City of Richmond

Report to Committee

To:	Planning Committee	**Date:**	November 16, 2016
From:	Wayne Craig Director, Development	**File:**	08-4430-01/2016-Vol 01
Re:	**Single-Family Dwelling Building Massing Regulation – Second Phase**		

Staff Recommendation

1. That the proposed amendments to Zoning Bylaw 8500 for further refinement of single-family residential massing be received for the purposes of public stakeholder consultation; and

2. That staff be authorized to proceed to public and stakeholder consultation.

Wayne Craig
Director, Development

BK:rg/blg

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Building Approvals Policy Planning	☑ ☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** CJ	**APPROVED BY CAO** for

Staff Report

Origin

There are two (2) separate Council referrals addressed in this staff report.

At the July 27, 2015 Regular Council meeting, the following referral was passed:

That staff conduct further research and analysis into (i) maximum depth of house, (ii) rear yard setbacks to house, (iii) rear yard setback for larger detached accessory buildings, (iv) interior side yard setbacks, (v) projections into required side yard setbacks, and (vi) secondary (upper floor) building envelope and report back.

At the October 19, 2015 Public Hearing, Council passed the following referral:

That the positioning and/or placement of sundecks on homes (i.e., single-family and coach house, etc.) be referred to staff for examination of any potential impacts to neighbouring properties.

This report responds to both referrals from Council, with an overview of a number of potential amendments to Richmond Zoning Bylaw 8500 (the Zoning Bylaw) for Council's consideration. Preliminary details on consultation with the general public and the building industry are also provided.

Analysis

During the public consultation process for the first phase of amendments to the Zoning Bylaw for single-family residential massing and during the July 27, 2015 Public Hearing for Zoning Amendment Bylaw 9280, a number of issues were identified as potential follow-up work by staff to further refine single-family building massing

Current Massing Regulations

Council adopted Zoning Amendment Bylaw 9280 on September 14, 2015 to add a number of building massing regulations to the Zoning Bylaw. Since that time, staff have worked closely with design professionals and local house builders to implement the new regulations. Staff in the Building Approvals Department have noted a number of positive changes to house designs submitted for Building Permit over this period. Interior ceiling heights are reflective of the new regulations, and changes to the residential vertical lot width envelope had an immediate impact on the design of single family dwellings submitted for building permit. Second storey building bulk has been reduced to reflect the new vertical lot width envelope requirements, with a resulting reduction in massing, the desired outcome of the adopted regulations.

This report also contains a number of proposed amendments which are outside the scope of the July 27, 2015 and the October 19, 2015 referrals. While outside the scope of the original referrals, these additional measures warrant consideration, based on input received during the prior public consultation.

Proposed Zoning Bylaw Amendments

The potential Zoning Bylaw amendments presented in this report are grouped into three themes: Siting and Lot Configuration Regulations; Landscaping and Site Coverage Regulations; and Forward Projecting Garage and Fencing Regulations. Each section features options for possible bylaw amendments, including a status quo option where no change is proposed. The intent of the range of possible bylaw amendments is to enhance compatibility between existing single family houses, and new construction. Attachment 1 includes explanatory diagrams for the proposed amendments.

Siting and Lot Configuration Regulations

i. Maximum depth of house

The current observed trend for single family residential in Richmond is to maximize house size on the lot; generally utilizing the maximum building footprint permitted – based on lot coverage regulations and required setbacks. This practice has been cited by residents as a negative impact arising from new house construction and of concern to residents, particularly in established neighbourhoods where older houses are typically relatively small compared to the size of the lot.

In particular, for deeper lots (30 m or deeper), constructing a home at the minimum setback requirements can result in a long uninterrupted wall face, adjacent to the side yards between properties. This built form may have impacts on the amount of sunlight reaching adjacent rear yards and the potential for overlook and loss of rear yard privacy.

Staff propose three options for Council's consideration to regulate the maximum permitted depth of house on single-family lots:

1. Status quo – leave current practices unchanged – continue to require a minimum 6 m front yard and 6 m rear yard setback
2. Limit the maximum depth of house for new single-family house construction to a maximum continuous wall of 55% of the total lot depth
3. Limit the maximum depth of house for new single-family house construction to a maximum continuous of 50% of the total lot depth

An additional amendment to the zoning bylaw is proposed to define **continuous wall** as:

> Continuous wall means an exterior wall on a dwelling single-family, which does not include an inward articulation of 2.4 m or more.

Staff note that similar house depth regulations are utilized in the City of Vancouver, the City of Burnaby and the City of Port Coquitlam. Attachment 1 includes diagrams of these options.

Implementing either of the possible maximum depth of house regulations (Options 2 or 3 above) would be a modest restriction on the location of new houses, while still preserving the ability of the property owner to achieve the maximum buildable floor area under existing single-family residential zones.

ii. Rear yard setbacks

During the 2015 consultation and subsequent Public Hearing for the first round of Zoning Bylaw amendments for single-family zones, several residents mentioned negative impacts on rear yard interface between new single-family houses and older, existing houses. Comments were made regarding the impact new construction can have on rear yards, as newer, larger homes can block sunlight and cause potential overlook and privacy issues. Comments made were specifically related to the minimum 6 m setback currently required in the RS single-family zones.

Staff have prepared the following options for Council's consideration:

1. Status quo: continue to implement a minimum rear yard setback of 6 m
2. Establish a new requirement for:
    - Minimum rear yard setback is 6 m for the ground floor – limited to a maximum of 60% of the width of the house
    - Remaining 40% of wall face at a minimum rear yard setback of 7.5 m
    - Minimum rear yard setback of 7.5 m for any second storey or half-storey.
    - Lots less than 28 m deep and less than 372 m^2 in area would be exempt from this setback requirement and would be permitted to utilize a 6 m rear yard setback
3. Establish a new requirement that the minimum rear yard setback is the greater of 6 m or 25% of the lot depth, up to a maximum of 10.7 m. Lots less than 28 m deep would be exempt from this setback requirement and would be permitted to utilize a 6 m rear yard setback

Staff propose the exemption for lots 28 m or less in depth from the new setback regulation as a 6 m setback for shallower lots results in an adequate rear yard, and does not negatively impact the buildable area of a lot. In addition, the proposed maximum setback of 10.7 m (35 feet) for deeper lots will ensure compatibility between rear yards and maintain a viable building footprint for house construction. In no case would a rear yard setback be less than 6 m. Please see Pages 3 to 7 of Attachment 1 for diagrams of these options.

iii. Rear yard setback for larger detached accessory buildings

During the Public Hearing for Zoning Bylaw 8500, Amendment Bylaw 9280, a number of residents raised a concern that the 1.2 m minimum rear yard setback for detached accessory buildings had potential for negative impacts on adjacent properties. The initial bylaw amendments for building massing included measures to better regulate the height of detached accessory buildings, and the regulations proposed in this report are intended to refine the siting and setbacks for these buildings.

Staff have prepared the following options for Council's consideration:

1. Status quo – no change to current minimum rear yard setback of 1.2 m for an accessory building more than 10 m^2 in area (up to a maximum of 70 m^2)
2. Implement a variable minimum rear yard setback for a detached accessory structure larger than 10 m^2 (up to a maximum of 70 m^2) as follows:
    - the minimum rear yard and side yard setbacks are 1.2 m if the exposed face of the accessory building oriented to the rear lot line is 6 m wide or less, or
    - the minimum rear yard and side yard setbacks are 2.4 m if the exposed face of the accessory building oriented to the rear lot line is greater than 6 m
    - If the accessory structure is located adjacent to a rear lane a rear yard setback of 1.2 m is required

Staff note that a 6 m exposed wall façade to the rear property line is not uncommon, and is generally compatible with adjacent rear yards. The proposed setback of 2.4 m for larger exposed façades should address adjacency concerns from adjacent properties. Staff further note that the proposed amendments to rear yard setbacks for accessory structures would be applicable to all standard and site-specific single-family residential zones. Page 8 of Attachment 1 outlines diagrams of these options.

iv. Interior side yard setbacks and permitted projections

Richmond Zoning Bylaw 8500 currently allows projections into required minimum side yard setbacks, limited to bay windows, hutches, fireplaces and chimneys. These building elements can project to a maximum of 0.6 m (2 ft) into the required sideyard setback.

Through the consultation process for the 2015 Zoning Bylaw amendments, public comments were made regarding the existing required side yard setbacks, projections and the impact on adjacent homes. The specific comments were that the minimum 1.2 m side yard setback was itself very small, and when hutches, chimneys and other projections are built, the resulting reduced setback had negative impacts on adjacent properties.

Staff have prepared the following options for permitted projections into side yard setbacks:

1. Status quo – no change to current minimum permitted projections into side yard setbacks for a 0.6 m (2 ft) projection into the side yard setback of 1.2 m, with no limit on the width of the projection
2. Allow one 0.6 m projection into the required side yard setback, limited to 1.8 m in length, and limited to one exterior wall only
3. Eliminate the permitted projection into side yard setbacks

Page 9 of Attachment 1 includes a diagram of these options.

v. Secondary (upper floor) building envelope

Staff have monitored the effectiveness of the recent single-family residential vertical lot width envelope amendments adopted in November 2015. Staff is of the opinion that the revised building envelope regulations have resulted in tangible improvements in the form and massing of single-family dwellings recently constructed. A comparison of two building permit drawings are provided on page 10 of Attachment 1, which illustrate the positive changes to house designs staff have seen in the recent months. The red dotted line illustrates the single family residential vertical lot width envelope that was adopted in 2015.

The existing building massing regulations have addressed a number of upper storey building design concerns, and staff is of the opinion that the existing measures, when combined with the range of additional regulations outlined in this report will continue to improve single-family residential buildings. No amendments to further regulate upper floor building envelope is proposed at this time.

Decks and Balconies – October 19, 2015 referral

At the October 19, 2015 Public Hearing, Council passed the following referral:

That the positioning and/or placement of sundecks on homes (i.e., single-family and coach house, etc.) be referred to staff for examination of any potential impacts to neighbouring properties.

i. Decks for Single-Family Houses

Staff have examined a number of recent building permit designs and have noted a common feature of single family house designs is a sundeck on the second storey – oriented towards the rear yard – which often spans the full width of the rear wall of the house. Other design elements include a deck accessed from the master bedroom, in line with the sidewall of the house. These decks do not span the entire rear wall of the house, but can result in overlook and privacy issues for adjacent side and rear yards.

