

R.A.D Study™

4523 E Pender St, Burnaby



DANIEL CLARKE
ARCHITECT

© Daniel Clarke Architect
dclarke@dclarkearchitect.com

how to use this report



This **R.A.D. Study™** report is the second step of my SAPPHR Strategy™ and the second stage of your journey to create a new home – the **ANALYSIS** phase, as shown below:



The desired project **outcomes** and project **constraints** identified in the Pre-Design Diagnostic Scan™ (shaded in grey) have been explored further and with additional detail. Targets for **high performance** have been more clearly set.

This report includes your preliminary **functional program** or **design brief** – a qualitative statement of requirements describing your **priorities** and desired **outcome** and a corresponding list of **features** and **spaces** you require or want.

The concept design and design development stages must all satisfy the requirements set out in the R.A.D. Study™.

This report is organized into the following sections:

- **EXISTING CONDITIONS**
- **GENERAL GOALS**
- **LIFESTYLE**
- **PERFORMANCE GOALS**
- **PROGRAM**
- **REGULATIONS**
- **CONSTRUCTION**
- **NEXT STEPS**

Additional questions arise from this deeper investigation, new **considerations**, and possibly new opportunities to be considered. This report is a Basic R.A.D. Study™, but a Premium version is available and would contain additional clarification.

ADDITIONAL FEATURES INCLUDED IN THE R.A.D. PREMIUM STUDY™

- Site plan showing survey plan, solar access, views, and prevailing winds
- Shadow study
- Bubble diagram of functional program
- Copies of forms to submit to the city
- Project planner with permit and submitted applications tracking spreadsheet

table of contents

EXISTING CONDITIONS

GENERAL GOALS

LIFESTYLE

PERFORMANCE GOALS

PROGRAM

REGULATIONS

CONSTRUCTION

SCOPE OF SERVICES

▶▶▶ NEXT STEPS



existing conditions

A summary of the existing site that includes dimensions, any existing structures

PROPERTY

BUILDINGS

LANDSCAPE

NEIGHBOURHOOD

UTILITIES



existing conditions

PROPERTY:

Municipal address: 4523 Pender Street, Burnaby BC
 Land Title Office Parcel ID: 012-109-681
 Legal Address: Lot 33 BLK 9 DIST Lot 122 PLAN NWP1308
 Lot frontage: 10.06m (33'-0")
 Lot rear width: 10.06m (33'-0")
 Lot depth: 37.19m (122'-0")
 Lot area: 374.1 m² (4026 ft²)
 Description: street front, lane at rear, flat site with approximately 1 ft. retaining curb at front fence line
 Surroundings: faces residential city street to the south

- **Good solar access, excellent construction access via Willingdon Road**

Assessment: \$1,647,000 (2022)

BUILDINGS:

Description: YES – one 2-storey house (Vancouver Special) with enclosed 2-car garage
 Year constructed: 1992

- **Existing roof finish is in good shape, and wall framing is likely in decent condition due to breathability of vinyl siding.**
- **Seismic hazard ratings in current building codes likely render existing structures not compliant**

Materials: Vinyl siding, vinyl windows, concrete tile hip roof

Basement: no

Landscaping: Gravel front yard, concrete rear driveway

Electrical connection: Overhead lines in rear lane at rear fence, overhead oil-filled pole transformer

- ***Pole transformers pose a minor hazard; buildings must be located far enough away or be protected with noncombustible material or tempered, laminated safety glass***

Adjacent: one Vancouver Special to the West, a 1940's house to the East. Lane and parking lot to the North, Street to the South.

- ***The parking lot is likely to be replaced in the not-too-distant future with a multifamily building.***

LANDSCAPE

The front yard is entirely river rock. There is a 12" retaining wall that steps up to the municipal boulevard – also river rock – that slopes down from the sidewalk. The landscaped strips on each side of the concrete driveway at the rear are river rock.

- ***The stone landscaping heats up during the day, increasing the air temperature around the house and continuing to release heat overnight. Fresh air brought in will be warm and therefore must be cooled to avoid overheating the house. However, air intake and a heat exchanger will benefit from being on the North side of the house if located at the rear.***

There is a 15' tall field maple tree at each corner against the fence, and a 15' tall hazel tree in the East neighbour's lawn at the common fence. There is a dogwood against the rear fence.

- ***These trees provide very little shading during the summer***
- ***Passive cooling opportunity will be very limited (partly due to a future mixed-use building blocking airflow from Burrard inlet and rejecting additional heat from commercial condensers in the parkade), and shading design will be critical to prevent overheating especially for Husband and Wife as they grow older.***
- ***Active cooling will be necessary.***

UTILITIES

Water supply: ***yes - city***

Firefighting water supply: ***yes – city, hydrant nearby***

Sanitary sewer: ***yes - city***

Stormwater sewer: ***yes - city***

Natural gas availability: ***yes – adjacent restaurant has supply***

Electricity: ***yes – BC Hydro (power pole in lane)***

Telephone landline service (Telus/Shaw/Bell): ***yes – already connected***

Fibre optic availability: ***yes – already connected***

Cell signal: ***excellent***

Mobile data available: ***5G***

Garbage collection: ***yes - city***

Garbage collection: ***yes - city***

Compost collection: ***yes - city***

Recycling collection: ***yes - city***

NEIGHBOURHOOD:

Fire hall 4 long blocks away

- ***Sirens will not be an issue with Passive House level insulation, airtightness, and triple-glazed windows***

Restaurant across lane

- ***Grease bin and multiple large garbage bins are unenclosed and directly across the lane. Odours, flies, and rodents will be a concern.***

Existing site conditions to check (native artifacts, protected/endangered species, environmental or waterway restrictions, geotechnical hazards):

- ***The site appears to have no special hazards. Geotechnical assessment should check for fill from likely previous house on site.***

Pests and Wildlife:

- ***Mice from the adjacent restaurant are nesting in the existing house. They will therefore present a challenge to prevent infestation of the new house(s).***
- ***There is no wildlife and no evidence of stray cats or dogs.***
- ***This property is far from the water so is unlikely to see seagulls.***
- ***This area has few tall buildings, so pigeons are unlikely.***

LOCAL VALUES:

Assessed Values This Block

<u>Address</u>	<u>Area</u>	<u>Bdrms</u>	<u>Baths</u>	<u>Assessed Value</u>	<u>Built</u>
4503 Pender	2379 ft ²	6	3	\$ 962,000.00	1989
4502 Pender	2149 ft ²	4	3	\$ 964,000.00	1989
4537 Pender	1418 ft ²	4	2	\$ 1,123,000.00	1948
4529 Pender	2369 ft ²	4	3.5	\$ 1,147,000.00	1922
4549 Pender	1702 ft ²	5	2	\$ 1,150,300.00	1951
4550 Pender	1753 ft ²	4	2	\$ 1,195,900.00	1947
4564 Pender	1829 ft ²	3	1	\$ 1,200,300.00	1954
4546 Pender	2261 ft ²	3	1	\$ 1,200,400.00	1935
4560 Pender	902 ft ²	2	1	\$ 1,200,800.00	1956
4514 Pender	1936 ft ²	4	1.75	\$ 1,208,800.00	1958
4559 Pender	2561 ft ²	6	2.5	\$ 1,237,000.00	1968
4556 Pender	2069 ft ²	5	2	\$ 1,238,000.00	1940
4553 Pender	2530 ft ²	5	2.75	\$ 1,249,000.00	1982
4541 Pender	2473 ft ²	5	2.5	\$ 1,255,000.00	1975
4524 Pender	2472 ft ²	5	2.25	\$ 1,293,000.00	1971
4532 Pender	2549 ft ²	5	2.5	\$ 1,326,000.00	1975
4523 Pender	2285 ft ²	5	4	\$ 1,353,000.00	1992
4509 Pender	2389 ft ²	5	3.5	\$ 1,360,000.00	1989

EXISTING CONDITIONS · 02

4533 Pender	2186 ft ²	5	1.5	\$ 1,370,000.00	2002
4528 Pender	2447 ft ²	5	3	\$ 1,387,000.00	1989
4510 Pender	2357 ft ²	5	2.5	\$ 1,390,000.00	1989
4555 Pender	2192 ft ²	5	4	\$ 1,395,000.00	2003
4516 Pender	2070 ft ²	6	3.5	\$ 1,405,000.00	1996
4542 Pender	2167 ft ²	6	4	\$ 1,421,000.00	1997
4567 Pender	2359 ft ²	3	3.5	\$ 1,431,000.00	2004
4577 Pender	2384 ft ²	5	4	\$ 1,432,000.00	2004
4554 Pender	2913 ft ²	5	4	\$ 1,444,000.00	1993
4568 Pender	2154 ft ²	5	3	\$ 1,447,000.00	1993
4538 Pender	2112 ft ²	6	4	\$ 1,450,000.00	2007
4535 Pender	2200 ft ²	5	4	\$ 1,524,000.00	2010
4513 Pender	2176 ft ²	5	3.75	\$ 1,568,000.00	2014
Average				\$ 1,300,887.10	

Current Properties for Sale

<u>Address</u>	<u>Area</u>	<u>Bdrms</u>	<u>Baths</u>	<u>Assessed Value</u>	<u>Built</u>
4557 Parker	2147 ft ²	6	2	\$ 1,698,800.00	1950
4265 Frances	2634 ft ²	5	3	\$ 1,999,988.00	1978
4770 Fairlawn	2327 ft ²	4	3	\$ 2,098,000.00	1956
4702 Parker	3272 ft ²	7	5	\$ 2,149,000.00	1959
4217 Parker	2949 ft ²	8	5	\$ 2,488,000.00	2015
4858 Pender	3378 ft ²	6	7	\$ 2,998,000.00	2023
5021 Parker	4959 ft ²	7	8	\$ 3,780,000.00	2022
Average				\$ 2,458,826.86	





general goals

What do you want to achieve by building this house?

- LANDSCAPE
- GENERAL FORM
- ANTICIPATED SIZE
- STYLE
- IMPETUS
- INTENT
- FEELING
- FUTURE

general goals

LANDSCAPE:

\$900,000

- **Construction cost will likely be closer to \$1M unless noticeable minimalist treatments are accepted. Consultant and builder fees will add another 20-25%.**

GENERAL FORM:

Duplex, side-by-side

- ~~**Burnaby Planning defines this arrangement as SEMI-DETACHED DWELLINGS**~~
- ~~**Semi-detached dwellings are permitted**~~
- ~~**With parents moving in and ageing in place, I strongly discourage the two-storey dwellings and suggest a duplex (stacked) arrangement**~~
- **You've updated your requirement to a (stacked) duplex arrangement and have agreed to abandon plans for stratifying the second dwelling.**

ANTICIPATED SIZE:

2400 ft²

- **Maximum floor space ratio = 0.60 (224.5m² / 2415.6 ft²)**
- **Considering the adjacent medium-density and commercial plans, I suggest applying for a**
- **Maximum site coverage = 40% / 45%; refer to site coverage section**

STYLE:

Modern styling on a traditional form, stylish but not trendy. We do not want Craftsman or Victorian ornamentation. We want to use natural materials – metal, stone, wood, brick.

Husband really likes Japanese styling (minimal palette, honest structural expression) but also some modern Indonesian. Wife likes modern (manicured) wood cabins and Victorian styling.

