

Summary of Comments Received from the March, 2014 Circulation

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Guiding Principles/Overall message received from comments:

Rationale for these amendments

These objectives were established through collaboration with stakeholders in Summer 2013

- To solve the issue of walkout basements having to go to notices (class B permit) for most applications;
- To solve the issue of walkout basements and drive under garages having to go to notices, even if they are within the allowable maximum height, due to how storeys are regulated;
- To solve the issue in new neighbourhoods where an identical house is proposed on two lots, and one is approved and the other is not;
- To enable four-storey residential multi-unit development with a five/twelve pitched roof to be built on a large site, without going to notices;
- To adapt to new construction technologies and techniques, such as larger joists, flat-roofed buildings, and reflect conventions used (i.e. four/twelve pitch instead of 18.4 degrees)
- To accommodate changing expectations in the housing market, including narrower lots, usable basements, higher ceilings, steeper roofs, etc.;
- To improve the uniformity of decisions by Development Officers, reducing discretion of interpretation, and convey precisely what is allowed to be built on a parcel while still allowing a range of housing types and building styles;
- To solve the issue of changing how average grade elevation is determined in order to get around storey calculations or maximum height requirements;
- To improve the clarity and conciseness of definitions and explanatory images, ideally harmonizing with superior legislation (Alberta Building Code, Municipal Government Act, etc.);
- To clarify when additional information ought to be required, and what would be considered an acceptable outcome (i.e. shadow and wind studies);
- To remove barriers to infill development, while balancing individual property rights with society interests;
- To ensure privacy by minimizing overlook, and to minimize shadowing;

Process

Comments received

We are happy with the meaningful consultation with stakeholder groups, and the willingness to work through issues to find something that works.

I commend you for a very comprehensive and thorough undertaking.

Changes

Comments received

- The changes effectively address many issues with the current Bylaw including walkout basements, definitions, and measuring height to the peak just to name a few.

- The proposed rules need to be modeled/tested.
- The rationale for changes needs to be strengthened and the implications of the changes need to be communicated.
- The proposed rules seem overly complicated/difficult to administer/confusing to interpret. The provisions in the Bylaw related to height and grade need to be definitive and as simple as possible. The proposed amendments needlessly increase the complexity of regulations related to both grade and height.
- Additional collaboration with internal and external stakeholders is essential before these amendments proceed to Council.
- There is concern with policy creep of Mature Neighbourhood Overlay regulations out to Greenfield areas (and even recently developed areas).
- Do not put Mature Neighbourhood Overlay regulations into the general bylaw.
- The Mature Neighbourhood Overlay should be replaced with simpler regulations for infill development that don't increase costs relative to greenfield development.
- Regulations must not force unique building design for each lot.

Options for changes

- To address the complicated nature of some of the proposed amendments, it is possible to incorporate more images (or update existing) into the bylaw amendment to show what the regulations are intending to convey.
- In order to provide the flexibility to apply to multiple building forms, while still providing certainty in what is allowed to be built, more complicated regulations are required. In order to simplify the regulations, the amendment would either have to reduce the certainty by giving the Development Officer more discretion, or it would have to be a one-size-fits-all regulation, which does not have the ability to regulate the three-dimensional size of the third storey as effectively as more complicated regulations.
- Changes to the Mature Neighbourhood Overlay are largely out of scope of this amendment, and the proposed regulations will be reviewed to clarify wording with regard to Mature Neighbourhood Overlay policy creep.
- There was never intent to force a unique building for each lot.

"Parking Lot"

Comments received

- The Mature Neighbourhood Overlay creates barriers to infill, and results in higher densities in new neighbourhoods.
- Civic buildings, landmarks and heritage buildings (need to) be proportionally larger than their surroundings to indicate their importance to civic society. These would need to be indicated in plan prior to development. A grand building or an architecturally innovative building may seem out of place, but may become a landmark building over time despite not fitting into an area at time of construction.
- The regulations are not meant to delay projects unnecessarily. When a proposed development goes to notices, it should be for good reason, and not for minor things that don't change the type or use of the building (ex. a single detached house that is one metre taller in height, still results in a single detached house). What is important is the principles used to determine the numbers used for the regulations.
- The front of the buildings facing the street form the block face, together framing and enclosing the street, and giving visual cues regarding the use and importance of the street. The relationship of

buildings to the street is important to urban design, so the building height should relate to the street widths. The purpose and context of the street is important and not considered with the current regulations.

- Focus on resulting streetscapes. Measure perception of height from the pedestrian scale on the street/sidewalk.
- Move towards a performance based zoning. If the proposed development is outside of the “painted lines” but meets the objectives that are the intent of the bylaw, then that should be a viable option without going to notices. Similar setup to the Building Code, where there are minimum standards, but if you provide an engineers stamp, then it will be ok.

Storeys:

Issue: Usefulness of Storeys as a regulation

Comments received

- Height determination techniques should properly interpret the impact of the three-dimensional size of the proposed building. The number of storeys really shouldn't matter. What does matter is how tall the building will appear to the observer in the street.
- If the building form is regulated, it is not clear why the number of storeys is necessary, especially for low-density residential.
- The number (i.e. ten metres) is less important to height than how things fit together. Height is felt at street level, not at the ridge line so the numerical height doesn't make a difference at the pedestrian level. The floor count does make a difference to the perception of height.
- The team landed on keeping reference to 'floors' as important to addressing concerns with building form, but believe that there is no real purpose to identification of a 'basement' as a special type of floor.

