

CHAMBERLAIN LOW ENERGY DUPLEX

July 20, 2017

To: Mayor Helps and Victoria City Council
Victoria City Hall 1 Centennial Square
Victoria BC V8W 1P6

Re: Rezoning & Development Permit Application for 1068 Chamberlain Street

Dear Mayor Helps and Victoria City Council,

This proposal is to modestly increase density in one of Victoria's most walkable neighbourhoods, in a manner that exemplifies efficient design and construction practices and respects the fabric of the existing established neighbourhood. The project is shaped by the following fundamental values:

- We believe that we have the skills, materials, and available technologies – *right now* - to build homes that are significantly more energy efficient, comfortable, healthy and long-lasting than most of what is being built today.
- We believe there is tremendous value in our existing homes and that there is much we can do to improve those as well.
- We believe that environmental outcomes are at least as important as financial ones.
- We believe that thoughtfully designed infill is critical to supporting a walking and biking culture.
- We believe that sustainable design is compact design.

Our goal is to create housing for 2.5 families that uses less energy than the existing single family home on the property. Our intention is to continue to live in the renovated existing house, with extended family in the suite, and to call this vibrant neighbourhood our home for the long-term.

Description of Proposal:

The proposal is to convert the existing single family home into a strata duplex with a secondary rental suite in one half. The design is sensitive to the existing single family character of the neighbourhood, maintaining the existing 100+ year old home while adding an attached duplex addition. The rental suite within the existing home's current footprint will keep that half of the duplex affordable to families and offer additional rental accommodation in the neighbourhood. The rental suite will not be a separate strata unit.

Design will follow Passive House principals (emphasis on super insulation, high performing windows, and airtight construction with no thermal bridging), with goals of achieving net-zero energy consumption, zero carbon emissions, and Passive House certification. We have retained a Passive House Certifier and can provide a letter of engagement, if requested, as evidence of our commitment. The Certifier will also complete an interim Design Stage Review to provide feedback prior to construction and to provide a degree of assurance that the project will certify if constructed as designed. This review can also be provided to the city if requested.

A 144 sq.m. (~1550 sq.ft.), 3-bedroom, 2-storey addition will be added to the south side of the existing home. The design is practical and compact, suitable for a family, and intended to be extremely comfortable and low impact. The location is highly desirable for its established character, natural beauty, proximity to high quality schools, and proximity to Oak Bay Avenue.

The existing 108 sq.m (~1160 sq.ft.) house + 108 sq.m basement will remain as the second half of the new duplex. It will be renovated following the same Passive House design principles, with a full upgrade to the

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exterior, foundation, plumbing, electrical and mechanical systems. The single storey + basement structure will be lifted 0.8 m to create a full height lower level, which will include the studio rental suite. The suite is intended as affordable, independent accommodation particularly suited to multi-generational living. Site specific R2 zoning is being requested to facilitate the addition of the suite in the duplex.



Figure 1: Southeast Perspective of Proposed Duplex Addition

Policy Support: Land Development and Management

The proposal supports the Official Community Plan (OCP)'s goal to create compact development patterns that use land efficiently. The proposal lot is large (709.4 m²) and is the third property south of Oak Bay Avenue, adjacent to a 6-unit townhouse on the north side and a single family dwelling on the south. Our proposal will create additional housing that supports walking to Oak Bay Avenue's "Small Urban Village" economic center. The property is also a short walk to bus stops and a short walk or bike ride to neighbourhood schools.

The addition of the suite to the existing house diversifies the range of housing options available in this Traditional Residential neighbourhood, creating an option for extended family to remain closely connected, access amenities within a short walk, and age in place.

The proposal supports the new (draft) Gonzales Neighbourhood Plan by maintaining the ground-oriented existing single family character of the immediate neighbourhood, while enhancing the diversity of housing via the addition of the rental suite and the new duplex addition.

The immediate neighbourhood is characterized by a mixture of single family homes, house conversions, and multi-family dwellings. Many of the houses in the area have rental suites and several are house conversions.

