PORT MOODY FRONT-BACK CONCEPT ZONING STUDY

This study has been undertaken to analyze and make recommendations regarding the proposed *Front-Back Concept Zone* for bare-land stratification of lots within the Seaview neighbourhood between Westmount Drive and Tuxedo Drive, Valor Drive and Seaview Drive.

The majority of lots have an approximate frontage of 20m (66'), depth of 52m (170') and site area of 1,020 sq.m. (11,000 sq.ft.) meeting the proposed post-stratification minimum lot size requirement of 360 sq.m. (3,900 sq.ft.). There is significant elevation change, dropping from Westmount Drive to Tuxedo Drive approximately 19m which effects lot utilization and potential forms of redevelopment. This study assumes these approximate sizes and characteristics for the purposes of generating possible scenarios.

The intent from the proposed *Front-Back Concept Zone* is "to accommodate residential infill for lots with rear lane access in a front to back configuration in Seaview while maintaining the character of the neighbourhood." Based on these intentions, this study comtemplates and makes recommendations with consideration to the following objectives:

- maintain neighbourhood character
  - maintain existing single-family quality of the streets
    - retain traditional parking arrangement from the streets
    - retain characteristic single-family building size and frontage
    - facilitate retention of existing principal houses where possible
  - minimize impacts of infill development
    - infill houses to be subordinate to principal houses
    - reduce overlook and shadowing from infill houses onto neighbouring properties

- accommodate residential infill
  - create livable infill development
    - provide appropriate setback between principal and infill houses for outdoor space
    - provide privacy and autonomy to infill houses
    - create legibility of infill house entries from streets
  - facilitate feasible infill development
    - minimize overall complication of redevelopment to reduce implementation obstacles
    - desirable size and configuration of infill houses

The following assumptions have been made in this study:

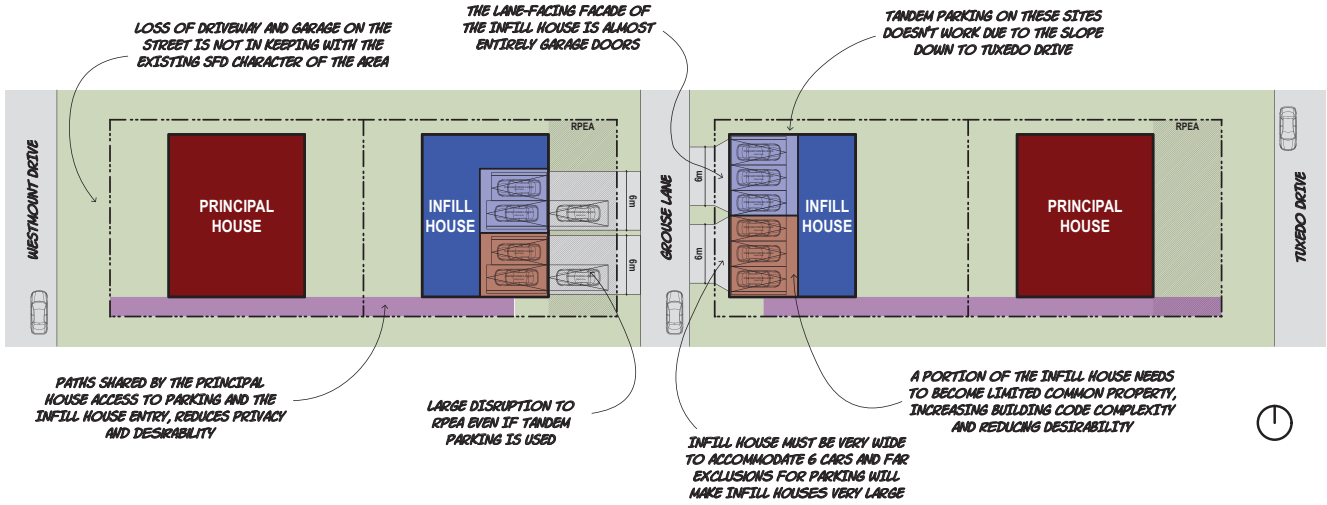
- secondary suites are provided for both principal and infill houses;
- floor area is maximized including exclusions for below-grade basement areas;
- floor area for each parking stall is 23m^2 (247 sq.ft.) and excluded from floor area calculations;
- watercourses (class c ditches) exist at the rear property line of properties on Westmount Drive and front property line of properties on Tuxedo Drive;
- a 7m setback has been provided for watercourses to account for the more restrictive 5m municipal riparian protection and enhancement area (RPEA) and a 'top of bank' location 2m in from the property line (this location is an average approximation and will vary for each property, requiring individual confirmation). This RPEA setback will most likely always be more restrictive than provincial riparian setbacks and zoning setbacks.

This study will move through 6 aspects realted to the proposed zoning: parking, infill side yards, infill access paths, height calculation, and lot size and density (which have been explored together). Recommendations based on the objectives are made at each aspect and applied as a baseline for the exploration of each subsequent aspect.

This study has been prepared for optimum viewing as a PDF document, allowing comparison between options by toggling back and forth between pages.

Configuration of the required parking in the proposed concept zoning has a fundamental effect on the resulting forms of development - influencing the character of the streetscapes and lanescapes; the impact of infill development; the livability of infill dwellings; and the overall feasibility of resulting projects. Given this, parking will be the first aspect explored in the study.

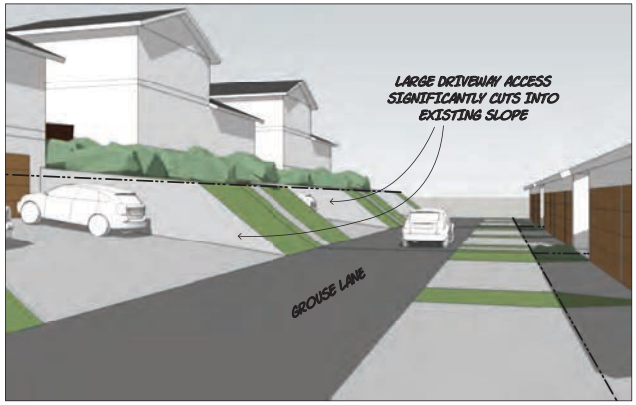
For this exploration, the parking requirements for a single detached dwelling with secondary suite in both the principal and infill houses will be applied: 2 parking spaces per single detached dwelling + 1 parking space per secondary suite, for a total of 6 parking spaces. This represents the greatest possible parking requirement allowed under the contemplated zoning, and the most intense parking scenario.