Staff has identified two possible responses to this issue for Council's consideration:

1. Status quo – maintain the current requirements for decks as regulated by building setbacks and permitted projections
2. Amend the regulations for rear decks as follows:
   - A second storey deck can span no more than 50% of the maximum width of the rear wall of the house;
   - A second storey deck must have an additional setback of 1.5 m from the minimum interior side yard setback; and
   - A second storey deck must have an additional setback of 1.5 from the minimum rear yard setback.

The proposed regulation in option 2 above would introduce a new maximum limit on the width of a deck, and new additional setback from interior and rear lot lines. These regulations would result in decks constructed in a more centralized location on the rear wall of the house. Having a deck located closer to the centre of the rear wall will reduce potential for side yard overlook and loss of privacy for adjacent homes. Page 11 of Attachment 1 includes a diagram of these options.

ii. Decks for Coach Houses

The potential for overlook and loss of privacy associated with the development of coach houses on lots with rear lane access has been raised, and was included in the October 19, 2015 referral motion.

The "Coach Houses (RCH and RCH1)" zones were developed to meet Council's stated objectives for a range of affordable housing choices in the City, and provide opportunity for new built forms to accommodate modest density increases in single-family neighbourhoods. Part of the consideration of coach house form and density was the quality of private outdoor space that could be provided for the residents of a single-family house with coach house, and ensure that private amenity space is provided for the coach house unit itself.

The RCH zones allow the developer to choose how open space for the coach house is provided:

- either at grade in the rear yard of the single family dwelling; or
- in the form of a deck of the upper storey of the coach house.

If the developer chooses the latter approach, the RCH and RCH1 zones specifically require that the deck be oriented towards the rear lane, to minimize overlook issues into the rear yard of the single-family dwelling, and into the rear yards of the adjacent houses on either side of the coach house lot, arising from the reduced building separation distance provided by the zone.

The upper storey deck facing the rear lane also provides an important opportunity for casual surveillance of the rear lane, in accordance with principles of Crime Prevention Through Environmental Design (CPTED). Balconies facing the rear lane provide opportunities for 'more eyes on the street' which can reduce the potential for criminal activity in the rear lane.

A coach house deck at the rear of the lot must have a minimum 1.2 m setback from the rear property line at the lane. The rear lane provides an additional separation of 6 m to the rear property line to a house across the lane, and there is a minimum 6 m setback to the rear wall of the house, resulting in a minimum physical separation of a minimum of 13.2 m from the coach house deck to the rear wall of any adjacent house located across the rear lane. As a comparison, the physical separation between two single-family lots built with the current minimum 6.0 m rear yard setbacks (without a rear lane) would be 12 m.

Staff also note that coach house decks are generally located at a lower height above grade than a second storey deck on a single-family house. The ceiling height in a single-family house is typically higher than the ceiling in a detached garage, which results in a rear second storey deck on the house being higher above grade than a deck constructed for a coach house. Based on the desired outcome of eyes on the rear lane and viable private outdoor space for people residing in coach houses, staff recommends that there be no changes to the setbacks or locations of sundecks provided for rear lane coach houses.

As an alternate consideration, to address concerns associated with loss of privacy arising from coach house decks facing the rear lane, would be a shift in existing policy to allow coach house development on both sides of an existing rear lane. Allowing the same land use on each side of a rear lane avoids the potential overlook concerns, as garage and coach house would provide effective screening of adjacent rear yards. This policy would also meet other Council objectives of creating more rental housing stock and more housing options for residents.

Related Items for Consideration

Through a detailed review of the scope of the Council referral, and the development of potential bylaw amendments to address the referrals, staff have identified a number of issues relating to the referral. These measures are identified in order to provide a comprehensive overview of the range of massing and construction-related issues the city encounters in the redevelopment of single family residential properties.

Landscaping and Site Coverage Regulations

i. Changes to the Definition of Non-Porous Surfaces

Richmond Zoning Bylaw 8500 currently contains a definition of 'hardsurfacing' – the decorative hard surfaces used in landscaping; and a definition of 'non-porous surface' – a constructed surface on, above or below ground that does not allow precipitation or surface water to penetrate directly into the underlying soil.

In the case of existing single-family zones, non-porous surface is utilized in the calculation of maximum permitted lot coverage:

> **8.1.5 Permitted Lot Coverage**
>
> 1. The maximum **lot coverage** is 45% for **buildings**.
> 2. No more than 70% of a **lot** may be occupied by **buildings**, **structures** and **non-porous surface**.

In order to provide more clarity to the bylaw, staff proposes that Council consider the following amendment to the definition of 'non-porous surface':

> **Non-porous surfaces** means any constructed surface on, above or below ground that does not allow precipitation or surface water to penetrate directly into the underlying soil.

Surfacing materials considered as non-porous are concrete, asphalt, and grouted brick or stone.

The proposed change to the definition of 'non-porous' surface will clarify the range of materials which can be used to achieve minimum permeability standards for new single-family residential development, and address drainage and site design concerns.

ii. Maximum Permitted Site Coverage and Landscaping

Richmond Zoning Bylaw 8500 currently allows a maximum site coverage for a single-family dwelling of 45% of the lot area for buildings, and the total lot coverage can be no more than 70% of a lot area for all buildings, structures and non-porous surfaces combined. Richmond Zoning Bylaw 8500 also requires a minimum provision of live landscaping, ranging from 20% of the lot area to 30%, depending on the zoning of the property.

Staff continues to field public concerns regarding drainage impacts arising from new house construction, and lack of landscaping in new single family house development.

In response to these concerns staff has developed the following options for Council's consideration:

1. Status quo – no change to current maximum permitted lot coverage: 45% of the lot area for buildings, and total lot coverage of 70%, and live landscaping as follows:
   a) 20% on lots zoned RS1/A or K, RS2/A or K;
   b) 25% on lots zoned RS1/B, C or J, RS2/B, C or J; and
   c) 30% on lots zoned RS1/D, E, F, G or H, RS2/D, E, F, G or H

2. The maximum permitted lot coverage be reduced to 42% for buildings, and total lot coverage be reduced to 65% for buildings, structures and non-porous surfaces and live landscaping be increased as follows:
   a) 25% on lots zoned RS1/A or K, RS2/A or K;
   b) 30% on lots zoned RS1/B, C or J, RS2/B, C or J; and
   c) 35% on lots zoned RS1/D, E, F, G or H, RS2/D, E, F, G or H
   d) any area between the side lot line and building face is excluded from the calculation of minimum landscaped area

3. The maximum permitted site coverage be reduced to 40% for buildings, and total lot coverage be reduced to 60% for buildings, structures and non-porous surfaces and live landscaping be increased as follows:
   a) 30% on lots zoned RS1/A or K, RS2/A or K;
   b) 35% on lots zoned RS1/B, C or J, RS2/B, C or J; and
   c) 40% on lots zoned RS1/D, E, F, G or H, RS2/D, E, F, G or H
   d) any area between the side lot line and building face is excluded from the calculation of minimum landscaped area

The range of options for increasing on-site live planting would be a modest increase in planted areas, and the exclusion of side yards from the minimum planted area is proposed as few plants can survive in these shady areas. The proposed exclusion will result in an increase in viable planted areas in the front and rear yards, with better chance of survival and long-term maintenance, and more realistic and accurate calculation of required landscaped areas.

Reducing the coverage will enhance natural water infiltration into the soil, reducing the potential for post-development drainage issues, and will ensure that more of the site is used for pervious materials and landscaping. Pages 12 to 14 of Attachment 1 include a diagram of these options.

Staff review of zoning regulations in other jurisdictions indicates that 40% site coverage for buildings is a common maximum practice in a number of municipalities in the region (City of Vancouver, City of Burnaby, and the City of Surrey).

Either of the two potential bylaw amendments (Option 2 or 3 above) for front yard landscaping would reduce the amount of paved or hard surfaces on a single-family property, while maintaining adequate space for driveways and on-site parking.

iii. Front Yard Landscaping

Richmond Zoning Bylaw 8500 currently does not specify the location of minimum landscaping requirements, the result of this is front yard spaces often completely covered with impervious hard surfaces, and used for vehicle parking. Staff have taken the opportunity of the Council referrals to examine possible amendments to Zoning Bylaw 8500 to address this issue to secure a minimum percentage of the required front yard setback planted with live landscaping.

Staff has developed three options for Council's consideration:

1. Status quo – no change to existing requirements for live landscaping
2. Require that a minimum of 50% of the required front yard setback be covered in live landscaping
3. Require that a minimum of 60% of the required front yard setback be covered in live landscaping

Page 16 of Attachment 1 includes a diagram of these options.

iv. Site Coverage Regulations for Properties Zoned Agriculture (AG1)

The development of large single-family houses on lands zoned for agriculture is an on-going issue in the city.

Staff recommends applying the proposed site coverage and live planting requirements outlined above to the development of a single-family residence on properties zoned for agricultural uses. If so endorsed by Council, staff will include amendments to the AG1 Zone in the public and industry consultation described later in this report, and in the bylaw(s) presented for Council consideration.

v. Tree Planting Requirements

Retention and replacement of trees impacted through single-family re-development continues to be a concern of residents and staff. Staff proposes an amendment to the landscaping requirements for single-family residential development in Richmond Zoning Bylaw 8500 bylaw to include the following requirement:

> For a lot which contains no existing trees at the time of building permit, a minimum of two (2) trees – one (1) in the required front yard setback and one (1) in the required rear yard setback – must be planted as part of a building permit for a single detached housing unit.

Staff will also continue to secure tree replacements and enhancement through the rezoning process. Please see Page 15 of Attachment 1 for a diagram of these options.