It has been suggested that City policy does not support suites in duplexes. However, the R-2 Two-Family Zone and the City's Duplex Guidelines predate the OCP. This proposal is entirely consistent with the

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objectives and policy direction of the OCP and the new Gonzales Neighbourhood Plan, which specifically identifies duplexes + suites as a desirable housing type. The OCP envisions a range of ground-oriented housing types that fit well within the existing neighbourhood fabric. This is what our proposal achieves and we trust our proposal is evaluated in the context of the City's most up-to-date and emerging policy.

Below is a map with current housing mix of properties immediately surrounding the subject property.



Figure 2: Housing types adjacent to subject property

Policy Support: Housing Diversity

This proposal also supports the OCP's objectives for Housing and Homelessness. While not targeted at the most vulnerable, this proposal enhances affordability while creatively regenerating and enhancing the existing housing stock.

Half of the duplex includes a mortgage helper suite, making ownership in this popular family neighbourhood accessible to a greater diversity of families. At the same time, it adds additional rental stock to this neighbourhood and creates an opportunity for multi-generational living and a diverse community.

Policy Support: Climate Change and Energy

The proposal supports all five of the City's strategic goals around climate change and energy, as follows:

1. Increased resilience to climate change, energy scarcity and costs: By applying Passive House principles, both the existing and new addition will use very little energy. Because of the emphasis on constructing an airtight and highly insulated building envelope, the homes will also remain comfortable year-round, with very little need for additional heating or cooling. In the face of a natural disaster, the homes will stay warm longer without power.
2. Both existing and new addition will be built solar PV ready and both will be all-electric. BC's hydro power supply has a much lower carbon footprint than combustion fuel. By building all-electric, both homes will also have the potential to generate and store all of their own power on-

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- site.
3. The homes are sited in a location where cars are not needed. All amenities can be accessed within a short walk. Downtown is accessible by a short bike or bus ride.
 4. The re-use and improvement of the existing building will reduce construction waste and reduce the need for raw materials. By renovating the existing house to a very high construction and energy performance standard, the life of this 100-year old house is extended indefinitely, while also creating a healthy, low-energy, low-carbon environment for its occupants.
 5. As outlined in 2. above, both sides of the proposed duplex will be solar PV ready as a minimum, increasing Victoria's clean, renewable, and efficient energy sources.

Neighbourhood Consultation:

Beginning in the fall of 2015, neighbours within and beyond the 100m radius were consulted. We had preliminary in-person conversations with over 55 neighbours from September 2015 through spring 2016. Preliminary plans for a small lot subdivision approach were shared and input received. Plans were also emailed to interested neighbours, including the Clare Street email list and the 6-unit townhouse email list. We also shared our blog documenting the project (stretchdeveloper.com). We discussed the small lot subdivision proposal at an informal meeting with the Fairfield Gonzales Community Association Land Use Committee in February 2016.

As a result of the concern voiced by some of our neighbours that there was insufficient space between adjacent properties, we elected to redesign for an attached duplex. This approach allows us to achieve our project objectives while doubling the amount of space between the building and its adjacent properties to the north and south.

Neighbour input also led us to move the parking from the rear of the yard to the front, using minimal permeable parking surface to accommodate the required parking area. While a variance from the R2 zoning, this strategy is consistent with R1-G Design Requirements for Single Family Front Yard Parking, and reflects a preference to maintain the greenspace in the rear yard. The rear yard is part of a nearly block-long stretch of back yard space that has no car access or paved area. See Appendix A. The parking design is intended to provide two parking spaces in as efficient manner as possible, and thereby preserving as much front yard green space as possible.

Landscaping has also been intentionally designed to provide screening and protect privacy, particularly with the neighbour immediately to the south of the new house. Landscaping includes the extension of the existing 6' fence and plantings to enhance privacy on both sides.

A noticed community meeting was held with the Fairfield Gonzales Community Association Land Use Committee on October 20, 2016. An estimated eight neighbours attended and several provided comments at the meeting, most of which were supportive. Points of support included the creative addition of modest density, the addition of the suite, the ambitious sustainability goals, and the design. Specific criticisms focused on minor design elements such as plantings between properties and roof shape.

Follow up from our neighbour to the south after the meeting raised a number of points including disliking the modern design of the addition, concern about privacy issues, and a dislike for the 3 units without a rationale. We believe we have addressed privacy concerns with the design of non-view windows on the second floor of the addition, as well as a 6-foot fence and plantings screening windows on the ground floor. Refer to the overlook study on drawing A002. We will continue to work with this owner in as constructive a manner as possible to resolve any remaining concerns. Redesigning from the small lot subdivision to the attached duplex approach was a significant change we undertook specifically in response to this neighbour's concerns.