- **Some traditional Asian styling or more decorative Indonesian elements can prevent a minimal aesthetic from feeling stark.**

IMPETUS:

We are upsizing to a house from our downtown condo.

INTENT:

Demolish the existing house. Strata-title the new two-dwelling house or rent second dwelling unit and add secondary suite.

- **A strata-titled property results in some parts of the site being "common property". Changes to and maintenance of the common property must be agreed to unanimously by both strata owners.**

A strata corporation of just two owners is still subject to the Strata Property Act and must conduct the affairs of the

We want a secondary dwelling unit large enough for a small family and planning to accommodate a future laneway or infill house.

FEELING:

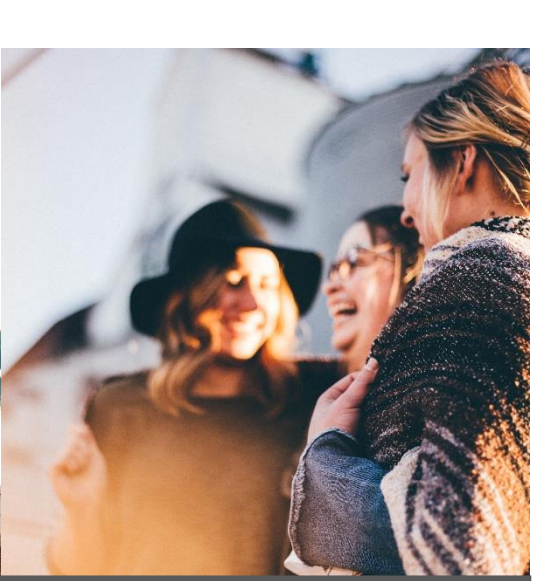
Modern styling on a traditional form. Wife likes quaint, ornate, Craftsman-style homes and A-frame cabins but is willing to compromise. Husband likes houses with bold movements that make sense to the spaces inside.

- ***A multigenerational house has separate entrances and separate kitchens but provides internal access. Strata-titling the house requires a special type of fire-rated wall that you would not want***

FUTURE:

Continue to own and live on the property until old age requires us to move to a care home. We would like the option of our daughter and her family being able to move in to care for us. Wife's parents are 80+ and in moderately declining health; the survivor may want to move in or insist on living in their home (with extra care from either Wife or her sister) but will likely pass away after only a few years. Husband's mom is nearly 70 and in better health but less mobile and may visit for several months a year.

- ***Ageing in place can be accommodated by designing the access to and layout of the main floor to accommodate wheelchairs. Dividing the house into semi-detached dwellings will result in each having two or more floors. Climbing up or down the stairs will be increasingly difficult, and you will most likely begin to favour one floor or another – likely the main floor – with the other floor being underused.***
- ***A multigenerational house has separate entrances and separate kitchens but provides internal access. Strata-titling the house requires a special type of fire-rated wall that you would not want to put a door into.***
- ***Considering the need for space for in-laws or adult children in the future, a second dwelling unit OR a secondary suite could be rented out but likely not both.***



lifestyle

A summary of who we are, how we live, and what's important to us

WHO WE ARE
WHAT WE ARE LIKE
VALUES
MATERIALS
WHAT DO WE DO
PRESENT HOME - LIKES
PRESENT HOME - DISLIKES
WHY THIS NEIGHBOURHOOD
GENERAL SPATIAL CONFIGURATION
PETS
BABIES
HOUSEKEEPING, FURNISHING, DECORATION
HOME AUTOMATION AND SECURITY
INTERIOR STATEMENT
TRAVEL
RELIGION, CULTURE, SPIRITUALITY
FAMILY ACTIVITY
CARS
VIEW
AMENITIES & APPLIANCES
PRESENCE / STREET APPEAL
HOME OFFICE

lifestyle

WHO WE ARE:

Husband and Wife both in late 40's. Wife will retire to casual project management work in a few years; Husband will continue his small architectural practice until he physically can't. Daughter is just starting school and will be our only child.

We are non-smokers, very rarely drink, enjoy tea.

Husband rarely watches movies, but Wife and Daughter enjoy movies more often.

WHAT ARE WE LIKE:

Daughter is very creative and needs space for crafts, for building structures.

- ***Perhaps also plan for space to display Daughter's works***

Daughter is very social while Husband and Wife are fairly introverted and nerds to differing degrees. Husband is spiritual

- ***Plan for slumber parties, house parties, and for semi-privacy in Daughter's teen years***
- ***Consider birthday parties – will they be at home? Indoors?***

We want enough room for small, indoor parties if needed.

- ***Health concerns, sensitivities, or allergies?***

Husband and daughter are highly allergic to dust mites. We and our parents don't have any other environmental concerns. Husband keeps about a dozen plants.

- ***Heavy sleepers?***

Wife is a heavy sleeper; Husband is neither heavy nor light but will awake readily if there's a noise.

- ***Night owls or early risers?***

Husband and Wife are night owls; Husband is also frequently an early riser.

- ***Regular exercise – indoors or out?***

Husband does morning runs and evening workouts, and he needs a room to lift weights and a place to hang wet clothes.

- ***A controlled forced-air ventilation system will help dry out clothes but send odours to an exhaust stream out of the house.***

VALUES:

Husband is a treehugger and highly environmentally conscious but still drives an old sports car.

- ***Do you want to re-use any of the building materials from the existing house (framing or finishes) for either moral or sentimental reasons?***

We have no attachment to any of the existing materials, and the interior and exterior finishes of the existing house are in bad shape. We understand that the concrete roof shingles are in good shape, so maybe we could sell them to someone.

- ***Roof tiles likely will have no resale value; performance is not 'new' and therefore unpredictable for anyone's warranty***
- ***Do you value frugality, optimization, or efficiency?***

We highly value optimization and efficiency. We are not pursuing frugality or modesty, but we also are not pursuing opulence or decadence in any way. Let's call it "mildly luxurious".

- ***Prioritize your sustainability goals from high to low to help determine where to spend money. How much importance do you place on:***

- ***Locally-sourced materials and components***

Local sourcing is more reliable for delivery and quality control – high priority

- ***Responsibly-sourced building materials / low environmental impact of building materials***

Husband values products that don't require environmental destruction or societal damage – medium priority

- ***Petrochemical-free building materials***

Husband highly values non-petroleum products – high priority

- ***Natural indoor finishes***

Wife likes wood finishes; Husband likes some wood finishes and believes natural materials limit unhealthy airborne particulates – medium priority

- ***Natural finishes also include clay, brick, plaster, stone, concrete, metal, glass***

- ***Water use efficiency***

Husband plans for future water semi-independence – medium priority

- ***A cistern is an option for onsite water storage, but it requires diligent maintenance and a finite lifespan. The filtration system itself is extra maintenance. Could be used easily for toilets.***

- ***Heat island reduction***

Husband really wants to stave off effect of man-made heatwaves and wants to use vegetative shading and cover to keep the local temperature to what would occur if this was natural land – high priority

- ***You will be able to lower the local temperature compared to your neighbours, but it is unlikely that you will be able to achieve a native temperature due to surrounding buildings blocking wind and reflecting infrared rays from low-E windows.***

MATERIALS:

Husband likes shou sugi ban, white and grey and black, materials that don't fade or rust or need refinishing, and materials that develop a patina.

- ***Dark-coloured exterior materials must be reviewed because the daily expansion and contraction due to sunlight and dark will reduce the components' longevity.***

Husband likes some trims or beams or select portions of wall or soffit in nice exotic wood.

- ***Exotic woods take longer for delivery, have less tolerance for mistakes, and contradict being a treehugger.***

Wife likes woods but in a modern styling.

- ***Do you want visible timber framing?***

WHAT DO WE DO:

Occasional family get-togethers, minimal entertaining, lots of time spent indoors at home.

- ***Natural daylight will be critical for most spaces***

We enjoy hiking, Husband runs and bikes (and snowboards occasionally), but we also spend a lot of time at home.

- ***Does Husband (and in the future maybe Daughter) need a wash-down space or repair space for equipment?***

We want a covered wash-down space outside

We also work from home, Wife needs a space suitable for all-day videoconferencing, and Husband needs a small office space that can host clients. Husband also creates educational videos and would like an acoustically appropriate space but interesting as a backdrop. Husband is very handy and cooks well; he needs work space and cooking space.

- ***Does Husband do spray painting? Will this be outdoors, in a shed, or in the house?***

Spray painting will be in the driveway or other covered area

- ***Will a prep kitchen or other secondary cooking space be needed?***

No, just extra counter space

- ***For the big gatherings, do the other families bring food?***

Space for staging food / laying groceries

- ***Is cooking strictly a functional activity or is it a social interaction – either for the family or with extended family and friends?***

Some social

Husband will barbeque. Wife enjoys having drinks on the patio and would love to be sipping a Caesar by the poolside.

- ***Consider an Al Fresco space and decide if you would want cover so you can eat outside in the rain***

We entertain sometimes but only for one or two friends at a time for brief visits or supper except for extended family get-togethers.

- ***You may want a T-island that can be further extended and still leverage island seating***

A view from the living room is important; a big window from the master bedroom is crucial and a deck highly desired.

- ***How much privacy do you want on this deck? Do you want space for morning coffee or brunch?***

Family is not musically inclined, but Daughter will be put through likely piano lessons and hopefully martial arts classes.

- ***What kind/size of piano will there be, if any? Do you need an acoustically separated room to practice?***

Husband grows fruit trees and vegetables in the back yard.

- ***Either plan for a heated shed or space in the house for washing//preparing/storing harvest. You will need a space for various gardening supplies. Do you grow herbs?***

Husband wants to be able to service at least one car

- ***Heated space or not? On a scale of 'oil change' to 'pulling the block', where is Husband's level of service? Does he use solvents or paints?***

Music throughout the common areas of the home would be nice, but bedrooms and home office should be able to block it off.

- ***Acoustic insulation and flanking sound transmission at wall/floor/ceiling junctions must be detailed and constructed.***

PRESENT HOME - LIKES

Wife adores the big view from the kitchen and living room (and consequently home office). Husband hates the unshaded, unnecessarily big glass. Wife loves the proximity to so many shops, restaurants, and services and the relative proximity to the waterfront. Husband appreciates the relative safety inside a

highrise condo suite and security of the car in underground parking. Husband also likes that it has an automatic sprinkler system.

- ***A house can be outfitted with a non-monitored residential automatic sprinkler system.***

Wife's previous condo was an internal and external statement of success and independence in style. Also, a house in Lion's Bay where she stayed for a summer was a dream – large views from inside and from the large deck to

PRESENT HOME – DISLIKES

Husband hates the unshaded, unnecessarily big glass.

Husband hates the noises that run from 6:30 to 2am and the general noise that comes in through cracks around the windows or through the glass.

Husband hates the poor insulation, radiant asymmetry, uncomfortable stratified air,

- ***Window of opportunity and timing constraints?***

As soon as possible. Daughter is about to enter kindergarten, so her circle of friends changes every couple of months. We want to be settled in a few years.

- ***Have to sell to afford build? Where will you stay?***

Husband and Wife will stay with her parents.

WHY THIS NEIGHBOURHOOD:

We want to be close to Vancouver but also far enough from the crime and noise of downtown. This location is halfway between downtown Vancouver and Port Moody/ Port Coquitlam where extended family lives. Family is about half an hour's drive; the water is half an hour's drive. We enjoy the family aspect of this neighbourhood combined with nearby commercial amenities and easy access to Highway 1 East or West.