Forward Projecting Garage and Fencing Regulations

vi. Front Entry Gates

Recent house designs in urban neighbourhoods in Richmond have featured solid masonry or brick fences and a sliding mechanical entry gate across the driveway. The presence of a sliding mechanical gate results in traffic implications, particularly on minor and major arterial roads, as a car must stop in traffic, wait for the gate to open and then enter the driveway as well pedestrian movements on sidewalks may also be impacted. Staff note that it is unlawful for the City to prohibit front yard fences or gates, but as per the *Local Government Act*, Council is able to regulate these structures, including siting, height and setbacks. Currently, Richmond Zoning Bylaw 8500 regulates the maximum height of a fence located in the front yard to 1.2 m.

Staff propose the following amendment to the regulations on fencing in Richmond Zoning Bylaw 8500:

1. A solid masonry or brick fence up to a maximum **fence height** of 1.2 m is permitted within the required **front yard setback** area, but any mechanical or manual gate must be located no closer than 6.0 m from the front **property line**.

The proposed 6.0 m setback will ensure that vehicles entering a property with a gate have adequate queuing space on-site, and do not block traffic or pedestrian movement, creating safety issues on the fronting street.

Staff note that no Building Permit is required to construct a masonry fence with an entry gate, and should these amendments be endorsed, there may be additional bylaw enforcement requirements for non-compliant fences and gates, particularly if and when a fence and gate are not constructed as part of new construction.

Page 17 of Attachment 1 includes a diagram of these options.

vii. Garage Projection

A common design element in recent single-family houses on larger lots is the construction of a large, forward – projecting three (3) car garage, with side entry (cars enter from the driveway or a central 'auto court'). The impact of this house design is a large portion of the front yard that is paved for vehicle access, and the resulting "L-shaped" house having a significant impact on the adjacent streetscape. Staff are of the opinion that an amendment to Zoning Bylaw 8500 to limit the maximum distance a front-facing garage can project from the house façade should be considered.

Staff have developed the following options for Council's consideration:

1. Status quo – no change to existing zoning as it pertains to garage placement and design
2. Require that a garage can project a maximum of 9.1 m from the front façade of the house.
3. Require that a garage can project a maximum of 7.3 m from the front façade of the house.
4. Require that a garage can project a maximum of 6.6 m from the front façade of the house.

Staff note that the minimum width for a functional side-by-side two car garage is 5.4 m (18 ft) with a 4.8 m (16 ft) wide garage door. All of the garage projections regulations proposed above would all allow construction of a functional two car garage.

Limiting the distance for garage projection as outlined in the three options above will provide an opportunity for a conventional front-facing two car garage (oriented to the fronting street), and if a third parking space is desired, the house can be designed to provide an alternative location for the third on-site parking space. Page 18 of Attachment 1 details a diagram of these options.

viii. Datum for measurement of building height

Through the on-going review of single-family building massing and house design, staff have noted that the current method of calculating building height utilizes a complicated calculation based on the finished grade at the corners of the property and the four corners of the building foundation, and an average of these elevations, and reflects the definition in Zoning Bylaw 8500:

> **Grade, finished site** means in Area 'A', the average ground elevation identified on a lot grading plan approved by the **City**, not exceeding 0.6 m above the highest elevation of the crown of any public **road abutting** the **lot** unless approved by the **City**.

Staff note that the finished grade definition refers to Area A (generally West Richmond and Steveston, north of Moncton Street), while Area B (the remainder of the City). Area B has more stringent flood control levels.

In order to simplify this procedure, staff have prepared two options for addressing the definition of **grade, finished site**:

1. Status quo – no change to zoning bylaw and the measurement point for finished grade; as it pertains to garage placement and design

2. Amend the bylaw to Grade, finished site means in Area 'A', the average ground elevation identified on a lot grading plan approved by the City, not exceeding 0.3 m above the highest elevation of the crown of any public road abutting the lot.

Staff is of the opinion that utilizing this simpler method of calculating building height from the datum at 0.3 above the crown of the road, will further reduce the height and massing of single-family houses.

Public Consultation

Similar to the consultation approach utilized in the 2015 building massing amendments, staff recommend direct consultation with the public and the building industry.

Public information meetings/open houses will be held, open to both the public and industry representatives, and staff proposes direct consultation (by letter) to the following:

- Urban Development Institute (UDI);
- Richmond Small Home Builders Group; and
- Greater Vancouver Home Builders' Association

Staff propose two public information meetings to be held at Richmond City Hall, from 6:00 pm to 8:00 pm, to provide attendees with an opportunity to review display panels of the proposed amendments, and complete a comment sheet to provide their feedback. All responses received will be summarized in the subsequent staff report for introduction of the amending bylaw(s).

Proposed Open House / Information meeting dates:

January 10 – 6:00 pm to 8:00 pm – City Hall / Council Chambers

January 12 – 6:00 pm to 8:00 pm – City Hall / Council Chambers

Staff will contact UDI, the GVHBA and the Richmond Small Builders directly, the meetings will be advertised in the local newspaper, and will have an information page on the City's Website.

The public will have an opportunity to further comment on the proposed amendments at the required Public Hearing, should Council endorse the bylaw amendments to proceed.

Conclusion

Staff have identified a number of potential measures for the regulation of single-family residential building massing. These potential measures address a range of areas associated with current house design and construction trends that were the subject of a referral and frequent public comments.

It is recommended that the potential amendments to Zoning Bylaw 8500 be received and staff be authorized to proceed to public and industry consultation.

for Barry Konkin
Program Coordinator, Development

James Cooper
Manager, Plan Approvals

BK:rg/blg

Attachment 1: Massing Regulation Sketches

Proposed Amendments to Single Family Zoning in Bylaw 8500

Single-Family Dwelling Building Massing Regulation – Second Phase

Richmond

2016-10-31

Proposed Amendments to Single Family Zoning in Bylaw 8500

Single-Family Dwelling Building Massing Regulation – Second Phase

This study is in response to Council's Referral to address privacy issues associated with rear yard conditions in single family neighborhoods. In previous public discussions presented in Planning Committee and Public Hearing, there have been concerns raised about an erosion of privacy in backyard, outdoor spaces due to overlooks from newly constructed houses. The current study provides for analysis and recommendations addressing these potential privacy issues as well as related issues of side yard projections, measurement of overall building height, and orientation of second storey decks to the rear yard as per direction from the original referral.

Analysis:

Current trends in single family home construction maybe contributing to the back yard privacy issues. These include:

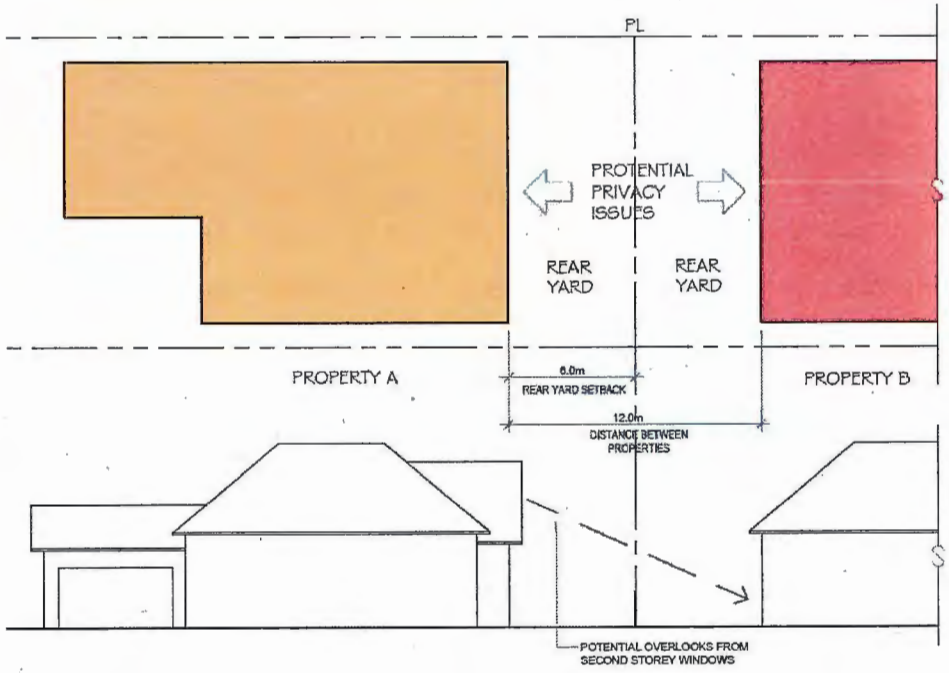
1. Construction of larger, 2-storey homes that in general occupy a greater percentage of the lot and have substantially higher overall building heights than existing neighbors.

2. New homes tending to have higher floor to floor heights results in higher second storey windows that present overlook situations into neighbors' rear yards and existing windows.

3. Side entry front garages that have the effect of locating the house toward the rear of the lot at the expense of rear yard depth.

4. High ceiling spaces in rear facing family and living rooms producing rear facades that are higher, more expansive, and convey a greater sense of building mass than traditionally constructed in Richmond neighborhoods.

These factors tend to produce situations where there may be undesirable second storey overlooks into neighbors' rear yards as well as rear facing exterior walls that present an overly massive presence to the neighbor. The combination of these contributes to a sense of compromised privacy for rear yard outdoor space. Such compromises have been described by many residents as reducing their ability to enjoy their homes and private outdoor spaces.



