 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 37.0 | 37.0 | | 37.0 | 37.0 | |
| Total Split (%) | 38.3% | 38.3% | | 38.3% | 38.3% | | 61.7% | 61.7% | | 61.7% | 61.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Min | Min | | Min | Min | |
| Act Effct Green (s) | 13.0 | 13.0 | | 13.0 | 13.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Actuated g/C Ratio | 0.28 | 0.28 | | 0.28 | 0.28 | | 0.49 | 0.49 | | 0.49 | 0.49 | |
| v/c Ratio | 0.61 | 0.48 | | 0.06 | 0.18 | | 0.48 | 0.79 | | 0.13 | 0.79 | |
| Control Delay | 25.1 | 11.2 | | 15.3 | 13.3 | | 18.0 | 17.3 | | 9.0 | 17.1 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 25.1 | 11.2 | | 15.3 | 13.3 | | 18.0 | 17.3 | | 9.0 | 17.1 | |
| LOS | C | B | | B | B | | B | B | | A | B | |
| Approach Delay | | 17.3 | | | 13.6 | | | 17.4 | | | 16.8 | |
| Approach LOS | | B | | | B | | | B | | | B | |

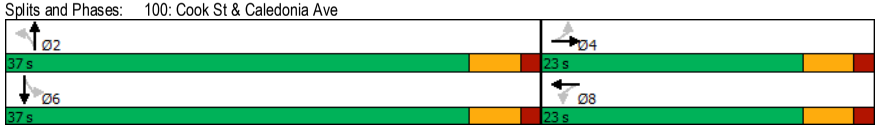




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Length 50th (m) | 15.0 | 7.9 | | 1.0 | 4.7 | | 4.8 | 44.6 | | 1.0 | 42.4 | |
| Queue Length 95th (m) | 38.9 | 27.8 | | 5.0 | 15.3 | | 18.8 | 95.3 | | 4.9 | 92.5 | |
| Internal Link Dist (m) | | 64.9 | | | 196.3 | | | 75.5 | | | 71.2 | |
| Turn Bay Length (m) | 25.0 | | | 10.0 | | | 20.0 | | | 20.0 | | |
| Base Capacity (vph) | 508 | 743 | | 417 | 756 | | 295 | 1344 | | 278 | 1312 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.41 | 0.35 | | 0.04 | 0.12 | | 0.33 | 0.54 | | 0.09 | 0.54 | |

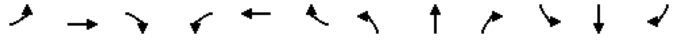
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 46.8 | | | |
| Natural Cycle: 60 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay: 17.0 | | Intersection LOS: B | |
| Intersection Capacity Utilization 73.7% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 100: Cook St & Caledonia Ave



## HCM Unsignalized Intersection Capacity Analysis
## 200: Chambers St & Caledonia Ave

Existing Base
PM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 1 | 83 | 1 | 1 | 1 | 37 | 67 | 1 | 1 | 70 | 59 |
| Future Volume (Veh/h) | 55 | 1 | 83 | 1 | 1 | 1 | 37 | 67 | 1 | 1 | 70 | 59 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 60 | 1 | 90 | 1 | 1 | 1 | 40 | 73 | 1 | 1 | 76 | 64 |
| Pedestrians | | 35 | | | 40 | | | 15 | | | 20 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 3 | | | 1 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 320 | 339 | 158 | 409 | 370 | 134 | 175 | | | 114 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 320 | 339 | 158 | 409 | 370 | 134 | 175 | | | 114 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 89 | 100 | 89 | 100 | 100 | 100 | 97 | | | 100 | | |
| cM capacity (veh/h) | 560 | 529 | 850 | 438 | 508 | 869 | 1359 | | | 1425 | | |

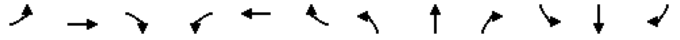
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 151 | 3 | 114 | 141 |
| Volume Left | 60 | 1 | 40 | 1 |
| Volume Right | 90 | 1 | 1 | 64 |
| cSH | 702 | 555 | 1359 | 1425 |
| Volume to Capacity | 0.22 | 0.01 | 0.03 | 0.00 |
| Queue Length 95th (m) | 6.4 | 0.1 | 0.7 | 0.0 |
| Control Delay (s) | 11.5 | 11.5 | 2.9 | 0.1 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 11.5 | 11.5 | 2.9 | 0.1 |
| Approach LOS | B | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 5.2 | | | |
| Intersection Capacity Utilization | 46.0% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



## HCM Unsignalized Intersection Capacity Analysis
## 300: Fernwood Rd & Grant St

Existing Base
PM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 34 | 3 | 10 | 4 | 2 | 7 | 11 | 266 | 5 | 11 | 237 | 28 |
| Future Volume (Veh/h) | 34 | 3 | 10 | 4 | 2 | 7 | 11 | 266 | 5 | 11 | 237 | 28 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 37 | 3 | 11 | 4 | 2 | 8 | 12 | 289 | 5 | 12 | 258 | 30 |
| Pedestrians | | 46 | | | 59 | | | 1 | | | 39 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 4 | | | 5 | | | 0 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 706 | 720 | 320 | 685 | 732 | 390 | 334 | | | 353 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 706 | 720 | 320 | 685 | 732 | 390 | 334 | | | 353 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 87 | 99 | 98 | 99 | 99 | 99 | 99 | | | 99 | | |
| cM capacity (veh/h) | 293 | 316 | 692 | 308 | 311 | 605 | 1177 | | | 1145 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 51 | 14 | 306 | 300 |
| Volume Left | 37 | 4 | 12 | 12 |
| Volume Right | 11 | 8 | 5 | 30 |
| cSH | 337 | 429 | 1177 | 1145 |
| Volume to Capacity | 0.15 | 0.03 | 0.01 | 0.01 |
| Queue Length 95th (m) | 4.2 | 0.8 | 0.2 | 0.3 |
| Control Delay (s) | 17.6 | 13.7 | 0.4 | 0.4 |
| Lane LOS | C | B | A | A |
| Approach Delay (s) | 17.6 | 13.7 | 0.4 | 0.4 |
| Approach LOS | C | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.0 | | | |
| Intersection Capacity Utilization | 36.1% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 16 | 812 | 43 | 57 | 31 | 0 | 0 | 54 | 42 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 16 | 812 | 43 | 57 | 31 | 0 | 0 | 54 | 42 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 17 | 883 | 47 | 62 | 34 | 0 | 0 | 59 | 46 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (m) | | | | | | | | | | | | |
| Walking Speed (m/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 930 | | | 0 | | | 551 | 964 | 0 | 958 | 940 | 465 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 930 | | | 0 | | | 551 | 964 | 0 | 958 | 940 | 465 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 80 | 86 | 100 | 100 | 77 | 92 |
| cM capacity (veh/h) | 731 | | | 1622 | | | 313 | 251 | 1084 | 189 | 259 | 544 |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 458 | 488 | 96 | 105 |
| Volume Left | 17 | 0 | 62 | 0 |
| Volume Right | 0 | 47 | 0 | 46 |
| cSH | 1622 | 1700 | 288 | 336 |
| Volume to Capacity | 0.01 | 0.29 | 0.33 | 0.31 |
| Queue Length 95th (m) | 0.3 | 0.0 | 11.2 | 10.3 |
| Control Delay (s) | 0.4 | 0.0 | 23.7 | 20.5 |
| Lane LOS | A | | C | C |
| Approach Delay (s) | 0.2 | | 23.7 | 20.5 |
| Approach LOS | | | C | C |

| Intersection Summary | | | | | |
|---|---|---|---|---|---|
| Average Delay | | | 4.0 | | |
| Intersection Capacity Utilization | | | 42.4% | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 90 | 53 | 153 | 9 | 108 | 23 | 131 | 475 | 12 | 11 | 550 | 82 |
| Future Volume (vph) | 90 | 53 | 153 | 9 | 108 | 23 | 131 | 475 | 12 | 11 | 550 | 82 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | 25.0 | | 45.7 | 10.0 | | 45.7 | 20.0 | | 45.7 | 20.0 | | 45.7 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.94 | 0.90 | | 0.92 | 0.98 | | 0.97 | 1.00 | | 0.95 | 0.98 | |
| Frt | | 0.889 | | | 0.974 | | | 0.996 | | | 0.981 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1789 | 1508 | 0 | 1789 | 1806 | 0 | 1789 | 1869 | 0 | 1789 | 1814 | 0 |
| Flt Permitted | 0.666 | | | 0.619 | | | 0.274 | | | 0.399 | | |
| Satd. Flow (perm) | 1184 | 1508 | 0 | 1069 | 1806 | 0 | 500 | 1869 | 0 | 710 | 1814 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 166 | | | 18 | | | 3 | | | 19 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 48 | | | 48 | |
| Link Distance (m) | | 88.9 | | | 220.3 | | | 99.5 | | | 95.2 | |
| Travel Time (s) | | 6.7 | | | 16.5 | | | 7.5 | | | 7.1 | |
| Confl. Peds. (#/hr) | 41 | | 70 | 70 | | 41 | 75 | | 84 | 84 | | 75 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 98 | 58 | 166 | 10 | 117 | 25 | 142 | 516 | 13 | 12 | 598 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 98 | 224 | 0 | 10 | 142 | 0 | 142 | 529 | 0 | 12 | 687 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 37.0 | 37.0 | | 37.0 | 37.0 | |
| Total Split (%) | 38.3% | 38.3% | | 38.3% | 38.3% | | 61.7% | 61.7% | | 61.7% | 61.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Min | Min | | Min | Min | |
| Act Effct Green (s) | 10.1 | 10.1 | | 10.1 | 10.1 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Actuated g/C Ratio | 0.23 | 0.23 | | 0.23 | 0.23 | | 0.53 | 0.53 | | 0.53 | 0.53 | |
| v/c Ratio | 0.36 | 0.47 | | 0.04 | 0.33 | | 0.54 | 0.54 | | 0.03 | 0.71 | |
| Control Delay | 19.4 | 9.2 | | 15.2 | 15.7 | | 17.0 | 9.6 | | 6.0 | 13.0 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 19.4 | 9.2 | | 15.2 | 15.7 | | 17.0 | 9.6 | | 6.0 | 13.0 | |
| LOS | B | A | | B | B | | B | A | | A | B | |
| Approach Delay | | 12.3 | | | 15.7 | | | 11.1 | | | 12.9 | |
| Approach LOS | | B | | | B | | | B | | | B | |

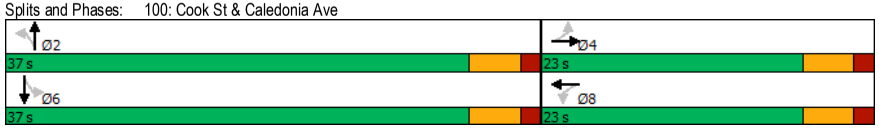




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Length 50th (m) | 5.5 | 3.1 | | 0.5 | 6.9 | | 5.6 | 20.6 | | 0.3 | 29.9 | |
| Queue Length 95th (m) | 19.3 | 19.1 | | 3.7 | 22.6 | | 27.2 | 58.9 | | 2.6 | 87.7 | |
| Internal Link Dist (m) | | 64.9 | | | 196.3 | | | 75.5 | | | 71.2 | |
| Turn Bay Length (m) | 25.0 | | | 10.0 | | | 20.0 | | | 20.0 | | |
| Base Capacity (vph) | 515 | 749 | | 465 | 795 | | 385 | 1442 | | 547 | 1403 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.19 | 0.30 | | 0.02 | 0.18 | | 0.37 | 0.37 | | 0.02 | 0.49 | |

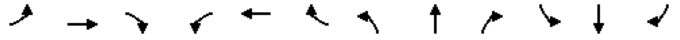
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 43.6 | | | |
| Natural Cycle: 60 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.71 | | | |
| Intersection Signal Delay: 12.4 | | Intersection LOS: B | |
| Intersection Capacity Utilization 81.3% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 100: Cook St & Caledonia Ave



HCM Unsignalized Intersection Capacity Analysis
200: Chambers St & Caledonia Ave

Post Development
AM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 37 | 6 | 29 | 9 | 13 | 4 | 72 | 76 | 3 | 1 | 53 | 51 |
| Future Volume (Veh/h) | 37 | 6 | 29 | 9 | 13 | 4 | 72 | 76 | 3 | 1 | 53 | 51 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 40 | 7 | 32 | 10 | 14 | 4 | 78 | 83 | 3 | 1 | 58 | 55 |
| Pedestrians | | 38 | | | 53 | | | 18 | | | 26 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 5 | | | 2 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 403 | 420 | 142 | 434 | 446 | 164 | 151 | | | 139 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 403 | 420 | 142 | 434 | 446 | 164 | 151 | | | 139 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 91 | 98 | 96 | 98 | 97 | 100 | 94 | | | 100 | | |
| cM capacity (veh/h) | 462 | 456 | 863 | 429 | 441 | 822 | 1383 | | | 1379 | | |

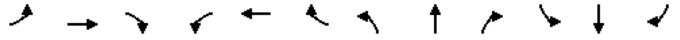
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 79 | 28 | 164 | 114 |
| Volume Left | 40 | 10 | 78 | 1 |
| Volume Right | 32 | 4 | 3 | 55 |
| cSH | 568 | 467 | 1383 | 1379 |
| Volume to Capacity | 0.14 | 0.06 | 0.06 | 0.00 |
| Queue Length 95th (m) | 3.8 | 1.5 | 1.4 | 0.0 |
| Control Delay (s) | 12.4 | 13.2 | 3.9 | 0.1 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 12.4 | 13.2 | 3.9 | 0.1 |
| Approach LOS | B | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 5.2 | | | |
| Intersection Capacity Utilization | 31.5% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



HCM Unsignalized Intersection Capacity Analysis
300: Fernwood Rd & Grant St

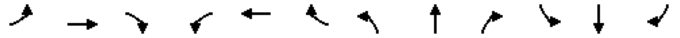
Post Development
AM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 1 | 6 | 1 | 1 | 11 | 35 | 215 | 5 | 7 | 236 | 47 |
| Future Volume (Veh/h) | 14 | 1 | 6 | 1 | 1 | 11 | 35 | 215 | 5 | 7 | 236 | 47 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 15 | 1 | 7 | 1 | 1 | 12 | 38 | 234 | 5 | 8 | 257 | 51 |
| Pedestrians | | 35 | | | 29 | | | 2 | | | 38 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 2 | | | 0 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 696 | 678 | 320 | 650 | 700 | 304 | 343 | | | 268 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 696 | 678 | 320 | 650 | 700 | 304 | 343 | | | 268 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 95 | 100 | 99 | 100 | 100 | 98 | 97 | | | 99 | | |
| cM capacity (veh/h) | 305 | 341 | 698 | 342 | 330 | 695 | 1180 | | | 1264 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 23 | 14 | 277 | 316 |
| Volume Left | 15 | 1 | 38 | 8 |
| Volume Right | 7 | 12 | 5 | 51 |
| cSH | 370 | 603 | 1180 | 1264 |
| Volume to Capacity | 0.06 | 0.02 | 0.03 | 0.01 |
| Queue Length 95th (m) | 1.6 | 0.6 | 0.8 | 0.2 |
| Control Delay (s) | 15.4 | 11.1 | 1.4 | 0.3 |
| Lane LOS | C | B | A | A |
| Approach Delay (s) | 15.4 | 11.1 | 1.4 | 0.3 |
| Approach LOS | C | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.5 | | | |
| Intersection Capacity Utilization | 47.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 11 | 1000 | 67 | 26 | 17 | 0 | 0 | 34 | 62 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 11 | 1000 | 67 | 26 | 17 | 0 | 0 | 34 | 62 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 12 | 1087 | 73 | 28 | 18 | 0 | 0 | 37 | 67 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (m) | | | | | | | | | | | | |
| Walking Speed (m/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 1160 | | | 0 | | | 653 | 1184 | 0 | 1156 | 1148 | 580 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 1160 | | | 0 | | | 653 | 1184 | 0 | 1156 | 1148 | 580 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 89 | 90 | 100 | 100 | 81 | 85 |
| cM capacity (veh/h) | 598 | | | 1622 | | | 256 | 186 | 1084 | 140 | 196 | 458 |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 556 | 616 | 46 | 104 |
| Volume Left | 12 | 0 | 28 | 0 |
| Volume Right | 0 | 73 | 0 | 67 |
| cSH | 1622 | 1700 | 223 | 310 |
| Volume to Capacity | 0.01 | 0.36 | 0.21 | 0.34 |
| Queue Length 95th (m) | 0.2 | 0.0 | 5.9 | 11.3 |
| Control Delay (s) | 0.2 | 0.0 | 25.3 | 22.3 |
| Lane LOS | A | | D | C |
| Approach Delay (s) | 0.1 | | 25.3 | 22.3 |
| Approach LOS | | | D | C |

| Intersection Summary | | | | | |
|---|---|---|---|---|---|
| Average Delay | 2.7 | | | | |
| Intersection Capacity Utilization | 45.8% | ICU Level of Service | | A | |
| Analysis Period (min) | 15 | | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 190 | 100 | 151 | 16 | 74 | 18 | 89 | 653 | 16 | 25 | 569 | 85 |
| Future Volume (vph) | 190 | 100 | 151 | 16 | 74 | 18 | 89 | 653 | 16 | 25 | 569 | 85 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (m) | 25.0 | | 45.7 | 10.0 | | 45.7 | 20.0 | | 45.7 | 20.0 | | 45.7 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 7.6 | | | 7.6 | | | 7.6 | | | 7.6 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.93 | 0.93 | | 0.94 | 0.98 | | 0.98 | 1.00 | | 0.97 | 0.99 | |
| Frt | | 0.910 | | | 0.970 | | | 0.996 | | | 0.981 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1789 | 1601 | 0 | 1789 | 1792 | 0 | 1789 | 1869 | 0 | 1789 | 1821 | 0 |
| Flt Permitted | 0.692 | | | 0.550 | | | 0.224 | | | 0.211 | | |
| Satd. Flow (perm) | 1216 | 1601 | 0 | 975 | 1792 | 0 | 412 | 1869 | 0 | 386 | 1821 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 129 | | | 20 | | | 3 | | | 19 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 48 | | | 48 | |
| Link Distance (m) | | 88.9 | | | 220.3 | | | 99.5 | | | 95.2 | |
| Travel Time (s) | | 6.7 | | | 16.5 | | | 7.5 | | | 7.1 | |
| Confl. Peds. (#/hr) | 46 | | 55 | 55 | | 46 | 57 | | 78 | 78 | | 57 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 207 | 109 | 164 | 17 | 80 | 20 | 97 | 710 | 17 | 27 | 618 | 92 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 207 | 273 | 0 | 17 | 100 | 0 | 97 | 727 | 0 | 27 | 710 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 23.0 | 23.0 | | 23.0 | 23.0 | | 37.0 | 37.0 | | 37.0 | 37.0 | |
| Total Split (%) | 38.3% | 38.3% | | 38.3% | 38.3% | | 61.7% | 61.7% | | 61.7% | 61.7% | |
| Yellow Time (s) | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | | 3.5 | 3.5 | |
| All-Red Time (s) | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | | 1.5 | 1.5 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | Min | Min | | Min | Min | |
| Act Effct Green (s) | 13.0 | 13.0 | | 13.0 | 13.0 | | 23.1 | 23.1 | | 23.1 | 23.1 | |
| Actuated g/C Ratio | 0.28 | 0.28 | | 0.28 | 0.28 | | 0.49 | 0.49 | | 0.49 | 0.49 | |
| v/c Ratio | 0.61 | 0.51 | | 0.06 | 0.20 | | 0.48 | 0.79 | | 0.14 | 0.78 | |
| Control Delay | 25.4 | 12.5 | | 15.4 | 13.4 | | 17.9 | 17.4 | | 9.2 | 17.1 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 25.4 | 12.5 | | 15.4 | 13.4 | | 17.9 | 17.4 | | 9.2 | 17.1 | |
| LOS | C | B | | B | B | | B | B | | A | B | |
| Approach Delay | | 18.1 | | | 13.7 | | | 17.5 | | | 16.8 | |
| Approach LOS | | B | | | B | | | B | | | B | |