- ***What do you like about this site?***

We love the existing grapevine and want to keep the trunk to regrow the vine. Burnaby Mountain Park is relatively close, and Confederation Park is even closer. There's a new trail that goes down to Brentwood

- ***What do you dislike about this site?***

This neighbourhood's still in its infancy as a commercial intersection and therefore offers limited amenities. Brentwood still has much to be built. We also don't like the weekend congestion in the restaurant parking lot. Morning rush hour traffic along Hastings is loud.

- ***Passive House insulation, airtightness, and triple-glazed windows will help block out the noise when inside. Dense perimeter landscaping should be a consideration – possibly also a tall rear fence and solid gate.***

GENERAL SPATIAL CONFIGURATION:

We don't need a separate floor for certain activities (nothing loud) except for home office which should be on the ground floor.

- ***Okay***

We want privacy between the master bedroom and guest bedroom, and Daughter's bedroom likely somewhere in between.

- ***Daughter will want privacy to the bathroom she uses, but you will want to know who is going to her bedroom.***

PETS:

We have one miniature Australian Shepherd (Dog) who has free reign of the house. Husband is allergic to cats, so we won't have any.

- ***Carpet is not recommended, and hardwood should be solid flooring instead of engineered flooring. Real linoleum (not sheet vinyl or PVC) is also a durable, bacteria-resistant finish. Rubber flooring also comes in sheet, tile, or liquid-applied form.***

BABIES:

Daughter is almost 5, but we would like to make much of the house adaptable to babies and toddlers if needed in case Daughter has children while we can enjoy them.

- ***Circulation should accommodate future restrictions to areas where there are changes in floor level or heights that would be dangerous.***

HOUSEKEEPING, FURNISHING AND DECORATION:

We live halfway between "very lived-in chaos" to "always magazine-ready". Husband likes to clean, and Wife will clean when necessary. We don't change interior design every few years. We don't decorate for the seasons, and interior decoration is minimal.

- ***Finishes should be classic and simple; they should tie into the form, feeling, and exterior appearance of the house to reinforce the theme.***

We both have medium-sized wardrobes

- ***Where do you dress? Where do you put on your makeup or style your hair? Do you both lay out your clothes / outfit options? Do you have shoe collections?***

Husband would like a dressing area with sink and counter adjacent, for morning and bedtime routines.

Wife is content getting made up in the bathroom.

- ***Both ample natural light and well-distributed, high-quality artificial lighting should be provided.***
- ***Full-length mirror to be shared will likely be adequate. Daughter could have a movable full-length when she is older.***

HOME AUTOMATION AND SECURITY:

We don't have a home assistant and don't want remotely controlled systems. Crime is not a high concern, but we do want a decent level of security – maybe a closed-circuit system with an unmonitored alarm, shutters for the ground floor at least.

- ***You may consider closed-loop moisture and/or air quality monitoring for health and for checking the performance of your house.***
- ***Exterior overhead rolling shutters can be fire-rated, but the exterior housing is conspicuous. I recommend either swing or sliding shutters that are integrated into the design or moved into pockets when not used.***

INTERIOR STATEMENT:

We don't typically dress to impress, and our home should look smart but not have to impress anyone.

TRAVEL:

We like to travel overseas once a year, long weekend trips to Vancouver island 1-2 times a year, and visit family in Edmonton every year and a half.

- ***Do you take Dog with you? Are you planning on additional pets?***
- ***How much luggage storage space do you need?***
- ***Do you bring back souvenirs from other places?***

RELIGION, CULTURE, AND SPIRITUALITY:

Wife is non-practicing Buddhist, and Husband is Muslim; Husband would like a comfortable, small space for daily prayers.

- ***How big do you need the space? Do you want to see the sunrise or even the outside? Should this space be considered solely for religious use or can it be part of another space? How much privacy does it need?***
- ***Cultural background / references?***

FAMILY ACTIVITY

We eat together as a family.

- ***Having a young child, the floor finish should be easily cleanable.***

CARS:

Husband has a vintage car and wants space for car maintenance or upgrades. Family has an electric Audi crossover. We may need another electric car in the future.

- ***This house is 20m from a bus stop on a rapid line that runs to SFU. Transit also runs down Willingdon. The continued expansion of Brentwood, development of East-West Translink lines, and the eventual densification on Hastings Street adjacent may render another car unnecessary. Alternatively, the space in front of the house on Pender could be used instead of a dedicated space on the property.***

Husband is willing to teach Ellie to drive the vintage car and eliminate or forestall the need for a third car.

VIEW:

Wife must have very large windows to the view at least from a common space but also a significant view from the master bedroom. There is no particular view in any direction, but we don't want to be looking at the neighbours or to bushes except from secondary rooms.

- ***View to the North will eventually be blocked by mid-rise buildings.***

AMENITIES / APPLIANCES:

Work shed

Pool – a spool would be nice if it fits in the program and budget, but a hot tub would be an acceptable compromise

- *A pool of any size adds a maintenance burden and electrical load*
- *Gas appliances?*
- *Condensing dryer?*
- *Recirculation fan at kitchen?*

PRESENCE / STREET APPEAL:

We want this home to be stylish but not trendy. We are not trying to impress

HOME OFFICE:

We likely will need not only two locations in the home as home offices, but a room for meeting clients is likely needed.

- *Home occupations are permitted.*
- *I recommend slating a portion of the main floor for the meeting office and reducing the size of the second dwelling unit. This portion would easily work to a tax advantage.*



performance goals

Qualitative descriptions of the targets for ultra high-performance across a range of metrics

EFFICIENCY
ONSITE POWER GENERATION
EARTHQUAKE RESILIENCE
WIND STORM
FLOOD DEFENSE
STRUCTURAL OPTIMIZATION
INDOOR AIR QUALITY (OUTDOOR SOURCES)
INDOOR AIR QUALITY (INDOOR SOURCES)
EXTREME COLD WEATHER
HEATWAVES
POWER OUTAGES
HEAVY RAIN
ICE STORMS
LONGEVITY
NATURAL HABITAT
STORAGE & UTILITY
EATING
RECREATION
BEDROOMS
OUTDOORS

performance goals

ENERGY EFFICIENCY:

We want very low utility bills year-round. Sustainability

- *Utilities include power, water, and gas. Natural gas prices are highly volatile, subject to both geopolitics and government subsidies. Electricity in British Columbia is generated primarily by hydroelectric dams, but growing demand due to population growth and overall electrification (people switching from fossil fuels to electricity) will consume all of BC Hydro's current generating capacity.*
- *Electricity bills include charging for a car*
- *Front of house faces South, and there are no significant trees. Properties across the street are not zoned for tall buildings, and*
- *Read the section on onsite power generation*

ONSITE POWER GENERATION:

We don't want to see a big wind turbine, and any solar panels need to be away from the street.

- *There are vertical wind turbines such as the Freya made by Icelandic firm Icelwind or the Tulip Turbine by American Flower Turbines.*
- *The city street is to the South – generally the only direction that*

EARTHQUAKE RESILIENCE

Meet building code – no special concerns

- *The severity of shaking in an earthquake correlates with the peak ground acceleration (PGA) and peak ground velocity (PGV). British Columbia Building Code (BCBC) 2018 (rev 2) gives PGA and PGV values that capture an expected 98% of earthquakes in 50 years. BCBC gives PGA values ranging from 0.043 m²/s to 0.695 m²/s; Burnaby is listed as 0.330 m/s BCBC gives PGV values ranging from 0.056 m/s to 0.989 m/s; Burnaby is listed as 0.500 m/s*

WIND STORM:

Target: minor concern

- *This property is surrounded by development, far from the water, and is near the foot of Burnaby mountain; exposure to wind is not unusually high. However, wind gusts in the middle of Vancouver – away from Queen Elizabeth Park – have blown down trees and taken down power lines. Refer to notes on power outages.*

FLOOD DEFENSE:

Target: No concern

- *This property is not in a floodplain; it is far from the ocean's edge, not close to any waterways (creeks, rivers), and is far from any major hills or mountains, so storm surge and overflowing bodies of water pose no notable hazard.*

- *If the catch basin in the adjacent parking lot becomes clogged, the curb cut to Hastings Street appears to be at a lower elevation, and overland water would likely travel across the street and downslope Northward.*

STRUCTURAL OPTIMIZATION:

Target: unknown

- *This property is a typical 33' wide city lot; the overall depth of the East and West walls should be minimized. The addition of a demising wall to create a semi-detached building further constrains the rooms within.*

INDOOR AIR QUALITY – OUTDOOR SOURCES:

Some concern about odours from restaurant, would like to do something about it.

- *Major forest fires are currently a near-yearly phenomenon. An activated carbon filter can be added to the intake system for limited periods without negative impacts. However, these filters do not have a long useful life; an intake system would be better served by pulling air from the South side of the house where odours from the commercial garbage bins has dissipated.*
- *Be aware that the buildings along Hastings Street in this area are in a community development plan that requires higher-density mixed-use buildings. The resulting garbage facilities would almost certainly be enclosed and not pose nearly as much an odour annoyance.*

We want extra filtration on the air intake.

- *I recommend as much perimeter greenery (tall trees) as possible to filter as much as possible. Tighter filters put more strain on ventilation equipment and those such as HEPA should be reserved for times of low air quality (i.e. during forest fires). Trees could also help with shading (see Heatwaves notes).*

INDOOR AIR QUALITY – INDOOR SOURCES:

We want good quality air; medical grade air treatment is not needed

- *A HRV or ERV will constantly provide fresh air to the home.*
- *Most of the home will be outfitted with hardwood flooring, tile, and linoleum; this will greatly help reduce airborne particulates especially if swept frequently.*

EXTREME COLD WEATHER:

Minor concern – not having to turn up the thermostat in the winter would be nice.

- *This location frequently experiences freezing temperatures at night and has remained below zero for one or two extended periods in recent years.*
- *The Passive House approach designs the interior air temperature to stay between 20°C and 25°C for 90% of the time.*

HEATWAVES:

Some concern about risks in old age

- *The shape of the land doesn't offer any advantage for natural wind flow. The site is far from sea breezes, but the higher elevation affords some persistent breeze. There are also no large trees on*

the property – only a 15 ft. tall deciduous tree at the front fence with offers only moderate shading.

We want air conditioning but also want to keep the power bills low.

- *Passive House Plus performance will ensure that active cooling won't be a significant power draw.*

POWER OUTAGES:

No concern

- *Power distribution in this area and power connection are by overhead lines; high winds or ice storm could bring down power lines. Wind gusts have create power outages in central Vancouver.*

We want a modest backup power system to protect us from power outages for a few days.

- *Passive House Plus as an energy efficiency target designs the house to generate as much power as it consumes.*
- *The electric Audi provides additional storage capacity provided that during an outage, you aren't using it much or trying to charge it up at home.*

HEAVY RAIN:

Minor concern

- *This site doesn't likely receive an unusual amount of rain due to local topography.*
- *The large grassed area at Confederation Park will help absorb some runoff from Burnaby Mountain during an excessively heavy rain.*

STORMS: ICE

Target: No concern

- *Freezing temperatures account for a small minority of the weather here. Minor sleet should be expected at this location, but snow and ice buildup would be minimal.*
- *Some ice buildup could take down overhead power lines. I recommend some backup power.*

LONGEVITY:

Target: This house must be in excellent shape if we sell it when we're 90 or until our children are middle-aged if we pass it on to them.