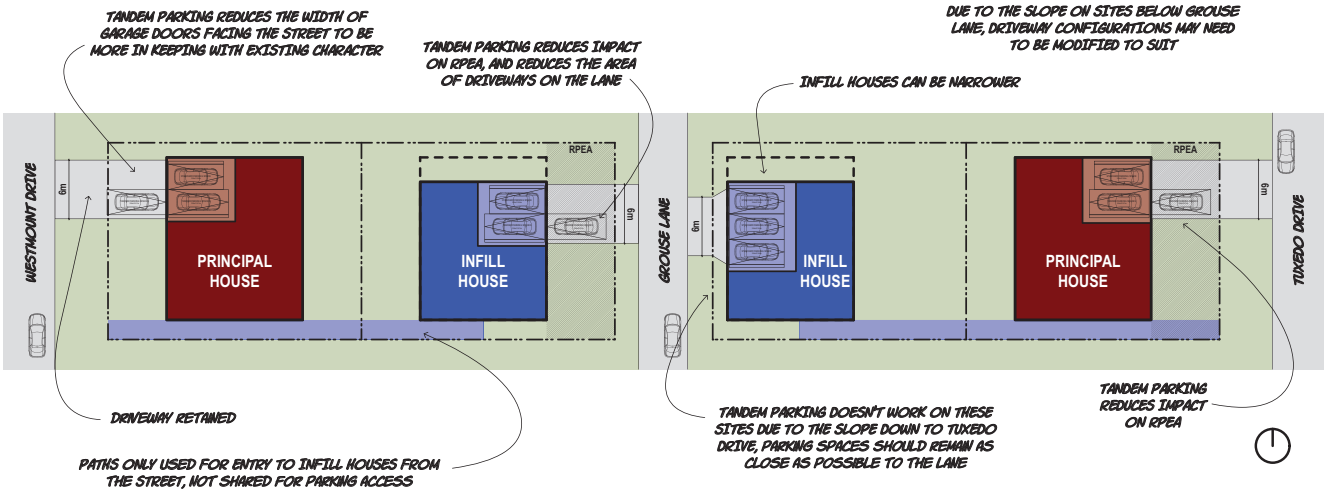


PARKING FROM ONLY THE LANE

This option does not maintain the quality of the street, by removing key streetscape elements typical of the single family character (the visibility of a front driveway and garage or parking area from the street); it does not minimize the impacts of infill development, requiring very large infill houses that would compete with the scale of principal houses and increase shadowing and overlook to neighbouring properties; and it negatively impacts the livability of the resulting two strata lots by requiring inclusion of the principal house garage within the infill house.

The feasibility of redevelopment using this parking configuration is diminished due to the increased building code requirements for the infill house to accommodate parking for both units within one building, and the increased complexity of facilitating sharing a building as limited common property between the resulting two strata lots.



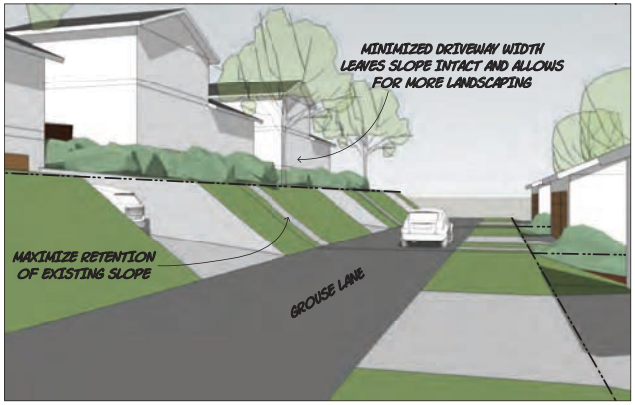


PARKING FROM ROAD AND LANE

This option maintains the character of the street by retaining the visibility of driveways and garages or parking areas from the street; it minimizes the size of infill houses (to be subordinate to the principal houses) which also reduces shadowing and overlook to neighbouring properties; and it provides greater privacy between the resulting two strata lots, as the principal house and infill house garages are separate and contained within their respective buildings.

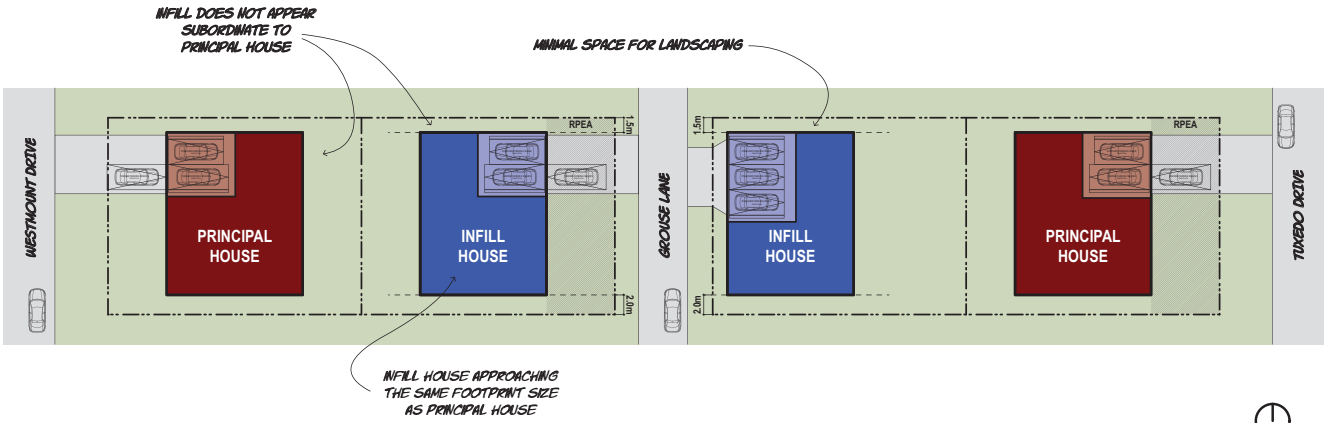
The feasibility of redevelopment using this parking configuration is enhanced as the building code requirements for the infill house are no more onerous than the principal house, and the resulting strata lots do not have to accommodate limited common property.

This parking configuration would require a relaxation to the maximum number of allowable tandem parking spaces from 33% to 66%.