Options for changes

Eliminate storeys from the bylaw, only relying on maximum numerical height.

Keep storeys and height as proposed in the amendments.

Recommended option

Host a workshop with stakeholders to determine the appropriate direction for the continued use of Storeys.

Rationale

There are good arguments to keep storeys and to eliminate storeys. Keeping storeys creates complications for flexibility in building design, particularly in regard to basement height, drive under garages, and walkout basements. Eliminating storeys reduces options for creating nuanced regulations for the three-dimensional size of a building.

Issue: Basements, Walkouts and Drive-under garages

Comments received

- Do not count a drive under garage or walkout basement as a storey. Height is already limited by the criteria for sloping sites and measured from grade – this will regulate the overall three-dimensional size and height of this built form.
- Regulating the number of storeys becomes problematic when the basement level becomes a storey. This often results in a development within the numeric height requirement but fails based

on the number of storeys. This also brings into question the manner in which grade is established and more importantly, the underlying objective since the building is within the required height.

- Eliminate reference to basement and only refer to total number of storeys. Basement should not be defined in reference to the height above the ground.
- There is no real purpose to identification of a 'basement' as a special type of floor.

Options for changes

- Do not include basement/drive under garage as a Storey, and regulate Storeys as the bylaw does now, so that no elevation is more than three storeys. (no change from what is currently approved).
- Include basement/drive under garage as a storey as is currently proposed in the amendment (no change from the spring 2014 draft).
- Continue to regulate storeys, but create an exception for particular building types.
- Include basement/drive under garage as a storey, but change how a storey is calculated so that the number of storeys is based on what is shown on front and rear elevations, not the entire structure.
- Do not regulate storeys, and rely only on the numerical height requirement.

Recommended option

Host a workshop with stakeholders to determine the appropriate direction for the continued use of Storeys.

Rationale

The existing regulations and proposed draft regulations work well in typical situations, but both fall short of accommodating all situations. One way to address the atypical situations is to create exceptions for those specific scenarios, but that is not an elegant solution. Allowing storeys to be relative to the building façade would likely work for the situations where the existing regulations and draft regulations fall short. However, eliminating storeys as a requirement would be the simplest way of addressing the possibility of exceeding the number of storeys while still being substantially below the maximum numerical height allowed in the zone.

The workshop would also endeavour to find an acceptable, simple way to regulate the three-dimensional size of the third storey of a ground-oriented building, yet not act as a barrier to development, particularly in infill situations.

Issue: Related parts of the Bylaw

Comments received

With the RF5 and Community Services Zones (CS1, CS2, CS3, CS4), the Density regulations must also change so that three storey Row Housing with the lower storey drive under garages can be developed up to the maximum 54 Dwellings per hectare. This change goes hand-in-hand with the change to three storeys in these Zones - if you do one without the other, the problem is not solved.

Recommended option

Verify that the proposed amendments maintain the intent of the affected zones.

Rationale

The intent of the proposed amendments, namely changes to how height is measured, is to simplify the calculation, and improve the uniformity of decisions. It is not to change the maximum density permitted in a zone, or to reduce the amount of floor area that can be built on a site.

Stepbacks and third-storey three-dimensional size:

Issue: Proposed changes to Section 52.4-Regulation of three-dimensional size of the third storey

Comments received

- We fully support regulating the three-dimensional size of the third story of small scale housing types, but feel that the current amendments do not achieve this end. In their current form, the proposed regulations create incentives for certain architectural features, namely steeper roofs, by allowing greater height to achieve these styles.
- Proposed changes to Section 52 are overly complex. This complexity can be avoided if the Development Officer can vary the height regulations in certain circumstances and under specific direction. Innovation needs to be encouraged through clear and less restrictive regulations.
- For example, the development authority may vary the height to a maximum of (x metres) if, in his/her opinion, the additional height does not pose an adverse three-dimensional size effect in relation to adjacent developments due to the roof design or the size and location of the building that exceeds the height requirement. Considerations (shall/should) include location and size of gable ends, dormers, large uninterrupted walls, etc. Variances to height may be considered for innovative building style, use of sustainable technologies, steep roof pitch where gables do not face adjacent developments (side) or flat-roofed developments.
- The rules still make it very difficult to build a loft into a third floor.
- Giving a height bonus based on the roof style and/or pitch will bring into question the interpretation of the built form. Many developments have complex roof design and as such, there will be instances when the development authority will need to apply discretion of interpretation (as opposed to discretion of variance, which can be appealed).
- Using degrees is complicated. Instead of using degrees, pick a Stepback that approximates what the degrees will accomplish and use that regulation instead.
- Combination roofs are not contemplated in these proposed amendments. How would combination roofs be handled, especially in regard to what height bonus they would get? Also, what slopes should be used to determine the height bonus? For example, if you have a hip roof, the slopes that form the ridge could be four/twelve pitch, whereas the slopes that form the hip could be eight/twelve.
- The proposed Stepbacks will not allow a reasonably sized third Storey to be built on narrow lots. We suggest that there be no side setback for narrower homes less than 40 feet wide, and that a side setback be implemented for any homes equal to or greater than 40 feet wide. Furthermore, rooftop stair access should be allowed to be built to the exterior wall on one side to enable the interior stair systems to be continuous. The allowance could be similar to the dormer allowance in the Mature Neighbourhood Overlay. Stepback from the street frontage should still be required for narrow lots.