- *Minimal degradation after 45 years – without significant maintenance or renovation – points to a design life of 80+ years. Passive House design combined with durable exterior finishes and specific wall and roof assemblies can achieve this lifespan.*

We are not interested in Passive House certification but are eager to adopt all the techniques.

- *I recommend Passive House Plus level of design and performance.*

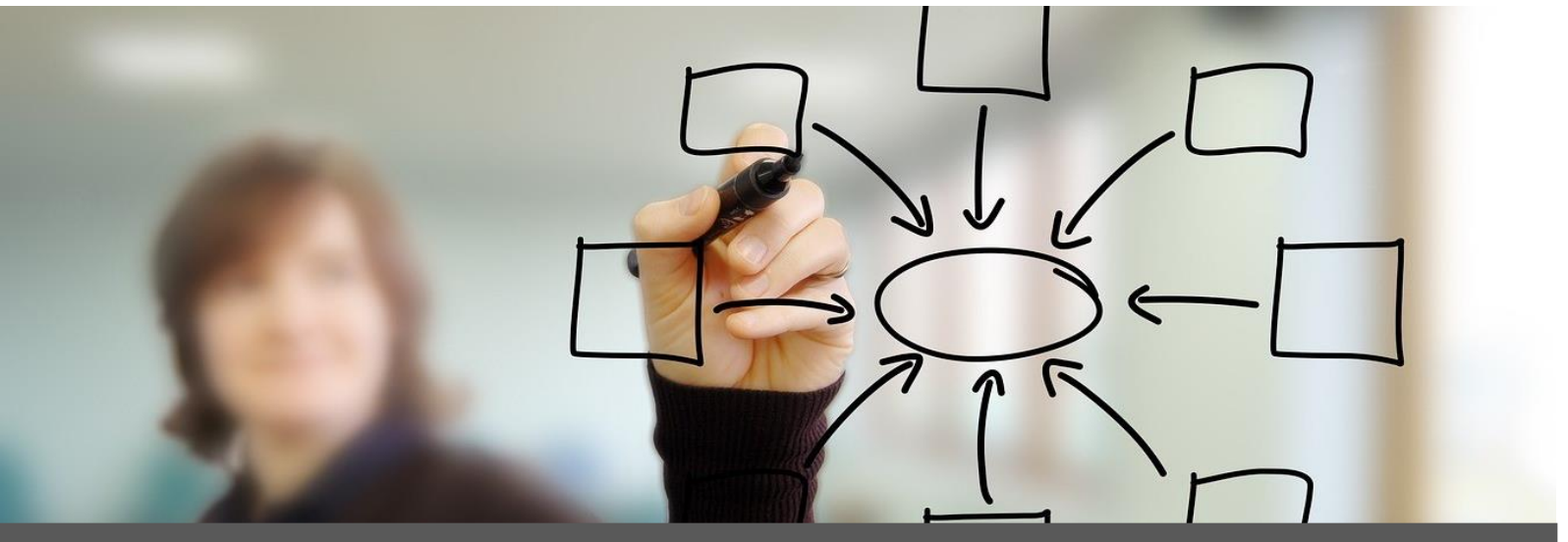
NATURAL HABITAT RESTORATION

Target: A green roof would be desired if practical

- *Sloped roofs can be designed as green roofs, but they are more costly than green flat roofs*

We want a medium/aggressive slope roof

- *I recommend 6:12 since this is more expressive than typical 3:12-4:12 North American roofs but less drastic and challenging than 1920's 7:12-8:12 slopes.*



program

A list of all the spaces needed, their descriptions, and how they relate to each other

EFFICIENCY
ONSITE POWER GENERATION
EARTHQUAKE RESILIENCE
WIND STORM
FLOOD DEFENSE
STRUCTURAL OPTIMIZATION
INDOOR AIR QUALITY (OUTDOOR SOURCES)
INDOOR AIR QUALITY (INDOOR SOURCES)
EXTREME COLD WEATHER
HEATWAVES
POWER OUTAGES
HEAVY RAIN
ICE STORMS
LONGEVITY
NATURAL HABITAT
STORAGE - UTILITY
EATING
RECREATION
BEDROOMS
OUTDOORS

program

STORAGE & UTILITY

garage

Detached. Room for one car plus a SUV and a motorcycle and motorcycle trailer and three bicycles on wall racks
Overhead storage with fold-up ladder (e.g. tires, maybe camping or car gear)
Charging provision for eventually both vehicles.
Dedicated storage for three bicycles and bike trailer.
Fully insulated and as airtight as the garage door allows.

- **Consider battery system here; it will give off some heat**

mud room

Janitor sink, rack or similar for umbrellas, wet boots, and snow clothing or gear.
Next to rear entry
Used for dog food/toys storage

- **Do you want to store clothes (e.g. boots, umbrellas) here after dry?**

garden shed / workshop

Excellent ventilation and lighting and task lighting
Storage for only yard tools
Some heating
10'x3' bench – room to lay down large pieces of whatever
Bike work rack and lighting

- **I recommend white fibre-reinforced plastic finishes to improve cleanability, durability, and visibility**
- **Consider making the garage larger and allocating one area or end of it for this function**

laundry

Stacked washer-dryer
Small amount of storage
Large amount of layout / folding space

- **Perhaps combine this with your linen storage**
- **Would this be a good area to dry post-workout clothing?**

linens

Include shelf space for seasonal blankets
Lots of towels and spares for guests

broom closet

Upright vacuum, shampooer, steamer
Cleaning supplies

- **Since Husband cleans frequently, plan for small cleaners storage around the home – maybe on high shelves**

waste enclosure

Covered but open to air compost/recycle bin
Adjacent to mud room/janitor sink
Has washdown capability (finishes, drainage)
Recycling for paper, plastic, cardboard
Compost
Trash
Keep odours away from someone coming in rear entry

STORAGE & UTILITY (cont'd)

long-term Storage

2'x6'x 8' high

seasonal clothes storage

2'x2'x7' high

cellar space

A small area on the ground floor

- *I recommend that this be outside the building envelope to keep the humidity low – maybe a high storage mezzanine in the garage or shed*

mechanical

HRV and water tank

- *This could be combined with the laundry room and tucked into a closet*

Powder Room

Close to eating areas, not for workshop use

stair

Chunky wood steps

Glass rails

U-shape – it doesn't need to make a statement, but make it wider than typical

- *Do you want to see anywhere from the mid-landing?*

second dwelling unit

Target is small family, 800 sq.ft.

We don't know what would fit, but we do want to consider future children with us or a survivor moving in

- *After your parents are gone, a laneway house would be better to rent; keep your child in the same building to care for you*

EATING

kitchen

2-stage island for cooking section and eating section (room for 6-7)

-OR-

Big, deep island for both cooking and dining (room for 4-5)

Small prep sink at end of island

Pull-out undercounter cabinet storage in island for pots/pans/containers.

- ***I recommend lots of undercounter pullout shelf storage since Wife has trouble reaching higher***

prep sink

Next to staging / groceries

4' to 6' of counter space

dining

Connected to kitchen and to al fresco dining

Open area close to dining island

Café height eating

al fresco dining

Close to BBQ and to kitchen but not necessarily very close to indoor dining

Well-covered in case of rain

No fireplace

breakfast nook

Space for brunch for 4

Space for tea service

- ***Why do you want a nook? Would the kitchen island work?***

bbq area

Modest size, covered but away from house, close to al-fresco

pantry

Store less-used small appliances

Handyman storage – tools, home reno stuff

- ***How much volume does handyman storage require?***

Between rear entry and kitchen

deep freeze

2' x 4'

- ***Both horizontal and vertical options are available; verticals reduce the need for archaeology***

RECREATION

crafts room

Easy-to-clean floor
Maybe 8'x8'

- *I recommend linoleum*
- *I also recommend any window be mounted high to minimize anyone looking in on Daughter*

exercise room

Space for yoga

- *Hot yoga or flow?*

Carpet

Sunlight in morning, modest window – we don't need to look out at anything

Close to either master or guest bedroom

- *Plan a room that separates an area of peace from an area of intense exertion*
- *I recommend a portion be linoleum with a removable exercise mat*
- *Why do you want carpet? This is difficult to clean; perhaps a rug would be better.*

reading nook

Minimal sunlight but high-level daylight
Bookshelf – built-in with solid wood lining
Loveseat

- *What time of day would you be reading*

media room

No home theatre

We don't play many video games

- *You may want to eliminate this; there appears to be no real need*

flex room

Secondary computer work area
Note table and beanbag chair

Sound insulated

- *Based on our discussions, this would be good to combine with the crafts room*

living

Casual lounge feel

TV wall, large sectional couch, loveseat, and two easy chairs + coffee table

Wall to dining area but big, heavy rolling doors with acoustic block

No fireplace (wood or gas or electric)

- *You've indicated that this would be nicer at the front of the house*

home office

Separate room / alcove from a common area that permits meetings with clients and is set up with acoustics and lighting for videoconferencing and for video creation.

BEDROOMS

master bedroom

Big enough for a king bed and two bedside tables, foot bench, and big chair with small note table

No built-in AV features

Would like a deck but not necessary (at least a Juliette balcony)

- ***Would you have a chair or lawn chairs on this deck?***
- ***Do you want the deck for the open air or mainly for the sun?***

master ensuite

Two separate mirrors, two sinks, big (2-person) shower

Indoor Storage

No bathtub

Undercounter sinks

Would like two separate water closets

- ***Husband should consider taking on maintenance of a shared toilet since a second one would take up quite a bit of extra space***

master closet

Husband needs 8' of closet or 4' each side of a walk-thru; no need for dressing area

Wife wants 4' + 4' + 4' of rack in a walk-in-closet with centre layout ledge

child bedroom

Close to common bathroom

10'x12' – queen bed and desk + movable wardrobe

Decent view

Tub with showerhead

Extra counter space

Undercounter sink

- ***Assess if a common bathroom (Jack-and-Jill style) between Child and guests would work***

guest bedroom

Queen bed, night table, small desk, movable wardrobe

Room for twin inflatable mattress

Privacy from master bedroom, close to kitchen

No need for a nice view

guest ensuite

Optional if practical

Minimal window

- ***Most guests won't understand the Passive House ventilation scheme, and they're unlikely to take long showers. A small, high window or skylight would be suitable.***

OUTDOORS

entry

Separate alcove to put things down. Entry will be used frequently.