EXISTING CONDITION

Richmond

Single-Family Dwelling Building Massing Regulation – Second Phase

MAXIMUM DEPTH OF HOUSE

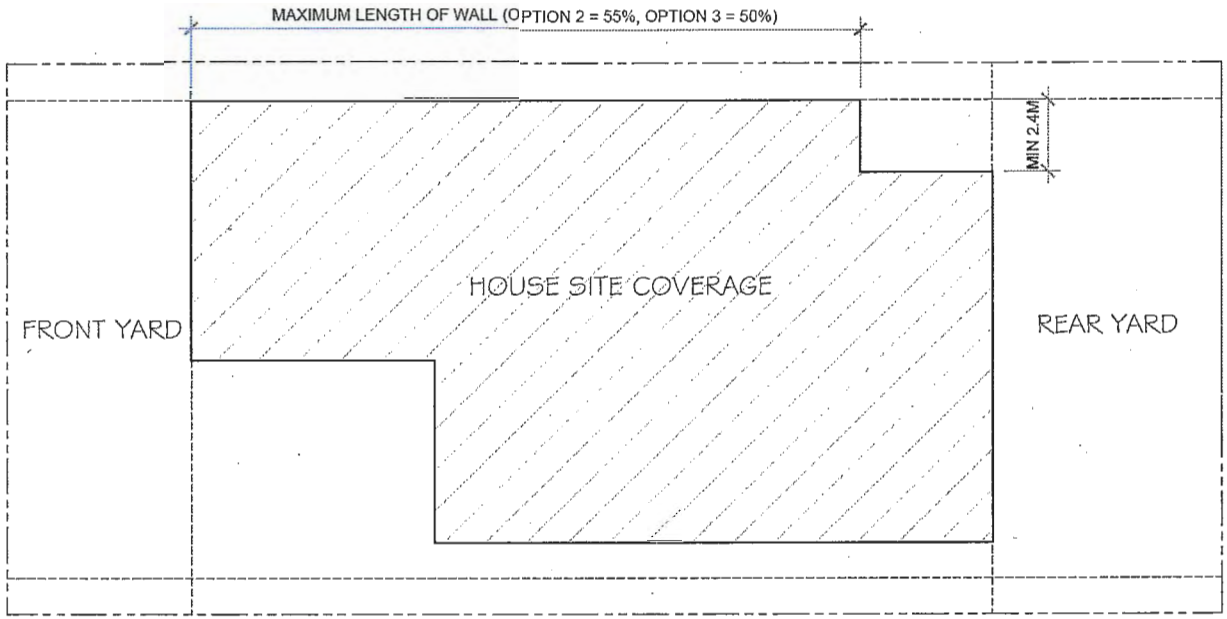
OPTION 1 (STATUS QUO): NO LIMITATIONS TO OVERALL DEPTH OF HOUSE (6 M FRONT AHD REAR SETBACKS)

OPTION 2: CONTINUOUS LENGTH OF WALL LIMITED TO 55% OF TOTAL LOT DEPTH

A continuous wall is defined for this purpose as one without a minimum inward articulation of 2.4 m or more.

OPTION 3: CONTINUOUS LENGTH OF WALL LIMITED TO 50% OF TOTAL LOT DEPTH

A continuous wall is defined for this purpose as one without a minimum inward articulation of 2.4 m or more.



Single-Family Dwelling Building Massing Regulation – Second Phase

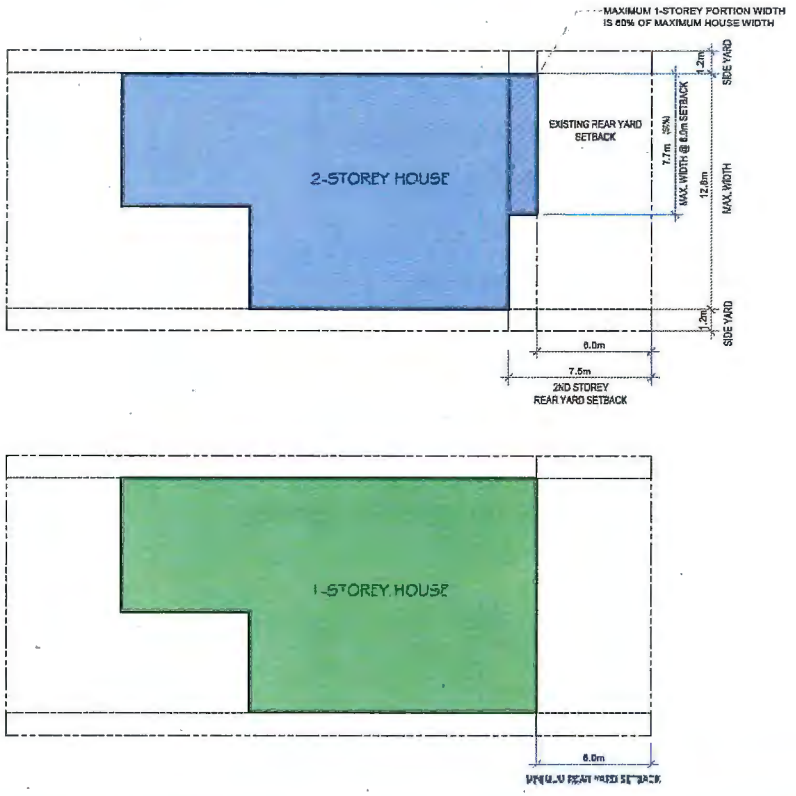
REAR YARD SETBACKS

OPTION 1 (STATUS QUO): Continue to require 6 m minimum rear yard setback.

OPTION 2: Rear yard setback is 6.0 m for the first storey, limited to a maximum of 60% of the wall facing the rear property line, and the remaining 40% of the rear wall will have a minimum setback of 7.5 m.

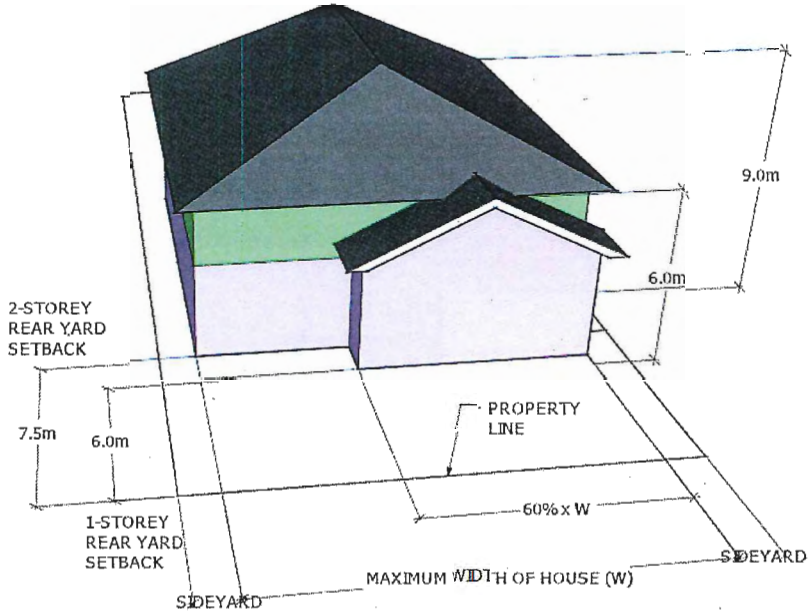
Any second or half storey above will have a minimum rear yard setback of 7.5 m.

Exception: Lots less than 28.0 m deep and less than 372 m2 in area will have a minimum rear yard setback of 6.0 m.

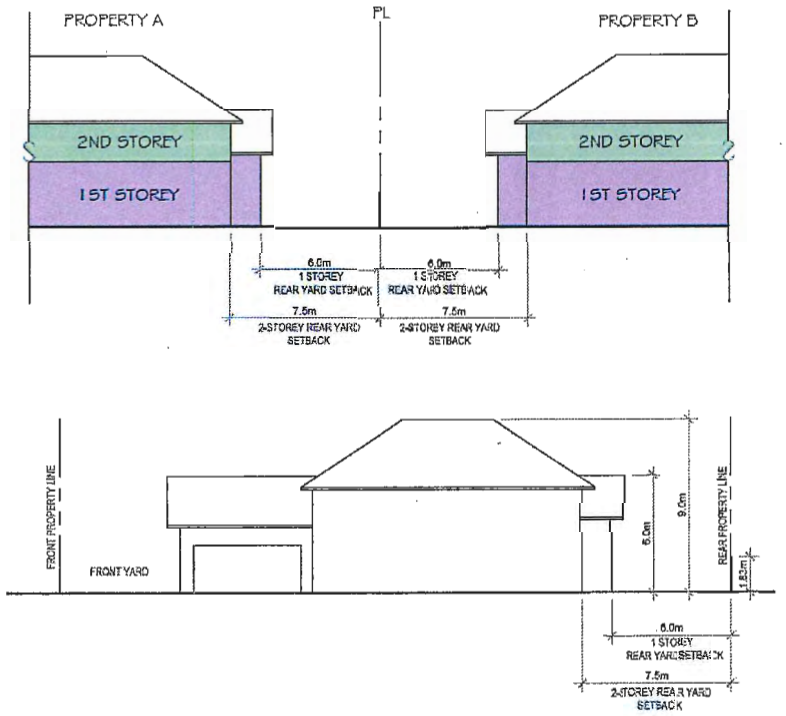


Single-Family Dwelling Building Massing Regulation – Second Phase

OPTION 2: Illustrations



MASSING DIAGRAM



SITE SECTION DIAGRAMS

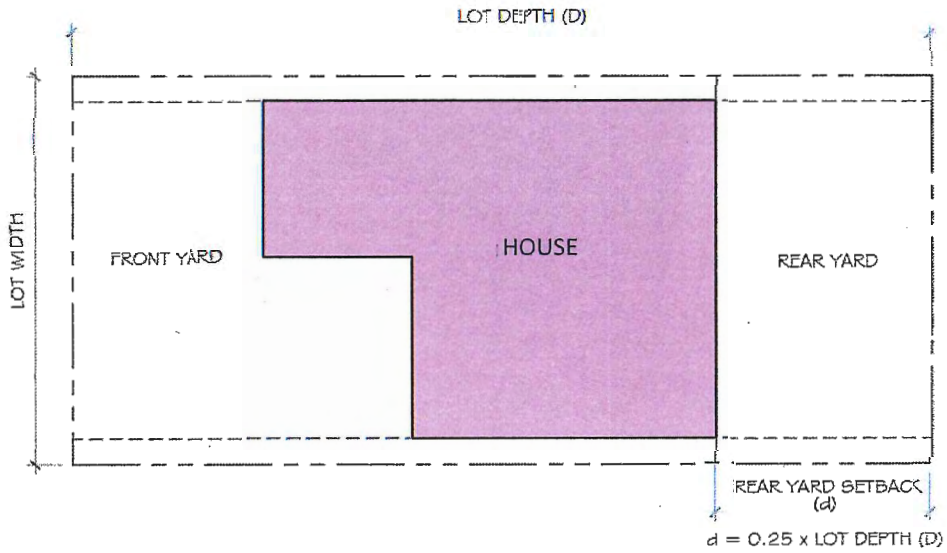
REAR YARD SETBACK—FUNCTION OF LOT DEPTH

OPTION 3:

The minimum rear yard setback is the greater of 6.0 m, or 25% oft he total lot depth, up to a maximum set-back of 10.7 m.