Options for changes

- Change the allowable height 'bonus' as proposed in the draft amendment, capping the bonus at 12/12 pitch. Replace the stepback degrees with a stepback distance that would approximate what the degrees would achieve. Clarify how combination roof designs would be handled. Increase the width of the lot that would qualify for limited side stepbacks from 10 metres to 12 metres.
- Bring an amendment to Section 11.3 and 11.4 (variances and limitations to variances) into the scope of this amendment.

- Eliminate regulation of storeys, and just rely on the numerical height. Implement a two-tier height calculation, the first measurement to the eave line (or similar) and the second from the eave line to the top of the structure.

Recommended option

Amending the draft regulations in response to received comments was chosen.

Rationale

There is a need to balance a variety of roof styles with providing certainty as to what is allowed to be built. The draft regulations are a good step towards doing that, and the feedback was helpful in refining the concepts. Guidance in regard to combination roofs has been added to the proposed amendment. The 48° Stepback was replaced with two metre Stepback, which will result in a slightly smaller Stepback requirement. Two metres is consistent with other Stepback requirements used in the Bylaw for this purpose. The 40 feet/12 metre wide lot has been incorporated into the proposed draft, and associated images.

During the initial scoping exercise, opening up the limitations to variances section was explored. It was determined that the impact of such a change would be appropriate for a stand-alone project. A workshop will be held to discuss the need for regulating storeys, and further amendments may be required as a result of the workshop.

Issue: Granting Discretionary Power regarding the three-dimensional size of the third storey

Comments received

- Remove the instances of “may” and replace with “shall” regarding the application of bonus height.
- Discretionary powers should be limited in their use and surety of requirements needs to be provided.
- The primary need for height regulations is to be flexible and simple. The question is, who will see this building and from where?
- The regulations should encourage design techniques that lessen perceived building three-dimensional size (i.e. stepbacks, gabling etc). One way to do this is by providing height bonuses for desired forms.
- The current Bylaw also does not contemplate other types of built form, such as flat-roof houses or houses with a steep roof pitch; however, I am of the opinion there should be greater discretion applied to such applications because these developments are more likely to have an adverse effect on adjacent properties and/or are not appropriate given the characteristics of the area.

Options for changes

Allow Development Officers to vary height, and provide specific performance criteria within the bylaw that needs to be met in order to approve a third (or more) storey building.

Do not allow Development Officers to vary height, and have specific regulations instead.

Recommended option

Do not allow Development Officers to vary height, and have specific regulations instead.

Rationale

One of the primary objectives of this amendment is to improve the uniformity of decisions made by Development Officers, and expanding discretion in this way will likely not further that objective.

During the initial scoping exercise, opening up the limitations to variances section was explored. It was determined that the impact of such a change would be appropriate for a stand-alone project.

Issue: What to do as a result of eliminating the ½ Storey?

Comments received

Change 2½ to three for allowable storeys for single family housing, with restrictions. If you are allowing three storeys, make it clear and avoid confusion and ambiguity. The current wording implies that your intent is to decrease allowable density, and make it difficult for anyone who wants to attempt a 3rd storey. We completely disagree with the reduction to two storeys.

Options for changes

Round up all instances of 2½ storeys to three-storeys (what was proposed in January 2014 draft)

Round down all instances of 2½ storeys to two-storeys

Round down all instances of 2½ storeys to two-storeys, but allow the third storey when certain circumstances are met (what is currently proposed)

Eliminate the regulation of storeys entirely and just rely on the numerical height.

Eliminate the regulation of storeys entirely and just rely on the numerical height. Implement a two-tier height calculation, the first measurement to the eave line (or similar) and the second from the eave line to the top of the structure.

Recommended option

Host a workshop with stakeholders to determine the appropriate direction for Storeys.

Rationale

The draft bylaw continues the direction proposed in the Spring 2014 circulation: round down all instances of 2½ storeys to two-storeys, but allow the third storey when certain circumstances are met. However, the 'bonus' height was always intended to be mandatory, so 'may' has been clarified and changed to 'shall'. The added requirements in regard to the three-dimensional size of the third storey intend to provide certainty in regard to interpretation, while also providing flexibility in regard to building styles/forms. Stepbacks for flat-roofed building have been included, but on narrow lots, the side Stepbacks would result in an unusable third storey, and so the side Stepbacks have been removed for lots narrower than twelve metres.

Due to the multitude of options available, and the good arguments for each method, a workshop will be required to discuss the benefits and drawbacks of each approach.

Issue: Exemptions from height calculations or Stepback requirements

Comments received

We are suggesting that rooftop access and stairwells be exempt from the height calculation for a two storey house, as they are now.

We agree that enclosed rooftop stairwell access should not be allowed to a third storey roof, as it could appear as a fourth storey.

An exemption similar to the dormer exemption in the Mature Neighbourhood Overlay has been added to the Stepback requirements.

Options for changes

Stairways and rooftop access are included in the height calculation for developments in a zone that allows single-detached dwellings as a permitted use. (what is currently proposed).

Stairways and rooftop access are specifically exempted from the height calculation for all developments (what currently exists in zoning bylaw).

Recommended option

Stairways and rooftop access are included in the height calculation for developments in a zone that allows single-detached dwellings as a permitted use.