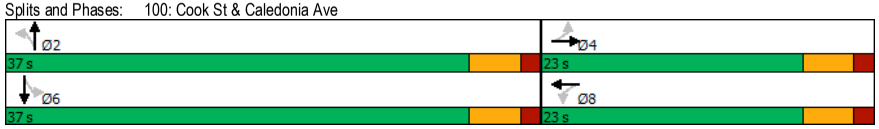




| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Queue Length 50th (m) | 15.1 | 9.6 | | 1.1 | 5.1 | | 4.8 | 44.9 | | 1.1 | 42.6 | |
| Queue Length 95th (m) | 39.0 | 31.0 | | 5.4 | 16.2 | | 18.8 | 96.0 | | 5.2 | 92.5 | |
| Internal Link Dist (m) | | 64.9 | | | 196.3 | | | 75.5 | | | 71.2 | |
| Turn Bay Length (m) | 25.0 | | | 10.0 | | | 20.0 | | | 20.0 | | |
| Base Capacity (vph) | 504 | 739 | | 404 | 754 | | 295 | 1340 | | 276 | 1310 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.41 | 0.37 | | 0.04 | 0.13 | | 0.33 | 0.54 | | 0.10 | 0.54 | |

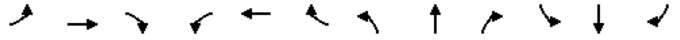
| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 60 | | | |
| Actuated Cycle Length: 46.9 | | | |
| Natural Cycle: 60 | | | |
| Control Type: Semi Act-Uncoord | | | |
| Maximum v/c Ratio: 0.79 | | | |
| Intersection Signal Delay: 17.2 | | Intersection LOS: B | |
| Intersection Capacity Utilization 73.7% | | ICU Level of Service D | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 100: Cook St & Caledonia Ave



HCM Unsignalized Intersection Capacity Analysis
200: Chambers St & Caledonia Ave

Post Development
PM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 55 | 14 | 83 | 5 | 8 | 3 | 37 | 67 | 9 | 4 | 70 | 59 |
| Future Volume (Veh/h) | 55 | 14 | 83 | 5 | 8 | 3 | 37 | 67 | 9 | 4 | 70 | 59 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 60 | 15 | 90 | 5 | 9 | 3 | 40 | 73 | 10 | 4 | 76 | 64 |
| Pedestrians | | 35 | | | 40 | | | 15 | | | 20 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 3 | | | 3 | | | 1 | | | 2 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 336 | 354 | 158 | 426 | 381 | 138 | 175 | | | 123 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 336 | 354 | 158 | 426 | 381 | 138 | 175 | | | 123 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 89 | 97 | 89 | 99 | 98 | 100 | 97 | | | 100 | | |
| cM capacity (veh/h) | 537 | 518 | 850 | 417 | 500 | 864 | 1359 | | | 1414 | | |

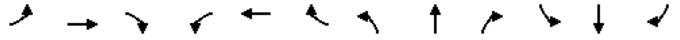
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 165 | 17 | 123 | 144 |
| Volume Left | 60 | 5 | 40 | 4 |
| Volume Right | 90 | 3 | 10 | 64 |
| cSH | 669 | 508 | 1359 | 1414 |
| Volume to Capacity | 0.25 | 0.03 | 0.03 | 0.00 |
| Queue Length 95th (m) | 7.6 | 0.8 | 0.7 | 0.1 |
| Control Delay (s) | 12.1 | 12.3 | 2.7 | 0.2 |
| Lane LOS | B | B | A | A |
| Approach Delay (s) | 12.1 | 12.3 | 2.7 | 0.2 |
| Approach LOS | B | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 5.7 | | | |
| Intersection Capacity Utilization | 44.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



HCM Unsignalized Intersection Capacity Analysis
300: Fernwood Rd & Grant St

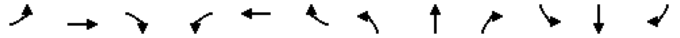
Post Development
PM Peak Hour



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 36 | 3 | 10 | 4 | 2 | 7 | 12 | 266 | 5 | 11 | 237 | 30 |
| Future Volume (Veh/h) | 36 | 3 | 10 | 4 | 2 | 7 | 12 | 266 | 5 | 11 | 237 | 30 |
| Sign Control | | Stop | | | Stop | | | Free | | | Free | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 39 | 3 | 11 | 4 | 2 | 8 | 13 | 289 | 5 | 12 | 258 | 33 |
| Pedestrians | | 46 | | | 59 | | | 1 | | | 39 | |
| Lane Width (m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Walking Speed (m/s) | | 1.2 | | | 1.2 | | | 1.2 | | | 1.2 | |
| Percent Blockage | | 4 | | | 5 | | | 0 | | | 3 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | | | | | | | None | | | None | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 710 | 724 | 322 | 688 | 738 | 390 | 337 | | | 353 | | |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 710 | 724 | 322 | 688 | 738 | 390 | 337 | | | 353 | | |
| tC, single (s) | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 | 4.1 | | | 4.1 | | |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 | 2.2 | | | 2.2 | | |
| p0 queue free % | 87 | 99 | 98 | 99 | 99 | 99 | 99 | | | 99 | | |
| cM capacity (veh/h) | 292 | 314 | 690 | 306 | 309 | 605 | 1174 | | | 1145 | | |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 53 | 14 | 307 | 303 |
| Volume Left | 39 | 4 | 13 | 12 |
| Volume Right | 11 | 8 | 5 | 33 |
| cSH | 333 | 427 | 1174 | 1145 |
| Volume to Capacity | 0.16 | 0.03 | 0.01 | 0.01 |
| Queue Length 95th (m) | 4.4 | 0.8 | 0.3 | 0.3 |
| Control Delay (s) | 17.9 | 13.7 | 0.4 | 0.4 |
| Lane LOS | C | B | A | A |
| Approach Delay (s) | 17.9 | 13.7 | 0.4 | 0.4 |
| Approach LOS | C | B | | |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 2.1 | | | |
| Intersection Capacity Utilization | 36.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 0 | 0 | 0 | 16 | 812 | 47 | 57 | 35 | 0 | 0 | 57 | 44 |
| Future Volume (Veh/h) | 0 | 0 | 0 | 16 | 812 | 47 | 57 | 35 | 0 | 0 | 57 | 44 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 17 | 883 | 51 | 62 | 38 | 0 | 0 | 62 | 48 |
| Pedestrians | | | | | | | | | | | | |
| Lane Width (m) | | | | | | | | | | | | |
| Walking Speed (m/s) | | | | | | | | | | | | |
| Percent Blockage | | | | | | | | | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (m) | | | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 934 | | | 0 | | | 554 | 968 | 0 | 962 | 942 | 467 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 934 | | | 0 | | | 554 | 968 | 0 | 962 | 942 | 467 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.5 | 6.5 | 6.9 | 7.5 | 6.5 | 6.9 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 99 | | | 80 | 85 | 100 | 100 | 76 | 91 |
| cM capacity (veh/h) | 729 | | | 1622 | | | 306 | 250 | 1084 | 185 | 259 | 542 |

| Direction, Lane # | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 458 | 492 | 100 | 110 |
| Volume Left | 17 | 0 | 62 | 0 |
| Volume Right | 0 | 51 | 0 | 48 |
| cSH | 1622 | 1700 | 282 | 335 |
| Volume to Capacity | 0.01 | 0.29 | 0.35 | 0.33 |
| Queue Length 95th (m) | 0.3 | 0.0 | 12.2 | 11.0 |
| Control Delay (s) | 0.4 | 0.0 | 24.6 | 20.9 |
| Lane LOS | A | | C | C |
| Approach Delay (s) | 0.2 | | 24.6 | 20.9 |
| Approach LOS | | | C | C |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 4.2 | | | |
| Intersection Capacity Utilization | 42.7% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

| POLICY AND PROCEDURES MANUAL | **Tenant Relocation Policy** | | |
|---|---|---|---|
| | POLICY NO. 2.48 | EFFECTIVE September 25, 2018 | AMENDMENT NO. |

## 1. Policy

This policy will ensure that the CRHC adheres to fair and transparent tenant relocation practices that abide with the British Columbia Residential Tenancy Act (BC RTA) and BC Housing's Guiding Principles on redevelopment and tenant relocation. This policy will assure that the redevelopment of aging affordable housing properties "*will ensure that people in greatest housing need in the capital region will have improved access to housing that best meets those needs and that affordable housing residents currently living at sites slated for redevelopment will be considered first at all key stages of the redevelopment process."*[1]

## 2. Purpose

This policy outlines rehousing provisions for current affordable housing tenants in aging CRHC affordable housing communities that are being proposed for redevelopment.

## 3. Management of the Policy

This policy is managed by Regional Housing Services, the CRHC Tenant Services staff. Any modifications to this policy subsequent to implementation must be reviewed and approved by the CRHC Board.

## 4. Definitions

a) *Affordable Market*

Applicants from households with income over the Housing Income Limits (HILs) but below the moderate income limit can apply for low-end market housing. Low-to-moderate income households are defined as those whose income level is within the second quintile of the total household income of two persons or more in British Columbia. To be eligible for an affordable market unit, total household income must not exceed this amount at move-in.

[1] https://www.bchousing.org/partner-services/asset-management-redevelopment/redevelopment-process-princlples

b) *Household Income Limits (HILS)*
HILs is set by BC Housing and represents the income required to pay the average market rent for an appropriately sized unit in the private market.

c) *Official Notice*
Official Notice refers to an official provision of a "Notice to End Tenancy" that is provided to the tenant four months prior to demolition or renovation as per the *Residential Tenancy Act (BC)*.

d) *Rent Geared to Income (RGI)*
To be eligible for rent-geared-to-income (RGI) or subsidized housing, the applicant's gross household income must be below certain income limits, as established by the (HILs).

e) *Unofficial Notice*
Unofficial Notice refers to the CRHC providing advance notification to tenants of a renovation or redevelopment 12 months prior to demolition in order to support the tenants in acquiring housing.

f) *Vulnerable Tenants*
Vulnerable tenants, those occupying rent-geared-to-income units such as seniors, persons with disabilities, or those living on very low incomes, are among those most affected by redevelopment or renovation. They often require more assistance in the relocation process as there are fewer choices available to them. These individuals also tend to be longer-term residents, and the process of moving may be more challenging for them.

## 5. Policy Priority

This policy takes priority over *CRHC Policy 2.10 Applicant Eligibility*.

## 6. Tenant Engagement

a) *Informing of proposed redevelopment*
CRHC tenants will be provided *Unofficial Notice* at least 12 months prior to demolition if a redevelopment of their community is proposed.

b) *Tenant Relocation Plans*
Once the funding is approved and a resolution by the CRHC Board is made to proceed with the redevelopment, the CRHC staff will meet with tenant households to develop individualized Tenant Relocation Plans (TRP).

c) *Design Consultation*
Tenants will be provided opportunities to consult on the design of the proposed redevelopment throughout the process. Notice of these opportunities will be provided in writing.

d) *Updates*
Monthly updates will be provided in writing.

**7. Tenant Relocation Plans (TRP)**

a) Staff will meet with Tenant Households to develop individualized TRP. These plans will support tenants in moving to an existing CRHC unit or with another social housing provider.

b) TRP will take into consideration the requirements of *Vulnerable Tenants*. Additional financial compensation or support, such as partnering with health organizations and other non-profit services, may be requested for *Vulnerable Tenants* and will be reviewed for consideration in the TRP.

c) The TRP will guide staff in providing appropriate housing choices based on employment, location of school(s) and health requirements.

d) Tenants will be provided three offers of housing based on their choices and availability of CRHC housing.

e) Offers of housing will reasonably accommodate medical requirements. Written confirmation by a health professional of medical accommodation requirements must be provided.

f) *Affordable Market* tenants that meet the eligibility requirements will be offered CRHC units based on Canadian National Occupancy Standard guidelines.

g) *Affordable Market* tenants that meet the eligibility requirements will be advised during the TRP meeting of the rental rates in CRHC communities. Tenants will be required to pay the rents that are applicable in their “chosen” community and the accompanying security deposit. Proof of income will be required.

h) *Rent-Geared-to Income (RGI)* tenants that meet the eligibility requirements will be offered CRHC units based on Canadian National Occupancy Standard guidelines.

i) Current Tenants who do not meet the eligibility requirements for RGI or affordable market housing will be provided with information on at least three rental options in the community that are rented for no more than 30% of their household income.

j) Arrangement for an insured moving company or a flat-rate payout for moving expenses will be as follows:

   i. A maximum of $750 for bachelor and 1-bedroom households; and
   ii. A maximum of $1,000 for two or more bedroom households.

k) Current tenants will be given right of first refusal to move back into the redevelopment and tenants must meet the eligibility requirements for the redevelopment.

l) CRHC will work with other housing providers to secure appropriate housing for tenant households where applicable.

m) Tenants will be provided with move-out cleaning instructions prior to vacating their current units.

n) After completing a move-out inspection, CRHC may agree to the transfer of security deposits to the new unit for tenants relocating to CRHC units. Depending on the rent of the new unit, an additional damage deposit may be required, and the tenant will be required to make up the difference. Alternatively, if the rent is less, the tenant will receive a refund for the balance.

## 8. Reasonable Notice

All reasonable efforts will be made to house tenants prior to the demolition of the building. CRHC will provide at least four months' *Official Notice* to tenants prior to demolition as per the *Residential Tenancy Act (BC).*

## 9. Tenant Relocation Report

CRHC must keep records and documentation for reporting purposes. At minimum that is to include:

a) Names of the tenants;
b) Accommodations provided;
c) Outcome of their search for alternate accommodation; and
d) A summary of the monetary value given to each tenant (e.g., moving costs, rent, etc.).

## 10. Municipal Tenant Relocation Policies

The CRHC will work in cooperation with those municipalities who have adopted tenant relocation guidelines or policies.

## 11. Related Legislation, Policies and Documents

a) British Columbia Residential Tenancy Act
b) BC Housing's Guiding Principles
c) CRHC Policy 2.10 Applicant Eligibility
d) CRHC Policy 2.11 Tenant Eligibility for Rent Supplement/RGI
e) CRHC Policy 2.12 Occupancy Guidelines
f) CRHC Policy 2.34 Pet Policy
g) CRHC Policy 2.47 Smoke-Free

Talbot Mackenzie & Associates
Consulting Arborists

# Caledonia Redevelopment, Victoria

## Construction Impact Assessment &

## Tree Preservation Plan

Prepared For: de Hoog & Kierulf architects
977 Fort St
Victoria, BC
V8V 3K3

Prepared By: Talbot, Mackenzie & Associates

Noah Borges
ISA Certified # PN-8409A
TRAQ – Qualified

Date of Issuance: March 4, 2020

Box 48153 RPO - Uptown Victoria, BC V8Z 7H6
Ph: (250) 479-8733
Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

Talbot Mackenzie & Associates
Consulting Arborists

Jobsite Property: 1209-1226 North Park St, 1230 Grant St, 1219 Vining St, 1235 Caledonia Ave, and 1211 Gladstone Ave, Victoria, BC

Date of Site Visits: February 18, 2020

Site Conditions: 2 residential lots and 7 empty lots. No ongoing construction activity.