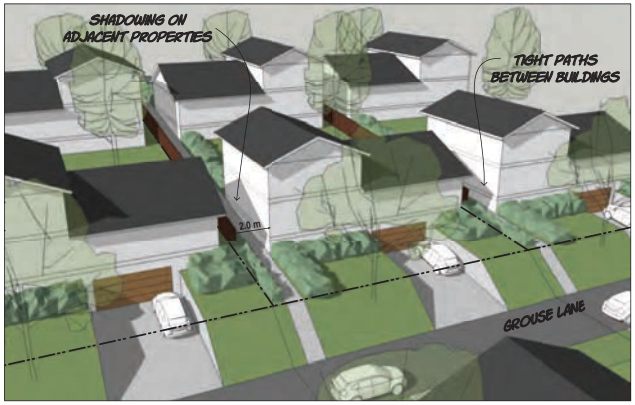
RECOMMENDED

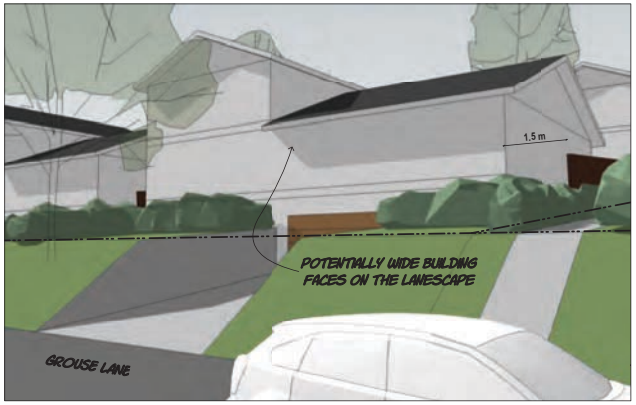
The width of the side yard setbacks to the infill house in the proposed concept zoning have an effect on the impacts of infill development, the livability of not only proposed infill dwellings but also neighbouring properties, and the overall feasibility of resulting projects. The size of setbacks from infill houses to neighbouring property lines can affect the apparent size of infill houses relative to their lots and principal houses, control the amount of shadowing onto adjacent lots, and determine the amount of privacy.

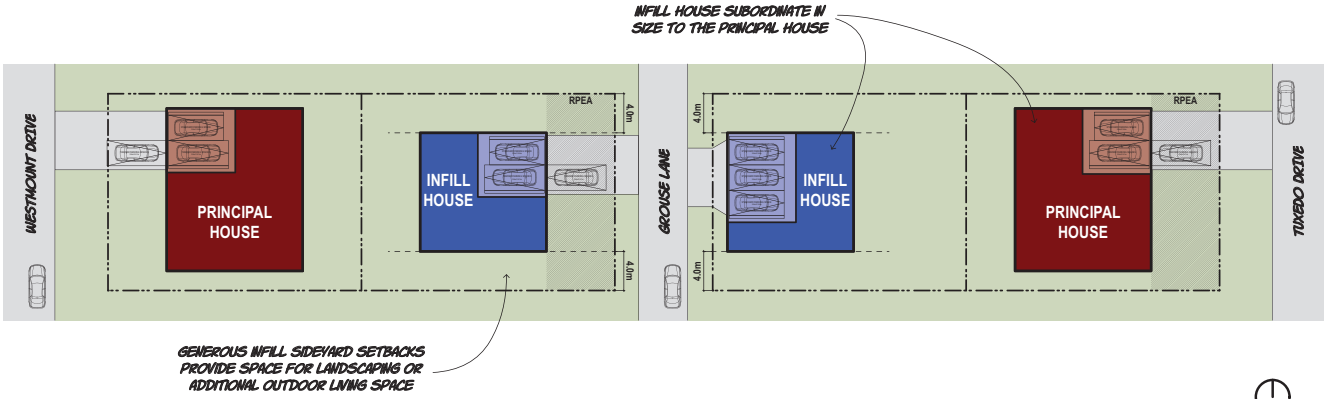


2m / 1.5m INFILL SIDE YARD SETBACKS

This option is currently proposed in the concept zoning, in which the infill house side yard setbacks are the same as those of the principal house. This option does little to distinguish infill houses from principal houses in terms of the extent of their footprints and could lead to building massing that appears similar in scale for both buildings. The minimal infill side yard setbacks in this option also reduce the ability to control the siting of infill houses in relation to adjacent properties to mitigate shadowing and overlook to neighbouring yards or infill houses.



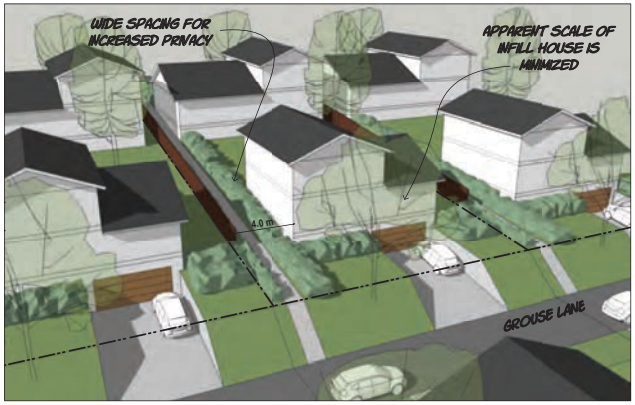


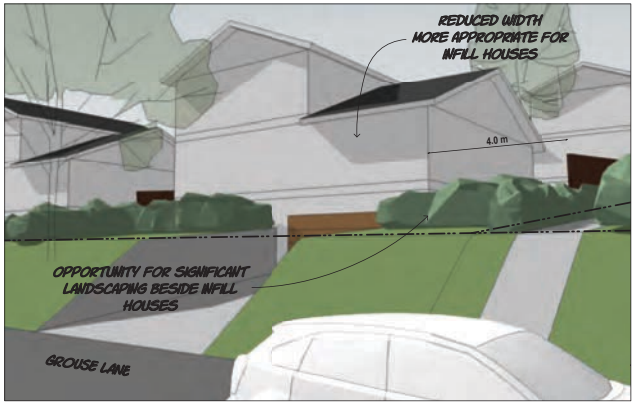


4m INFILL SIDE YARD SETBACKS

This option provides generous sideyard setbacks on both sides of proposed infill houses to ensure their scale and width remain subordinate to principal houses and does not overwhelm adjacent properties. The narrower, wider-spaced buildings on the lane in this arrangement reduce the effect of a singular building wall on the lanescape (should infill houses be constructed on numerous adjacent lots) and provide some access to views to the East for principal houses.

The large sideyards work to reduce shadowing and the potential for overlook onto neighbours while providing opportunities for significant landscaping to further enhance privacy and livability. The additional side yard width is significant enough that it could be used as outdoor living space.