Rationale

The stairway and rooftop access exemptions were contemplated for flat-roof commercial, industrial and multi-family developments. Flat-roofed buildings were uncommon when these exemptions were established. With emerging technology and construction, flat roof ground-oriented buildings are more viable. If this exemption were allowed for all developments, as currently exists in zoning, this would enable a third or fourth storey to be built. In compensation for removing this exemption, a third storey is proposed to be allowed for flat-roofed buildings in single-detached areas, so long as certain requirements are met (such as stepbacks from the exterior of the building).

Issue: Maximum Floor Area for a third-storey

Comments received

The third storey floor area coverage restriction should be the same throughout the city.
The coverage restriction is written in an unclear way that may be misinterpreted.

Options for changes

To remove this coverage restriction, and just rely on the Stepbacks to regulate the floor area of the third storey.

To rewrite this portion to improve clarity

To rewrite this portion to improve clarity and change the proposed 60 percent and 65 percent to match the 50 percent maximum in the Mature Neighbourhood Overlay, or change the Mature Neighbourhood Overlay third story coverage restriction from 50 percent to 65 percent.

Recommended option

To remove this coverage restriction, and just rely on the Stepbacks to regulate the floor area of the third storey.

Rationale

This coverage restriction would apply only to ground-oriented dwellings. The stepback amounts would approximate the coverage restriction, making the coverage restriction redundant. Combine that with how that coverage restriction would interact with the Mature Neighbourhood Overlay, and the concern from stakeholders that the Mature Neighbourhood Overlay regulations are seeping into the regular bylaw, removing the coverage restriction is the best option.

Calculating Height

Issue: What is / are the issues that prompted the review?

Comments received

- Changes to construction methods and building design standards/expectations;
- 18" trusses are now used in place of 2 inch by 8 inch joists;
- Eight foot main floor ceiling height is now expected to be nine foot or ten foot;
- Narrow lots and higher density ground-oriented development;
- Expectations of the same living space despite a smaller lot;
- Infill that's a jarring departure from what's around it, oversight, shadowing impacts;
- Building three-dimensional size / especially with flat-roof houses;

- Clumsy existing regulations; and
- ½ storey, eave to peak calculations

The max height in the Mature Neighbourhood Overlay is 8.6 metres. The new rules do not solve the height issues on infill as the industry would still be using the average of four corners on most “normal” lots which makes it difficult to build a house under the height restriction with nine foot ceilings and a standard four/twelve roof pitch. The “new” standard for housing is nine foot walls so this is a major impediment to encouraging infill development.

We would also note that the current proposed amendments do not address some height issues that are currently known as barriers for infill, in particular the definition of basements in the Mature Neighbourhood Overlay.

Options for changes

Increase height in all zones and Mature Neighbourhood Overlay to account for new construction methods. Also review the definition for height, storey and basement.

Increase storeys in all zones to account for new construction methods.

Change the starting point to measure height from the average grade elevation to the apex of the lot grading, adjacent to the building.

Create separate height requirements for infill development and greenfield development.

Increase lot coverage maximum to allow larger buildings while keeping the maximum height the same.

Manage the three dimensional size of the top storey using Stepbacks.

Manage the three dimensional size of the top storey using a two-step height calculation, the first measurement to the eave line (or similar) and the second from the eave line to the top of the structure.

Recommended option

A blend of these options:

Increase the maximum height in RF6 and RA7 from 14 metres to 16 metres (plus the height ‘bonus’ proposed in Section 52) for an effective height of 17 metres. Keep the same maximum height in ground oriented zones that allow single detached as a permitted use, including the Mature Neighbourhood Overlay, but change the height ‘bonus’ from 1.5 metres to scale with the pitch of the roof, and to allow a third storey for flat-roof buildings. Consider increasing the maximum height in zones typically applied to greenfield developments (i.e. RSL, RPL, RMD).

Consider eliminating storey requirements (see storey section), and consider the apex method (see grade section).