**Summary:**


- 31 trees on the subject property will have to be removed (2 are bylaw protected: #946 and #948). The applicant will make an effort to retain any trees where possible. The location of rain gardens that the final grades of patios and walkways will be adjusted where necessary to minimize tree impacts.
- Off-site Trees #933-944 are growing just west of the property line of 1209 North Park St (#939 is likely a shared tree). The attached plans indicate that Apartment 1 will be constructed, at the nearest, 5.8m from the property line, and that the underground parkade will be between 7.5-8.5m away. The extent of excavation outside the building and parkade foundation walls will have to be minimized as much as possible and the patio area constructed over any critical roots encountered. We anticipate these trees can be retained with minor health impacts. Pear #943 is dead and we recommend it be removed.
- Based on discussions with the applicant, it is our understanding an effort will be made to retain trees #901-910. The patios will have to be constructed above the root systems of these trees where they encroach within their CRZs, any surrounding fences or walls will have to be constructed in a way that preserves critical roots, and the rain gardens should be relocated outside their CRZs.
- We anticipate Red Oak #917 can be retained if excavation can be minimized outside the rain garden footprint, and if the depth of excavation within the patio area can be minimized and the patio constructed overtop the tree's root system.
- We anticipate neighbour's cedars #927-930 and NT1 can be retained. The proposed rain garden should be shifted away from #927.
- A storm service main will be extended, as near as approximately 3-3.5m from neighbour's trees #941-944. The main will be extended underneath Grant St. The impacts to these trees will depend on the depth and width of the trench required. The project arborist should be on site to supervise any excavation within their CRZs.


**Scope of Assignment:**

- Inventory the existing bylaw protected trees at 1209 North Park St and 1211 Gladstone Ave, and any trees on municipal or neighbouring properties that could potentially be impacted by construction or that are within three metres of the property line

- Review the proposal to demolish the existing buildings and construct two apartment buildings, three townhouse buildings, one amenity building, and an underground parkade
- Comment on how construction activity may impact existing trees
- Prepare a tree retention and construction damage mitigation plan for those trees deemed suitable to retain given the proposed impacts

**Methodology:**

- We visually examined the trees on the property and prepared an inventory in the attached Tree Resource Spreadsheet.
- Each by-law protected tree was identified using a numeric metal tag attached to its lower trunk. Municipal trees and neighbours' trees were not tagged.
- Information such as tree species, DBH (1.4m), crown spread, critical root zone (CRZ), health, structure, and relative tolerance to construction impacts were included in the inventory.
- The conclusions reached were based on the information provided within the attached architectural plans from dHKarchitects (dated February 6, 2020), landscape plan from Murdoch de Greeff Inc. (dated February 4, 2020), and servicing plan from McElhanney.

**Limitations:**

- No exploratory excavations have been conducted and thus the conclusions reached are based solely on critical root zone calculations and our best judgement using our experience and expertise. The location, size and density of roots are often difficult to predict without exploratory excavations and therefore the impacts to the trees may be more or less severe than we anticipate.

- The extent of impacts to some trees will largely depend on the cut-slope prescribed by the geotechnical engineer during excavation for the foundation wall of the underground parkade. Therefore, the proximity of excavation to trees (without shoring) can only be estimated, and may be closer or farther from trees than we estimate.

**Summary of Tree Resource:** 59 trees were inventoried, most of which are ornamental species. Six are bylaw protected, four of which are elm trees located off-site in Haegart Park.

Based on discussions with the applicant, it is our understanding that this proposal falls under Tree Preservation Bylaw No. 05-106 (consolidated June 1, 2015), as the permit application was received prior to October 24, 2019.

**Trees to be Removed:** 31 trees on the subject property will have to be removed (2 are bylaw protected: #946 and #948):

- **Trees #645, 646, 648, 649, 911-916, 918-920, 922-924, 926, 945-949, 951-953, 955-958** are in locations where we anticipate they will be significantly impacted by construction of the underground parkade, buildings, road extensions, or parking areas.

- **Douglas-fir #931** (27cm DBH; not bylaw protected) will likely be significantly impacted by the Vining St road widening. We anticipate large roots will be encountered if excavation is required to bearing soil. This tree has been topped previously for clearance from the aboveground utility lines. The owner of the tree should be informed of the potential impacts.

- **Eucalyptus #932** (74cm DBH; not bylaw protected) is within the footprint of the new sidewalk on the south side of Vining St. The owner of the tree should be informed of the potential impacts.

**Potential Impacts on Trees to be Retained and Mitigation Measures**

- **Off-site Trees #933-944:** These trees are growing off-site, just west of the property line of 1209 North Park St (#939 is likely a shared tree). The attached plans indicate that Apartment 1 will be constructed, at the nearest, 5.8m from the property line, and that the underground parkade will be between 7.5-8.5m away. Roots from the elm trees are likely to be encountered, particularly from some of the larger, multi-stemmed elm trees where the existing building is not located in between the trees and the proposed excavation areas (#941, 942, 944).

  To retain these trees, the extent of excavation outside the building and parkade foundation walls will have to be minimized as much as possible. Shoring techniques may be required depending on the depth of excavation. We recommend excavation not occur more than 2m outside the parkade footprint and 1m outside the house footprint. The project arborist should supervise any excavation within the CRZs of these trees, including removal of the existing building foundation, and prune back any roots encountered to sound tissue. The project arborist may recommend that the depth of excavation for the patio area on the west side of the building be minimized depending on the number and size of roots encountered. If our recommendations are followed, we do not anticipate the trees will incur more than minor health impacts. The neighbour at #1809 Chambers St should be informed of the proposed impacts to their trees.

  The North Park St sidewalk will also be extended, requiring excavation 2m from cedar #933. This tree has a CRZ of 2m and we do not anticipate it will be significantly impacted if excavation does not occur more than 30cm outside the sidewalk footprint.

  **Pear #943** is dead and we recommend it be removed. We have identified it as "Not Suitable" (NS) for retention in the attached tree resource spreadsheet.

- **#901-910:** Based on discussions with the applicant, it is our understanding an effort will be made to retain these trees. The existing building foundation wall is approximately 1.25m closer to trees #905-910 than the proposed new building (Townhouse 2). If excavation does not extend beyond the existing foundation walls, we do not anticipate that these trees will be significantly impacted. Trees #901-904 are more than 5.5m from the proposed building foundation wall. Patios are proposed to be constructed 1.5-3m away from #901-907 and rain gardens are proposed to be constructed between 0.5-1.5m from away.

If these trees are to be retained, the patios will have to be constructed above the root systems of these trees where they encroach within their CRZs (see "Paved Surfaces Above Tree Roots" section below). Any surrounding fences or walls will have to be constructed in a way that preserves critical roots. The rain gardens will also have to be relocated outside the CRZs of the trees. Based on discussions with the applicants and the attached landscape plan, the final grades of the patios and location of the rain gardens will be adjusted based on the direction of the project arborist. The project arborist should be on site to supervise any excavation within the CRZs of these trees.

It should be noted that Tulip trees #901, 902, and 904 have dead central leaders and, in our opinion, it would be prudent to remove and replace these trees. It should also be noted that the available soil volume around trees #908-910 is limited and surface roots are visible around the base of these trees. These trees are suitable to retain in the short-term, but will likely eventually have to be removed as they will eventually outgrow their planting location. These trees should be inspected periodically by an ISA Certified Arborist with a TRAQ Qualification to ensure they do not pose an increased risk of failure. Depending on the height of the proposed townhouses, trees #909 and 910 may need to be pruned to attain clearance from the new buildings (they currently overhang the existing two-storey houses). None of these trees are bylaw protected.

- **Red Oak #917 (36cm DBH):** This tree is approximately 5.5m from Townhouse 3, 7m from the underground parkade, and 3.25m from a rain garden. Patios on the north side the townhouse extend an additional 2m closer to the tree. We anticipate this tree can be retained if excavation can be minimized outside the rain garden footprint, and if the depth of excavation within the patio area can be minimized and the patio constructed overtop the tree's root system. (Excavation outside the building and parkade footprint should also be minimized as much as possible). Fencing should be erected around this tree as indicated on the attached site plans and the project arborist should supervise any excavation within the tree's CRZ. It is not bylaw protected.

- **Neighbour's Cedars #927-930, NT1:** These trees are growing on a neighbouring property (#1907 Chambers St). They are growing at a slightly lower grade and separated by a concrete retaining wall. There are stumps of previously removed trees on the subject property side of the fence, which should be either left in place, routed below grade, or removed carefully under arborist direction. A rain garden is proposed to be constructed 1m away from #927 and 2.5m from #928-930. The rain garden partially overlaps with the footprint of an existing building. We recommend the project arborist supervise all excavation within the CRZs of these trees. The location and shape of the rain garden should be adjusted around #927 to minimize potential impacts. The neighbour should be informed of the proposed impacts to their trees.

- **Service Connections:** The attached site servicing plan indicates a storm service main will be extended, as near as approximately 3-3.5m from **trees #941-944.** The main will be extended underneath Grant St. Depending on the depth of excavation and the width of the trench, it may be possible to preserve large roots encountered. We recommend the project arborist supervise excavation within the CRZs of these trees. The excavation should be completed using either a combination of machine and hand-digging or a hydro-vac.

- **Arborist Supervision**: All excavation occurring within the critical root zones of protected trees should be completed under supervision by the project arborist. This includes (but is not limited to) the following activities:

    - Excavation for construction of the underground parkade and Apartment 1 within the CRZs of trees #933-944.
    - Installation of the storm sewer where it crosses the CRZ of #941-944
    - Excavation for construction of Townhouse 2, the east patios, and surrounding rain gardens within the CRZs of trees #901-910
    - Removal of the existing building foundation wall adjacent to #908-910
    - Excavation for construction of the proposed rain garden south of neighbour's trees #927-930 and NT1
    - Any excavation within the CRZ of Red Oak #917 for construction of Townhouse 3, the surrounding patios, the underground parkade, or rain gardens

- **Pruning Roots:** Any severed roots must be pruned back to sound tissue to reduce wound surface area and encourage rapid compartmentalization of the wound. Backfilling the excavated area around the roots should be done as soon as possible to keep the roots moist and aid in root regeneration. Exposed roots should be kept moist until the area is backfilled, especially if excavation occurs during a period of drought. This can be accomplished in a number of ways, including wrapping the roots in burlap or installing a root curtain of wire mesh lined with burlap, and keeping the area moist throughout the construction process.

- **Barrier Fencing:** The areas surrounding the trees to be retained should be isolated from the construction activity by erecting protective barrier fencing. Where possible, the fencing should be erected at the perimeter of the critical root zones.

    The barrier fencing must be a minimum of 4 feet in height, of solid frame construction that is attached to wooden or metal posts. A solid board or rail must run between the posts at the top and the bottom of the fencing. This solid frame can then be covered with plywood, or flexible snow fencing. The fencing must be erected prior to the start of any construction activity on site (i.e. demolition, excavation, construction), and remain in place through completion of the project. Signs should be posted around the protection zone to declare it off limits to all construction related activity. The project arborist must be consulted before this fencing is removed or moved for any purpose.

- **Minimizing Soil Compaction:** In areas where construction traffic must encroach into the critical root zones of trees to be retained, efforts must be made to reduce soil compaction where possible by displacing the weight of machinery and foot traffic. This can be achieved by one of the following methods:

    - Installing a layer of hog fuel or coarse wood chips at least 20 cm in depth and maintaining it in good condition until construction is complete.
    - Placing medium weight geotextile cloth over the area to be used and installing a layer of crushed rock to a depth of 15 cm over top.

- Placing two layers of 19mm plywood.
- Placing steel plates.

- **Demolition of the Existing Buildings:** The demolition of the existing buildings and any services that must be removed or abandoned, must take the critical root zone of the trees to be retained into account. If any excavation or machine access is required within the critical root zones of trees to be retained, it must be completed under the supervision and direction of the project arborist. If temporarily removed for demolition, barrier fencing must be erected immediately after the supervised demolition.

- **Paved Surfaces Above Tree Roots:**

  If the new paved surfaces within the CRZs of trees to be retained require excavation down to bearing soil and roots are encountered in this area, their health or stability could be impacted. If tree retention is desired, a raised and permeable paved surface should be constructed in the areas within the critical root zone of the trees. The "paved surfaces above root systems" diagram and specifications is attached.

  The objective is to avoid root loss and to instead raise the paved surface and its base layer above the roots. This may result in the grade of the paved surface being raised above the existing grade (the amount depending on how close roots are to the surface and the depth of the paving material and base layers). Final grading plans should take this potential change into account. This may also result in soils which are high in organic content being left intact below the paved area.

  To allow water to drain into the root systems below, we also recommend that the surface be made of a permeable material (instead of conventional asphalt or concrete) such as permeable asphalt, paving stones, or other porous paving materials and designs such as those utilized by Grasspave, Gravelpave, Grasscrete and open-grid systems.

- **Mulching**: Mulching can be an important proactive step in maintaining the health of trees and mitigating construction related impacts and overall stress. Mulch should be made from a natural material such as wood chips or bark pieces and be 5-8cm deep. No mulch should be touching the trunk of the tree. See "methods to avoid soil compaction" if the area is to have heavy traffic.

- **Blasting:** Care must be taken to ensure that the area of blasting does not extend beyond the necessary footprints and into the critical root zones of surrounding trees. The use of small low-concussion charges and multiple small charges designed to pre-shear the rock face will reduce fracturing, ground vibration, and overall impact on the surrounding environment. Only explosives of low phytotoxicity and techniques that minimize tree damage should be used. Provisions must be made to ensure that blasted rock and debris are stored away from the critical root zones of trees.

- **Scaffolding:** This assessment has not included impacts from potential scaffolding including canopy clearance pruning requirements. If scaffolding is necessary and this will require

clearance pruning of retained trees, the project arborist should be consulted. Depending on the extent of pruning required, the project arborist may recommend that alternatives to full scaffolding be considered such as hydraulic lifts, ladders or platforms. Methods to avoid soil compaction may also be recommended (see "Minimizing Soil Compaction" section).

- **Landscaping and Irrigation Systems:** The planting of new trees and shrubs should not damage the roots of retained trees. The installation of any in-ground irrigation system must take into account the critical root zones of the trees to be retained. Prior to installation, we recommend the irrigation technician consult with the project arborist about the most suitable locations for the irrigation lines and how best to mitigate the impacts on the trees to be retained. This may require the project arborist supervise the excavations associated with installing the irrigation system. Excessive frequent irrigation and irrigation which wets the trunks of trees can have a detrimental impact on tree health and can lead to root and trunk decay.

- **Arborist Role:** It is the responsibility of the client or his/her representative to contact the project arborist for the purpose of:

    - Locating the barrier fencing
    - Reviewing the report with the project foreman or site supervisor
    - Locating work zones, where required
    - Supervising any excavation within the critical root zones of trees to be retained
    - Reviewing and advising of any pruning requirements for machine clearances

- **Review and Site Meeting**: Once the project receives approval, it is important that the project arborist meet with the principals involved in the project to review the information contained herein. It is also important that the arborist meet with the site foreman or supervisor before any site clearing, tree removal, demolition, or other construction activity occurs and to confirm the locations of the tree protection barrier fencing.

Please do not hesitate to call us at (250) 479-8733 should you have any further questions.

Thank you,

Noah Borges
ISA Certified #PN- 8409A
TRAQ – Qualified

Talbot Mackenzie & Associates
ISA Certified Consulting Arborists

Encl. 3-page tree resource spreadsheet, 1-page site survey, 2-page architectural site plan, 1-page landscape plan, 1-page site servicing plan, 1-page specification for constructing paved surfaces

above tree roots, 1-page barrier fencing specifications, 2-page tree resource spreadsheet methodology and definitions

**Disclosure Statement**

The tree inventory attached to the Tree Preservation Plan can be characterized as a limited visual assessment from the ground and should not be interpreted as a "risk assessment" of the trees included.

Arborists are professionals who examine trees and use their training, knowledge and experience to recommend techniques and procedures that will improve their health and structure or to mitigate associated risks.

Trees are living organisms, whose health and structure change, and are influenced by age, continued growth, climate, weather conditions, and insect and disease pathogens. Indicators of structural weakness and disease are often hidden within the tree structure or beneath the ground. It is not possible for an Arborist to identify every flaw or condition that could result in failure or can he/she guarantee that the tree will remain healthy and free of risk.