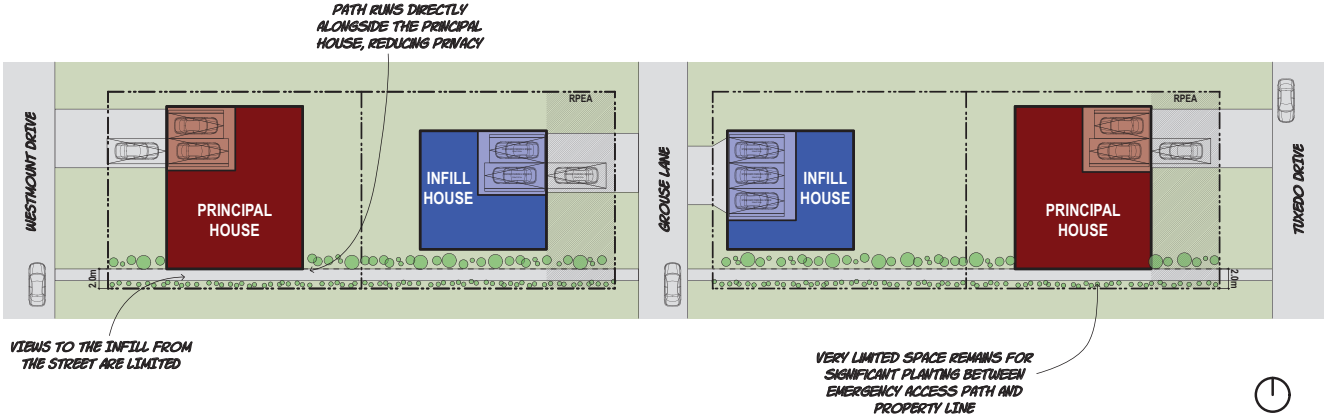




RECOMMENDED

The principal house side yard setback that functions as the entry to the infill house in the proposed concept zoning has an effect on the character of the streetscapes, the livability of both infill dwellings and principal dwellings, and the feasibility of resulting projects. The way in which the infill access path is presented at the street and configured within the lot must balance retention of the existing character of the street with appropriately signifying a primary entry, while providing adequate privacy between the two strata lots.

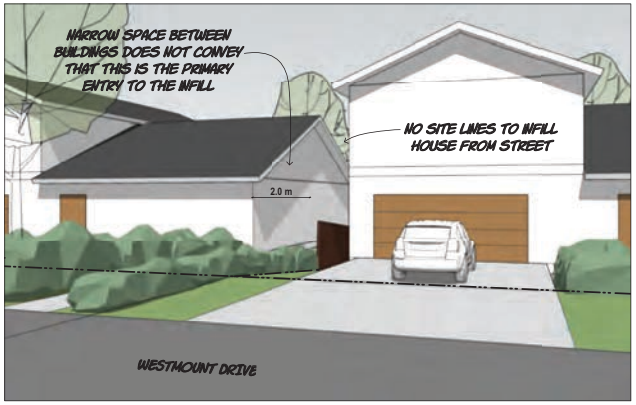
For this exploration a path width of 1.2m is shown within the entry setback, as this is the minimum width required by building code for emergency response to more than one unit. The infill house and its secondary suite represent two units that are served by this access path.

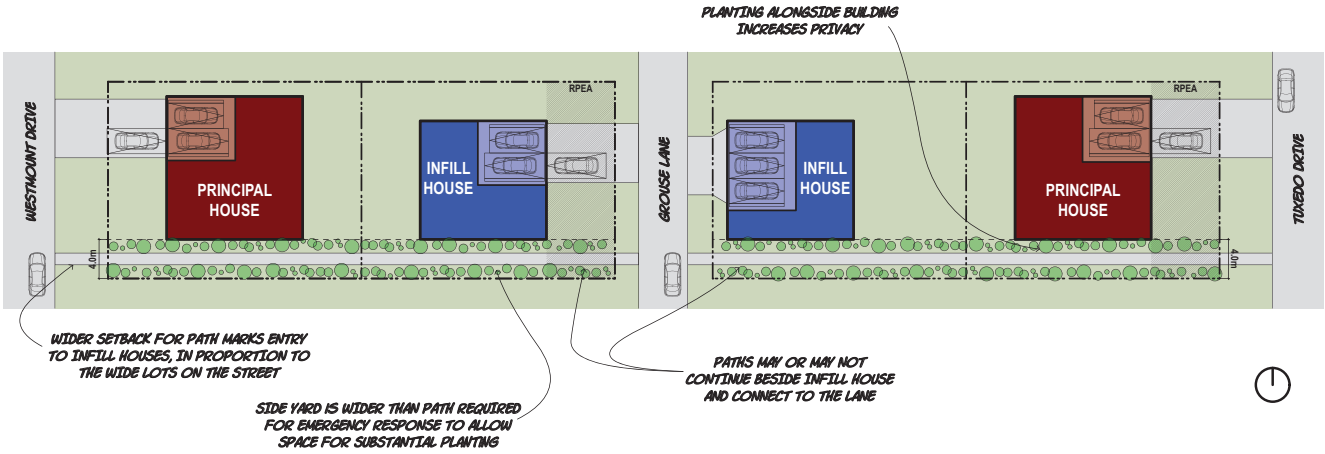


2m SETBACK FOR INFILL ACCESS

This option is currently proposed in the concept zoning, allowing a very modest increase in width to the standard 1.5m side yard setback to accommodate the required 1.2m wide path to the infill house. While this more than satisfies the requirements for emergency response, it does not provide the level of livability or desirability typical of the neighbourhood and befitting the size and autonomy of the infill houses.

At 2m wide, the scale of the setback used as the primary access to the infill house is undersized given the typical ~20m lot frontage in the area. This reduces the legibility of these setbacks as entries and creates narrow paths with limited access to daylight and loss of privacy for occupants of both principal and infill houses.





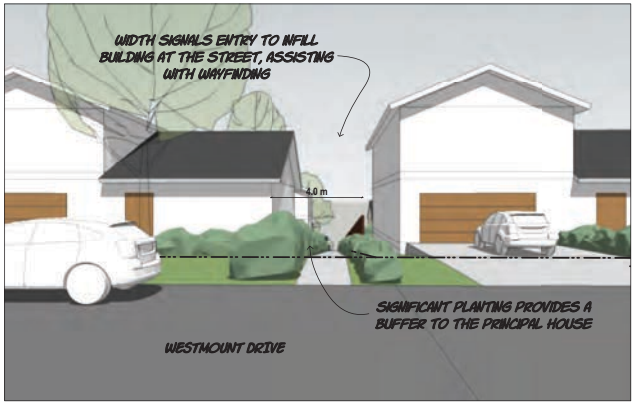
4m SETBACK FOR INFILL ACCESS

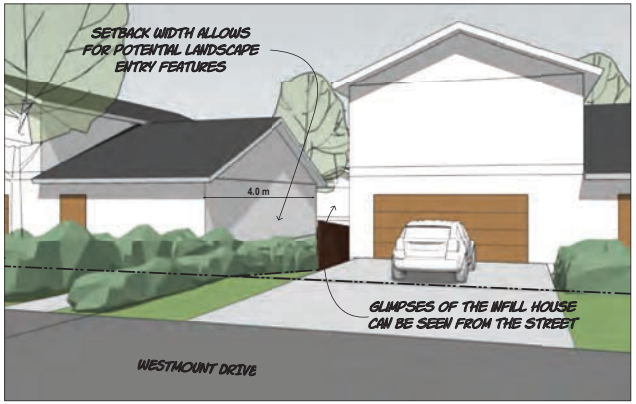
This option provides a generous setback for the minimum 1.2m path to the infill house to travel through. The additional width creates a more livable and desirable arrangement for both the principal and infill houses in sharing access to the street.