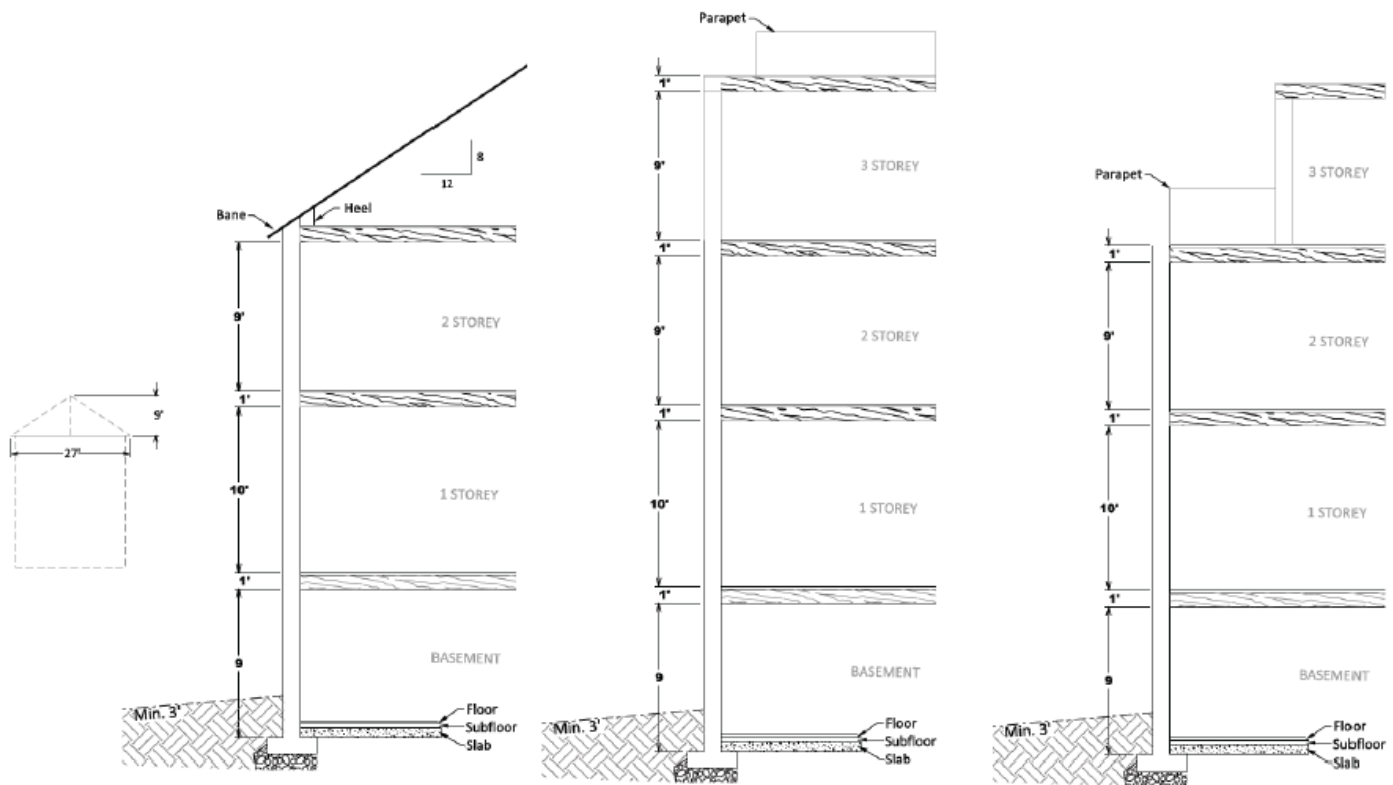
Manage the three dimensional size of the top storey of a flat-roofed building using Stepbacks

Remove regulations from the definitions of basement, of height and of storey.

Rationale

14 metres and four storeys with a pitched roof is not an achievable building form. In reviewing typical building designs for a four-storey pitched roof product, it was determined that the physical building requires 17 metres in height (depending on the direction of the gable, and how wide the building is).

Typical building sizes were examined for ground-oriented dwellings, and it was determined that a ten metre maximum height is sufficient for the distance between average grade elevation and the eave line, and 2.4 metres is sufficient from the eave line to the top of the structure.

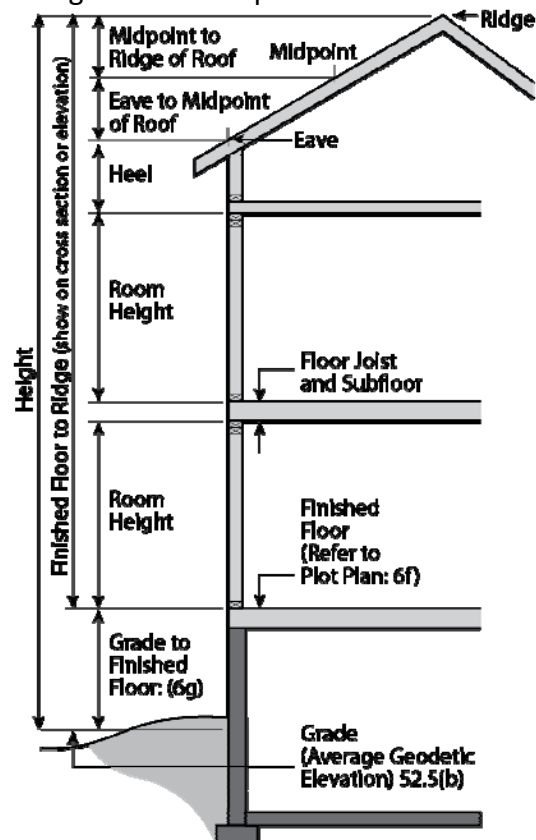


11.0m (36')

12.3m (40.5')

11.5m (37.5')

The measurement of height to the top of a structure (instead of the midpoint of a roof), in addition to the 'bonus' heights allowed via proposed Section 52.4 will, in certain circumstances, allow some additional height above what is currently permitted. The definition for basement and for storey is being reviewed as part of this amendment.



Issue: Changes to Definitions

Comments received

We would encourage the inclusion of a more detailed definition of height and storeys in the definitions section, mirroring the language currently proposed for Section 52. Conversely, a direct reference to Section 52 in the definition section for these two terms should be included. As proposed, it would be difficult to determine what counts as a storey or how height is measured without knowing to look to Section 52. It is important to have a definition for height, so we are happy to see the definition is retained.

Options for changes

Keep the proposed definition.

Keep the existing definition that contains regulations.

Recommended option

Keep the proposed definition.

Rationale

Definitions should be objective explanations of the word or statement. Definitions that contain regulations are inappropriate.

When definitions contain regulations, or refer to a specific section of the bylaw that contain regulations that form part of the definition, it becomes unclear whether the regulations are part of the definition or not.

An example of this would be if a definition contained a regulation, but a proposed development did not meet that regulation. In this case the definition would not be applicable to the proposed development. This creates a situation that is problematic from an interpretation and legal standpoint. If this situation were to arise, it would be unclear whether the regulations can be varied or not. Definitions are not allowed to be varied, yet regulations are allowed with some specific exceptions.