Remedial care and mitigation measures recommended are based on the visible and detectable indicators present at the time of the examination and cannot be guaranteed to alleviate all symptoms or to mitigate all risk posed.

| Tree ID | Common Name | Latin Name | DBH (cm) ~approximate | Crown Spread (m) | CRZ (m) | Relative Tolerance | Health | Structure | Remarks and Recommendations | Location | Bylaw Protected | Retention Status | Reason for Removal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NT1 | Variegated Cedar | *Thuja plicata 'Zebrina'* | ~13 | 3 | 2.0 | Poor | Good | Good | Neighbour's, next to fence | Off-site (1907 Chambers St) | N | Retain | - |
| 901 | Tulip Tree | *Liriodendron tulipifera* | 11 | 2 | 1.5 | Moderate | Fair/poor | Poor | Dead leader | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 902 | Tulip Tree | *Liriodendron tulipifera* | 11 | 2 | 1.5 | Moderate | Fair/poor | Poor | Dead leader | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 903 | Tulip Tree | *Liriodendron tulipifera* | 12 | 3 | 1.5 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 904 | Tulip Tree | *Liriodendron tulipifera* | 16 | 2 | 2.0 | Moderate | Fair/poor | Fair/poor | Dead leader | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 905 | Tulip Tree | *Liriodendron tulipifera* | 16 | 3 | 2.0 | Moderate | Fair | Fair | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 906 | Tulip Tree | *Liriodendron tulipifera* | 25 | 5 | 3.0 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 907 | Tulip Tree | *Liriodendron tulipifera* | 32 | 6 | 4.0 | Moderate | Good | Good | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 908 | Tulip Tree | *Liriodendron tulipifera* | 34 | 6 | 4.0 | Moderate | Good | Good | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 909 | Red Oak | *Quercus rubra* | 36 | 9 | 4.5 | Moderate | Good | Fair | Confined rooting area | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 910 | Red Oak | *Quercus rubra* | 42 | 11 | 5.0 | Moderate | Good | Fair | Crown over existing building, confined rooting area | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 911 | Red Oak | *Quercus rubra* | 36 | 9 | 4.5 | Moderate | Good | Fair | Small deadwood, asymmetric crown | Subject property (1211 Gladstone Ave) | N | X | Townhouse 2 |
| 912 | Norway Maple | *Acer platanoides* | 31, 29 | 10 | 5.0 | Good | Good | Fair/poor | Included bark between stems | Subject property (1211 Gladstone Ave) | N | X | Townhouse 2 |
| 913 | Red Oak | *Quercus rubra* | 46 | 13 | 5.5 | Moderate | Good | Fair | Confined rooting area | Subject property (1211 Gladstone Ave) | N | X | Caledonia Ave road extension |
| 914 | Maple | *Acer spp.* | 45 | 10 | 5.5 | Moderate | Good | Fair | Confined rooting area, surface rooted, possibly Silver Maple (*Acer saccharinum* ) | Subject property (1211 Gladstone Ave) | N | X | Caledonia Ave road extension |
| 915 | Red Oak | *Quercus rubra* | 43 | 12 | 5.0 | Moderate | Good | Fair | Wire embedded in trunk | Subject property (1211 Gladstone Ave) | N | X | Caledonia Ave road extension |
| 916 | Red Oak | *Quercus rubra* | 41 | 11 | 5.0 | Moderate | Good | Fair | 3 codominant leaders | Subject property (1211 Gladstone Ave) | N | X | Townhouse 3 |
| 917 | Red Oak | *Quercus rubra* | 36 | 10 | 4.5 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | Retain* | - |
| 918 | Red Oak | *Quercus rubra* | 34 | 9 | 4.0 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 919 | Tulip Tree | *Liriodendron tulipifera* | 30 | 6 | 3.5 | Moderate | Good | Fair | Asymmetric crown | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 647 | Tulip Tree | *Liriodendron tulipifera* | 20 | 4 | 2.5 | Moderate | Good | Good | Surface rooted. Previously tagged 920 | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 921 | Tulip Tree | *Liriodendron tulipifera* | 33 | 7 | 4.0 | Moderate | Good | Fair/poor | Narrow codominant union. | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 922 | Red Maple | *Acer rubrum* | 24 | 6 | 3.0 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 923 | Tulip Tree | *Liriodendron tulipifera* | 30 | 6 | 3.5 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |

Prepared by:
Talbot Mackenzie & Associates
ISA Certified and Consulting Arborists
Phone: (250) 479-8733
Fax: (250) 479-7050
email: tmtreehelp@gmail.com

| Tree ID | Common Name | Latin Name | DBH (cm) ~approximate | Crown Spread (m) | CRZ (m) | Relative Tolerance | Health | Structure | Remarks and Recommendations | Location | Bylaw Protected | Retention Status | Reason for Removal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 924 | Tulip Tree | *Liriodendron tulipifera* | 20 | 6 | 2.5 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 646 | Tulip Tree | *Liriodendron tulipifera* | 41 | 8 | 5.0 | Moderate | Good | Fair | Previously tagged 925 | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 926 | Red Maple | *Acer rubrum* | 25 | 6 | 3.0 | Moderate | Fair | Fair | | Subject property (1211 Gladstone Ave) | N | X | Vining St road extension and parking area |
| 927 | Variegated Cedar | *Thuja plicata 'Zebrina'* | 23 | 4 | 3.5 | Poor | Good | Good | Neighbour's, next to fence | Off-site (1907 Chambers St) | N | Retain | - |
| 928 | Variegated Cedar | *Thuja plicata 'Zebrina'* | 20 | 5 | 3.0 | Poor | Good | Good | Neighbour's, next to fence | Off-site (1907 Chambers St) | N | Retain | - |
| 929 | Variegated Cedar | *Thuja plicata 'Zebrina'* | 21 | 6 | 3.0 | Poor | Good | Good | Neighbour's, next to fence | Off-site (1907 Chambers St) | N | Retain | - |
| 930 | Variegated Cedar | *Thuja plicata 'Zebrina'* | 28 | 7 | 4.0 | Poor | Good | Good | Neighbour's, next to fence | Off-site (1907 Chambers St) | N | Retain | - |
| 931 | Douglas-fir | *Pseudotsuga menziesii* | 27 | 4 | 4.0 | Poor | Fair | Fair/poor | Topped for utilities | Off-site (1903 Chambers St) | N | X | Vining St road extension |
| 932 | Eucalyptus | *Eucalyptus spp.* | 74 | 16 | 9.0 | Moderate | Fair | Fair | Some dieback | Off-site (1855 Chambers St) | N | X | Vining St sidewalk |
| 933 | Pyramidal Cedar | *Thuja spp.* | 14 | 1 | 2.0 | Poor | Good | Good | | Off-site (1809 Chambers St) | N | Retain | - |
| 934 | Spanish Chestnut | *Castanea sativa* | 54 | 12 | 6.5 | Moderate | Good | Good | | Off-site (1809 Chambers St) | N | Retain | - |
| 935 | Spanish Chestnut | *Castanea sativa* | 33 | 12 | 4.0 | Moderate | Good | Fair | | Off-site (1809 Chambers St) | N | Retain | - |
| 936 | Western Red Cedar | *Thuja plicata* | 35 | 8 | 5.5 | Poor | Good | Fair | Asymmetric crown | Off-site (1809 Chambers St) | N | Retain | - |
| 937 | Elm | *Ulmus spp.* | 58 | 16 | 7.0 | Moderate | Good | Fair | 3m from building | Off-site (Haegart Park) | N | Retain | - |
| 938 | Elm | *Ulmus spp.* | 59, 56, 49, 42 | 18 | 14.5 | Moderate | Good | Fair | Conflicting limbs, 2m from building | Off-site (Haegart Park) | Y | Retain | - |
| 939 | Elm | *Ulmus spp.* | 33 | 9 | 4.0 | Moderate | Good | Fair | | Off-site (Haegart Park) | N | Retain | - |
| 940 | Elm | *Ulmus spp.* | 33 | 9 | 4.0 | Moderate | Good | Fair | Likely shared ownership. Clothesline on trunk | Off-site/shared (Haegart Park) | N | Retain | - |
| 941 | Elm | *Ulmus spp.* | 39, 38, 29, 28, 25 | 14 | 9.5 | Moderate | Good | Fair/poor | Included bark between stems | Off-site (Haegart Park) | Y | Retain | - |
| 942 | Elm | *Ulmus spp.* | 34, 33, 33, 27, 23, 22 | 13 | 9.0 | Moderate | Good | Fair/poor | Included bark between stems | Off-site (Haegart Park) | Y | Retain | - |
| 943 | Pear | *Pyrus spp.* | 42 | - | 5.0 | Moderate | - | - | Dead | Off-site (Haegart Park) | N | NS | - |
| 944 | Elm | *Ulmus spp.* | 41, 40, 35, 25 | 15 | 10.5 | Moderate | Good | Fair/poor | Included bark between stems | Off-site (Haegart Park) | Y | Retain | - |
| 945 | European Ash | *Fraxinus excelsior* | 36 | 8 | 4.5 | Moderate | Fair | Fair | Asymmetric crown | Subject property (1209 North Park St) | N | X | Underground parkade / buildings / walkways |
| 946 | Douglas-fir | *Pseudotsuga menziesii* | 68 | 12 | 10.0 | Poor | Good | Good | | Subject property (1209 North Park St) | Y | X | Underground parkade / buildings / walkways |
| 947 | Pear | *Pyrus spp.* | 27, 27 | 8 | 5.0 | Moderate | Fair | Fair | Neighbour's, tearout injury, trunk wound | Subject property (1219 North Park St) | N | X | Underground parkade / buildings / walkways |

Prepared by:
Talbot Mackenzie & Associates
ISA Certified and Consulting Arborists
Phone: (250) 479-8733
Fax: (250) 479-7050
email: tmtreehelp@gmail.com

| Tree ID | Common Name | Latin Name | DBH (cm) ~approximate | Crown Spread (m) | CRZ (m) | Relative Tolerance | Health | Structure | Remarks and Recommendations | Location | Bylaw Protected | Retention Status | Reason for Removal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 948 | Lawson Cypress | *Cupressus lawsoniana* | 4x20, 13, 12, 16, 21, 13 | 4 | 6.5 | Poor | Good | Fair | Asymmetric crown, stems removed at base | Subject property (1209 North Park St) | Y | X | Underground parkade / buildings / walkways |
| 949 | Red Maple | *Acer rubrum* | 25 | 5 | 3.0 | Moderate | Good | Fair | Asymmetric crown | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 649 | Tulip Tree | *Liriodendron tulipifera* | 22 | 5 | 2.5 | Moderate | Fair | Fair/poor | Codominant leaders, bolts in trunk, previously tagged 950 | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 951 | Red Maple | *Acer rubrum* | 19 | 5 | 2.5 | Moderate | Good | Fair | Trunk injury | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 952 | Red Maple | *Acer rubrum* | 18 | 5 | 2.0 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 953 | Red Maple | *Acer rubrum* | 32 | 10 | 4.0 | Moderate | Good | Fair | Surface rooted | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 648 | Tulip Tree | *Liriodendron tulipifera* | 13 | 3 | 1.5 | Moderate | Fair | Fair/poor | Previously tagged 954 | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 955 | Red Maple | *Acer rubrum* | 35 | 12 | 4.0 | Moderate | Good | Fair | Surface rooted | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 956 | Pyramidal Cedar hedge | *Thuja spp.* | 10 | 1 | 1.5 | Poor | Good | Good | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 957 | Red Oak | *Quercus rubra* | 24 | 6 | 3.0 | Moderate | Good | Fair | Flat topped | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |
| 958 | Red Oak | *Quercus rubra* | 23 | 6 | 3.0 | Moderate | Good | Fair | | Subject property (1211 Gladstone Ave) | N | X | Underground parkade / buildings / walkways |

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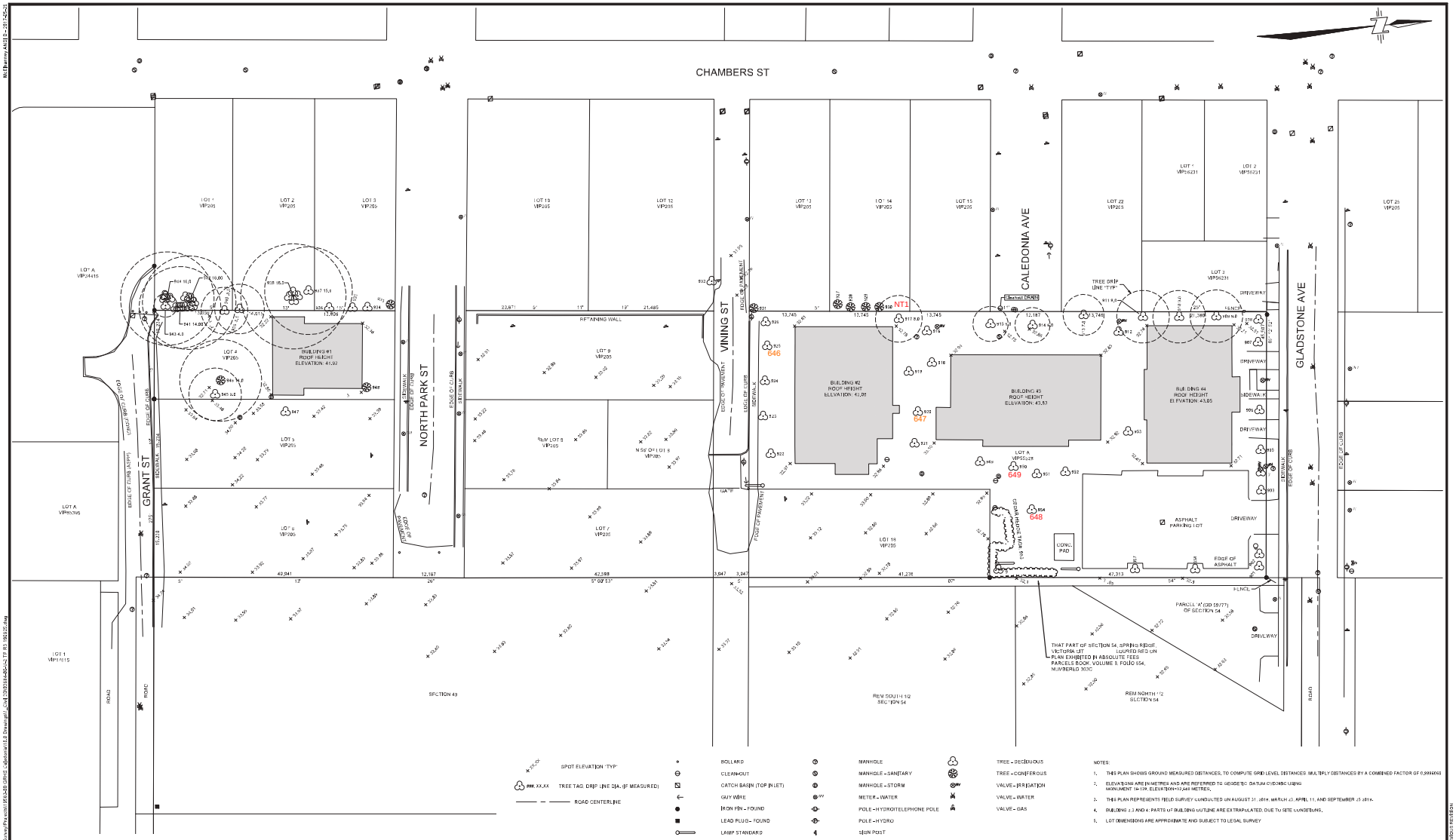
email: tmtreehelp@gmail.com




| Rev | Date | Descriptor | Drawn | Surv'd | Appr'd |
|---|---|---|---|---|---|
| 3 | 2019-09-26 | TREE TAGS ADDED | LM | SM | GQ |
| 2 | 2019-04-16 | REVISED WITH ADDITIONAL SURVEY INFO | DALM | SM | GQ |
| 1 | 2019-03-29 | REVISED WITH ADDITIONAL SURVEY INFO | DA | SM | GQ |
| 0 | 2018-05-17 | ORIGINAL ISSUE | LM | JC | GQ |



0 1:300 15

ORIGINAL DWG SIZE ANSI D (22" x 34")

McElhanney

McElhanney Consulting Services Ltd.

Suite 500
3960 Quadra Street
Victoria BC
Canada V8X 4A3
Tel 250 370 9221

Approved Sealed

CAPITAL REGIONAL HOUSING CORP
631 FISGARD ST, PO BOX 1000, VICTORIA, BC

RE-DEVELOPMENT OF CALEDONIA ST PROPERITES
SITE PLAN

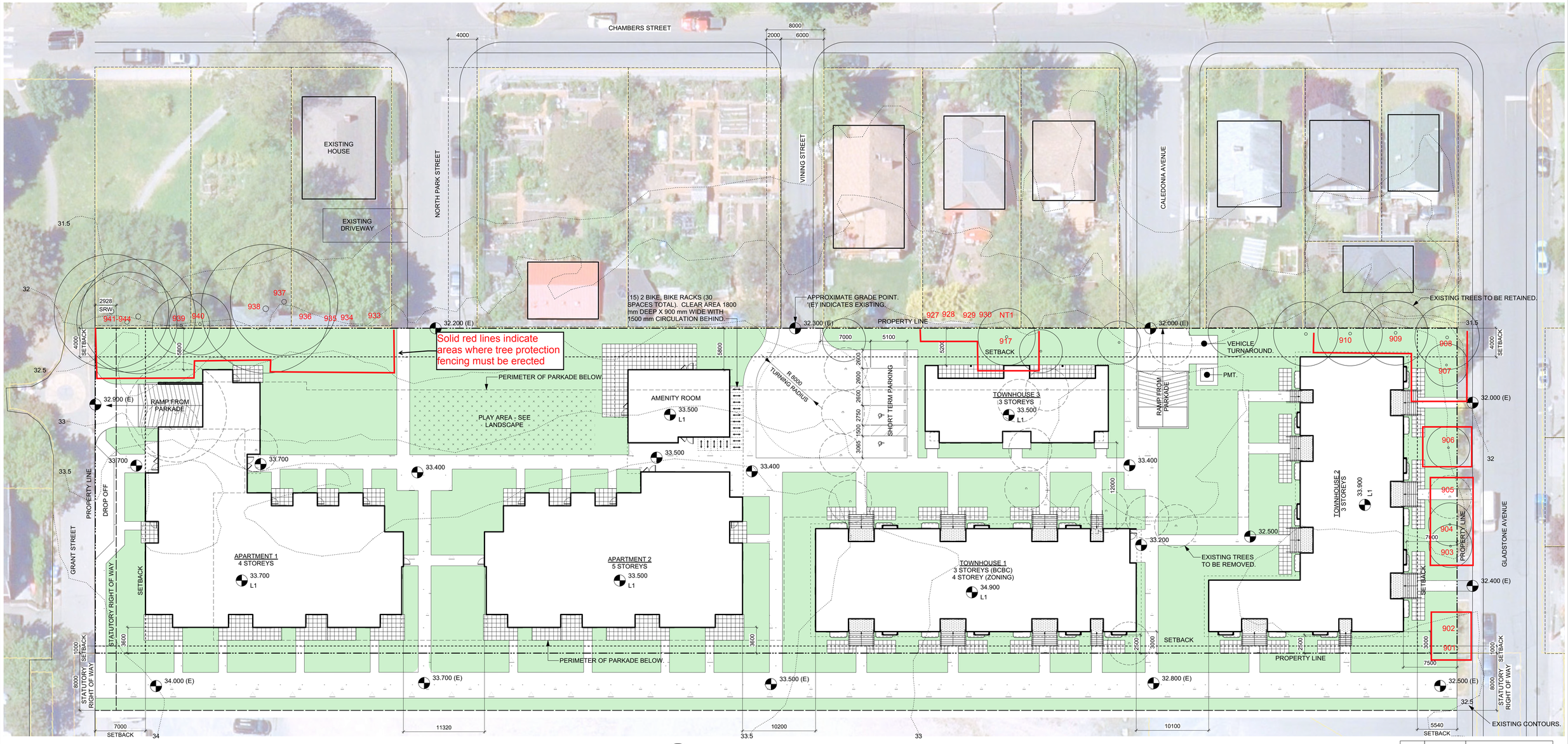
1250 GRANT ST, 1205, 1215, 1219, 1220, AND 1226 NORTH PARK ST, 1219 VINING ST, 1235 CALEDONIA AVE