The 4m width creates an entry to the infill house befitting its size and autonomy, that is legible and in proportion to the wide lots on the street. This legibility improves wayfinding for both emergency response, and also daily use in which entry identity at the street is important. The additional width also allows for significant planting, improving privacy between both the principal building and the neighbouring property, to the infill entry path.

As indicated in pink above, large side yard setbacks are already common in the area, especially among older homes, meaning a required 4m setback for infill access would be in keeping with the existing character of the street.

RECOMMENDED





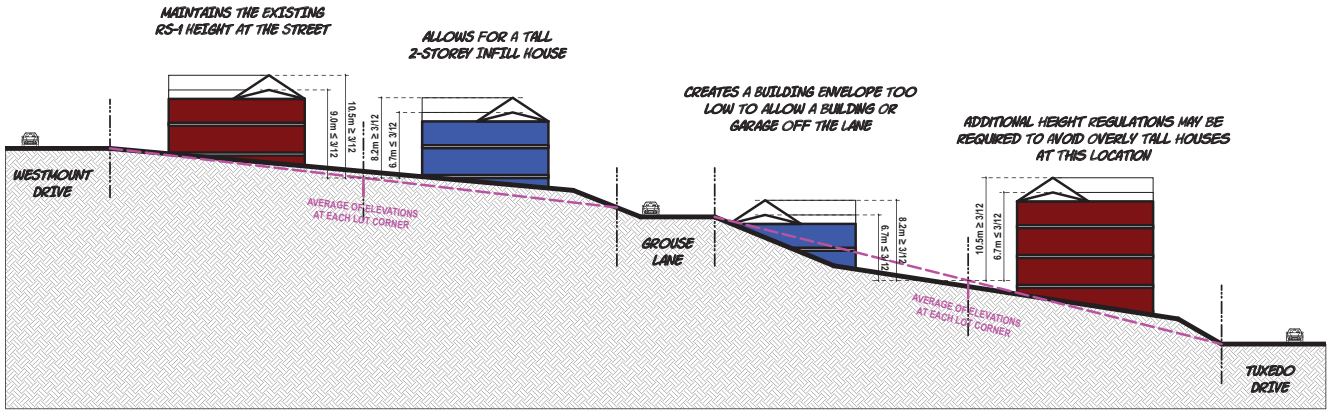
HEIGHT BASED ON LOT CORNERS

This is the method for calculating the allowable height of buildings in the existing RS-1 zoning, using the average of elevations at each corner of a lot as the point from which height is measured. This method of calculation does not produce a height requirements that are necessarily specific to the grade around a house, and when applied to lots that contain significant grade change, may produce results that do not address the immediate context in a sensitive way.

For principal houses on Westmount Drive this method of height calculation assists in maintaining the current street character as existing houses have been built to this requirement up to this point. But on lots fronting Tuxedo Drive, if front-back zoning is applied and the location of redeveloped principal houses moves forward, this method of height calculation would allow for very tall houses. Additional height controls may be required to limit the height of these principal houses.

This method of height calculation works well for creating 2-storey in fill houses uphill of Grouse Lane, but on the downhill side produces impractical low height requirements.

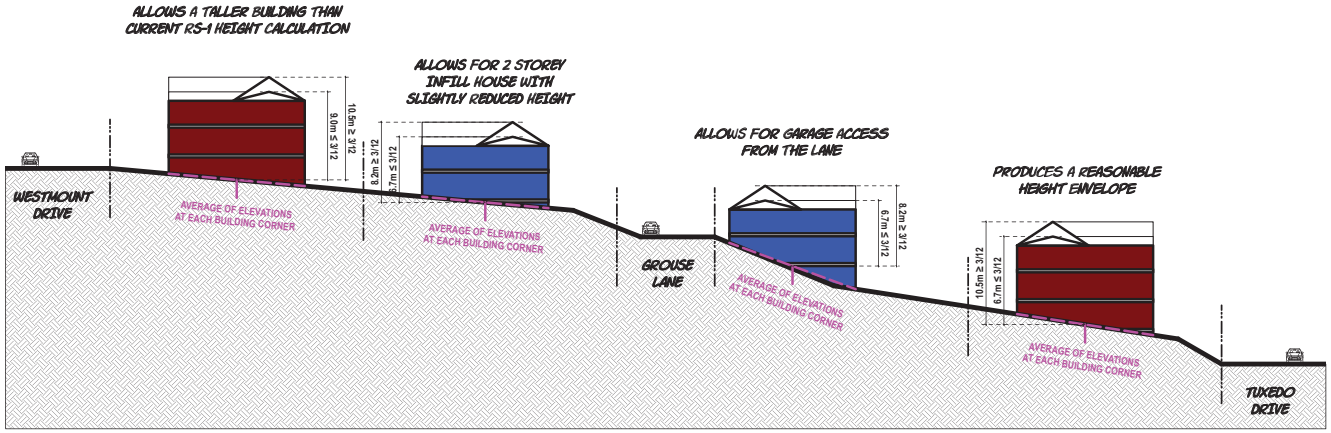
RECOMMENDED FOR PRINCIPAL HOUSES



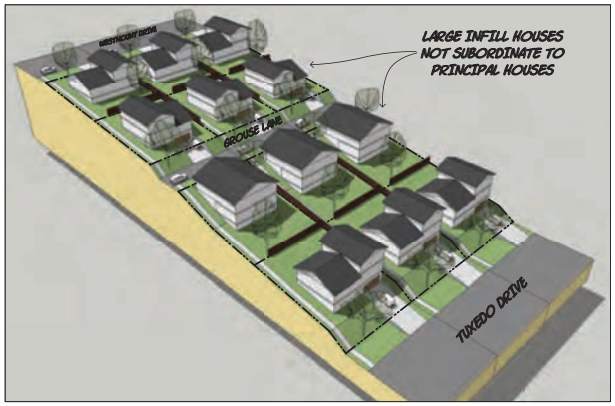
HEIGHT BASED ON BUILDING CORNERS

This is the method for calculating the allowable height of buildings in a majority of zones, using the average of elevations at each corner of a building as the point from which height is measured. This method of calculation produces height requirements that are highly specific to the grade around each house and can allow for building heights that are more attuned to their immediate surroundings.