Exception:

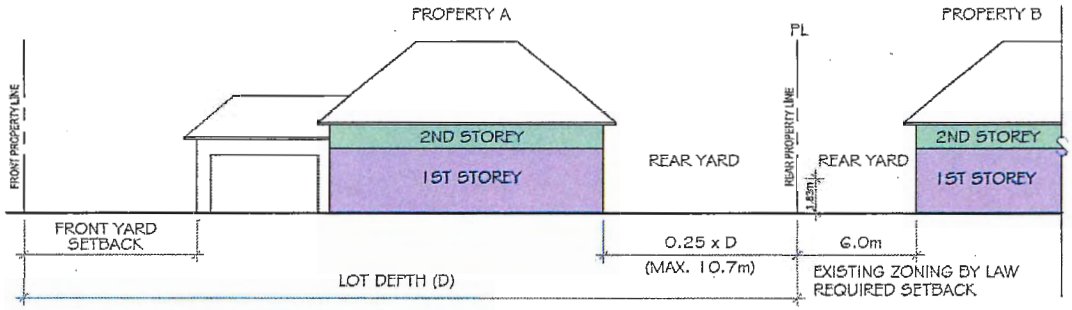
No change for lots less than 28 m in depth. For these lots, the minimum rear yard setback will be 6.0 m.



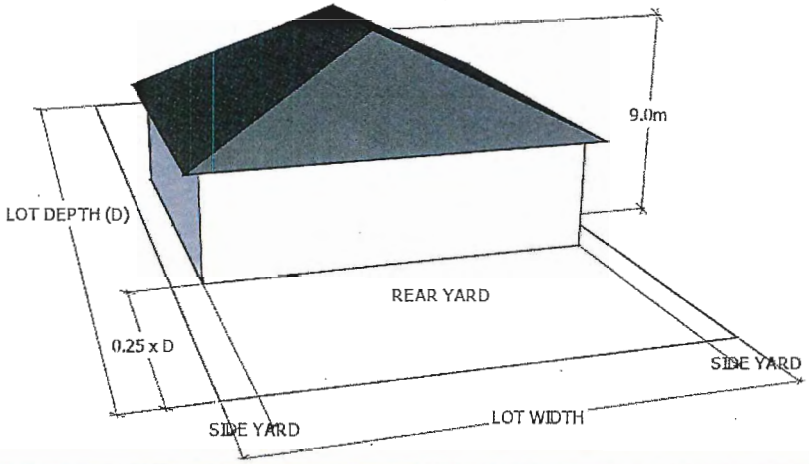
PLAN VIEW

Single-Family Dwelling Building Massing Regulation – Second Phase

OPTION 3: Illustrations

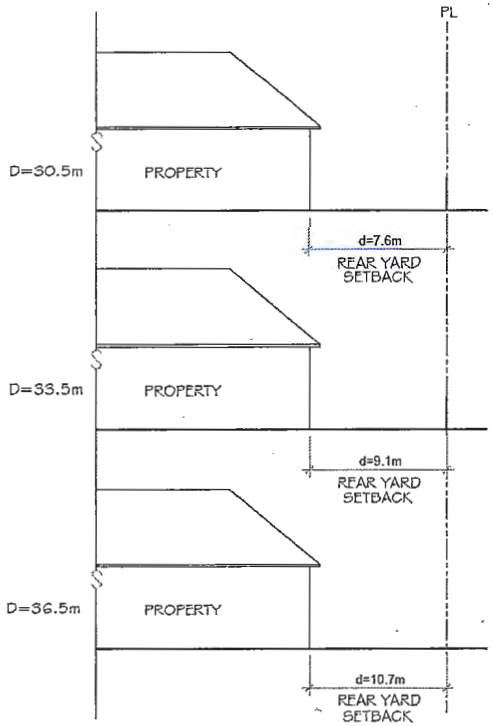


SITE SECTION



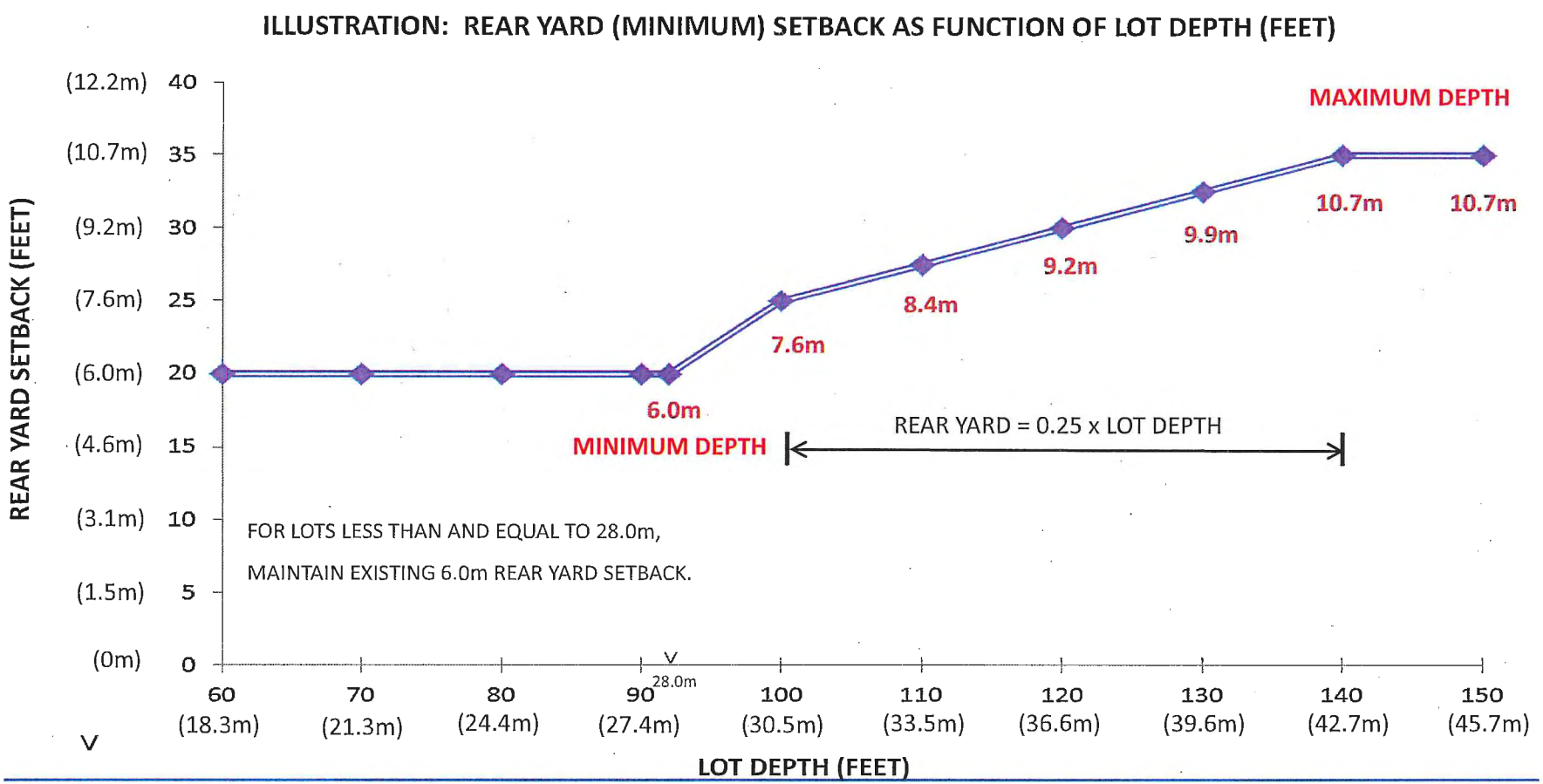
MASSING DIAGRAM

EXAMPLES:



CROSS SECTION

Single-Family Dwelling Building Massing Regulation – Second Phase



Single-Family Dwelling Building Massing Regulation – Second Phase

REAR YARD SETBACKS FOR DETACHED ACCESSORY BUILDINGS GREATER THAN 10m²

OPTION 1 (STATUS QUO): 1.2M MINIMUM REAR YARD AND 1.2M MINIMUM SIDE

OPTION 2:

The minimum rear yard setback for a detached accessory building is:

1.2 m for a detached accessory building with a continuous wall facing the rear property line less than 6 m in width;

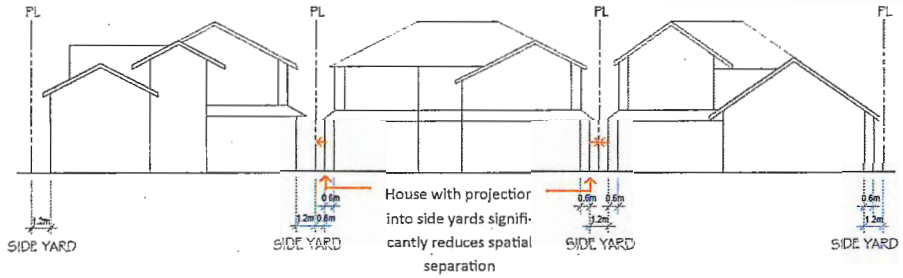
2.4 m for a detached accessory building with a continuous wall facing the rear property line greater than 6.0 m in width

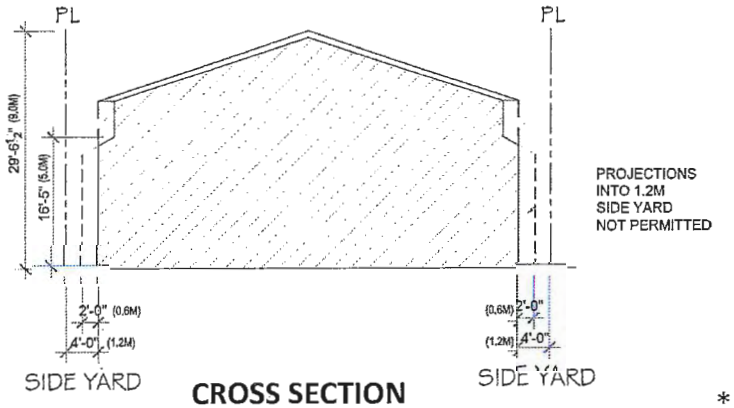
PROJECTIONS INTO REQUIRED SIDE YARD SETBACKS

OPTION 1 (STATUS QUO): Continue to allow a 0.6 m wall projection into required side yard setbacks