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Because of our lengthy consultation process prior to the community meeting, we did not hear any criticisms at the community meeting that warranted major changes to the current design. Some minor changes have been incorporated to meet the city's submission requirements.

House Design:

Both the existing house renovation and the new duplex addition are designed to be extremely energy efficient; to use low embodied carbon and energy materials to the extent possible. The focus of the design is on Passive House principles – significant resources will be focused toward making the building envelope of both houses highly insulated and airtight. High efficiency heat recovery ventilators will be installed to ensure very high quality distributed ventilation air.

The renovation of the existing house respects and maintains the original form and roof line, while the addition is intentionally contemporary, simple and contrasting. This design strategy highlights the relationship between old and new. The design uses traditional materials, including cedar siding and stucco, that reference more traditional material choices evident on the block. Deep window reveals introduced by the thicker Passive House walls add visual interest and depth to the facade. The roof slope of the new addition is nearly flat, to minimize intrusion on neighbouring properties, facilitate the addition of solar panels, and allow maximum sun penetration to the north half of the duplex. These features, along with welcoming, street-facing entries for both halves of the duplex, adhere to the Neighbourliness Guidelines for Duplexes.

Refer to Appendix C for a description of the architectural rationale for the design.

Zoning:

The proposed duplex meets the R2 requirements with the following requested variances:

- A. Usage: From two-family dwelling to two-family dwelling with one secondary rental suite
Rationale: Rental suites are common in this area, as are multi-family dwellings. Given the proximity of Oak Bay Avenue and the surrounding mix of density, adding a suite within the existing building footprint adds one more affordable rental option in a highly desirable location. It makes the purchase of this half of the duplex more attainable to families of moderate income and allows the potential of families with young children to remain even as the space needs of their growing children increase. Furthermore, it supports the potential of a multi-generational living arrangement.
 - B. Parking location: From rear yard to front yard
Rationale: This was a design change in response to neighbourhood input, and in keeping with the design of many houses on the west side of Chamberlain and the east side of Clare Street. The front yard parking design is consistent with the guidelines contained in the R1-G zoning, which seeks to minimize green space consumed for parking purposes. See Appendix B for examples of front yard parking in the immediate neighbourhood.
 - C. Rear yard setback: From 12.78 m to 10.26 m
Rationale: This variance is to accommodate a rear deck and does not reflect an intrusion of the main structure into rear yard space. The front yard setback was required to allow for front yard parking, which taken together, facilitates overall preservation of green space on the property.
 - D. First and second storey floor area: From 359.8 m² to 280.0 m²
Rationale: The existing house was raised to create a full height lower level and to enable addition of below slab insulation. Combined floor area is still well below the R2 limit, as is the overall building height.
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Project Benefits:

Economic:

- Locally owned and financed construction project
- Infill development supports economic vitality of the Oak Bay Village Small Urban Village

Social:

- Improved streetscape
- Addition of affordable rental housing (suite)
- Adaptive re-use of existing house for multi-generational living and aging in place
- Educational opportunities for sustainable construction practices
- Site selection that supports walking and biking culture

Environmental:

- Building retention and re-use
- Site selection that supports biking and walking
- Onsite stormwater management via the City's Rainwater Rewards Program
- Permeable paving for parking strips and patio space
- Landscaping that prioritizes edibles, natives and plantings with minimal irrigation demand
- High efficiency plumbing fixtures
- All LED lighting
- Site generated solar PV
- Ultra low energy consuming buildings (targeting net zero energy, zero carbon emissions, and Passive House certification)

Conclusion:

The proposed project prioritizes environmental sustainability, carbon reduction and energy efficiency. It creates a modest increase in density in keeping with the OCP's goal to provide additional housing in the city's most walkable/bikeable neighbourhoods. The design is sensitive to the existing single family character of the neighbourhood, adding a duplex addition that is appropriately scaled for the site, and maintaining the existing 100+ year old home while adding an affordable rental suite within its current footprint.

Thank you for your thoughtful consideration of this proposal.