Regulations should be found in the regulations section of the zoning bylaw. The regulations have been relocated or removed from definitions as required.

Issue: Changes to How Height is Determined

Comments received

- Abstract numbers or rigid height is less important. Avoid “towering over effect”
- Keep the height measurement to the midpoint of the roof for pitches five/twelve and greater. If changes are necessary consider only minor tweaks such as:
 - Increasing 1.5 metre roofline peak above maximum Height to allow for more roof pitch variation.
 - Make minor adjustments to allowable Heights in specific Zones, such as from 14 m to 15 m in RA7.
- Maximum building height should be measured to the top of highest ceiling at an exterior wall (thus our recommended height of 14 metres using this method) and this removes the need to engage in the details of a roof slope as a determining factor in the height calculation.
- Maximum building height should be to the top of the building.
- Height behind the dwellings is irrelevant/concealed from the street so it shouldn't be considered.

- Establish a baseline elevation for the street, which can be raised over time. If possible, have regulations tailored to each neighbourhood or street. Except that it may be more difficult to understand and apply. The height of a platform structure (i.e. a deck) should be measured as the height above average Grade Elevation from one point at the lowest corner where it intersects the structure.
- For infill, the concept of a height to eaves then a height to highest point of the structure was presented to help address concerns about building height in mature areas.
- The current Zoning Bylaw allows an exclusion for rooftop access/rooftop stairways against the exterior wall, and the proposed changes to the exclusions would remove this option.

Options for changes

- The regulations for height are removed from the definitions and replaced with a simple objective explanation. In regard to what is proposed to happen to the existing regulations:
- Option one: Measure height as the points between the average finished grade to the top of the building (excluding some features). Allow different maximum height based on the roof type. This is what is proposed in this amendment.
- Option two: Measure the building from average finished grade to the top of highest ceiling at an exterior wall.
- Option three: Separate the height calculation into two measurements, each with their own maximum height. One measurement should be from average finished grade to the top of highest ceiling at an exterior wall (e.g. the eave line), and the second measurement should be from the highest ceiling at an exterior wall (e.g. the eave line) to the top of the structure.
- Option four: Continue to measure buildings with a pitch of four/twelve or less to the highest point, and buildings with a pitch of five/twelve or higher to the midpoint, with an allowable bonus to height of 1.5 metres (what is currently approved). To address the issue of discrimination against steeper roof pitches, or larger buildings with a pitched roof, the bonus height could increase to an appropriate number (such as 2.4 metres).
- Further discussion is required to evaluate the merits of each of these options.
- The change to the definition for grade should resolve the issues with platform structures, as it causes the height of a deck to be measured relative to the finished ground surface, instead of an abstract horizontal plane (e.g. average grade elevation).
- Stairways and rooftop access are still proposed to be included in the height calculation for developments in a zone that allows single-detached dwellings as a permitted use. However, an exemption similar to the dormer exemption in the Mature Neighbourhood Overlay has been added to the Stepback requirements.

Recommended option

Measure height as the points between the average finished grade to the top of the building (excluding some features). Allow different maximum height based on the roof type.

Rationale

Option one accommodates all roof types, and represents the entire structure. The regulation is more complicated to understand and may require discretion of interpretation for some combination roofs.

Option two effectively excludes all roof types and pitches from the calculation of height, and would limit the height of flat roof buildings unfairly relative to pitched roof buildings.

Option three would likely work similarly to option one, but would reduce the discretion of interpretation while increasing the uncertainty as to what could be built.

Option four requires discretion of interpretation for where the midpoint is, and is complicated to explain to people.

Determining Grade

Issue: Overall

Comments received

- Separate the way grade is determined into infill and greenfield situations.
- Grade is not important in and of itself (except for Drainage). It is only important because it sets the context or the “visual field” of a building, i.e. what would an observer see as “ground level”?
- How does the City intend to accommodate development in the future? e.g. Will this amendment look to the past to maximize sympathy to what already exists, or will it look forward to transition the neighbourhoods towards the Municipal Development Plan goals? In that regard, sewer inverts set the finished floor elevation, and changes to the inverts are very limited due to required drainage slopes. For infill developments, older houses were typically built without basements, or built basements with very low ceilings. New developments are built with 8-foot tall (or more) basements.

Options for changes

Choose regulations based on what we want to see, assuming that properties will be redeveloped over time to meet the new regulations.

Choose regulations based on what already exists in an area, assuming that there will be limited desire or market to redevelop properties/replace aging structures.

Review the definitions and regulations for basement and storey to mitigate issues with the sewer inverts.

Keep a consistent method for grade across the city.

Create a method for infill and a method for infill.

Recommended option

Choose regulations based on what we want to see, assuming that properties will be redeveloped over time to meet the new regulations.

Review the definitions and regulations for basement and storey to mitigate issues with the sewer inverts.

Keep a consistent method for grade across the city.

Rationale

Looking forward will move the city towards meeting the Municipal Development Plan goals, and adapt the regulations to new construction technologies, building techniques, housing expectations, and reinvestment in mature neighbourhoods.

There are different needs and expectations between infill and greenfield developments, however grade, height, setbacks, et. al. are basic land use regulations that should be uniform across the city.

Issue: Granting Discretionary Power regarding the determination of Grade

Comments received

The amendments should primarily provide flexibility. It needs to allow the Development Officer to determine the best alternative primarily by granting some latitude in establishing grade - without sending everything to Notices.