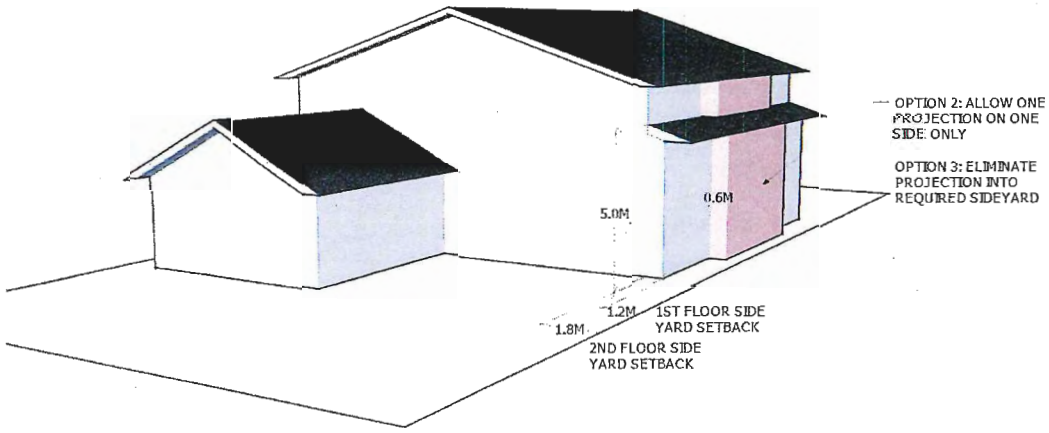
OPTION 2: Allow one 0.6 m wall projection into required side yard setbacks, for a maximum of 1.8 m length on one side of the house only.

OPTION 3: No projections permitted into required side yard setbacks.





CROSS SECTION

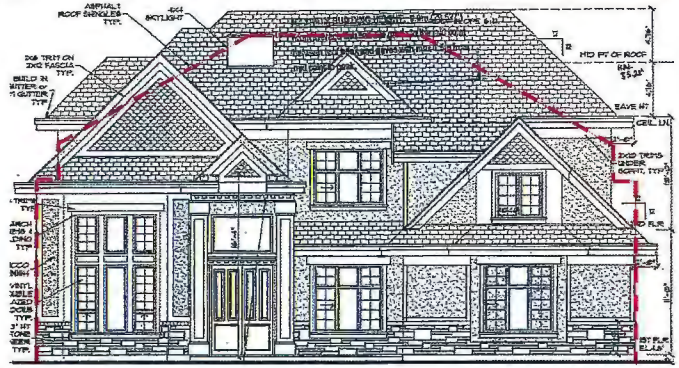


MASSING DRAWING

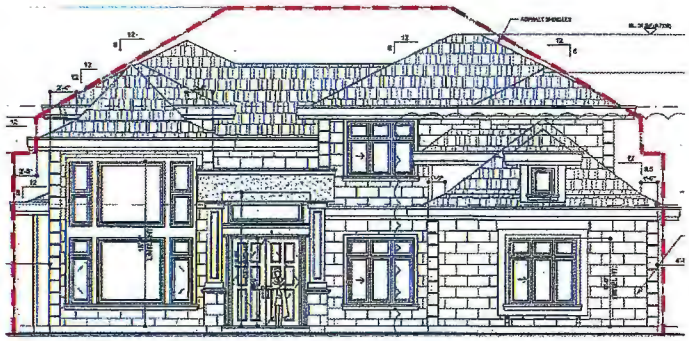
* ELIMINATION OF PROJECTIONS (PINK PORTIONS) INTO REQUIRED SIDEYARDS

Single-Family Dwelling Building Massing Regulation – Second Phase

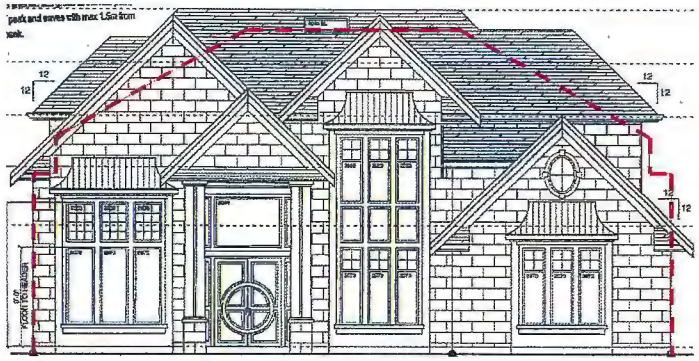
BUILDING MASSING IMPROVEMENTS SINCE THE ADOPTION OF VERTICAL LOT WIDTH ENVELOPE CHANGES IN 2015



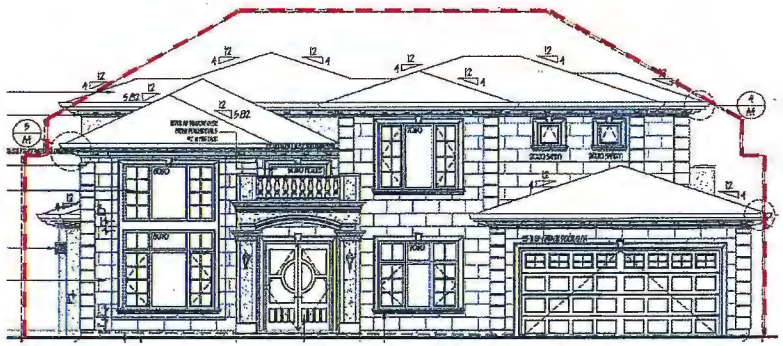
EXAMPLE 1



EXAMPLE 1



EXAMPLE 2



EXAMPLE 2

House design permitted under previous building envelope regulations prior to September 2015

House design complying to vertical building envelope regulations introduced with zoning amendments September 2015

Single-Family Dwelling Building Massing Regulation – Second Phase

LOCATION OF DECKS

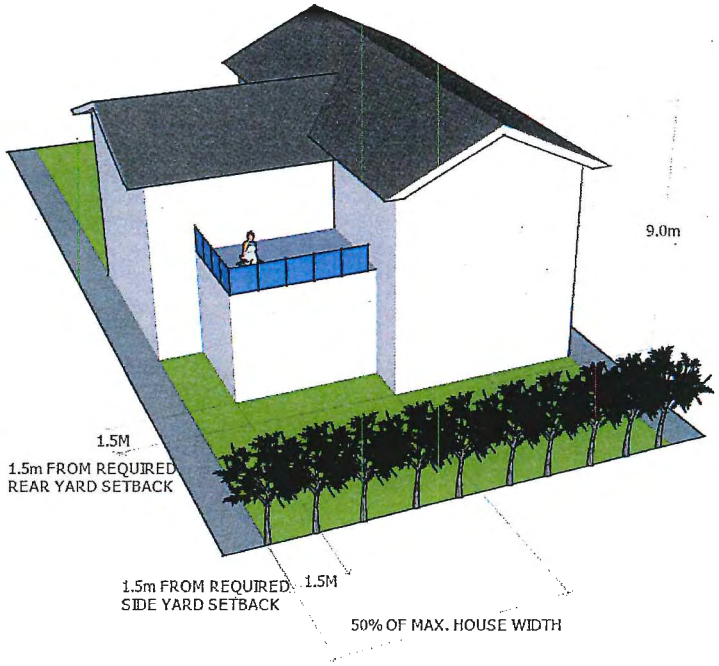
OPTION 1 (STATUS QUO): NO RESTRICTIONS ON LOCATION AND SIZE OF 2nd STORY DECKS

OPTION 2:

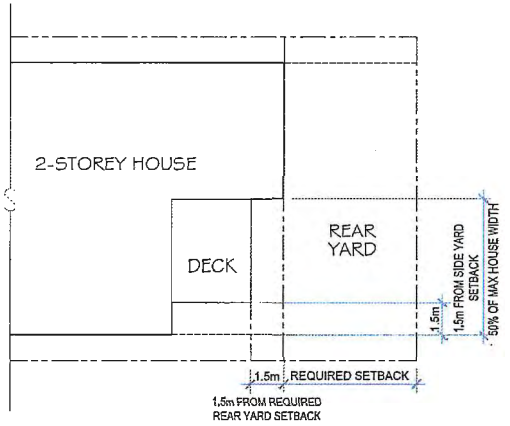
Any deck located on the rear of a single family dwelling shall be set back an additional 1.5 m from the required rear yard setback of the zone,

An additional 1.5 m setback from the required side yard setback of the zone;

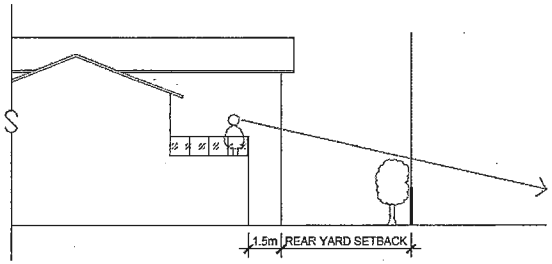
No deck structure shall exceed 50% of the total continuous wall against which it abuts.