Best Regards,



Christy Love and Matthew Mahoney
Owners/Occupants of 1068 Chamberlain Street

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APPENDIX A: Rear Yard Green Space



Subject
Property

Rear yard
green space

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APPENDIX B: Examples of Front Yard Parking in the Immediate Neighbourhood



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APPENDIX C: Architectural Rationale

The 1000 block of Chamberlain Street is comprised of an eclectic mix of character homes. Existing homes range from 1 to 2 1/2 stories in height and exhibit a broad range of architectural styles reflecting their year of construction. The majority of homes draw broadly on traditional house forms and materials including horizontal wood siding, stucco, and they generate visual interest with expressed massing and projecting roof fascia and eaves.

Existing houses reflect their unique history of addition and renovation work identifiable through changes in material and style.

Roof profiles are predominantly hipped and gable styles, often with complex dormers. Deep overhangs and eaves expressed with dentil patterns contribute to the character of the homes. Asphalt shingles are the dominant choice.

Authentic materials predominate with ornate timber posts and railings in conjunction with lapped wood siding, stone and stucco. Occasional insertions of brick and galvanized, corrugated metal add to the eclectic flavour of the neighbourhood.

Colour is used extensively in the neighbourhood with vibrant hues, contrasting trim and natural accents. Grades vary considerably along the block with several houses and front yards elevated above the grade of the street. The natural grade in the zone of the project is moderately flat.

Dense, mature landscaping is the dominant feature of the street. Several houses are virtually concealed by front-yard vegetation. Grass appears selectively in front yards along with a mix of bed planting, shrubs, mature trees, textured paved areas and natural rock.

The proposed house offers a contemporary interpretation of the patterns and forms of the street. The intention of this project is to honour the architectural legacy of the neighbourhood with homes that reflect contemporary values and design. This is achieved through sympathetic scale, texture and massing.

The **existing house** will receive new exterior insulation, windows and cladding. Additional wall thickness will introduce deep reveals at window and door openings, enhancing the rather flat façade of the existing house with deep shadow lines.

The existing shingle and stucco siding will be replaced with new stucco, similar to many homes throughout the neighbourhood.

The enclosed entry will be converted to a porch with a combination of stucco, stained timber columns and sealed cedar screen walls that reference natural materials used in similar ways throughout the neighbourhood.

The existing hipped roof will be re-clad with standing seam metal, chosen to extend the life of the roof and reduce the lifecycle environmental impact of asphalt shingles. The eaves will be extended to create a deeper shadow line that is more consistent with the neighbourhood. A sealed cedar soffit will visually connect the roof to the accent material used in fences and screens around the property.

The **duplex addition** stands two stories with a grade entry and flat roof. The linear shape is a response to the narrow property. The south side yard setback has been increased to mitigate impact on the neighbouring property and existing mature tree and to create useable yard space adjacent to the house. The roof, which presents a parapet to the street, projects to shade south facing windows while maximizing solar penetration to the existing house to the north.

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Front yard setbacks are aligned to adjacent houses. The characteristically shallow front yards of Gonzales contribute to the friendly character of the neighbourhood.

Similar to other houses in the neighbourhood, the massing of the new and existing houses will be expressed to create visual interest and to improve connection to the front garden and the street. In addition to deeply expressed windows and extended roof soffits, the entries of both houses are expressed with massing and materials. The projecting mass of the existing house's porch is enhanced with a projecting roof overhang, twinned timber columns and sculptural concrete steps. The lower entrance is defined with a shallow roof overhang and partially enclosed with a timber pergola. The alcove entry of the new addition is recessed, creating a sculpted massing of the house's façade and a semi-enclosed, landscaped courtyard entry. A large street-facing window announces the entry.

The addition will be clad with vertical cedar siding.

The houses are conceived together with their front yard landscaping. Entry, porch, stoop, windows, surface treatments, planting, fences and screens work together to create gardens that are beautiful, functional and seamlessly integrated with the homes.

Colour is chosen in the context of natural wood accents and front-yard landscaping of both houses. The dark French-grey hue mediates between the industrial sensibility of the metal roof and gutter and the natural tone and texture of natural wood, landscape and permeable paved surfaces. Vibrant colours are introduced in the glazed front doors of the houses and basement suite as a contemporary reference to the traditional use of colour in the street.