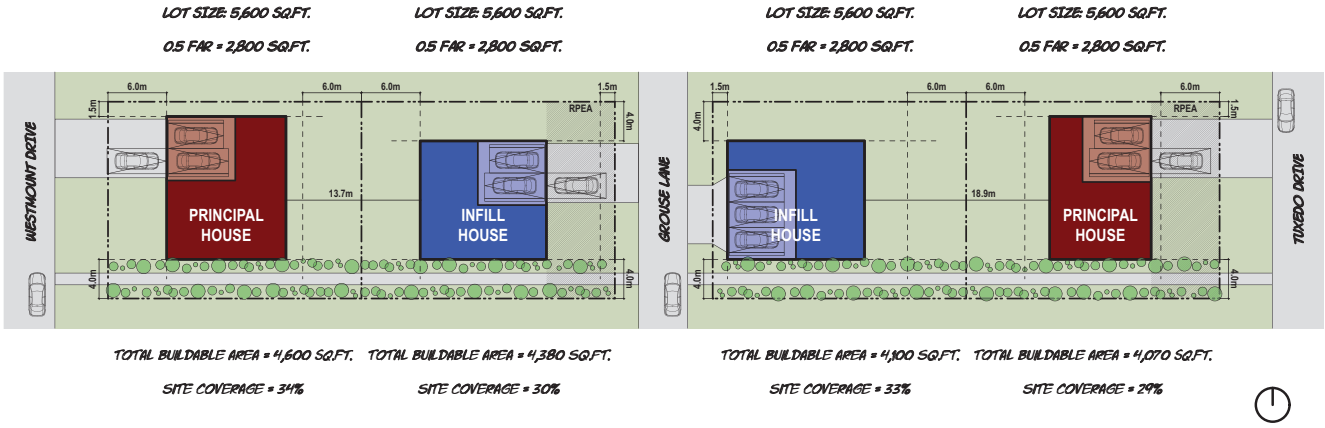
For principal houses on Westmount Drive this method of height calculation would allow additional height compared to current RS-1 height regulations and may alter the character on the street. But for principal houses on Tuxedo Drive and infill houses uphill and downhill of Grouse Lane, this method of height calculation creates viable height requirements for the desired forms of development, tailoring the height of each building appropriately to its context.



RECOMMENDED FOR INFILL HOUSES



For the purposes of generating comparable data, all buildings maximize available width within setbacks and are shown as compact as possible with a 5/12 roof slope. Other configurations within the setbacks and other zoning regulations are possible.



50/50 LOT SIZE WITH FAR 0.5 FRONT AND 0.5 REAR

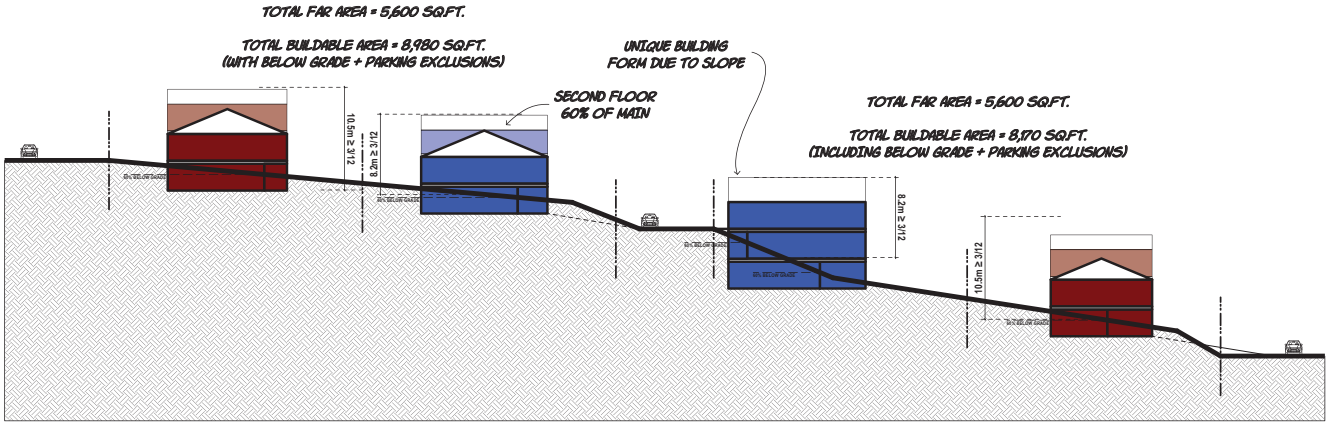
This option creates the largest infill houses, due to the equal size of strata lots and equal FAR. This doesn't minimize the impact of infill development, allowing infill houses that approach, or exceed the size of principal houses.

This configuration also creates the least buildable area (by a small margin) when accounting for below-grade basement and parking exclusions, which may affect redevelopment feasibility.

This is the most closely aligned option for potential retention of existing houses, as the lot size required to retain an existing house is likely 50% (given the building depth of existing houses). Additionally, the small size of existing houses retained with infill redevelopments would likely be unable to maximize available density without adding area to the existing houses.

There are estimated to be only a few existing houses in the study area that could feasibly be retained with an infill redevelopment, and this number could be reduced further as compliance with all other concept zoning regulations would also be required.