VICTORIA, BC

Drawing No. 03684-00-V-1 TP

Project Number 2113-03684-00

Rev. 03




1 / A201 Site Plan
Scale: 1:250

0 5000 10000 mm
1 : 250

N

| PROJECT INFORMATION TABLE | | | |
|---|---|---|---|
| ZONE (EXISTING) | - | **MINIMUM NEW BUILDING SETBACKS (M)** | |
| PROPOSED ZONE | NEW ZONE | FRONT YARD (SOUTH) | 7.0 |
| SITE AREA (SM) | 8681.1 | REAR YARD (NORTH) | 5.54 |
| TOTAL NEW FLOOR AREA (SM) | 11759 | SIDE YARD (WEST) | 4 |
| COMMERCIAL FLOOR AREA (SM) | 0 | SIDE YARD (EAST) | 1 |
| FLOOR SPACE RATIO | 1.35 | COMBINED SIDE YARDS | 5 |
| SITE COVERAGE (%) | 41% | **NEW RESIDENTIAL USE DETAILS** | |
| OPEN SITE SPACE (%) | 49% | TOTAL NUMBER OF NEW UNITS | 158 |
| MAXIMUM HEIGHT OF NEW BUILDINGS (M) | 14780 AS MEASURED FROM AVERAGE GRADE | NEW UNIT TYPES | STUDIO, ONE, TWO, THREE, & FOUR BEDROOM |
| MAXIMUM NUMBER OF STOREYS | 5 | NEW GROUND ORIENTED UNITS | 46 |
| PARKING STALLS (NUMBER) ON SITE | 117 | MINIMUM NEW UNIT FLOOR AREA (SM) | 34 |
| BICYCLE PARKINGS NUMBER (CLASS 1 AND CLASS 2) | 224 | TOTAL NEW RESIDENTIAL FLOOR AREA (SM) | 10358 |

| Rev | Date | Description |
|---|---|---|
| 3 | 20/02/06 | ISSUED FOR COTW |
| 2 | 20/01/15 | ISSUED FOR ADP |
| 1 | 19/12/16 | RESPONSE TO PLANNING REVIEW |

| | | | |
|---|---|---|---|
| plot date | SEPTEMBER 2019 | drawing file | 1907 A200 Plans.vwx |
| drawn by | FWP | checked by | RAW |
| scale | AS SHOWN | project number | 1907 |

NOTE: All dimensions are shown in millimeters.

# ISSUED FOR DP & REZONING

dHKarchitects

VICTORIA OFFICE
977 Fort Street
Victoria BC V8V 3K3
T 1•250•658•3367

NANAIMO OFFICE
102-5190 Dublin Way
Nanaimo BC V9T 2K6
T 1•250•585•5810

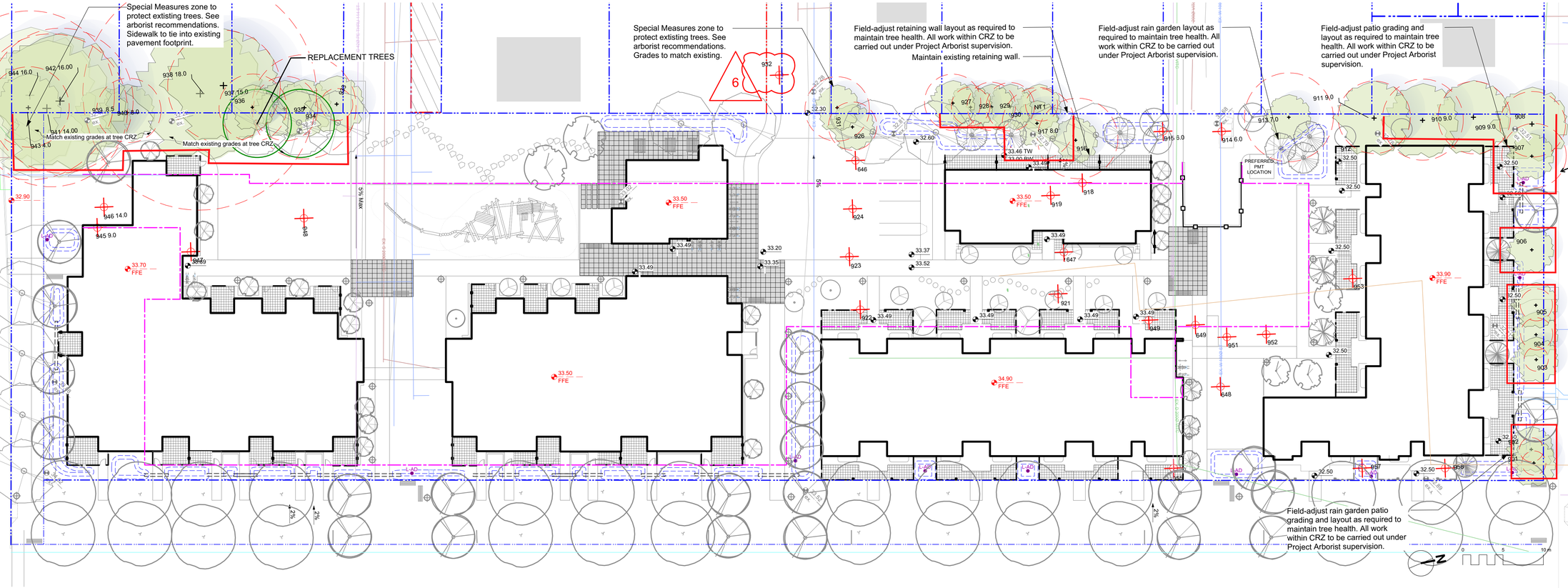
project name
Caledonia
Victoria BC

drawing title
Architectural Site Plan



drawing no. A201

revision no. 3




Solid red lines indicate areas where tree protection fencing must be erected

NOT FOR CONSTRUCTION

**DRAWING NOTES**

1. DO NOT SCALE DRAWING: Verify all property lines and existing structures/vegetation to remain, prior to commencing work.
2. All plan dimensions in metres and all detail dimensions in millimetres.
3. Plant quantities on Plans shall take precedence over plant list quantities.
4. Contractor to confirm location and elevation of all existing services and utilities prior to start of construction.
5. Provide layout of all work for approval by Landscape Architect prior to proceeding with work.
6. Contractor to provide irrigation system for all planters to current IIABC Standards and Contract Specifications.
7. Landscape installation to carry a 1 year warranty from date of acceptance.
8. Plant material, installation and maintenance to conform to the current edition of the Canadian Landscape Standard.
9. General Contractor and/or sub-contractors are responsible for all costs related to production and submission to consultant of all landscape as-built information including irrigation.
10. Tree protection fencing, for existing trees, to be installed prior to commencement of all site work

**RETAINED TREE SUMMARY***

| TREE TAG # | Species | Bylaw Protected? |
|---|---|---|
| NT1 | Vareigated Cedar | no |
| 901 | Tulip Tree | no |
| 902 | Tulip Tree | no |
| 903 | Tulip Tree | no |
| 904 | Tulip Tree | no |
| 905 | Tulip Tree | no |
| 906 | Tulip Tree | no |
| 907 | Tulip Tree | no |
| 908 | Tulip Tree | no |
| 909 | English oak | no |
| 910 | English oak | no |
| 911 | English oak | no |
| 912 | Sycamore maple | no |
| 913 | Red oak | no |
| 916 | Red oak | no |
| 917 | Red oak | no |
| 926 | Red maple | no |
| 927 | Zebra cedar | no |
| 928 | Zebra cedar | no |
| 929 | Zebra cedar | no |
| 930 | Zebra cedar | no |
| 931 | Douglas fir | no |
| 933 | Eastern white cedar | no |
| 934 | Edible chestnut | no |
| 935 | Edible chestnut | no |
| 936 | Western redcedar | no |
| 937 | Scotch elm | no |
| 938 | Scotch elm | yes |
| 939 | Scotch elm | no |
| 940 | Scotch elm | no |
| 941 | Scotch elm | yes |
| 942 | Scotch elm | yes |
| 944 | Scotch elm | yes |

**TOTAL TREES TO BE RETAINED:** 33

Mackenzie & Associates, 02/13/2020. Refer to Arborist report for details on tree conditions and Arborist recommendations.

**REMOVED TREE SUMMARY***

| TREE TAG # | Species | Bylaw Protected? |
|---|---|---|
| 914 | Norway maple | no |
| 915 | Red oak | no |
| 918 | Red oak | no |
| 919 | Tulip Tree | no |
| 920 | Tulip Tree | no |
| 646 | Tulip Tree | no |
| 922 | Red maple | no |
| 923 | Tulip Tree | no |
| 924 | Tulip Tree | no |
| 645 | Tulip Tree | no |
| 932 | Bluegum | no |
| 943 | Pear | no |
| 945 | Oregon ash | no |
| 946 | Douglas fir | yes |
| 947 | Pear | no |
| 948 | Ellwood juniper | no |
| 949 | Red maple | no |
| 649 | Tulip tree | no |
| 951 | Red maple | no |
| 952 | Red maple | no |
| 953 | Red maple | no |
| 648 | Tulip tree | no |
| 955 | Red maple | no |
| 956 | Eastern white cedar | no |
| 957 | Red oak | no |
| 958 | Red oak | no |

**TOTAL TREES TO BE REMOVED:** 26
**TOTAL PROTECTED TREES TO BE RE** 1

Mackenzie & Associates, 02/13/2020. Refer to Arborist report for details on tree conditions and Arborist recommendations.

** Based on pre Oct. 24th, 2019 Tree Bylaw requirements.

## LEGEND

- Property line
- Extent of Parkade, below
- Rain garden - TOP OF POOL
- Rain garden - BOTTOM OF POOL
- 24.31 ex. — Existing Landscape Grade
- 23.77 — Architectural grade, provided for reference only
- 24.31 — Proposed Landscape Grade

| | | | |
|---|---|---|---|
| TW | Top of Wall | TP | Top of Pool |
| BW | Bottom of Wall | BP | Bottom of Pool |
| TOC | Top of Curb | TS | Top of Stairs |
| BC | Bottom of Curb | BS | Bottom of Stairs |

**Existing Tree for Retention**
*(Refer to Arborist Report and Tree Retention & Removal Plan for full details and management strategies).*
10 — Critical Root Zone, Tree Tag

**Existing Tree to be Removed**
*(Refer to Arborist Report and Tree Retention & Removal Plan for full details and management strategies).*
10 — Tree Tag

**Replacement Tree**

| rev no | description | date |
|---|---|---|
| 5 | For COTW | 20.02.04 |
| 4 | Issued for ADP | 20.01.15 |
| 2 | RZ/DP Revision | 19.12.16 |
| 1 | Rezoning/DP | 19.09.26 |

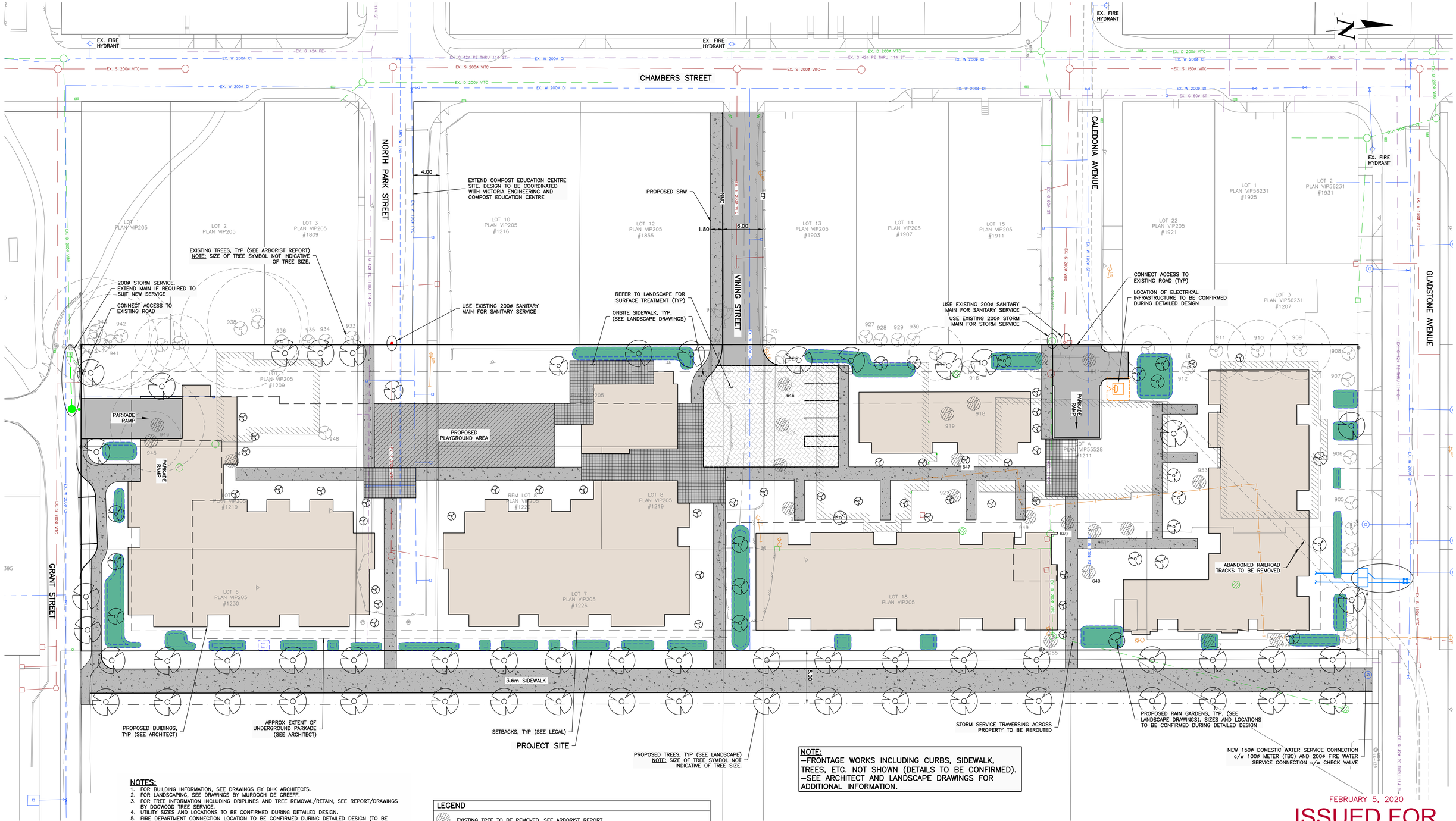

Murdoch de Greeff INC
Landscape Planning & Design
200 - 524 Culduthel Road
Victoria, BC V8Z 1G1
Phone: 250.412-2891
Fax: 250.412-2892


client
**CRD Housing Corporation**
631 Fisgard Ave.
Victoria, BC

project
Caledonia Redevelopment
Caledonia Ave.
Victoria, BC

sheet title
**Tree Retention & Removal Plan**

| | |
|---|---|
| project no. | 119.18 |
| scale | 1: 250 @ 24"x36" |
| drawn by | TB |
| checked by | PdG |
| revison no. | 2 |
| sheet no. | **L1.05** |




NOTES:
1. FOR BUILDING INFORMATION, SEE DRAWINGS BY DHK ARCHITECTS.
2. FOR LANDSCAPING, SEE DRAWINGS BY MURDOCH DE GREEFF.
3. FOR TREE INFORMATION INCLUDING DRIPLINES AND TREE REMOVAL/RETAIN, SEE REPORT/DRAWINGS BY DOGWOOD TREE SERVICE.
4. UTILITY SIZES AND LOCATIONS TO BE CONFIRMED DURING DETAILED DESIGN.
5. FIRE DEPARTMENT CONNECTION LOCATION TO BE CONFIRMED DURING DETAILED DESIGN (TO BE WITHIN 45m OF FIRE HYDRANT.
6. ALL EXISTING ON-SITE BUILDINGS, DRIVEWAYS, PARKING LOTS, RAMPS, ETC. TO BE REMOVED AND DISPOSED OFF-SITE (NOT SHOWN FOR CLARITY).
7. EXISTING STORM, SANITARY AND WATER SERVICES TO BE CAPPED AND ABANDONED.
8. BASE INFORMATION SHOWN IS PRODUCED FROM A COMBINATION OF FIELD SURVEY AND GIS INFORMATION PROVIDED BY THE CITY OF VICTORIA. ALL INFORMATION TO BE CONFIRMED IN THE FIELD PRIOR TO CONSTRUCTION (INCLUDING COMPLETING A BCONECALL).