MASSING DIAGRAM



PLAN



SECTION

CNCL - 250

Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

BUILDING AND OVERALL SITE COVERAGE

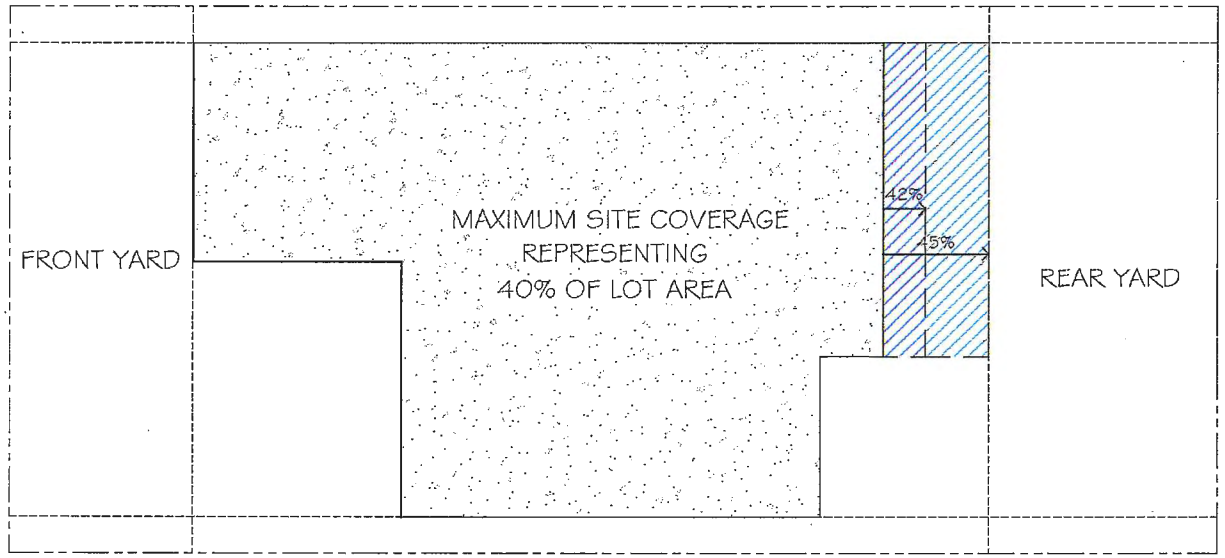
OPTION 1 (STATUS QUO):

45% building site coverage/ 70% overall coverage.

OPTION 2: Decrease the Lot Coverage to 42% building site coverage/ 65% overall coverage.

OPTION 3: Decrease the Lot Coverage to 40% building site coverage/ 60% overall coverage.

Exception: building lots smaller than 375 m^2 exempt from reductions in building site coverage which will remain at 45%.



Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

SITE COVERAGE

OPTION 1, STATUS QUO: Maximum of 45% coverage for buildings; total lot coverage of 70%. Minimum % of lot area for live landscaping :

a) 20% on lots zoned RS1/A or K, RS2/A or K;

b) 25% on lots zoned RS1/B, C or J, RS2/B, C or J; and

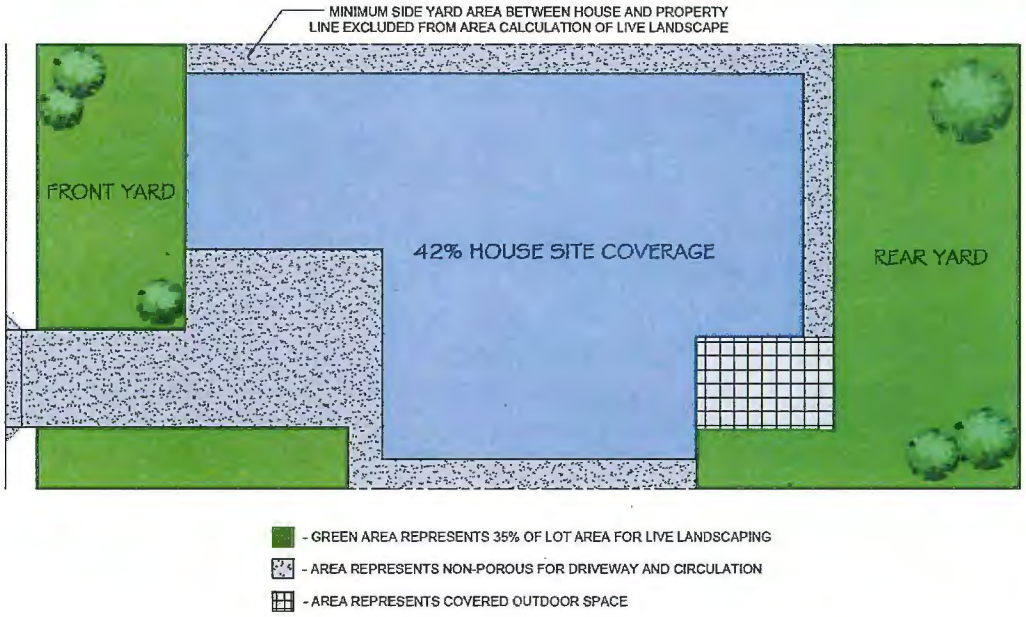
c) 30% on lots zoned RS1/D, E, F, G or H, RS2/D,

OPTION 2: Maximum of 42% for buildings; total site coverage of 65% . Minimum % of lot area for live landscaping:

a) 25% on lots zoned RS1/A or K, RS2/A or K;

b) 30% on lots zoned RS1/B, C or J, RS2/B, C or J; and

c) 35% on lots zoned RS1/D, E, F, G or H,



d) any area between the side lot line and building face is excluded from the calculation of minimum landscaped area

Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

SITE COVERAGE (continued)

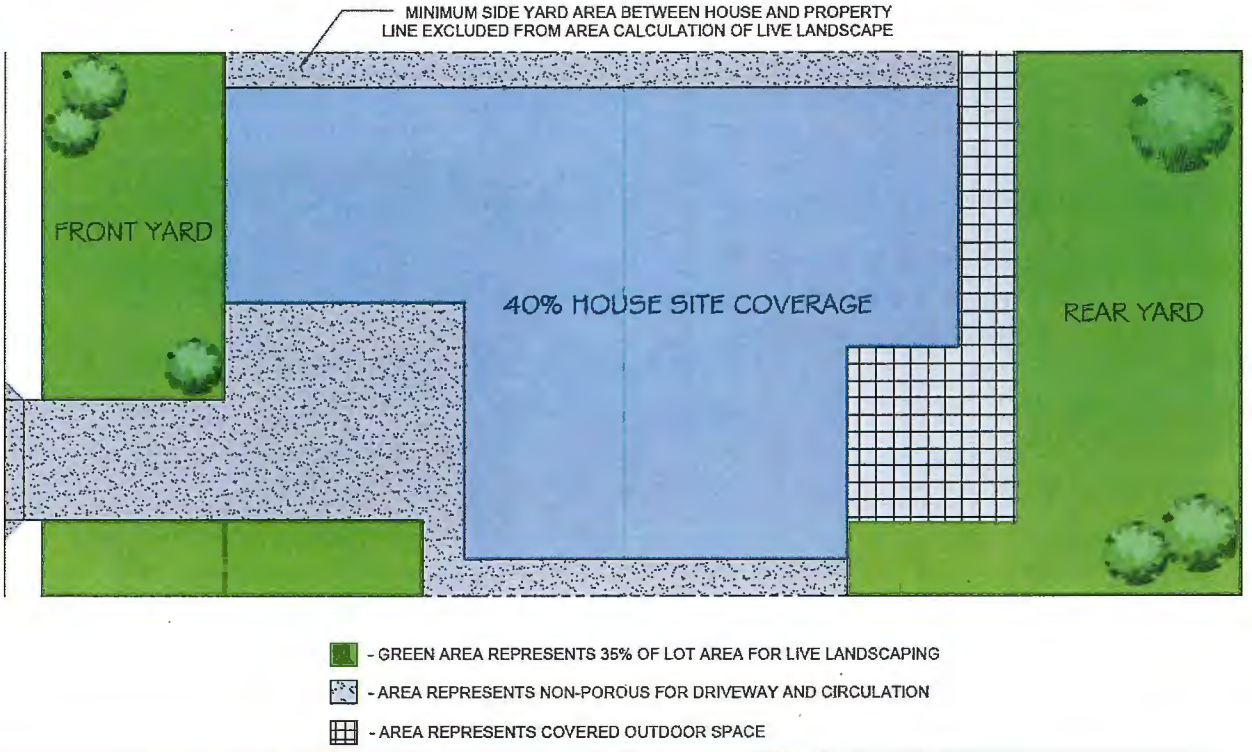
OPTION 3: Maximum 40% for buildings, total site 60%. Minimum % of lot area as live landscaping:

a) 30% on lots zoned RS1/A or K, RS2/A or K;

b) 35% on lots zoned RS1/B, C or J, RS2/B, C or J; and

c) 40% on lots zoned RS1/D, E, F, G or H, RS2/D, E, F, G or H

d) any area between the side lot line and building face is excluded from the calculation of minimum landscaped area



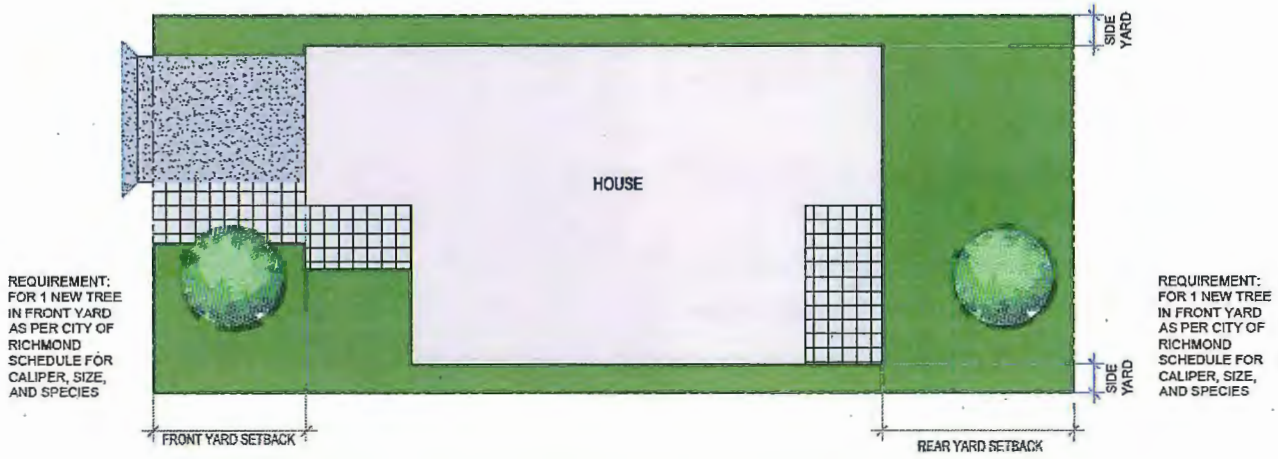
Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

TREE PLANTING FOR DEVELOPMENTS WITH LESS THAN TWO EXISTING TREES ON SITE

OPTION 1 (STATUS QUO): No requirements for new tree planting.