Key shelf and parcel ledge
Bench and mirror

Caged walkway along side of house – with bench also for grooming

entry coat closet

6' wide, deep wire hat shelf

- ***Do you prefer folding or sliding doors?***

deck

Lounge area – sofa, 2 easy chairs, small side tables

Al-fresco dining – 10 people
Hot tub

rear entry

Space for laying down groceries, wagon, wet equipment

Adjacent to mud room
Primary entry

back yard

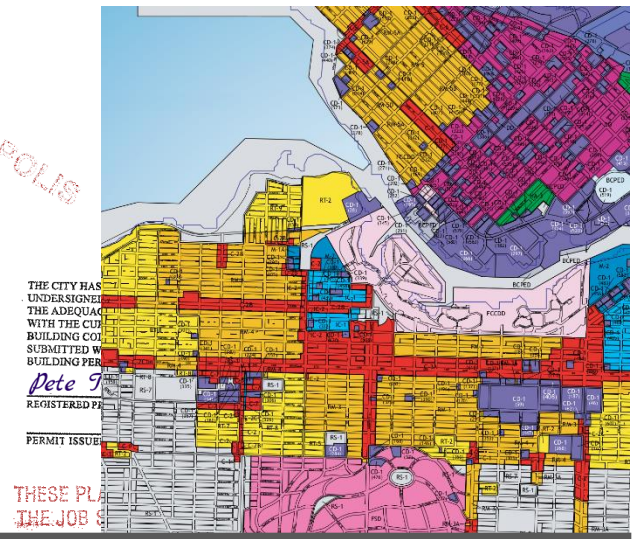
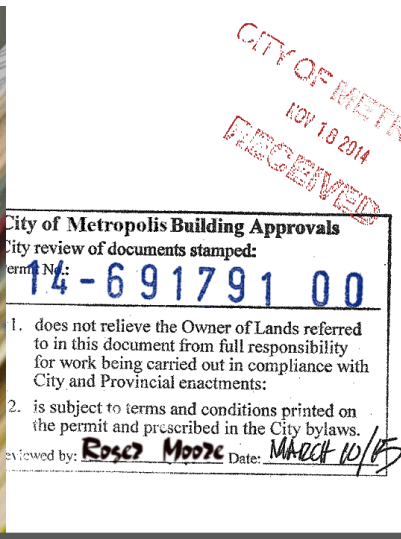
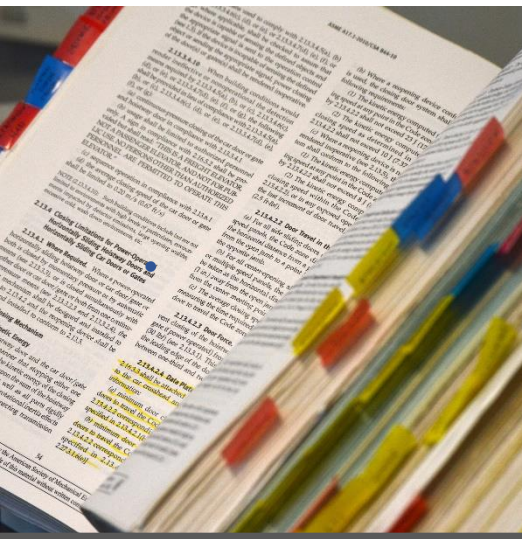
Koi pond would be nice

Hot tub at a minimum, but a rectangular spool would be great.

- ***I highly advise to plant lots of perimeter trees/bushes in addition to the fruiting trees***

dog run

Dog jail and covered outdoor grooming area



regulations

What you are and are not permitted to build

AUTHORITY HAVING JURISDICTION

ZONE R5

COVERAGE AND YARDS

AREAS - DUPLEX

PARKING

OFFICIAL COMMUNITY PLAN

ZONING: DEFINITIONS

ZONING: SUPPLEMENTARY

HERITAGE DESIGNATION

BUILDING CODE

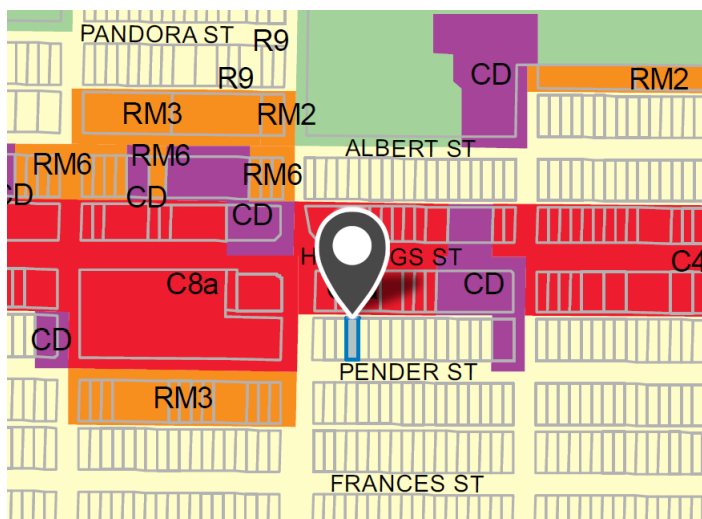
FORMS

regulations

British Columbia Building Code 2018 – Part 9 applicable
Burnaby Building Bylaw
Burnaby Zoning Bylaw
British Columbia Fire Code 2018
British Columbia Plumbing Code 2018
2018 Canadian Electrical Code (with BC Amendments)
Burnaby Electrical Bylaw
Burnaby Electrical Connection Bylaw
Burnaby Gas Bylaw
Burnaby Noise Bylaw
Burnaby Planning and Building Fees Bylaw
Burnaby Plumbing Bylaw
Burnaby Sign Bylaw
Burnaby Swimming Pool Bylaw
Burnaby Tree Bylaw
Burnaby Waterworks Bylaw

AUTHORITY HAVING JURISDICTION:

City of Burnaby



ZONING: R5 – TWO-FAMILY DWELLING, MEDIUM-DENSITY RESIDENTIAL

- single-family
- single-family with secondary suite
- two-family – semi-detached (side by side)
- two-family – duplex (stacked)

group home
boarding/lodging/rooming house - maximum 5 persons if SFH
home occupations
accessory building
Category A supportive housing facilities, part of a CD rezoning, each unit 25sq.m

COVERAGE AND YARDS:

Maximum lot coverage:

- **Attached garage or carport - 45% = 168.4 m² (1811.7 ft²)**
- **Detached garage or carport - 40% = 149.7m² (1610.4 ft²)**

Minimum Yards:

Front – **6m (19.7 ft)**

Side – **1.5m (5 ft)**

Rear – **7.5m (24.6 ft)**

- **Existing West side yard does not appear to comply with required yard width**
- **Net footprint of building based on required yards is 77.7' x 23' = 1787.1 ft²**

AREAS (DUPLEX)

Floor Area Ratio Maximum: 0.6: **224.5 m² (2415.6ft²)**

Gross Floor Area of all accessory buildings maximum **56 m² (602.8 ft²)**

If garage is attached, the portion exceeding 42 m² (452 ft²) is included as above-grade floor area

Principal Building Maximum Depth:

detached garage: **18.3m (60.0 ft)**

attached garage: **18.6m (61.0 ft)**

Principal Building Maximum Height:

- measured from lower of the front and rear average grade elevations to top of structure
- 2 storeys
- Sloping roof (minimum 4 in 12): **9 m (29.5 ft)**
- Flat roof (less than 4 in 12): **7.4 m (24.3 ft)**

A cellar shall not have a floor area (incl. garage/carport) exceeding floor area of storey immediately above

Maximum **116 m² (1248.6 ft²)** per dwelling Gross Floor Area above a cellar, crawl space, basement, or ground surface

ZONING: PARKING

2 parking spaces are required

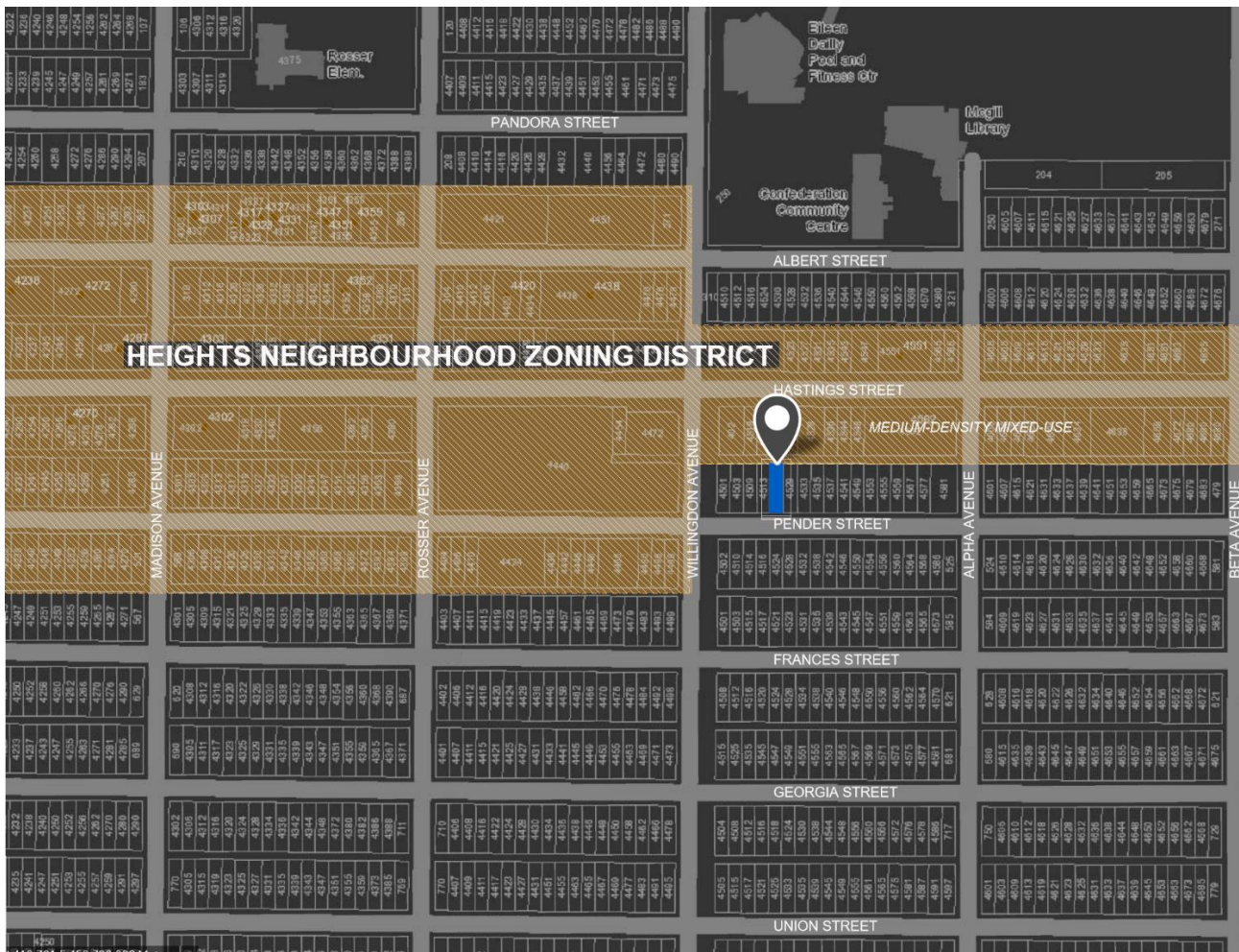
Each parking space = **5.5 m long x 2.6 m wide x 2.0 m clear height (18 ft x 8.5 ft x 6.56 ft height)**
Increase parking space width by 0.3 m (1 ft) where adjacent to any structure that is taller than 0.3 m (1 ft) or any structure that is taller than 0.05 m (2 in.) and less than 0.6 m (2 ft) from the end
 No encroachments into parking spaces are permitted
 We have one electric car and another one which may one day be converted to an EV
 Each parking space must have an energized, labeled EV outlet (minimum Level 2)

- **Charging outlets add to your total house load**

ZONING: OFFICIAL COMMUNITY PLAN ANALYSIS

HEIGHTS NEIGHBOURHOOD ZONING DISTRICT:

4523 Pender is not within and therefore not subject to requirements of any neighbourhood development zones. The adjacent Heights Neighbourhood Zoning District directly to the North (see map below) plans for primarily medium-density mixed-use developments for properties along Hastings Street and medium-density multi-family developments for properties to the North and South of that.