LEGEND
- EXISTING TREE TO BE REMOVED. SEE ARBORIST REPORT.
- PROPOSED TREE. SEE LANDSCAPE.

NOTE: SIZE OF TREE SYMBOL (EXISTING AND PROPOSED) NOT INDICATIVE OF TREE SIZE.

NOTE:
-FRONTAGE WORKS INCLUDING CURBS, SIDEWALK, TREES, ETC. NOT SHOWN (DETAILS TO BE CONFIRMED).
-SEE ARCHITECT AND LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.

PLAN
1:250

SEE ARCHITECTURAL AND LANDSCAPING, DRAWINGS FOR ADDITIONAL INFORMATION

LEGAL PLAN & TOPOGRAPHIC SURVEY PROVIDED BY MCELHANNEY LTD.

FEBRUARY 5, 2020

# ISSUED FOR REZONING

1:500 0 10 30m



| NO. | DATE | BY | ISSUED |
|---|---|---|---|

| NO. | DATE | BY | REVISIONS |
|---|---|---|---|

McElhanney
500 - 3960 QUADRA STREET
VICTORIA, BC V8X 4A3 PH (250) 370-9221

SEAL

PROJECT:
CAPITAL REGION HOUSING CORPORATION
CALEDONIA REDEVELOPMENT

TITLE:
CONCEPTUAL SERVICING

SCALE
HORIZ: 1:500 VERT:

PROJECT NO. 19-028 | ISSUED/REVISION

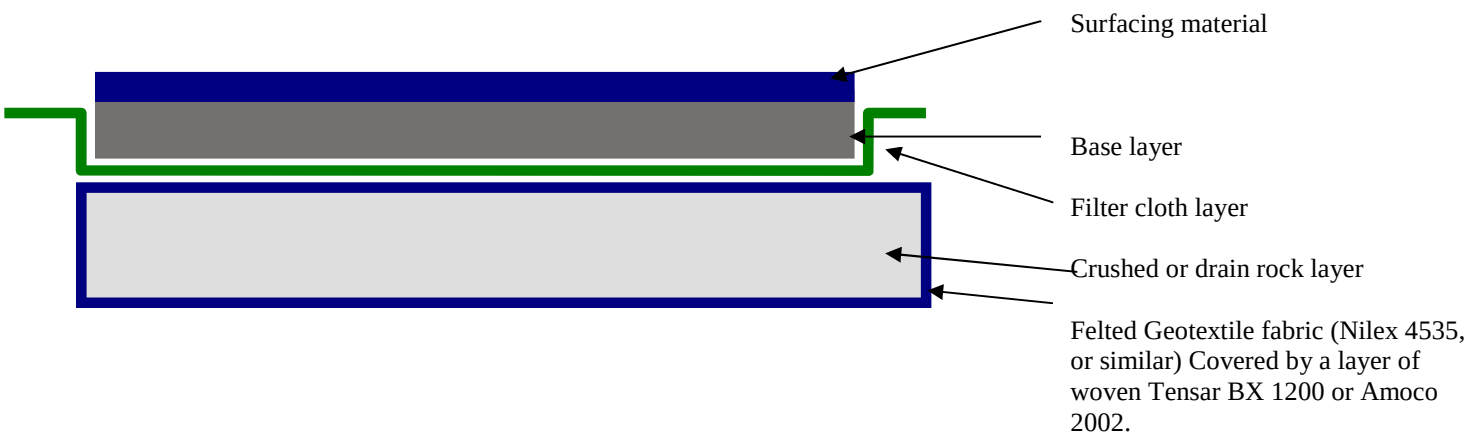
APPROVING AUTHORITY FILE NO.

DRAWING NO.
19-028-REZONING

# Talbot Mackenzie & Associates

Consulting Arborists

## Diagram – Site Specific Driveway, Parking and Walkway




## Specifications for Paved Surfaces Above Tree Roots (Driveway, Parking and Walkway Areas)

1. Excavation for construction of the driveway/parking/walkway areas must remove only the top layer of sod and not result in root loss

2. A layer of medium weight felted Geotextile fabric (Nilex 4535, or similar) is to be installed over the entire area of the critical root zone that is to be covered by the paved surface. Cover this Geotextile fabric with a layer of woven Amoco 2002 or Tensar BX 1200. Each piece of fabric must overlap the adjoining piece by approximately 30-cm.

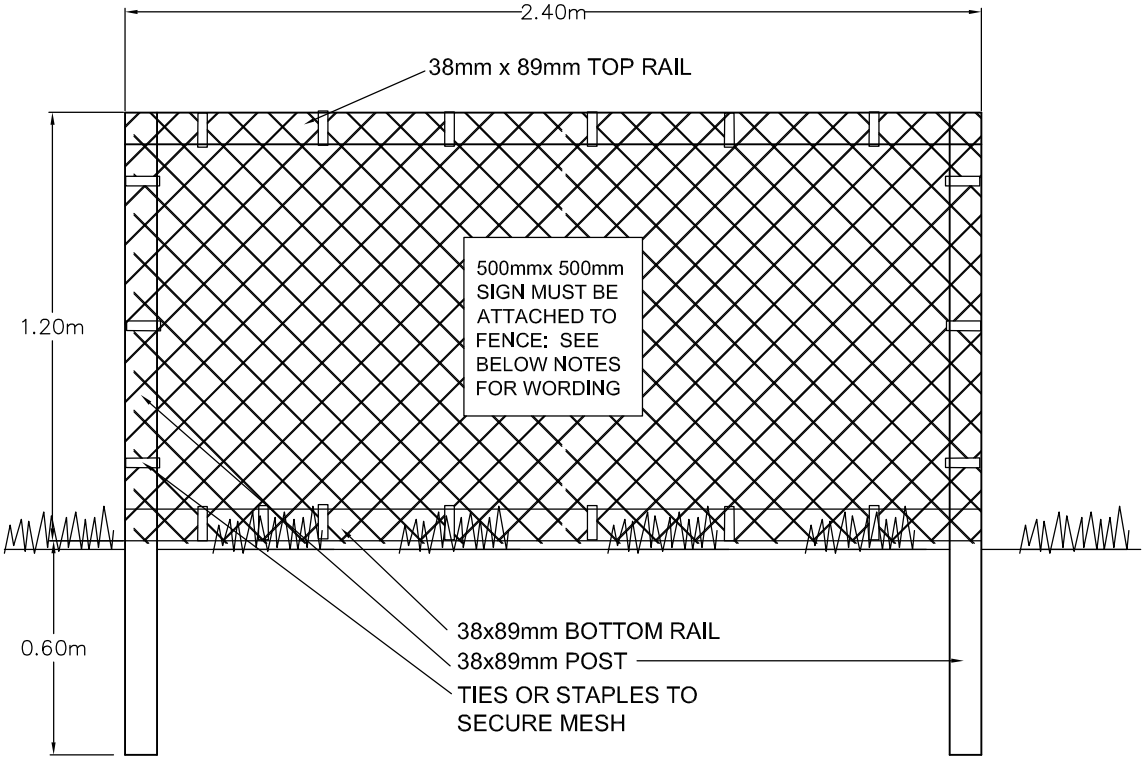
3. A 10cm layer of torpedo rock or 20-mm clean crushed drain rock, is to be used to cover the Geotextile fabric (depth dependent on desired finished grade).

4. A layer of felted filter fabric is to be installed over the crushed rock layer to prevent fine particles of sand and soil from infiltrating this layer.

5. The bedding or base layer and permeable surfacing can be installed directly on top of the Geotextile fabric.

6. Two-dimensional (such as CombiGrid 30/30 or similar) or three-dimensional geo-grid reinforcements can be installed in combination with, or instead of, the geotextile fabric specified in the attached diagram.

7. Ultimately, a geotechnical engineer should be consulted and in consultation with the project arborist may specify their own materials and methods that are specific to the site's soil conditions and requirements, while also avoiding root loss and reducing compaction to the sub-grade.




TREE PROTECTION FENCING

1. FENCE WILL BE CONSTRUCTED USING 38 mm X 89mm WOOD FRAME: TOP, BOTTOM AND POSTS * USE ORANGE SNOW-FENCING MESH AND SECURE THE WOOD FRAME WITH"ZIP" TIES OR GALVANIZED STAPLES.

2. ATTACH A 500mm X 500mm SIGN WITH THE FOLLOWING WORDING: WARNING- TREE PROTECTION AREA. THIS SIGN MUST BE AFFIXED ON EVERY FENCE OR AT LEAST EVERY 10 LINEAR METERS.

* IN ROCKY AREAS, METAL POSTS (T-BAR OR REBAR) DRILLED INTO ROCK WILL BE ACCEPTED

Talbot Mackenzie & Associates
Consulting Arborists

Box 48153 RPO - Uptown Victoria, BC V8Z 7H6
Ph: (250) 479-8733
Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

# Tree Resource Spreadsheet Methodology and Definitions

**Tag:** Tree identification number on a metal tag attached to tree with nail or wire, generally at eye level. Trees on municipal or neighboring properties are not tagged.

NT: No tag due to inaccessibility or ownership by municipality or neighbour.

**DBH:** Diameter at breast height – diameter of trunk, measured in centimetres at 1.4m above ground level. For trees on a slope, it is taken at the average point between the high and low side of the slope.
* Measured over ivy
~ Approximate due to inaccessibility or on neighbouring property

**Crown Spread**: Indicates the diameter of the crown spread measured in metres to the dripline of the longest limbs.

**Relative Tolerance Rating:** Relative tolerance of the tree species to construction related impacts such as root pruning, crown pruning, soil compaction, hydrology changes, grade changes, and other soil disturbance. This rating does not take into account individual tree characteristics, such as health and vigour. Three ratings are assigned based on our knowledge and experience with the tree species: Poor (P), Moderate (M) or Good (G).

**Critical Root Zone:** A calculated radial measurement in metres from the trunk of the tree. It is the optimal size of tree protection zone and is calculated by multiplying the DBH of the tree by 10, 12 or 15 depending on the tree's Relative Tolerance Rating. This methodology is based on the methodology used by Nelda Matheny and James R. Clark in their book "Trees and Development: A Technical Guide to Preservation of Trees During Land Development."

- 15 x DBH = Poor Tolerance of Construction
- 12 x DBH = Moderate
- 10 x DBH = Good

To calculate the critical root zone, the DBH of multiple stems is considered the sum of 100% of the diameter of the largest stem and 60% of the diameter of the next two largest stems. It should be noted that these measures are solely mathematical calculations that do not consider factors such as restricted root growth, limited soil volumes, age, crown spread, health, or structure (such as a lean).

**Health Condition:**

- Poor - significant signs of visible stress and/or decline that threaten the long-term survival of the specimen
- Fair - signs of stress
- Good - no visible signs of significant stress and/or only minor aesthetic issues

**Structural Condition:**

- Poor - Structural defects that have been in place for a long period of time to the point that mitigation measures are limited
- Fair - Structural concerns that are possible to mitigate through pruning
- Good - No visible or only minor structural flaws that require no to very little pruning

**Retention Status:**

- X - Not possible to retain given proposed construction plans
- Retain - It is possible to retain this tree in the long-term given the proposed plans and information available. This is assuming our **recommended mitigation measures are followed**
- Retain * - See report for more information regarding potential impacts
- TBD (To Be Determined) - The impacts on the tree could be significant. However, in the absence of exploratory excavations and in an effort to retain as many trees as possible, we recommend that the final determination be made by the supervising project arborist at the time of excavation. The tree might be possible to retain depending on the location of roots and the resulting impacts, but concerned parties should be aware that the tree may require removal.
- NS - Not suitable to retain due to health or structural concerns

# Advisory Design Panel Report
**For the Meeting of January 22, 2020**

| | | | |
|---|---|---|---|
| **To:** | Advisory Design Panel | **Date:** | January 15, 2020 |
| **From:** | Leanne Taylor, Senior Planner | | |
| **Subject:** | **Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue** | | |

## EXECUTIVE SUMMARY

The Advisory Design Panel (ADP) is requested to review a Development Permit Application for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue and provide advice to Council.

The proposal is for a five multi-unit residential buildings ranging in heights from three to five storeys and consisting of approximately 158 affordable rental dwelling units. A Rezoning and an amendment to the Official Community Plan (OCP) are also required to facilitate this development. The subject site is comprised of several properties, some of which are designated Traditional Residential where others are designated Public Facilities, Institutions, Parks and Open Space in the OCP, which supports a mix of residential uses, such as single family dwellings, duplexes and attached housing up to two-storeys, as well as institutional and recreational uses. However, the OCP also supports new population and housing growth within walking distance of North Park Village, which would be achieved with this proposal.

Staff are looking for commentary from the Advisory Design Panel with regard to:
- design of the breezeway and amenity room in apartment 2
- ground level entryways and their relationship with the street and greenway
- landscaping and open site space
- application of building materials
- any other aspects of the proposal on which the ADP chooses to comment.

The Options section of this report provides guidance on possible recommendations that the Panel may make, or use as a basis to modify, in providing advice on this application.

## BACKGROUND

| | |
|---|---|
| **Applicant:** | Mr. Rob Whetter<br>dHK Architects |

| | |
|---|---|
| **Architect:** | Mr. Rob Whetter, MAIBC<br>dHK Architects |
| **Development Permit Area:** | Development Permit Area 16: General Form and Character |
| **Heritage Status:** | N/A |

**Description of Proposal**

The proposal is for a five multi-unit residential buildings ranging in heights from three to five storeys and consisting of approximately 158 affordable rental dwelling units. The proposed density is 1.29:1 floor space ratio (FSR). The proposal includes the following major design components:

Four-storey multi-unit residential building

- a low-rise building form consisting of contemporary architectural features including a flat and butterfly roofline and contemporary-style windows
- exterior building materials include hardie panel and siding, brick veneer, painted concrete and aluminum soffit material
- main residential entryway facing Grant Street
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units
- entrance to underground parkade from Grant Street.

Five-storey multi-unit residential building

- a mid-rise building form consisting of contemporary architectural features including a flat roofline and contemporary-style windows
- exterior materials include hardie panel and siding, and aluminum soffit material
- a ground level amenity room for residents and community groups
- main residential entryway accessed from the breezeway
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units.

Townhouses

- architectural features include a pitched roofline, and contemporary-style windows
- exterior materials include hardie panel and siding, painted concrete and aluminum soffit material
- individual entrances for the ground level units with direct connections to the street, greenway and interior open space
- private patios for the ground level units and balconies for the upper storey units.

Landscaping, vehicle and bicycle parking, loading and access

- north-south and east-west pathways connecting the site to the proposed greenway and surrounding streets

- substantial outdoor space and amenities including a playground, several gathering places, outdoor seating, picnic tables, community garden plots, open space, rain gardens and extensive soft landscaping
- approximately 95 trees on-site (15 existing trees and 80 new trees)
- access to underground parkade from Caledonia Avenue and Grant Street
- loading, fire access, and service delivery from Vining Street
- one level of underground parking containing 112 parking spaces
- a total of 194 long-term and 30 short-term bicycle parking spaces.

The following data table compares the proposal with the existing R-K Zone, Medium Density Attached Dwelling District. An asterisk is used to identify where the proposal differs from the existing Zone. Additionally, the key City policy that pertains to the area has been included in this table.

| Zoning Criteria | Apartment 1 | Apartment 2 | Townhouse 1 | Townhouse 2 | Townhouse 3 | Zone Standard R-K Zone |
|---|---|---|---|---|---|---|
| Site area ($m^2$) – minimum | 8681.10 (total site) | 8681.10 (total site) | 8681.10 (total site) | 8681.10 (total site) | 8681.10 (total site) | 28,490 |
| Lot width (m) - minimum | 54.94 | 54.94 | 54.94 | 54.94 | 54.94 | 18 |
| Density (Floor Space Ratio) – maximum | **1.29:1 (overall density)** | **1.29 (overall density)** | **1.29 (overall density)** | **1.29 (overall density)** | **1.29 (overall density)** | 0.6:1 |
| Height (m) – maximum | 12.10 | 14.98 | 11.30 | 10.65 | 9.90 | 8.50 |
| Site coverage (%) – maximum | **41 (total site)** | **41 (total site)** | **41 (total site)** | **41 (total site)** | **41 (total site)** | 33 |
| Open site space (%) – minimum | 49 (total site) | 49 (total site) | 49 (total site) | 49 (total site) | 49 (total site) | 45 |
| **Setbacks** (m) – minimum | | | | | | |
| North (Gladstone Ave) | 147.30 | 99.80 | 44.80 | **7 (building)/1.46 (stairs)** | 48.50 | 7.50 (building)/1.60 (stairs) |
| South (Grant St) | **7 (living room)** | 54.60 | 100.50 | 155.60 | 115.90 | 2.50 (blank wall)/4 (habitable room)/7.5 (living room) |
| East | **3.60 (living room)** | **3.60 (living room)** | **2.50 (living room)/1 (stairs)** | **2.50 (living room)/1 (stairs)** | 28.60 | Same as south setbacks |

| Zoning Criteria | Apartment 1 | Apartment 2 | Townhouse 1 | Townhouse 2 | Townhouse 3 | Zone Standard R-K Zone |
|---|---|---|---|---|---|---|
| West | **5.80 (living room)** | **4 (living room)** | 27.50 (building)/26 (stairs) | **4 (living room)** | 4 (habitable room) | Same as south setbacks |
| Vehicle parking – minimum | | | | | | |
| Residential | 96 (site total) | 96 (site total) | 96 (site total) | 96 (site total) | 96 (site total) | 96 |
| Visitor | 16 (site total) | 16 (site total) | 16 (site total) | 16 (site total) | 16 (site total) | 16 |
| **Bicycle parking stalls** – minimum | | | | | | |
| Long-term | 194 (site total) | 194 (site total) | 194 (site total) | 194 (site total) | 194 (site total) | 194 |
| Short-term | 28 (site total) | 28 (site total) | 28 (site total) | 28 (site total) | 28 (site total) | 28 |

**Sustainability Features**

The project would meet BC Energy Step Code 3. The applicant is also proposing an extensive rain garden system on-site for stormwater management purposes.