Remove the instances of “may” and replace with “shall” regarding the selection of grade determination method.

It is not clearly defined which grade calculation will be used in which circumstance. If the Development Officer has the discretion to choose which grade calculation to use, it is not clear to the designer how tall their building can be, and it creates more uncertainty with surrounding property owners.*

**The proposed bylaw was updated to improve clarity before circulating to the following respondents:*

We welcome the idea of providing specific guidance for determining grade in infill situations that would recognize the context of the area, however understand further work is needed to establish an agreed-upon method.

The proposed amendments do clear up much of the ambiguity as the Bylaw now provides direction on how to establish grade based on specific site characteristics. However, the changes attempt to address different development scenarios independently (each building form and each site characteristic has a specific calculation). This adds complexity and interpretation.

Options for changes

Eliminate the need to send notices (Class B permit) for using an alternative method.

Reduce the discretion in determining average grade elevation by indicating which method should be used in which situation.

Create new methods of determining average grade elevation that better represent the typical scenarios that would be used to fairly assess an average grade elevation.

Recommended option

Blend of reducing the discretion in determining grade and creating new methods of determining average grade elevation.

Rationale

In the interest of improving uniformity of decisions, the flexibility in determining grade is proposed to be reduced by identifying scenarios where the grade method should be applied. Two methods of determining grade are proposed to be deleted and replaced with two methods that will more adequately represent certain scenarios.

Instances of ‘may’ are replaced with ‘shall’, and a reorganization of this section clarifies/provides guidance for which method to use in each scenario.

Not sending alternative method to notices creates an imbalance in individual property rights and society interest, and removes the disincentive to use an alternative method.

Issue: Topographic, Drainage, Site Grading, and mounding considerations

Comments received

Utilize grade design for Height and Grade considerations, not original countryside. Consider using the “lot grading profile types” that form part of the subdivision grading plan. At subdivision stage, the lots are graded and sewer inverts are established. These two things dictate the building pocket, and zoning adds another potentially conflicting layer to the physical constraints of the site.

Mounding earth around a building, especially in a rear-drive under product, helps minimize the number of risers going into a house, mitigating the perception of three-dimensional size and helps improve the aesthetics of overall site.

Options for changes

Use lot grading profile types from the approved subdivision plan instead of average grade elevation for greenfield development.

Use the grade elevations found on the approved subdivision plan (current method).

Use the grade elevation at the apex of the lot, where the building meets the finished ground (or otherwise relate the height of the building from the building, not from the lot).

Recommended option

Use the grade elevations found on the approved subdivision plan (current method).

Rationale

For greenfield sites, the lot grading profile types is an interesting concept that will be explored further. That way the builder can be sure that a particular house design will fit on the lot and be approved (since lot grading and sewer inverts are approved at subdivision stage).

The mounding of earth around a house may be problematic in terms of lot drainage onto adjacent sites. If one of the suggestions to base the height of the building on where the finished grade meets the building, then mounding earth may be used to circumvent maximum height regulations. There is merit in the argument of reducing the number of risers in a row, and there is precedent in older neighbourhoods where the lot grade is raised above the street/sidewalk. This idea needs to be explored further.

Issue: Bylaw requests should be aligned with surveyor Industry practise

Comments received

Grade determination should be based on measurements that the survey industry is readily capable of and experienced with providing.

We also question what kind of “additional info” will be required in addition to a standard plot plan (for example, would someone be required to go out and survey the adjacent properties, do we have permission from them to do so etc.).

Options for changes

Verify that the proposed regulations meet these criteria.

Rationale

The regulations should refer to points along property lines, or at building corners.

The aspects of main floor height on adjacent properties has been removed.

Issue: Corners method

Comments received

Average Grade Elevation should be determined based on the building corners, not the average of the corners of property or site.

Keep the corners method because it is easy to calculate and difficult to manipulate.

Delete the corners method because it measures average slope, and is not representative of the building starting point, especially as the site increases in size/the corners are further from the building.

For the “corners method”, the following changes are suggested:

Housing Type	Grade Calculation	Storeys	Height	Additional Considerations
Single Family	Two highest points at building corners.	three*	twelve	In Mature Neighbourhood Overlay areas, drainage plan for new residents to confirm compliance with current requirements and for additions to avoid impact to adjacent properties.

Semi-detached and Row Housing	Two highest points at building corners.	three*	twelve	Employ grade design developed at subdivision level.
				Accommodate terracing of sites.
four Storey Multi-family	Two highest points at building corners.	four*	14	Height is measured to the top of highest ceiling at an exterior wall.

*what is now called a basement would be a storey and be without reference to grade.

Options for changes

Create a new method to determine average grade elevation, such as the 'apex' method, which takes the highest points where the finished ground surface meets the building.

Continue using the methods approved in zoning.

Recommended option

To keep the corners method, delete the 1 in 30 lineal metres method, delete the adjacent main floor height method, add a walkout method, add an infill method, add a large site method.

Consider adding an apex method.

Rationale

The corners method is easy to calculate and difficult to manipulate, and it works in most cases, so it should be retained as the primary method to determine average grade elevation.

The 1 in 30 lineal metres method is not used, but there is a need to create a method that will work for large sites and multi-unit developments.

The adjacent main floor height method artificially raises or lowers the building pocket, depending on topography, and there are legal implications (gaining permission) with gathering the required information from adjacent properties.