ZONING: SELECTED DEFINITIONS

(EDITED EXCERPT FROM BURNABY ZONING BYLAW):

ACCESSORY BUILDING: building whose use is ancillary to that of a principal building on the same the lot

BALCONY: a cantilevered deck that projects from a building and that may be enclosed only by a guard

BASEMENT: the space between two floor levels that is partly underground but has at least one-half its height (from finished floor to the underside of the joists of the floor above it) *above* average natural grade as determined by the Building Inspector

BAY WINDOW: a projection from the wall of a building that is at least:

- 46 cm (1.5 ft.) above the level of the adjacent floor surface; and
- 50% glazed when viewed in elevation.

BEDROOM: includes dens, libraries, recreation rooms, sewing rooms or other rooms of similar character

BUILDING: a structure, located on the ground, which is designed, erected or intended for the support, enclosure, or protection of persons or property

CARPORT: a detached accessory building or portion of building that is used as a private garage and less than 60% of the perimeter is enclosed by walls, doors or windows

CELLAR: the portion of a building between two floors that is partly *or wholly* underground and has more than one-half its height (from finished floor to the underside of the joists of the floor above it) *below* average natural grade as determined by the Building Inspector; and a cellar shall not be considered to be a storey.

CRAWL SPACE: the space at or below natural grade between the underside of the joists of the floor next above and the floor slab on the ground surface below, having a vertical clear height less than 1.2 m (3.9 ft.).

DECK – COVERED DECK: a roofed deck that is not cantilevered, projects from a wall of a building, is accessible from the interior of a building and may be enclosed only by a guard

DEPTH, PRINCIPAL BUILDING: the horizontal distance between the point of the building nearest the front lot line and the point of the building nearest the rear lot line, excluding the following projections:

- belt courses, cornices, eaves, gutters, sills, chimneys, or other similar features, projecting up to 900 mm (2.95 ft.);
- bay windows projecting up to 900 mm (2.95 ft.); and
- balconies, canopies, sunshades, open porches, verandas and sundecks, including supporting structures, projecting up to 1.2m (3.94 ft.)

DWELLING – DUPLEX: a two-family dwelling wherein the two dwelling units are placed one above the other.

DWELLING – SEMI-DETACHED DWELLING: a two-family dwelling wherein the dwelling units are placed side by side.

DWELLING – SINGLE FAMILY DWELLING: any building consisting of one dwelling unit. Such a dwelling may include a secondary suite, subject to the Accessory Use provisions of Section 3 of this Bylaw.

DWELLING – TWO FAMILY DWELLING: any building divided into two dwelling units.

DWELLING UNIT: one or more habitable rooms constituting one self-contained unit with its own, separate entrance, which is occupied or intended to be occupied as the permanent home or residence of only one family and contains one kitchen or one set of cooking facilities.

FLOOR AREA – GROSS FLOOR AREA: the total area of all the floors measured to the extreme outer limits of the building (refer to Supplementary Regulations)

FLOOR AREA RATIO: gross floor area of all buildings on a lot (minus permitted exclusions) divided by the area of the lot

GRADE OR GRADE LEVEL, NATURAL: the existing, undisturbed ground level adjacent to the exposed wall of a building, except for an approved minor slope equalization

GROUP HOME: a residential care facility for a maximum of six persons in care that is operated in a private single family dwelling on a residential lot and licensed under the Community Care Facility Act.

HEIGHT: refer to Supplementary Regulations

HOME OCCUPATION: an occupation or profession that is incidental to the use of a dwelling unit for residential purposes, or to the residential use of a lot occupied by a dwelling and includes:

- (a) the office or studio of a person engaged in business, art, health, crafts or instruction,
- (b) the keeping of not more than two boarders or lodgers in each dwelling unit,
- € the operation of a home-based child care facility.

IN-LAW SUITE: one or more habitable rooms used for living and sleeping purposes by relatives of the owner or tenant pursuant to a licence issued by the Building Department the continued use of which is subject to section 911 of the Local Government Act.

LOT COVERAGE: the area of the projection of the outline of all buildings and structures on the lot as a percentage of the lot area but excluding

- belt courses, cornices, eaves, gutters, sills or other similar ornamental protrusions;
- bay windows;
- chimneys, fire escapes and steps;
- canopies and sun shades;
- terraces, balconies;
- uncovered swimming pools; and
- underground or open-sided, roofless parking areas

ROOF – FLAT ROOF: a roof on a building that has one or more roof surfaces that have a pitch of less than 4 in 12 and cover an area greater than 20 percent of the area of all roof surfaces as measured in plan view.

ROOF – SLOPING ROOF: a roof that has one or more roof surfaces sloped 4 in 12 or steeper and covers an area at least 80 percent of the area of all roof surfaces as measured from above.

SECONDARY SUITE: an accessory *dwelling unit* fully contained within a single family dwelling.

STOREY means a habitable space between two floors, or between any floor and the upper surface of the floor next above, except that the topmost storey shall be that portion of a building included between the upper surface of the topmost floor and the ceiling above. A basement is a storey; a cellar is not a storey.

STOREY – HALF STOREY: a storey under a gable, hip, gambrel or shed roof having a gross floor area not more than fifty percent of the gross floor area of the storey immediately below, and includes a roofed deck that is an extension of the topmost storey.

ZONING: SUPPLEMENTARY REGULATIONS

(EDITED EXCERPT FROM BURNABY ZONING BYLAW):

supplementary - basements

The ceiling height of a basement must be at least 2.3 m (7'-6").

A depression can be created to access a basement if that wall doesn't have a vehicle ramp down.

Light wells can be created to bring light into the basement.

supplementary - Dwelling Units:

A dwelling unit shall contain at least 56 m² (602.80 sq. ft.) of floor area, and a secondary suite shall contain at least 32m² (345 sq.ft.) of floor area.

Yards:

An uncovered swimming pool may be in the back yard or side yard but at least 10' from the property line.

A sundeck can be in any yard but can't be deeper than 4'.

Underground parking structures can be in the front or rear yard. If it's in the front yard and sticks up above the ground, it can't protrude further than 3' into the front setback.

(Full supplementary regulations are available in a R.A.D. Study™)

6.4 Height of Buildings and Structures:

(3) The following types of structures or structural parts are excluded from calculating building height: aeriels, electrical service masts, television and radio antennae, chimneys, flues, flagpoles, vents, transmission towers and water tanks; but no such structure shall cover more than 20 percent of the lot or, if located on a building, more than 10 percent of the roof area of the building.

(6) The height of a detached accessory building shall be measured from the calculated average natural grade of all sides of the building to the highest point of the structure, subject to the applicable exceptions in subsections (3) and (4), except that the height of a detached garage or carport may be measured from the finished grade at the point used for vehicular access.

6.6 Accessory Buildings and Uses:

(1) (b) Where a garage or carport or other accessory building or structure is attached to the principal building, it is to be considered a part of the principal building and shall comply in all respects with the requirements of this Bylaw applicable to the principal building.

€ An accessory building shall be located at least 1.2 m (3.94 ft.) from any lane,

(2) (a) An accessory building shall not have more than one storey and shall not exceed 3.7 m (12.13 ft.) in height except that a hip or gable roof may be constructed to a height not exceeding 4.6 m (15.1 ft.).

(b) The gross floor area of all accessory buildings on a lot

(i) in an A or RM District shall not exceed 10 percent of the area of the lot,

(ii) in an R District that is developed with a semi-detached dwelling shall not exceed 74.4 m² (800 sq.ft.), and

(iii) in an R District that does not have a semi-detached dwelling shall not exceed 56m² (602.8 sq.ft.). (B/L No. 10397-96-07-22)

€ Not more than two-thirds of the width of the rear yard of any lot in A or R District shall be occupied by accessory buildings.

(d) Subject to Clause (f), an accessory building between the rear building line and the rear lot line of an interior lot shall be not less than 1.2 m (3.94 ft.) from the side property lines, except where such accessory building is situated within the rear 9.0 m (29.53 ft.) of the lot, and not less than 21.5 m (70.54 ft.) from the street on which the principal building fronts. In this case a setback from the side lot line need not be provided.

6.8 home occupation:

(1) A home occupation shall involve no internal or external structural alterations to the principal building (dwelling) and there shall be no exterior indication that the building is being utilized for any purpose other than that of a dwelling, and no building, structure, fence or enclosure other than those in conformity with permitted residential uses in the Zoning District in which it is located, may be erected.

(2) The premises shall not be used for manufacturing, welding or any other light industrial use, and the home occupation carried on therein shall not produce noise, vibration, smoke, dust, odour, litter or heat other than that normally associated with a dwelling unit nor shall it create or cause any fire hazard, electrical interference, excessive pedestrian or vehicular traffic in the common areas or parking areas of a multi-family building or traffic congestion on the street. (B/L No. 10398-96-08-26)

(4) There shall be no external storage of materials, containers or finished product.

(5) No stock in trade shall be kept or handled and no commodity sold upon the premises.

(6) Such occupation shall not involve the use of mechanical equipment save as is ordinarily employed in purely private domestic and household use or for recreational hobbies, except for such equipment as may be used for a resident physician or dentist.

(7) No person who is not a resident in the dwelling shall be employed in such occupation, except that one non-resident employee is permitted for a home-based child care facility.

6.9 cellars and casements:

(2) The height of a basement or cellar, measured between floor and ceiling surfaces, shall not be less than 2.3 m (7.5 ft.).

(3) In the R Districts, where a part of the principal building used for vehicular access is depressed into the grade, that part of the building shall be excluded when determining whether the building has a basement or a cellar.

(4) For the purpose of providing pedestrian access to a basement or cellar, the surface of the ground adjoining a building may be lowered without affecting the determination between a basement and cellar, if the lowered surface is not on the same side of the building as a depressed vehicular access and does not

- exceed an area of 14.0 m² (150.7 sq. ft.),
- extend more than 3.0 m (9.8 ft.) from the building,
- exceed a width of 4.5 m (14.8 ft.) along the wall, and
- extend more than 0.75 m (2.5 ft.) into the required side yards.

(5) ... for the purpose of providing light to a basement or cellar, the surface of the ground adjoining a building may be lowered without affecting the determination between a basement and cellar, if the window wells do not

- extend more than 0.9 m (3.0 ft.) from the building,
- extend more than 0.75 m (2.5 ft.) into the required side yards, and
- exceed in length 25 percent of the length of the wall.

(6) ... on a lot developed with a single family dwelling a cellar exceeding a floor area of 32 m² (345 sq. ft.) shall meet the requirements of the British Columbia Building Code and all other requirements of this Bylaw for a secondary suite.

6.10 minimum floor area for dwelling units:

(1) No single family, two family or row house dwelling shall contain less than 56 m² (602.80 sq. ft.) of floor area for each dwelling unit except that a single family dwelling in an R1 District shall contain at least 93 m² (1001.08 sq. ft.) of floor area. Notwithstanding the foregoing, a secondary suite shall contain at least 32m² (345 sq.ft.) of floor area.