**Consistency with Policies and Design Guidelines**

Official Community Plan

The Official Community Plan (OCP), 2012 designates a portion of the site Traditional Residential, which supports residential uses such as single-family dwellings, duplexes and attached housing up to two-storeys and a density of up to approximately 1:1 FSR. Other portions of the site are designated Public Facilities, Institutions, Parks and Open Space, which supports institutional and recreational uses and a density of approximately 0.5:1 FSR. The applicant is proposing to amend the OCP designations to Urban Residential in order to facilitate this development.

The OCP also identifies the subject properties within Development Permit Area 16: General Form and Character. This DPA supports new multi-unit residential developments that provide a sensitive transition to adjacent and nearby areas and that are complementary to established place character of a neighbourhood. A high quality of architecture, landscape and urban design are strongly encouraged. The DPA also encourages livable environments that are designed for the human-scale and incorporate quality open spaces, adequate privacy, safety and accessibility.

To achieve a sensitive transition to the adjacent land uses, the applicant is locating the proposed four-storey multi-unit residential building on the south end of the site along Grant Street and adjacent to Haegart Park and the five-storey building adjacent to the Vic High track furthest away from the neighbouring single-family dwellings. The three storey townhouses are

situated on the north end of the site adjacent to the single-family dwellings and fronting Gladstone Avenue. The proposed site planning prioritizes pedestrians and minimizes the amount of space dedicated to vehicles by providing all the residential parking underground and limiting the amount of vehicular access on the site. The applicant is incorporating quality and accessible open spaces throughout the site for residents and visitors.

Fernwood Neighbourhood Plan

The *Fernwood Neighbourhood Plan,* 1994 supports the retention of the R-2 Zoning, which permits single-family dwellings and duplexes.

Design Guidelines for Development Permit Area 16: General Form and Character

- *Advisory Design Guidelines for Buildings, Signs and Awnings* (2006)
- *Design Guidelines for Multi-Unit Residential, Commercial and Industrial Development* (2012)
- *Guidelines for Fences, Gates and Shutters* (2010)

**ISSUES AND ANALYSIS**

The following section(s) identify and provide a brief analysis of the areas where the Panel is requested to provide commentary. The Panel's commentary on any other aspects of the proposal is also welcome.

Design of the breezeway and amenity room in apartment 2

Staff encouraged the applicant to consider a standalone amenity room and remove the breezeway in order to achieve a more cohesive built form and address CPTED concerns. Staff still have concerns with the overall design of this building and invite ADP's input on the appropriateness of a breezeway and the integration of an amenity room in apartment 2.

Ground level entryways and their relationship with the street and greenway

The design guidelines encourage residential uses at street level to have strong entry features and building designs that encourage interaction with the street or public spaces. In all five buildings, the applicant is proposing individual entrances for the ground level units with direct connections to the street, greenway and interior open space. Staff invite the ADP's input on the design of the entryways given the importance of connections between the buildings and the public and private realm.

Landscaping and open site space

The design guidelines encourage useable, attractive and well-integrated open spaces and landscaping with the design of buildings. The applicant is proposing substantial outdoor space and amenities that comply with the design guidelines; however, given the importance of this aspect of the proposal, staff welcome the ADP's input on the design and integration of the open spaces and landscaping.

Application of building materials

The predominant building materials include hardie siding and panels, brick veneer and painted concrete to accentuate different aspects on each of the buildings. Staff invite the ADP's input on the exterior finishes on all the buildings as well as feedback on the application of the building materials.

## OPTIONS

The following are three potential options that the Panel may consider using or modifying in formulating a recommendation to Council:

### Option One

That the Advisory Design Panel recommend to Council that Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue be approved as presented.

### Option Two

That the Advisory Design Panel recommend to Council that Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue be approved with the following changes:

- as listed by the ADP.

### Option Three

That the Advisory Design Panel recommend to Council that Development Permit Application No. 000567 for 1230 Grant Street, 1209, 1218, 1219, 1220 and 1226 North Park Street, 1219 Vining Street, 1235 Caledonia Avenue and 1211 Gladstone Avenue does not sufficiently meet the applicable design guidelines and polices and should be declined (and that the key areas that should be revised include:)

- as listed by the ADP, if there is further advice on how the application could be improved.

## ATTACHMENTS

- Subject Map
- Aerial Map
- Plans date stamped January 15, 2020 (under separate cover)
- Applicant's letter dated September 26, 2019.

cc: Rob Whetter, dHK Architects Inc.

## 1. APPLICATIONS

### 3.1 Development Permit Application No. 000567 for 1230 Grant Street & 1209, 1218, 1219, 1220, 1226 North Park & 1219 Vining & 1235 Caledonia Avenue & 1211 Gladstone

The City is considering a Development Permit application to develop 5 affordable housing apartment buildings (3 town home blocks, 2 apartment buildings)

Applicant meeting attendees:

| | |
|---|---|
| ROB WHETTER | DHK ARCHITECTS |
| CHARLES KIERULF | DHK ARCHITECTS |
| TAMARA BONNEMAISON | MERDOCH DE GREEFF INC |
| PAUL DE GREEFF | MERDOCH DE GREEFF INC |

Leanne Taylor Senior Planner provided the Panel with a brief introduction of the Application and the areas that Council is seeking advice on, including the following:

- design of the breezeway and amenity room in apartment two
- ground level entryways and their relationship with the street and greenway
- landscaping and open site space
- application of building materials
- any other aspects of the proposal on which the ADP chooses to comment.

Rob Whetter provided the Panel with a detailed presentation of the site and context of the proposal and Tamara Bonnemaison provided the Panel with details of the proposed landscape plan.

The Panel asked the following questions of clarification:

- how much consideration of the landscaping was based on Crime Prevention Through Environmental Design (CPTED)?
    - CPTED was a major consideration for the internal courtyards we are working with, as well as the corner of Haegert Park.
- can you access the track field from the Statutory Right of Way (SRW) that runs along the east side?
    - there is expected to be reconstruction on the track. Right now, there is a fence
- is the park open or is it divided into sections?
    - it is open
- are the trees along the greenway blocking and shading the buildings?
    - spacing of trees and greenery are still being worked out
- was onsite storm water treatment considered?
    - Yes, we focused on the rain gardens, so we have a lot of soil depth to work with. There is perforated pipe at the bottom as well, so water is not sitting at the bottom
- what is the depth of the soil on top of the parkade structure?
    - landscapers are using low seed walls so we can mound soil up to two feet and plant small trees
- where does the water go after going through the perforated pipe?

    - there is drainage mat is beyond the pipe, after which it would go into the storm drain
- how much below grade are the lower level bedrooms?
    - they are 1.2 meters below grade
- did the applicant consider raising the buildings, so the bedrooms weren't as much below grade?
    - yes
- will all units be rental?
    - yes
- will all operations for the open spaces be run by the Capital Regional Districts (CRD)?
    - no, they will be a landscape contractor and compost company that will work through all the sites. We are going to be working with community gardening as well
- how much rebate do you anticipate having on the window assemblies on the town houses?
    - there will be a couple inches of shadow line.

Panel members discussed:

- refinement of the relationship between landscape, architectural design and lighting between walkway and breezeway
- the possibility of side screening for townhouse entrances
- how ownership will take place for entries on multiunit town homes
- appreciation for the general concept of inviting the park into main site
- consideration for the landscaping layout on the greenway
- appreciation for the perspective studies
- refinement on what areas are private and what will be shared
- consideration of bicycle storage
- appreciation for the site plan and attention to the character of the Fernwood neighbourhood
- discrepancies with the presentation vs plans and the terminology of materials.

**Motion:**

It was moved by Carl-Jan Rupp, seconded by Brad Forth that Development Permit Application No. 000567 for 1230 Grant Street & 1209,1218,1219,1220,1226 North Park Street & 1219 Vining Street & 1235 Caledonia Avenue & 1211 Gladstone Avenue be approved with the following changes:

- refine the relationship between landscape, architectural design and lighting to improve the alignment between walkway and breezeway
- emphasize the site entrance and the main pedestrian connections throughout the site
- further refine the hierarchy of the pathways between public and private space
- confirmation of gaps within the trees along the playing field avenue as presented
- consider window assemblies that will result in shadow and light
- ensure the pedestrian routes take precedence over parking and do not inhibit views over the site
- consider simplification and revision of exterior finishes on the townhouses.

**Carried Unanimously**

April 13, 2020

Mayor and Council
City Hall
1 Centennial Square
Victoria, BC  V8W 1P6

977 Fort Street
Victoria, BC V8V 3K3
**T** 250-658-3367
**F** 250-658-3397
mail@dhk.ca
www.dhk.ca

**RE: Caledonia Rezoning Application – Advisory Design Panel Revisions**

Dear Mayor Helps and Council:

This letter is a supplement to our above-noted application, summarizing all comments received from Advisory Design Panel and how each comment translated into design improvements. The original minutes of the meeting is also appended to this letter for reference.

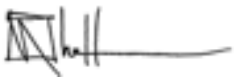
ADP moved that the Development Permit Application be approved with the changes listed in the first column below. The design response to each is summarized in the second column.

| ADP Comment | Design Response |
|---|---|
| Refinement of the relationship between landscape, architectural design and lighting to improve the alignment between walkway and breezeway | The central walkway, previously curved, was realigned and straightened to create a strong continuous axis through the site and the breezeway. Landscape and soffit lighting (dark sky friendly) will provide 24-hour comfort and safety to this route. |
| To emphasize the site entrance and the main pedestrian connections throughout the site | The three pedestrian site crossings were revised for straighter, more continuous connections to adjacent city sidewalks. At intersections with the central walkway enlarged areas of unit paving create small informal gathering places. |
| Further refinement of the hierarchy of the pathways between public and private space | Consistent application of three different widths of pavement create a clear hierarchy between primary, secondary, and tertiary walkways, also matching the foot traffic of each. More public pathways are afforded wider clear areas and sight lines, while more private pathways transition into more enclosed landscaped spaces. |

| | |
|---|---|
| Confirmation of gaps within the trees along the playing field Avenue as presented | Through collaboration with Parks a refined greenway design was created with tree gaps aligned to the three pathways and framed with a contrasting tree species |
| To encourage the applicant to consider window assemblies that will result in shadow and light | Windows will be detailed for particularly strong shadow lines and relief. The face of cladding and window trim will be a minimum of 2-3 inches proud of the window frames. |
| To ensure the pedestrian routes take precedence over parking, as to not inhibit views over the site | Pedestrian routes have been straightened to better fit desire lines and become a stronger organizing element. Vehicle access and parking has been refined to abut, but not inhibit pedestrian routes |
| Consideration for simplification and revision of exterior finishes on the townhouses | The townhouse finishes have been simplified so that color/material changes occur less frequently, and primarily at inside corners rather than flat wall faces. This change seems to result in a calmer, more comfortable appearance, still with the right amount of visual interest and variety. |
| [End of comments] | |

Advisory Design Panel was generally quite supportive of the proposal, and the implementation of their recommendations has strengthened the design further. I hope this proposal also meets with your approval, and I look forward to moving forward with this project.

Sincerely,



Rob Whetter, Architect AIBC, LEED™ AP
de Hoog & Kierulf architects

977 Fort Street
Victoria, BC V8V 3K3
**T** 250-658-3367
**F** 250-658-3397
mail@dhk.ca
www.dhk.ca

**Monica Dhawan**

**From:** Skye Gypsy Stegenga [redacted]
**Sent:** Friday, May 24, 2019 3:36 PM
**To:** Victoria Mayor and Council; fernwoodlanduse@gmail.com
**Subject:** Proposed development

Hi there

I'm sorry to say that the 155 units being proposed for Fernwood will be a disaster for George Jay elementary. This school has already doubled its population in only 5 years . We went from 250 kids 5 years ago to 500 currently and 600 in September 2019.

Even with the recent boundary review, there is no way that this proposed development will be sustainable for George Jay elementary school, which is in absolute crisis from the complications of overcrowding. Please rethink this.

The school board really needs to buy back Blanshard Elementary, which was sold only a few years ago. We dont have enough space or the support for the 500 kids we have now, let alone the 600 in September. The new development would create a huge burden on a school that already has twice the victoria average for students living in poverty and children and families who face multiple barriers. We are in crisis with the complications of overcrowding.

Another option would be to put Victor School back into the proposed catchment changes. This means that the new development might be possible in terms of having enough classroom space for the children who will live there. Victor was taken out of the boundary review prematurely.

The only way this development will not put a cataclysmic burden on George Jay is if Blanshard school is purchased by the school board and if Victor school has its own catchment.

As a George Jay parent and advocate i hope you will seriously consider this issue.

Thanks
Skye

**From:** Christine Condron [redacted]
**Sent:** Monday, May 27, 2019 1:14 PM
**To:** Victoria Mayor and Council <mayorandcouncil@victoria.ca>
**Cc:** Christine Culham [redacted]; Paul Kitson [redacted]; John Reilly [redacted]; Stephen Henderson [redacted]
**Subject:** Community Meeting June 6, 2019 - Development for property 1211 Gladstone Avenue

Please find our Referral Response relating to the above mentioned community Meeting to be held on June 5, 2019.

Trusting all is in order.

Regards,

*Christine Condron*

Snr. Admin Secretary
Capital Regional District
Real Estate Services,
250 360 3176
[redacted]

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# CRD Staff Referral Response Form

Referral No.: 1211 Gladstone Ave Meeting June 5 2019 DevelopmentPermitApplication

| | Interests Unaffected | Approval recommended for reasons outlined | Approval recommended subject to conditions | Approval ***not*** recommended due to reasons outlined | Comments |
|---|---|---|---|---|---|
| Executive Services | ☐ | ☐ | ☐ | ☐ | |
| Finance & Technology | ☐ | ☐ | ☐ | ☐ | |
| Integrated Water Services | ☐ | ☐ | ☐ | ☐ | |
| Legislative Services | ☐ | ☐ | ☐ | ☐ | |
| Parks & Environmental Services | ☐ | ☐ | ☐ | ☐ | |
| Planning & Protective Services | ☐ | ☒ | ☐ | ☐ | The CRHC has partnered with the City of Victoria, School District, and BC Housing to support the redevelopment of the existing Caledonia property by committing to land swaps to facilitate this development. BC Housing has also committed $100,000 per unit through the Building BC Community Housing Fund to support this redevelopment project.<br><br>Housing affordability is at near crisis level in the capital region and lack of access to substantially affordable housing contributes to hardship for both low and moderate income households and threatens the ongoing economic viability of the region as workers are unable find housing affordable to their commensurate salaries. Over the next 20 years, the Regional Housing Affordability Strategy outlines the need for the development of nearly 10,000 housing units affordable to very low and low income households. The CRHC is the largest provider of housing affordable to this income demographic. Land is very difficult to secure |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | for these purposes, and this opportunity to create a substantial affordable development will not only help move the region closer to achieving its affordable housing targets, it will also help contribute to the economic and social well-being of individuals and households with children. |

## Monica Dhawan

**From:** Catherine Minvielle <[redacted]>
**Sent:** Monday, June 03, 2019 6:12 PM
**To:** Victoria Mayor and Council
**Subject:** 1211 Gladstone Ave Proposal

Hi
I am sorry I am unable to attend the meeting on June 5. I am writing to confirm my approval of the proposed development as outlined in the meeting notice.

Best Regards
Catherine Minvielle
102-1252 Pandora Avenue

June 3, 2019

To: the Mayor and City Council of Victoria, BC
Re: the Proposed Development at 1211 Gladstone Ave.

Dear Madams and Sirs,

As an affected property owner, I have received an invitation to a community meeting regarding the subject development. Since I will be unable to attend, I thought I should register my concerns about this development to you directly. They are, specifically as below:

1. Project efficacy – For a very long time now, situating large numbers of low income people into large housing projects has proven to be a social failure. The evidence seems to confirm that those residents integrate less successfully into the surrounding community. Large low cost housing projects tend to emphasize social segregation and enforce a quasi-institutional stigma that creates impediments to community cohesion. As a consequence no one is happy and neighbourhood disruptions are not uncommon. I would think very carefully before I put my name to a document enabling a rezoning of this size and scale.
2. Project impact – The developer proposes to shoehorn a significantly greater number of people into an already congested, small scale heritage neighbourhood. This development proposal effectively doubles the density currently available to them. I don't know what the projections are per unit, but my guess would be ~4/unit, for a total population of well over 600 people. This is going to increase substantially the load on all the resources and infrastructure in a crowded and congested area and growing tourist destination.

If I read the document correctly, the developer currently has access to the creation of 78 residential units, for a local population increase of ~312. Surely this is sufficient to provide for a profitable development and a successful low-cost housing initiative for Victoria while posing rather less of a threat to the well-being and livability of the rest of the neighbourhood. Please do not approve this rezoning application in its current form.

Thank you for your kind attention to this letter.