OPTION 2: Landscaping criteria to provide for one new tree to be planted in the front yard and one in the rear yard as per City of Richmond Schedule for Caliper, Size and Species.

EXCEPTION: There is no requirement if trees are existing in number and distribution meeting the minimum.



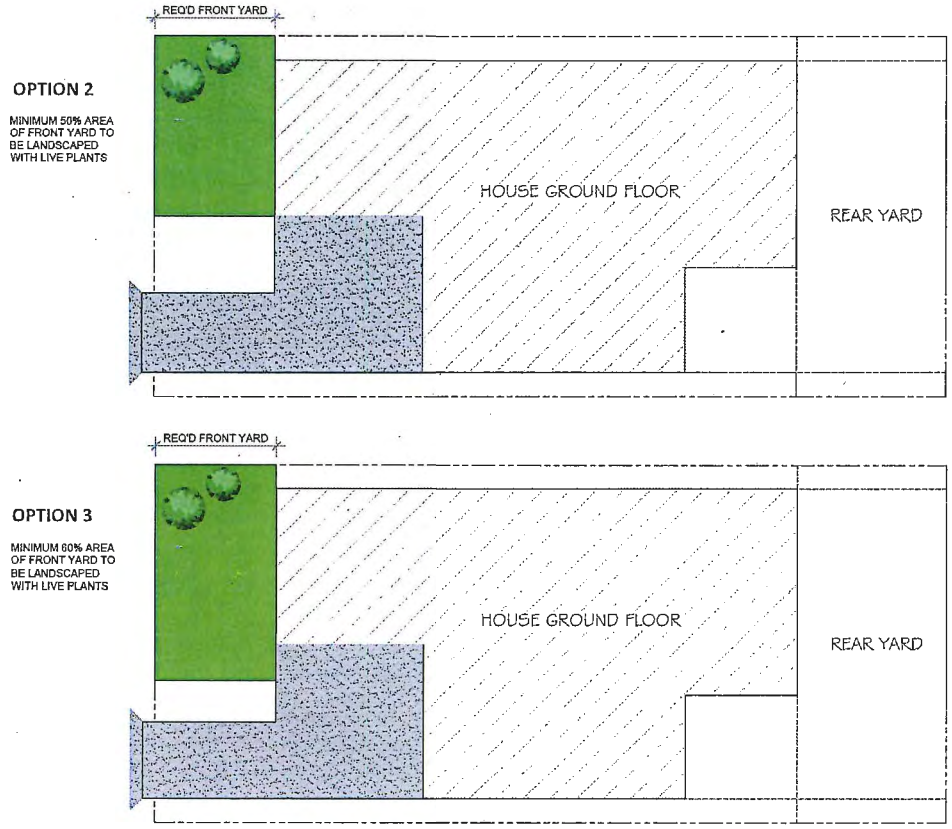
Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

MINIMUM FRONT YARD LANDSCAPING REQUIREMENTS

OPTION 1 (STATUS QUO): No change to existing requirements for live landscaping

OPTION 2: Require that a minimum of 50% of the required front yard setback be landscaped

OPTION 3: Require that a minimum of 60% of the required front yard setback be landscaped



Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

ENTRY GATES

OPTION 1 (STATUS QUO):

No restrictions on position of entry gates.

OPTION 2: A front entry gate shall be permitted, but shall be no higher than 1.2 m, and have a minimum setback of 6 m from the front property line.

Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

GARAGE PROJECTIONS

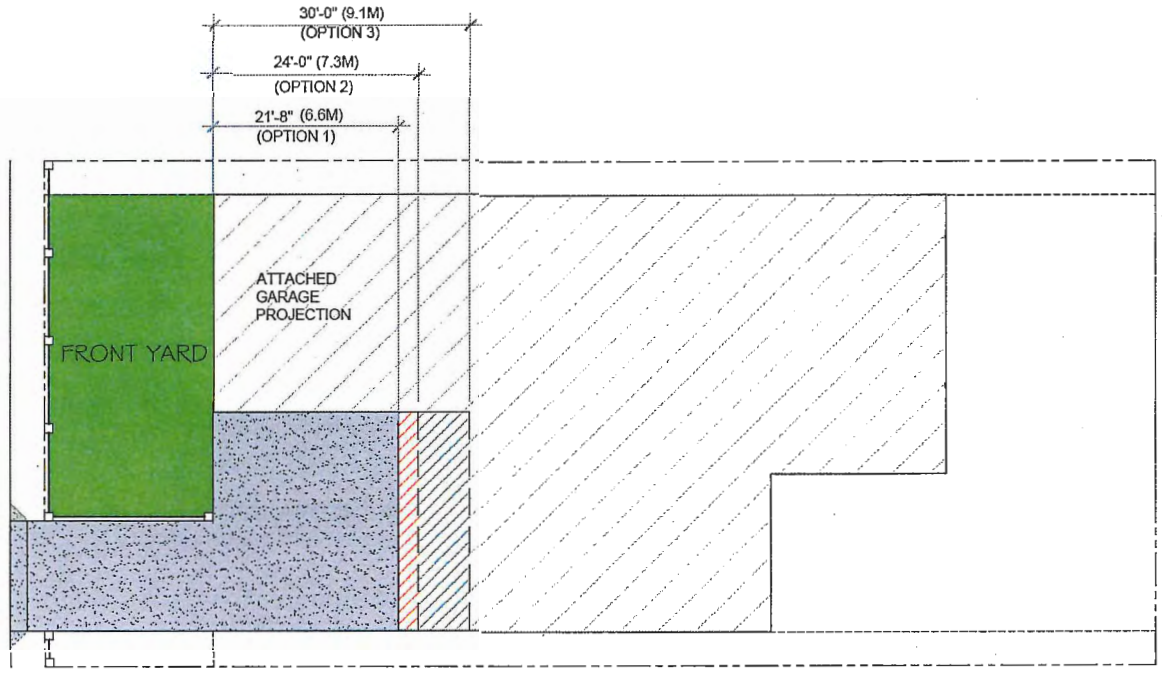
Garage Projections

OPTION 1 (STATUS QUO): No restrictions on front garage projections

OPTION 2: 9.1m Projection from front wall to front wall of garage (Three-car garage)

OPTION 3: 7.3 m Projection from front wall to front wall of garage (Two-car garage)

OPTION 4: 6.6 m Projection from front wall to front wall of garage (Two-car garage minimum)



Single-Family Dwelling Building Massing Regulation – ITEMS FOR CONSIDERATION

PROPOSED REFERENCE DATUM FOR MEASURING BUILDING HEIGHT IN AREA "A"

MAXIMUM BUILDING HEIGHT =9.0 M FOR SLOPED ROOFS, 7.5M FOR FLAT ROOFS

REFERENCE POINT FOR MEASUREMENT WILL BE 0.3m ABOVE HIGHEST CROWN OF ROAD

Measuring Building Height

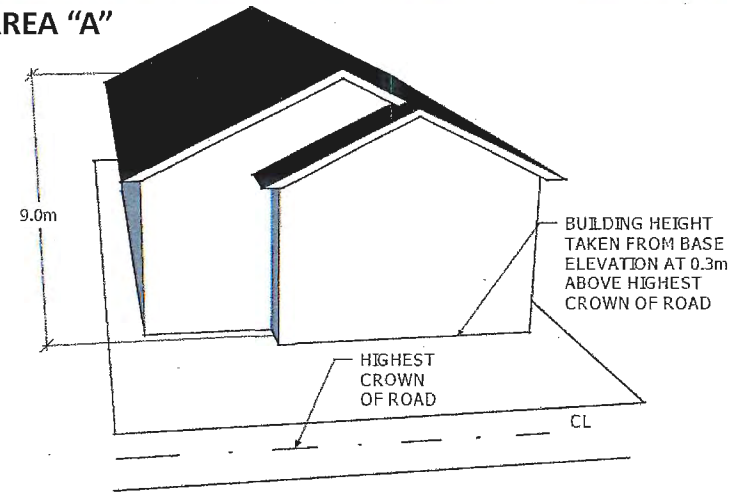
As part of the referral instruction, the method for measuring overall Building Height is part of this study. The maximum overall building height is currently measured from a base datum to the highest peak, ridge or parapet of roof. Currently, this base datum is the "Average Finish Site Grade" as calculated from the finish elevations at the corners of the lot and the proposed grade around the building.

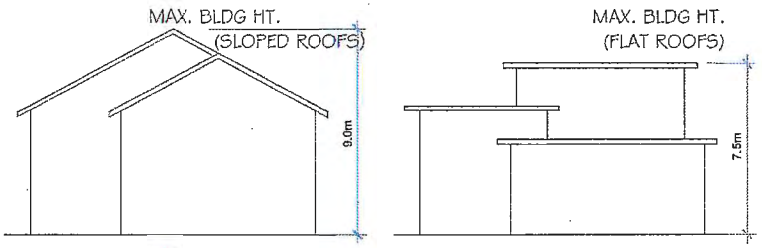
The proposed recommendation seeks to simplify the process for determining the base datum for overall building height measurement in order to affect the following improvements:

1. In Area A, the base datum for measurement of overall building height shall be from .3m above the highest crown of road facing the front yard.

2. This links the overall maximum height of structures to the common datum of the neighborhood street, ensuring consistency at the point of measurement despite manipulations of the land necessary to meet the flood control requirement.

3. It also facilitates easier verification of the maximum height by inspectors on site. Currently, the "average finished site grade" is typically not viewable as a discernible point on the construction site, making it difficult for inspectors to readily verify building height.





BUILDING HEIGHT TO BE MEASURED TOP OF GROUND FLOOR = MAXIMUM 0.3M ABOVE MAXIMUM CROWN OF ROAD