6.12 yards:

(1) Projections into Required Yards:

The following features may project into a required front, side or rear yard:

- Steps or stairs
- Belt courses, cornices, eaves, gutters, sills, chimneys, or other similar features, but such projections shall not exceed 900 mm (2.95 ft.)
- Bay windows, that do not project more than 900 mm (2.95 ft.) and the total length of all such windows shall not exceed 50 percent of the length of the exterior wall from which they project.
- Balconies, canopies, sunshades, open porches, verandas and sundecks, but such projections, including the supporting structures, shall not exceed 1.2 m (3.94 ft.), or 50 percent of the width of a required side yard.
- An uncovered patio or terrace, which may be open or enclosed, in any yard subject to the fence height limitations. The provision of an awning or similar temporary covering for such a terrace shall be permitted.
- Arbors and trellises, fish ponds, ornaments, flag poles, or similar landscape features.
- An uncovered swimming pool, but such pool shall not be constructed within required front yard nor nearer than 3.0 m (9.84 ft.) to any property line.
- A covered or roofed swimming pool, subject to the provisions of clause (g) and to the regulations governing accessory buildings contained in Section 6.6 of this Bylaw.
- Underground parking structures, subject to suitable landscaping or architectural treatment and proper maintenance, except that where such a structure extends above the surface of the finished grade, its horizontal projection shall not exceed 3.0 m (9.84 ft.) in a required front yard.

6.14 fences:

(1) A fence, wall or other structure that is not a building must either comply with these height restrictions or comply with the setback requirements for buildings.

(2) The height of a fence or wall shall be determined by measurement from the ground level at the average grade level within 900 mm (2.95 ft.) of both sides of such fence or wall.

(3) That portion of a retaining wall which projects above the surface of the ground which it supports shall be considered as a fence and subject to the regulations of this subsection.

(4) Notwithstanding Clause (2), in cases where a retaining wall has been constructed along a property line, the height of a fence or wall shall be determined by measurement from the surface of the ground which the retaining wall supports at the average grade level within 900 mm (2.95 ft.) of such retaining wall. (B/L No. 8096-83-09-19)

(5) Subject to the vision clearance provisions of Section 6.13 the following height limitations shall apply to fences or walls.

(a) Except for screening required under this Bylaw and fences enclosing an outdoor play area, fences up to 1.07m (3.51 ft.) high may be located anywhere on a lot.

(b) Fences or walls up to 1.8 m (5.91 ft.) high may be located on any lot to the rear of a required front yard.

6.15 screening and landscaping:

(1) Lots and Required Yards:

- ... any part of a lot not used for building, parking or loading facilities or outdoor recreation shall be fully and suitably landscaped and properly maintained.
- ...all those portions of a required side yard not used for permitted parking or outdoor play area shall be fully and suitably landscaped and properly maintained.

(2) Storage Yards:

- No storage yard or area shall be permitted in any required yard.
- Screening consisting of a solid 2.4 m (7.87 ft.) fence or wall, which shall be uniformly painted and well maintained and not used for advertising or display purposes or for the posting of notices, or, a compact evergreen hedge not less than 1.8 m (5.91 ft.) in height, which shall be maintained in good condition at all times, shall be provided as follows:
 - (ii) Required front screening shall be so situated as to conform with the applicable front yard setback provisions.
 - (iii) Where a side or rear yard is required to be landscaped, the required screening shall be located on the line established by the yard setback provisions.

(3) Parking Areas, Loading Areas and Display Yards:

- Any parking area shall be separated from an adjoining street, or from a directly abutting lot in an A, R or RM District, by a fully and suitably landscaped and properly maintained strip of not less than 1.8 m (5.91 ft.) in width.
- Screening of 1.8 m (5.91 ft.) in height shall be provided and properly maintained:
 - where any parking or loading area abuts a lot in an A, R, or RM District, or is separated therefrom by a street or lane, except however, that where a parking area abuts a lane, the screening along the lane shall be not less than 800 mm (2.62 ft.) nor more than 1 m (3.28 ft.) in height for a distance of not less than 6.0 m (19.69 ft.) from all points of ingress and egress to and from such parking area;
 - where any display yard abuts a lot in an A, R, or RM District, or is separated therefrom by a lane.

6.17.1 parking or storage of commercial vehicles, trucks, recreation vehicles, or boats

No commercial vehicle, truck, bus, contractor's equipment, dismantled or wrecked automobile, boat, recreation vehicle, trailer or any similar vehicle, conveyance, craft or equipment shall be parked or stored in the open, except the following which may be parked or stored in the rear yard only:

- one truck or commercial vehicle not exceeding 4,500 kg GVW (9,920.631 lbs. GVW) ownership of which is registered in the name of the resident of the dwelling;

- trucks, commercial vehicles or equipment required for the construction, repair, servicing or maintenance of the premises, but only while that construction, repair, servicing or maintenance is being carried out;
- not more than two uninsured but operable and complete vehicles, ownership of which is registered in the name of the resident of the dwelling.

(2) Notwithstanding subsection (1) and subject to the vision clearance provisions of section 6.13, one recreation vehicle and one boat having a combined length that does not exceed 12.0 m (39.37 ft.), may be parked in the open, provided that no parking is permitted in the required front yards or required side yards, nor in the area between the required front yard and the face of the dwelling that is oriented to the street from which the dwelling is addressed;

(3) The parking must be screened by compact evergreen trees or shrubs at least 1.8 m (5.91 ft.) in height,

- on a corner lot or through lot to obscure the view from the closest abutting street,
- where the front driveway is used, to obscure the view from any abutting property, and
- where the land beside the front driveway is used, to obscure the view from any abutting property, and from the abutting street.

6.20 computation of gross floor area and floor area ratio:

(1) The following shall be included as gross floor area:

- all suites or dwelling units;
- all corridors, hallways, landings, foyers, staircases and stairwells;
- enclosed balconies, enclosed sundecks, enclosed porches and enclosed verandas

(3) accessory buildings shall be included as gross floor area; but 42 m² (452.1 ft²) of the floor area of a garage or carport shall be excluded

(4) For single family dwellings and two family dwellings, gross floor area and above grade floor area, for any portion of a building, with the exception of staircases and stairwells, where the height from the floor to the ceiling directly above exceeds 4.5 m (14.8 ft.), shall be calculated in accordance with the following:

- cumulative floor area of such portion(s) of the building, multiplied by two; less
- 9.3 m² (100.1 sq. ft.) for each dwelling unit on a lot with a ceiling which exceeds the height specified in this section.

(6) For the purpose of computing floor area ratio, the following shall not be included as floor area:

- areas of undeveloped floors located above a storey or a half-storey, or adjacent to a half-storey, with a vertical clear height of less than 1.2 m (3.9 ft.) and to which there is no permanent means of access other than a hatch;
- crawl spaces;
- garages and carports up to a maximum of 42 m² (452.1 sq.ft.)
- balconies, sundecks and covered decks, up to a maximum area of 8 percent of the permitted gross floor area;
- covered porches up to a maximum area of 3.7 m² (39.8 sq.ft.) for a dwelling unit where the porches

(i) are not enclosed,

(ii) face a street or rear property line and are located at the first storey,

(iii) do not project more than 1.2 m (3.9 ft.) into the required front yard, and

(iv) do not exceed a height of 3.7 m (12.1 ft.) measured from the porch floor to the top of the supporting structure.

(7) Notwithstanding Section 6.20(6)€, on a lot developed with a single family dwelling, a garage or carport located in a cellar shall be included as floor area of the cellar.

6.24 IMPERVIOUS SURFACES

(1) This section applies only for the construction of a new principal building, whether on new or existing building foundations.

(2) A maximum of 70 per cent of the total area of a lot to which this section applies shall be covered by impervious materials, which include:

- buildings and structures;
- asphalt, concrete, grouted pavers;
- subject to subsection (f), ungrouted pavers having a surface area on their largest face of more than 0.21 m² (2.25 sq.ft.);
- but does not include
- ungrouted pavers having a surface area on their largest face of not more than 0.372 m² (4 sq.ft.) arranged in a line of single pavers to form a pedestrian walkway with a permeable gap between the pavers;
- water surfaces of structures designed to retain water, including swimming pools, reflecting pools, and ornamental ponds.

Heritage Designation:

None

timeline:

Review process: Rezoning (if applicable) -> Preliminary Plan Approval -> Building Permit

Design: 4-6 months

Building Permit Review: 4-6 months

Construction: 6-12 months

- ***Prefabrication and modular construction are both available options for this project; they increase the design time significantly but reduce the more expensive on-site construction time to a fraction and reduce the amount of time you need alternate accommodations.***

Development options:

Laneway housing not yet permitted in Burnaby; Infill housing not yet permitted in Burnaby

- ***Building permit application requires Waste Diversion Plan***
- ***A comprehensive study of redevelopment options is available in a RED Report™***

Consultants:

Architect: ***An architect and engineers are not required by the Building Code for a two-family house, but City of Burnaby does require structural and geotechnical engineers***

Land Surveyor: ***required to verify property boundaries and presence of rights-of-way or setbacks***

Structural: ***required by city***

Geotechnical: ***required by city***

Energy Advisor: ***required to prepare energy model to demonstrate compliance with Step 2 of Energy Step Code***

BUILDING CODE

British Columbia Building Code (BCBC) 2018 requires 11" (235mm) runs in residential dwelling units. BCBC 2018 will be updated on May 1, 2023:

- Greenhouse Gas Emissions Intensity must be calculated and reported at the time of application for a building permit. Each municipality may impose a limit on emissions.
- Energy Step Code step 3 has been adopted by Burnaby for Part 9 (small buildings) building applications. BCBC update has increased the insulation requirement for some elements of the building and for various heating/cooling/ventilation equipment.
- BCBC update has reduced the maximum thermal energy intensity limit for for large (Part 3) buildings but not for Part 9 (small) buildings).

administrative

REQUIRED FORMS FOR OWNER AND BUILDER

- Application to Access and Copy Building Records
- Zoning Bylaw Checklist and Floor Area Calculation
- Agent Authorization for Demolition and Building Permits
- Homeowner's Declaration
- Schedule F – Owner(s) Undertaking
- Application Form for Demolition Permit
- 2018 BC Building Code Analysis Summary
- Drawing Checklist
- Documentation Checklist
- Energy Checklist
- Energy Compliance Report (Pre-Construction)
- Certification of Minimum Thermal Resistance
- Building Permit Application for Single and Two Family Dwellings
- Building Envelope Compliance Letter for New Single and Two Family Dwellings
- Building Envelope - Schedule E-1 and Schedule E-2