Yours sincerely

Maureen Milburn
Property owner: 2117 Sayward Street

140 Andrew Place, Salt Spring Island, V81X3

## Monica Dhawan

**From:** Scott [redacted]
**Sent:** Tuesday, June 04, 2019 10:26 PM
**To:** Victoria Mayor and Council; fernwoodlanduse@gmail.com
**Subject:** Proposed Development 1211 Gladstone Ave

I am writing in response to the proposed CRD Housing development adjacent to Victoria High School at 1211 Gladstone Avenue.

I have many concerns with the proposal, including the following:

Development Size

The proposal is speaking of a development up to five stories in height with housing for 155 units. A quick lookup of social housing in Victoria seems to yield nothing of this sort of size (total units) in the capital region currently.

A five-story building in the proposed location will significantly take away from the current residential appearance of the area - and be bringing the sprawl of downtown firmly into Fernwood – an area dominated by 2-story older homes.

The physical size of the proposed development is not in keeping with the look of the many two-story homes in the immediate area.

Traffic

The proposed location has narrow residential streets all around it. Current residential parking available on these streets is very limited (but necessary) for the current residents. Adding higher density housing will bring additional traffic strain to an area that does not need additional vehicle traffic.

We want our children to be safe riding a bike to school. We want the residential parking to remain as it is. The additional traffic created by dese housing will not improve the current situation – it will make it worse.

Economic Diversity

Within 2km of the proposed site are many housing facilities providing short and long-term housing for low income people through organizations such as BC Housing, CRD, Pacifica, Kiwanis, Cool Aid Society and Our Place. Some of the housing locations cater to the lowest income people in the entire capital region.

Adding more low-income housing to this geographic location is only centralizing and consolidating people of low incomes to a specific location in the Greater Victoria area.

I recognize a need for affordable housing in the region. However, I oppose consolidating low income housing into such a geographically close area.

Impact on George Jay Elementary

My wife Skye Stegenga has cited concerns regarding the impact of such a development on George Jay Elementary in an email sent last week.

She has primarily cited concerns related to enrollment numbers already being greater than what the school can support. I too share her concerns in this regard. Adding higher density housing on top of this current situation will only make things worse for an already challenged school.

In addition to the concerns of school population, the socioeconomic mix of George Jay currently includes a high ratio of children who come form low income homes.

Adding 80 additional units of social housing for low income people will likely result in a greater number of students at the school coming from homes with low incomes.

The school has enough challenges already. It is reckless to add more challenges for the administration and faculty.

Closing

I recognize a need for affordable housing in the capital region.

There are many high-level problems associated with the proposed location and development.

I am opposed to the proposed development.

Thank you,

Scott Fox

1617 Camosun Street

## Monica Dhawan

**From:** Alice Whitehead <[redacted]
**Sent:** Friday, June 07, 2019 7:30 PM
**To:** Victoria Mayor and Council; fernwoodlanduse@gmail.com
**Subject:** proposed development for 1211 Gladstone Ave.

Hello,

I was not able to attend the community meeting on June 5. I hope it is not too late for questions and input.

In a Village Vibe article about the proposed development, it says that it will be built under the new BC Building Energy Step Code and will be designed to achieve Step 3, which is not described as ambitious on the Energy Step Code website. Is that "not" a typo? If not, I am surprised that this council would not be ambitious in this matter. Can you clarify for me?

I think it is important for the stability and continuity of our neighbourhood that there be some proportion of one-bedroom and/or studio units so that all ages can live there and so that parents can stay in the community after their children move out. Is this currently in the plan?

Thank you,
Alice Whitehead
13-1241 Balmoral Rd.

## Lucas De Amaral

**From:** Ann Jacob [redacted]
**Sent:** June 8, 2019 3:21 PM
**To:** [redacted]
**Subject:** Fernwood project

Hi - I love affordable housing and low income housing options to be developed in Victoria but putting in 150 units next to the highschool in Fernwood creates significant issues in our neighborhood.. I was not able to attend the meeting that you offered and am sorry about that.

There is no way that Chambers St can take the traffic that this 150 unit will bring. Chambers is already a maze of cars and bikes and walkers that is often very complicated to navigate and with traffic jamming many times during the day already - it would be a nightmare without serious planning that includes the neighboring roads and situations.

We live on Denman St. - which is already a major over busy detour route through Fernwood because of the many road stoppages in place already. People speed on Denman, roaring through including trucks/ taxis / school buses/ cars - and they aren't local traffic - they are weaving to get through the Fernwood maze over here. -- Yes the department in charge of Denman St Planning to slow traffic is thinking of how to improve our block but truly this new Project Development will require that the various departments work together. We were told they had no ability to discuss anything other then our one Block on Denman - meaning we were being asked to discuss the effects of one block without taking into account the larger neighborhood effects including no mention of the Development Project scheduled to be built next to the highschool nor other plans in this area of Fernwood. One of the biggest problems of our times is individual project planning without taking in the whole and the long term effects. We have to include the impacts on the whole neighborhood. If the department working of reshaping Denman St. tell us they aren't qualified or responsible for the block next to us then really there is no honest discussion happening. Please work together as a city with your planning departments and let neighborhoods take into account the larger area. Personally there is no need to pave Denman for example - that money could be better spent on low income housing or opening up the roads in the neighborhood not only so Denman gets less traffic (we are already a speeding traffic zone) but so the neighboring streets take up some of the extra traffic and we can all get out without hitting each other or feeling like we live in the middle of a huge city. There are often no parking spots available by the Fernwood community Centre park (already over parked) - so where does a mother with three little kids park when she wants to get her kids into nature already?

We need to make plans that are more global - or at least including more of neighborhoods. To accommodate the extra traffic and to quiet Denman you need to look at how cars will exit and enter the proposed Development also, etc.

Chambers to Bay St. opened up would be one partial possibility. Opening Pembroke to Fernwood has been suggested (possibly only one way traffic )- and obviously the kids around the highschool will be dodging more cars which is important to recognize and protect and consider in the routing, - - etc.

Please Shut down the plans for Denman St. repaving and slowing down until you have a plan for the neighborhood that takes the whole of the area into considerations -

I don't know who to send this too besides you folks - I don't know how to reach the Denman St. Planners or the Development Project folks or who to talk to . . thanks for sharing or letting me know where I could go to share this - - or at least adding this to the topics next meeting with the public - I apologize that again I will be unable to attend as I will be out of town.

Thanks for all you do - including listening to the neighborhood.
Ann Jacob
1281 Denman St.

## Lucas De Amaral

**From:** Dorothy Field [redacted]
**Sent:** June 21, 2019 11:31 AM
**To:** [redacted] Victoria Mayor and Council
**Subject:** proposing a joint meeting of School District 61, City of Victoria and CRHC

**Categories:** Planning, Awaiting Staff Response

To the City of Victoria Mayor and Council, and School District 61:

Last night I attended the meeting at Vic High regarding Vic High's seismic Upgrade. On June 5, I attended the meeting at the Fernwood CC gym regarding the affordable housing development in the lands west of Vic High. Having been at both, I've experienced two silos, the School District unable to speak about the development and the CRHC unable to speak about the seismic upgrade. I along with many at both meetings, am fairly frustrated. What is clear is that the two are so intertwined that they can't be looked at separately and yet, to date we have not been able to talk with any depth about their impacts.

Last night the suggestion was made that the city, the school district, and the CRHC hold a joint meeting so that we as a community can try to understand whether this is a fait accompli and if not, where there is room for adjustment.

At the June 5th meeting, we were told that the 155 units is not negotiable. Last night, it seems there are now to be 156 units. Even within the city, there seem to be several silos, this new development, the Wellburn's development, and the St. Andrew's development, and little acknowledgment of the cumulative effects for Fernwood and North Park.

In the fact sheet "Frequently Asked Questions Regarding the Future Use of the Land at Victoria High", it states that the process cannot be delayed.

As I have already written, neither audience spoke against affordable housing nor against the seismic upgrade. At both meetings, it became clear that our objections are to the scale -- five stories! and the impacts on traffic as well as the impacts on already at-capacity schools.

At both meetings, the issue of such a large number of marginalized families plunked together not far from Victoria's inner city was raised.
This model has not been entirely successful in other cities in the past.
What makes this proposal any different?

I fear that this "consultation" is only for show given the apparently non-negotiables already established and the very tight time line.

All of us at both meetings spoke out of our love for our neighbourhoods and our city. Times change and we all need to adapt, but imposing such a large development against the wishes of communities and with little opportunity for real input leads to cynicism and lack of trust.

I hope you prove me wrong.

Yours sincerely,

Dorothy Field
1560 Gladstone Avenue
Victoria

## Lucas De Amaral

**From:** Skye Gypsy Stegenga [redacted]
**Sent:** July 5, 2019 10:16 AM
**To:** Victoria Mayor and Council
**Subject:** Caledonia Project

I am writing again to let you know about the community opposition to the Caledonia Project. Although I realize that affordable housing was on the platform for the mayor and council I have to trust that you will be responsive to the community's voice.

At the land use meeting in early June it was obvious that Fernwood does not want the Caledonia Project.

The scale of the project is undesirable. This is a residential neighbourhood. Nearby there are apartment buildings that are three stories tall. This fits into the neighbourhood and is as tall as the new buildings should be. The 154 units must not be passed during the rezoning application.

The local school is in crisis from overcrowding. This year we lost our music room, our Parent Resource Room and our Strong Start room. Although the catchment review has been passed, the results will be negligible as the development in our neighbourhood is already booming. Any successes in redistribution of children to other elementary schools will be shortlived as development continues. The school agrees a new elementary school is necessary but does not think it will be possible for at least 5 years. We were not even given a portable as our school expanded. 154 units of affordable housing will likely bring 60 to 100 new kids to George Jay. This is totally irresponsible planning and unfair to all the children who are already suffering from the complications of overcrowding.

Although affordable housing has the benefit of raising families out of poverty, it still is a way of housing the poorest of our population. George Jay already has double the Victoria average of children living in poverty. Adding another hundred low income children is a burden on what is already becoming an inner city school.

A high density building like the Caledonia Project is an unnecessary and unwanted development. Why build something that is likely to become "the projects"? It is far preferable to build co-op types townhouses throughout the CRD. Spreading low income families throughout the CRD is better for the families, the schools and the neighbourhood.

The traffic report presented by the CRD did not demonstrate the effect of exiting vehicles on Grant Street. This street is already narrow and difficult to navigate during Vic High drop offs and pick ups. The increased traffic on Grant, Camosun and Fernwood is another reason that high density development is unwanted in our neighbourhood.

I think it was clear that Fernwood residents support low income housing but not at the density proposed. We are hoping that mayor and council will be responsive to the progressive constituency who are pleased to welcome affordable housing to the neighbourhood at a lower density. Three stories in enough.

Sincerely

Skye Stegenga

## Heather McIntyre

**From:** Joanne Murray [redacted]
**Sent:** August 13, 2019 11:05 AM
**To:** Victoria Mayor and Council
**Cc:** Leanne Taylor; Michael Hill
**Subject:** Demoviction in Fernwood

Dear Mayor and Council

Re: the proposal by the CRHC to build a 155-unit public housing complex on the grounds of Vic High.

There is a human - and environmental - cost to demoviction.

The 18 townhouse units to be torn down at the present Caledonia complex include 3 bedroom and 4 bedroom units affordable for low income families. All units have well-loved patios which help to create and maintain community.

Being told by your landlord that you must move, that your home will be destroyed and landfilled, that you will be directed to alternative housing outside your community and neighbourhood has real emotional cost. Our neighbours' distress is our distress.

In 2012 there was an estimated cost to repair all units at $120,000 a unit. These are basically 'leaky condos' and the units have extensive black mould. For the last 10 years CRHC has been aware of this problem and it has not been dealt with. CRHC has described this situation as "deferred maintenance".

I would say that a complex that had to be extensively rebuilt after 10 years (and wasn't) and needs to be demolished after a 26 year life span, is poorly designed, poorly built, and badly maintained.

Continuing to rent to tenants - some with compromised immune systems and health concerns - after discovering black mould is very disturbing.

Fernwood residents are rightly concerned about the proposed project of 155 units - given the track record for 18 units. This may be unfair but it is certainly understandable.

The CRHC Tenant Relocation Plan includes assistance in moving costs, assistance in finding alternative accommodations and first right of refusal. Things are not going well. Tenants have retained 2 lawyers from TAPS to encourage CRHC to live up to their stated commitments.

In group meetings with tenants CRHC has told them they must not talk to anyone about current or previous problems with their tenancy - especially media. They have also been advised to not attend Neighbourhood Landuse meetings dealing with the project. I hope you find this as offensive as I do.

There is also no appetite by these tenants to relocate to the proposed new Caledonia units - what is being offered having greatly reduced square footage and lacking amenities like private patios and other casual interactive spaces.

This proposal would be the largest built in Fernwood since the iconic Victoria High School was built in 1912. In 60 years Vic High will still be beautiful - and more useful and graceful - seismically sound, and even more engaged with the surrounding community.

And this proposed development?

155 units, built using the least expensive materials possible, operated by a perennially cash-strapped entity, and subject to day-and-night wear-and-tear? Still standing? Or demolished decades before?

Sincerely,

## Lucas De Amaral

**From:** Kate Berniaz [redacted]
**Sent:** November 19, 2019 4:39 PM
**To:** Victoria Mayor and Council; [redacted]
**Subject:** Support for Vic High land swap

**Categories:** Awaiting Staff Response

Hello,

I am writing to support the Vic High land swap and the development of new affordable housing in Fernwood. Building more family housing is absolutely necessary and this land swap facilitates it.

Still, we have two concerns: school overcrowding and traffic/parking.

Our children attend George Jay. Already the school is under stress with overcrowding. Though the new catchment boundaries are supposed to relieve this, the school growth projections do not included all the development growth that is coming to downtown Victoria. This growth will also impact Central and Vic High. I don't think we should restrict housing development but the school district should plan for these new residents.

With this development, concerns have been raised about increased vehicle traffic in the neighbourhood. I see two simple solutions to this: add traffic calming and diversions to Chambers (prioritize this street because of the high foot and cycle traffic from the 3 schools) and only provide minimal vehicle parking. Fernwood is a very walkable and bikabke neighbourhood and has access to transit. The number of alternatives to vehicles makes it easier to live without a car. As well, reducing the vehicle parking as part of the development will be cheaper to build, which is a benefit when building affordable housing.

Again, we support the development. With it we would like to see improvements to school capacity in the surrounding schools, reduced vehicle Parkin on site and  aggressive traffic calming in Chambers and through the neighbourhood.

Thank you,
Kate Berniaz

## Lucas De Amaral

**From:** Development Services email inquiries
**Sent:** November 19, 2019 8:22 AM
**To:** Victoria Mayor and Council
**Subject:** FW: Property Vic High and Chambers

**Categories:** Awaiting Staff Response

Dear Mayor, Council and the City of Victoria.

I live in Springridge Housing Co-op at 1275 Pembroke Street and have many concerns about the development in our neighbourhood directly behind us. Members here are attending to the consultation process but there has not been an opening to discussing a development scenario which is reduced in scale which could address many of the issues of the neighbourhood and balance the many needs involved and be of benefit to the whole.
Could we please open up that possibility and have our concerns recognized?
I appreciate your tending to this and many of the development issues.
Thank you
Sincerely,
Leia Mango

[redacted]

## Lucas De Amaral

**From:** Brianna Day [redacted]
**Sent:** November 27, 2019 1:16 PM
**To:** Lisa Helps (Mayor); Marianne Alto (Councillor); Sharmarke Dubow (Councillor); Ben Isitt (Councillor); Jeremy Loveday (Councillor); Sarah Potts (Councillor); Charlayne Thornton-Joe (Councillor); Geoff Young (Councillor)
**Cc:** [redacted]
**Subject:** Your role in fernwood/caledonia

**Categories:** Awaiting Staff Response

Dear mayor and councilors,

You may, by now, be familiar with my name as I have been in touch on and off for a while now. You will also be receiving some cc e-mails that partner with this one, but are directed to other groups involved.

From my limited interaction with a few of you, you seem to feel like city council has little to do with crowding at our inner city schools which is resulting in the loss of many programs, resources and amenities that are vital to our population.

I want to challenge that, and request some follow up information and commitments from you. You as a council continue to push through large developments, all focused on our city centre. I am all for affordable housing, but it should not all be shouldered by one or two neighbourhoods (or by one school catchment). The transit system, crowded roads, bike lane instalment and the following confusion, are all evidence of infrastructure not keeping pace with population growth due to increased living spaces.

In light of the land swap being voted for, I request:

- a community investment plan from you. What will the city do to keep fernwood safe, welcoming, and well resourced? If you insist on building more density here, where does childcare come from? Social programs? Catchment school space? George Jay is still "making do" instead of thriving. It is amazing what staff and admin have accomplished, but they are still far from equipped to provide all students with the care they need to get quality education.
- plans for traffic, bike and pedestrian safety especially down a single lane road that leads to an elementary school (I am aware some of this is in the works as we speak)
- a commitment to the new tax revenue staying in the neighbourhood. Invest it in the students who have lost land that was left vacant (new track and field? Parking lots/sidewalks?). Invest it in the new families moving in who are low income and need assistance to live and work in this market.
- an agreement in writing to keep the 3 green spaces that the city is getting out of the land swap

Finally, I request that the city of Victoria find ways to get hard on surrounding municipalities when it comes to densification. Our tax dollars can't sustain the city centre for everyone around us when they don't want to pull their weight. Our schools can't sustain the population growth that is paired with densification in our catchment. I believe, at its heart, this issue extends to amalgamation. What are the next steps with that after the previous vote?

Thanks for your attention in this matter. I look forward to hearing from you in regards to these concerns. If at all possible, I would love to be in contact with someone before December 20th. I can be reached at this e-mail, or by phone at [redacted]

Sincerely,
Brianna Day