USE ONLY WHERE RETENTION OF EXISTING HOUSES IS REQUIRED AND VIABLE



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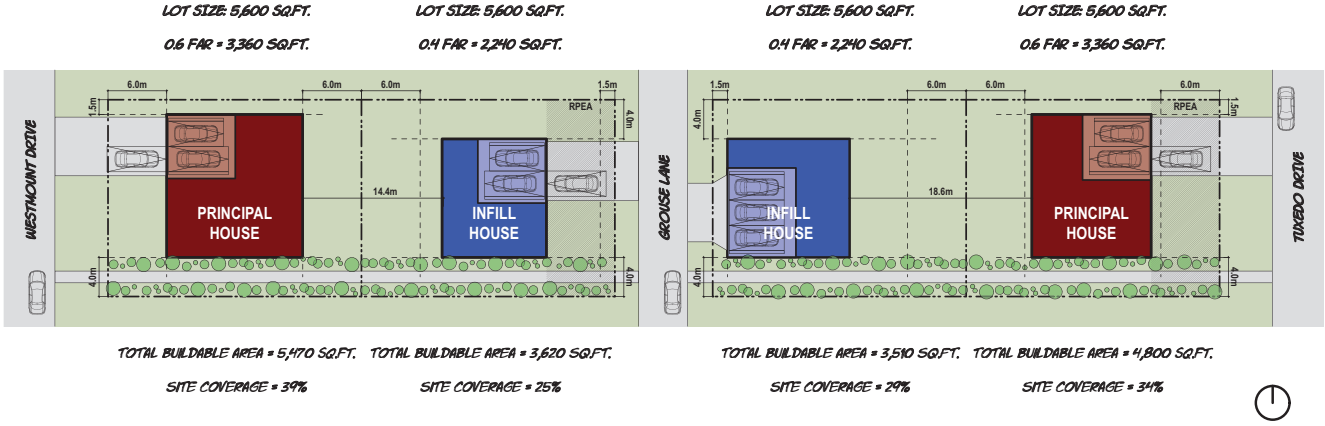
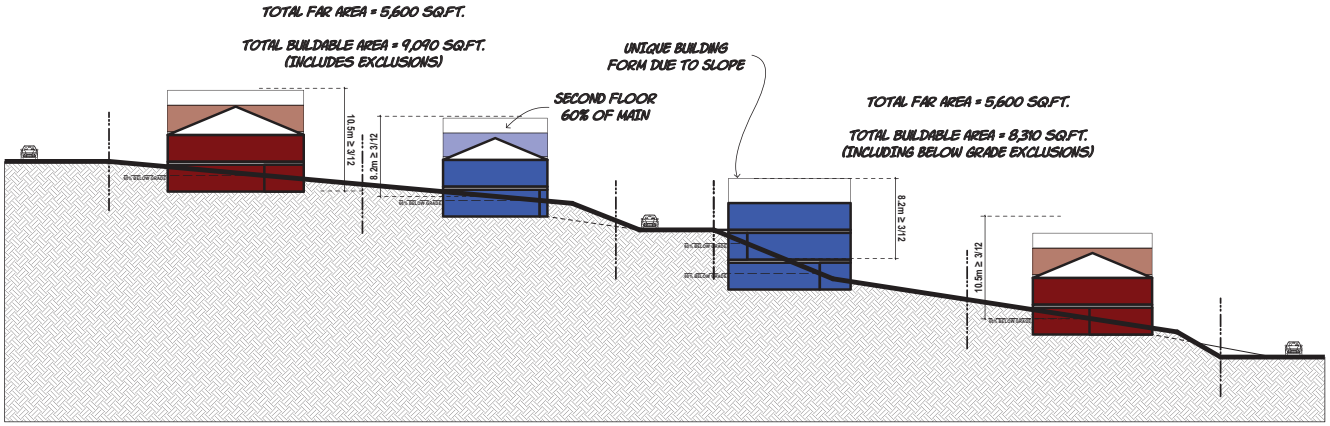


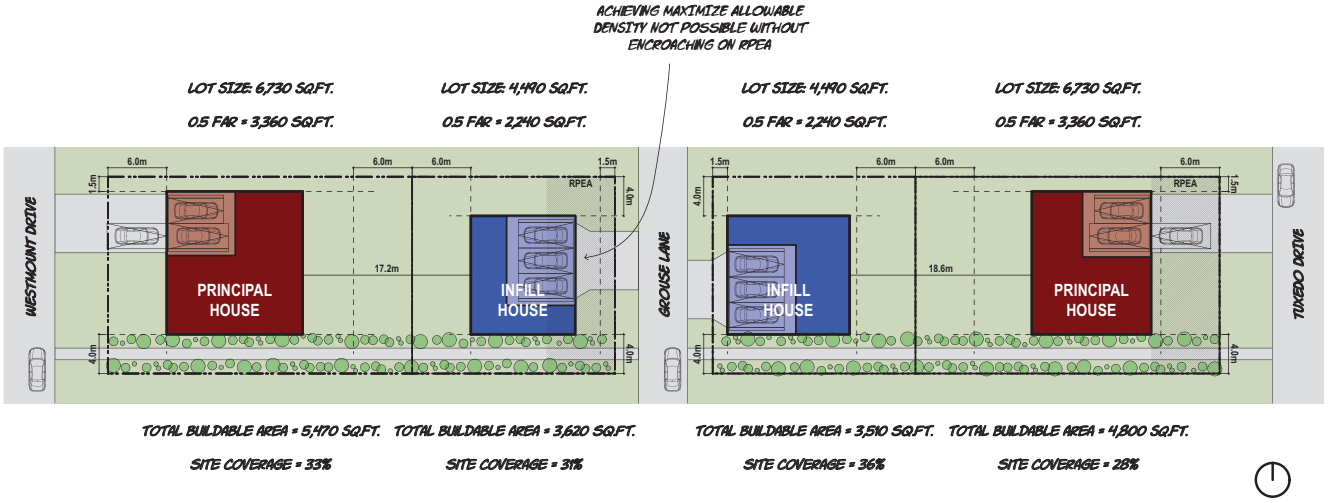
50/50 LOT SIZE WITH FAR 0.6 FRONT AND 0.4 REAR

This option creates medium-sized infill houses and produces a median buildable area (by a small margin) when accounting for below-grade basement and parking exclusions. These metrics are identical to the following option *60/40 Lot Size with FAR 0.5/0.5.*

This configuration minimizes the impact of infill development be creating infill houses that are subordinate to their associated principal houses, but the yard spaces associated to the principal and infill houses aren't proportionate to their building sizes (the larger principal house has a smaller yard and the smaller infill house has a larger yard), due to the 50/50 lot division.