BROCHURES THAT YOU MAY FIND NOTEWORTHY

- Accessory Buildings
- Building permit application requirements for ...
 - Interior Finishing for Single and Two Family Dwellings
 - prefabricated aluminum awnings and patio/deck covers for single and two family dwellings
 - New Residential Garages
 - New Single and Two Family Dwellings
- Demolition of Existing Structures when Building New Single or Two Family Dwelling
- Electric Vehicle (EV) Charging Bylaw
- Encroachments
- Energy Step Code (Part 9 Buildings)
- Fire Sprinkler Permits
- Infill Housing
- In law Suites (existing)
- Landscaping for New Single and Two Family Dwellings
- Legal Survey Requirements for Single and Two Family Dwellings
- Letters of Assurance for Single and Two Family Dwellings
- Parking Areas and Driveways for Single and Two Family Dwellings
- Secondary Suites
- Spas, Hot Tubs, Whirlpools and Hydromassage Bathtubs
- Swimming Pools
- Permits and Inspections for New Single and Two Family Dwellings
- Access to Building Department Records
- Adaptable Dwelling Units
- Be a Good Neighbour – Construction
- Bedroom Egress Window
- Combustible Drain Waste and Vent Piping and Plumbing Fixtures
- Dampproofing (Proprietary) Systems
- Demolition Permit
- Enhanced Building Permit Drawings and Third Party Review

- Form Survey
- Geoexchange (Geothermal) Systems for Single and Two Family Dwellings
- Glass Guards
- Heating System Permits
- Hot Water Heaters
- Hydronic/Radiant Heating Pipe Installation
- Methane gas
- Occupancy Certificates for New Buildings
- Plumbing and Gas Final Inspections for New Single and Two Family Dwellings
- Plumbing Fixture Standards
- Rainscreen for Single and Two Family Dwellings
- Revisions to Plans
- Roof & Floor (Wood) Trusses Design & Layout Drawings

BROCHURES SPECIFIC TO THE CONSTRUCTION PROCESS, FOR WHICH YOU ARE STILL RESPONSIBLE AND SHOULD READ

- Construction Site Safety
- Sediment Control Measures for Residential Construction Sites
- Management and Disposal of Construction Wastes
- Hours of Construction
- Building Permits and Inspections

CONSIDERATIONS, OPPORTUNITIES, CHALLENGES

- Burnaby does not currently permit Laneway Homes or Accessory Dwelling Units (ADUs) but City Council has been considering this format since 2018 as a possible option at increasing housing supply.
- Whereas most municipalities which have adopted the Energy Step Code have mandated Step 3, Burnaby currently stipulates Step 1. A house required to comply with Step 1 must be tested for airtightness in accordance with BCBC, but there is no airtightness target which it must achieve. However, the City of Burnaby may revise the Step 1 requirement to a higher Step at any point in the future.



construction

Some estimates for timeline, costs, and a list of permits required.

COSTS

HAZARDOUS MATERIALS

PERMITS

FORMS

construction

APPROXIMATE COST:

Custom: \$400-\$1000 / ft²; 2400 ft² house = **\$960,000 - \$2,400,000**

- Garage (attached or detached) not included
- Hard construction cost only
- Taxes not included
- Soft costs (land, fees, consultants, real estate, levies, airtightness tests) not included

Order-of-magnitude estimation based on our discussion is \$550 / ft² = \$1,320,000 (± \$200,000)

Estimated consultants' fees: 20% of construction cost = \$264,000

Building permit application: 20% of fee up to \$7500 = \$3200

Building permit: \$2944.10 + \$11.95/\$1000 over \$200k = \$16,300 (minus \$500 if architect involved)

Swimming pool deposit: \$3000

Damage deposit \$4000

Total cost preliminary estimate: \$1,600,000

(More comprehensive calculation is provided in the R.A.D. Study™)

HAZARDOUS MATERIALS:

Asbestos Remediation: based on the age of the existing house, none is anticipated

Remediation of contaminated soil: not anticipated

Fungal Remediation: low probability, but demolition costs should plan for required handling of mold in demolished building

PERMITS REQUIRED

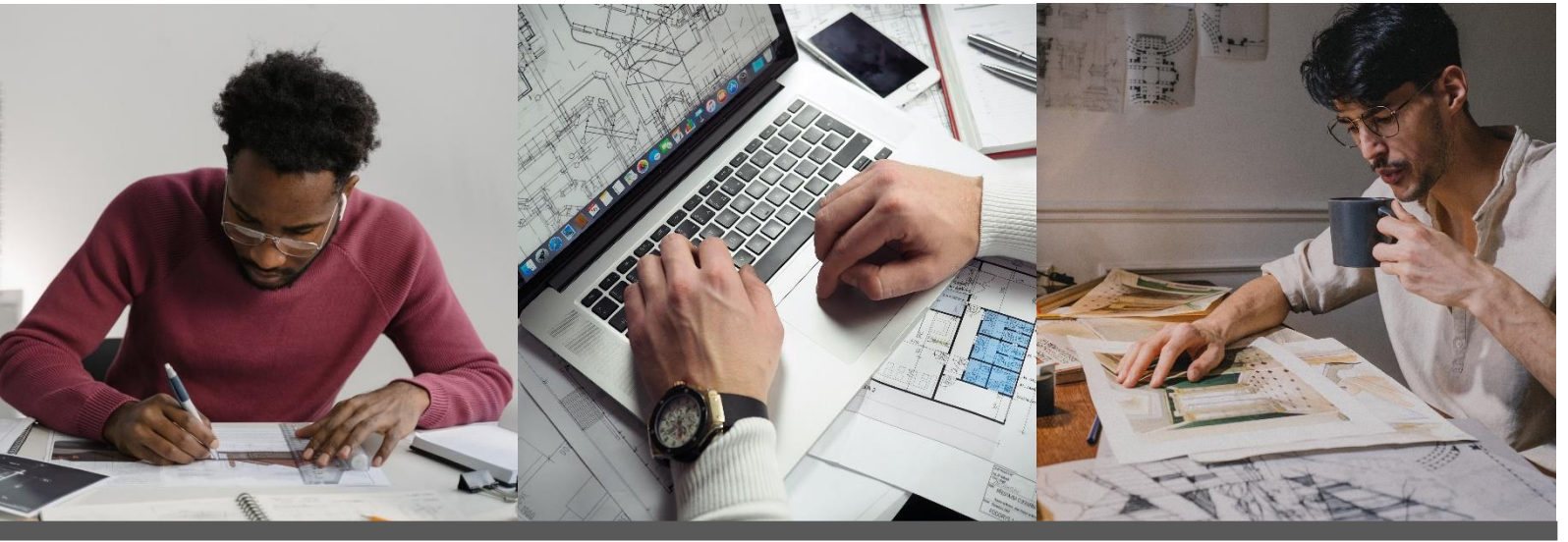
- **Preliminary Plan Approval (PPA)**
- Demolition Permit
- Tree Cutting Permit
- **Building Permit (BP)**
- Electrical Permit for Temporary Current
- Temporary Hydro Connection Permit (TCP)
- Electrical Permit
- Gas Permit
- Sewer Connection Permit
- Fire Alarm Permit (only if no other work)
- Fire Sprinkler Permit
- Heating System Permit

ADDITIONAL FORMS FOR BUILDER

- Energy Verification Report (Mid-Construction)
- Energy Compliance Report (As-Built)
- Change of Contractor for Building Permit (when applicable)
- Electrical Permit for Temporary Current Application
- Consent to Construction
- Tree Cutting Permit Application Form
- Occupancy Certificate Application Form
- Clean Up Certification (where applicable)

REQUIRED FORMS FOR SUBCONTRACTORS

- Air Test Certificate
- ASHRAE Lighting Compliance Document
- Backflow Prevention Assembly Test Report
- Certification of Fire Sprinkler System
- Certification of the Design of the Forced Air Heating System and Commitment for Field Review
- Certification of the Forced Air Heating System
- Certification of the Heating System
- Certification of the Rough-in Forced Air Heating System
- Electrical Annual Operating Permit Inspection Request Form
- Electrical Contractor Declaration
- Electrical Contractors Declaration for Work Done Previously by Others
- Electrical Installation - Home Owner Declaration
- Electrical Permit Application - Single Family Dwelling or Duplex
- Fire Sprinkler Permit Application
- Forced Air Heating Permit Application
- Gas Permit Application
- Plumbing Hydronic Heating Permit



scope of services

List of services that you are expecting your architect to provide

GENERAL

COORDINATION

AUTHORITIES

PRE-DESIGN

DESIGN

CONSTRUCTION DOCUMENTS

CONTRACT ADMINISTRATION

scope of services

GENERAL SERVICES – ALL PHASES

Interior Design
Multiple bid packages / multiple construction contracts

COORDINATION – ALL PHASES

Client meetings
Consultant meetings
Project dossier - Maintain written records of information flow between Architect, Client, Consultants, authorities having jurisdiction and other Project stakeholders. Document information requested and provided, recommendations made and accepted, advice given and decisions taken.
Project Report - Prepare Project report, including key information flow between Architect, Client, Consultants, authorities having jurisdiction and Project stakeholders. Document Project status, design, proposed materials, components and building systems, schedule, Construction Budget, Construction Cost Estimate, information requested and provided, recommendations made and accepted, advice given and decisions taken. Obtain and coordinate input from Consultants. Provide to Client and Consultants at:
end of Pre-Design Phase,
end of Schematic Design Phase,
end of Design Development Phase,
when Construction Documents Phase is 50% complete, and
end of Construction Documents Phase.
BIM
BIM Model Manager (in accordance with IBC?)

AUTHORITIES HAVING JURISDICTION

Review of regulatory requirements, variances, and building permit application

PRE-DESIGN

No construction cost estimate – rely on builder engaged
Drawing conversion - no
Photographs – general condition record

SCHEMATIC DESIGN, DESIGN DEVELOPMENT

Models – digital still images, no VR, no AR, no video
Renderings – digital still images only
Application to city – all permits
Project schedule – no

CONSTRUCTION DOCUMENTATION

Bidding requirements and construction contract conditions – no
Bidding phase – no bidding
Project report – no

CONTRACT ADMINISTRATION

Subtrade contract and site management – no
Construction schedule management - no
Submittal review – yes (*required)
Payment certification – no
Field reviews – yes (*required)
Occupancy site review – yes (*required)
Deficiency reviews – yes
Project manual – no
Operation and maintenance manuals review – no
Record drawings – no
As-built drawings – no

▶▶▶ NEXT STEPS

INVESTIGATION:

- *You need to hire a structural engineer to design foundations if you haven't already*
- *You need to hire an energy advisor to prepare and develop an energy efficiency report.*
- *You REALLY should hire a builder for pre-construction services to begin getting input on the project and to be available as design begins.*
- *You should hire an electrical engineer and mechanical engineer, or you could engage a lighting designer, electrician, plumber, and HVAC subtrade and designer (either directly or through a builder). I recommend relying on the builder to arrange to hire these specialists.*

CONSIDERATION AND ESTIMATION:

- *The project cost will very likely exceed the budget currently planned. Review your goals and consider if any can be compromised or eliminated.*
- *Burnaby appears to be interested in allowing laneway houses. Such legislation may never happen, or it may happen very soon. Consider if you still want to stratify the house; future development would require full agreement with the second owner. A laneway house may also increase rent revenue, and maybe you forego a secondary suite in the main house in exchange for a full-size second dwelling for rent.*

ACTION:

Once you have reviewed the comments and suggestions in this report, have read the brochures, have discussed and considered the impacts and possibilities suggested, and feel comfortable with your grasp on the material, your next step is to contact me to arrange for a Tuning Workshop™. This next phase reconciles the goals, limitations, opportunities, and resources by setting a strategy. After the Tuning Workshop™, you will receive a Tuning Report™ the summarizes all the decisions made about topics in the R.A.D. Study™ and begins the Concept Design phase.



Email me to request your Tuning Workshop™