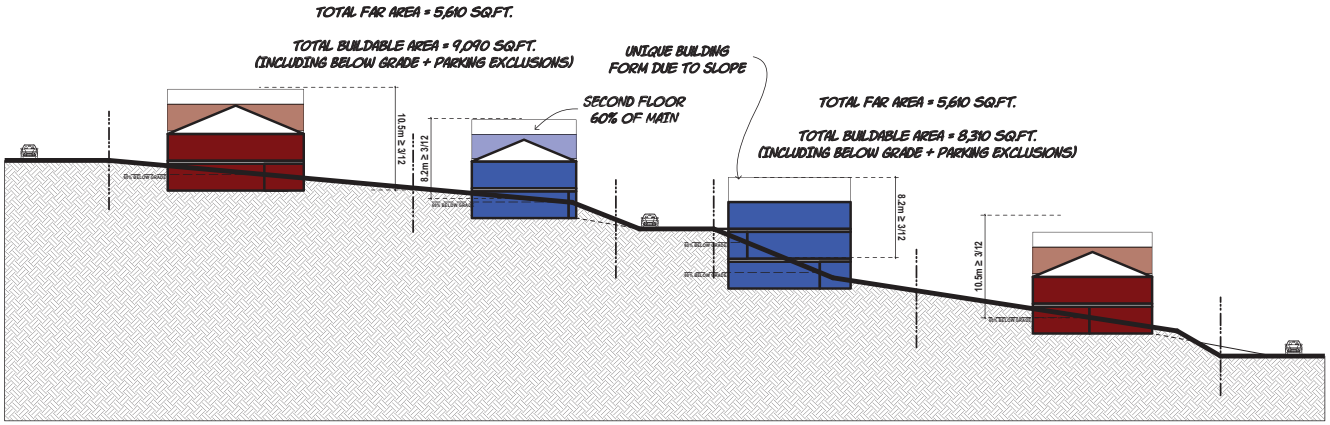
For the purposes of generating comparable data, all buildings maximize available width within setbacks and are shown as compact as possible with a 5/12 roof slope. Other configurations within the setbacks and other zoning regulations are possible.



60/40 LOT SIZE WITH FAR 0.5 FRONT AND 0.5 REAR

This option creates medium-sized infill houses and produces a median buildable area (by a small margin) when accounting for below-grade basement and parking exclusions. These metrics are identical to the preceding option *50/50 Lot Size with FAR 0.6/0.4.*

This configuration minimizes the impact of infill development be creating infill houses that are subordinate to their associated principal houses, and creates yard spaces that are proportionate to the building sizes of the principal and infill houses. This option does however require an incursion by the infill house uphill from Grouse Lane into the RPEA by a significant amount, which may increase the overall complication of redevelopment.



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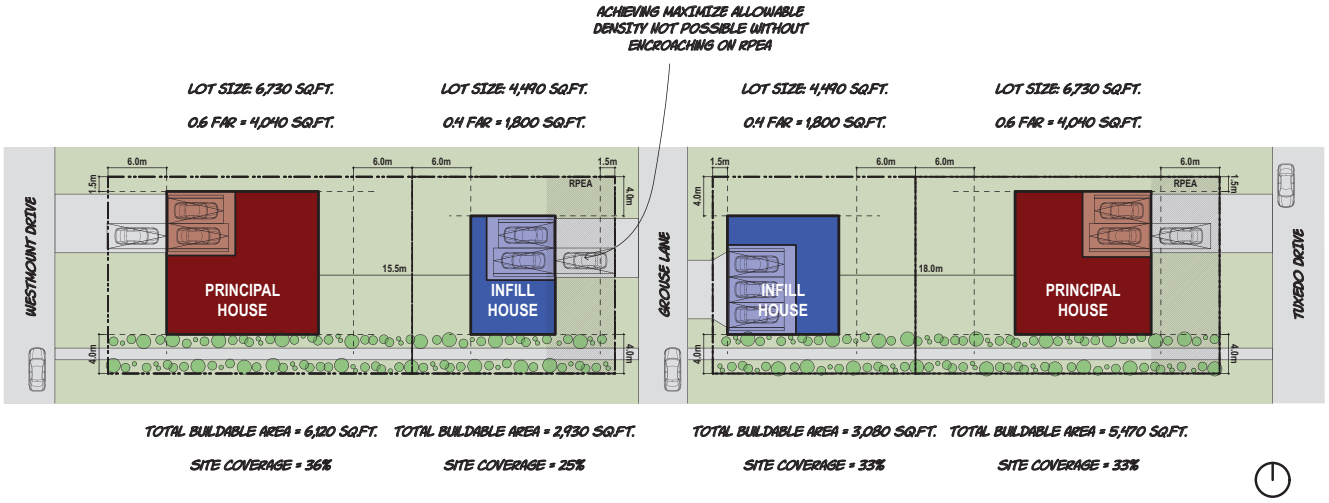
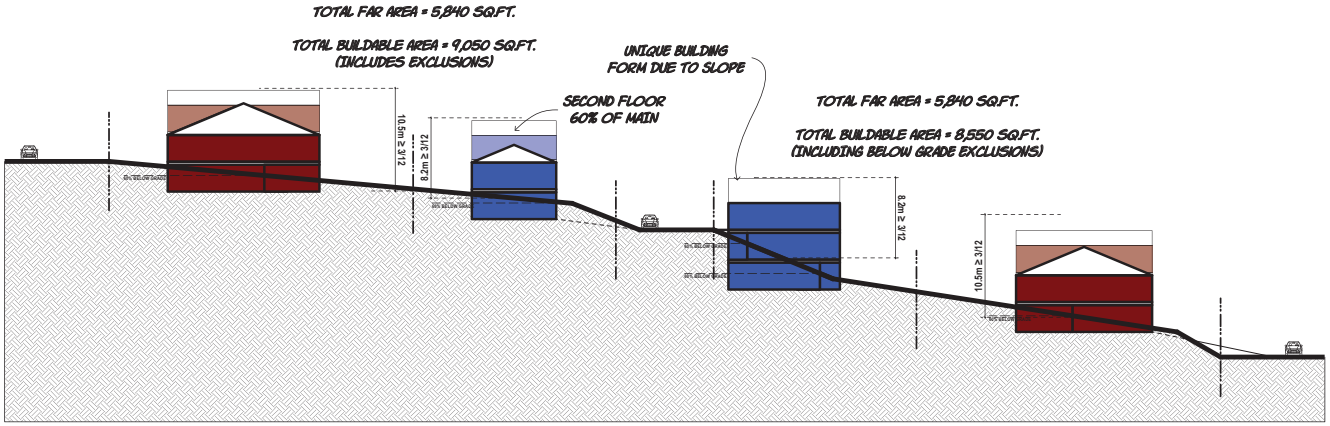


60/40 LOT SIZE WITH FAR 0.6 FRONT AND 0.4 REAR

This option creates smallest infill houses and produces the most buildable area (by a small margin) when accounting for below-grade basement and parking exclusions.

This configuration minimizes the impact of infill development be creating infill houses that are subordinate to their associated principal houses, and creates yard spaces that are proportionate to the building sizes of the principal and infill houses. This option does however require a small incursion by the infill house uphill from Grouse Lane into the RPEA, but this could be avoided by a small reduction in the recommended 4m side yard setbacks for the infill houses.



RECOMMENDED