The "apex method" is under consideration as an alternative to the corners method, however it needs more discussion, and verification that surveyors are capable of providing this information as part of standard practise.

Issue: Adjacent main floor elevation method

Comments received

- Remove the adjacent properties across a lane, because depending on the slope of the area, this could artificially raise or lower the maximum building height. This method should only use the main floor height of properties sharing a side lot line.
- Using the main floor height looks backwards to what we built before, not forwards to what we want to see in the future. Older homes had shorter basements, or no basements, substantially restricting the size of the basement in new developments.
- A range above or below the main floor height of adjacent properties should be allowed.
- Is the proposed development going to look odd visually, beside their neighbour? Expectations for housing have changed substantially in the last 30 years, and we can't constrain ourselves by building standards and expectations from 60-100 years ago.
- There should be a clear variance route if a proposed development can't meet the sewer invert, or if there are no adjacent basements.
- What does "typical" mean in "typical Grade Elevation of the Site"?
- What happens if a proposed development can meet two types of criteria for grade determination? For example, if a property is an infill lot and the lot and also proposes a walkout basement, which method should be used? Why not delete this method?

Options for changes

Delete the main floor height method.

Modify the main floor height method to eliminate the consideration of properties across a lane.

Recommended option

Delete the main floor height method.

Rationale

This method was proposed to be modified first by removing the reference to properties across the land, only applying to adjacent lots. That modification still proved unsatisfactory due to legal concerns with gaining permission to access adjacent properties. So the reference to main floor elevation was removed instead referencing the elevation at the side lot lines.

This method may be removed completely moving forward.

Issue: Proposed modified method (1 in 30 lineal metres method)

Comments received

- For large multi-unit sites: determining grade on sites that may have significant variations in elevation or for which site corners are so distant from one another that averaging them makes no sense .
- Add a method for large multi-family sites:
 - for larger sites with significant grade differences from one portion of the site to another and with more than one building, the Development Officer may determine a separate Grade for each individual building by averaging the prior to construction elevations at the corners of the proposed buildings; or
 - may determine a separate Grade for different portions of the Site by averaging the prior to construction elevations at the corners of each portion of the Site.
- Average grade elevation needs to be determined from existing benchmarks to ensure that Grade, and therefore proposed Heights, are not manipulated by applicants. Determination of Grade must be done using existing site grades. Using proposed grades essentially means that the developer will be determining grade. A developer may be able to design a perfectly acceptable grading plan that makes sense in terms of drainage, but that may create incompatible interfaces between sites and, between sites and public roadways.

Options for changes

Delete the 1 in 30 lineal metres method replaced with Large Site method.

Recommended option

Work with the builders of multi-unit developments and Development Officers to refine this method to ensure that it will work for most of the sites that it is intended for, and still achieve the built form objectives.

Rationale

Large sites are comprehensively planned as one development, so the main concern should be how the development relates to development that shares a property line. One baseline elevation for an entire site works for small sites, but the larger the size of the site, the less applicability that elevation has to individual buildings. However, taking the grade from individual buildings may result in retaining walls or other structures being used along roadways or common property lines.

Issue: Proposed modified method (Alternate method)

Comments received

Who can raise a doubt?* Can the developer raise a doubt and pick their own method? If this is the case, then the onus has shifted to the neighbours to provide the burden of proof regarding impact. There should be an opportunity for the designer to make a case to the Development Officer regarding why they think one method is the best for a particular site.

Options for changes

Rewrite this clause to clarify the intent and the roles.

Rationale

*Doubt is of the Development Officer, when the characteristics of a site do not make sense. For example, it may be reasonable to exclude certain points from the average Grade Elevation calculation.

The final decision must rest with the Development Officer. He or she can choose to hear arguments about certain points or particular methods from the designer. The proposed changes to provide guidance as to what situations require what method, which will help designers and Development Officers.

Issue: Proposed new method (Apex method)

Comments received

Average Grade Elevation (i.e. the starting point to measure height) should be established by using the two highest points where Grade meets the building. This would be the apex of the lot. This change would effectively raise the maximum height by about 1.5 metres for relatively flat lots, however, it would also fix the problem where on a sloping lot, the house is pushed down below the expected build form versus a level lot.

Options for changes

Include this method.

Do not include this method.

Recommended option

Do not include this method.

Rationale

This method would be a substantial departure from the status quo, as it would be taking a relative height instead of an absolute height. It would also be taking the Grade Elevation at the building instead of at the lot. Further discussion with stakeholders, in addition to site modeling is required before this would proceed as a viable method.

Issue: Proposed new method (Walkout method)

Comments received

Establishing the means to appropriately calculate height for developments with walkout basements corrects an obvious void in the Bylaw.

For small sites: determining grade on sites with significant changes in elevation (walkouts, zero drainage / double drainage sites).

Add a method for walkout basements. For developments with a walkout basement, the Development Officer may determine Grade by calculating the average of the elevations at the front corners of the Site (prior to construction), and the elevations at the intersections of the side

property lines and lines drawn parallel to the front and rear faces of the proposed building (prior to construction).

Options for changes

Include this method.

Do not include this method.

Recommended option

Include this method.

Rationale

This method is what is currently used to successfully process 19/20 (on average) walkout basement lots that go to notices. Due to its common use and applicability, moving this from a class B permit to a standard permit will improve processing times and conserve resources for the development industry and City administration, while still achieving built form objectives.

Issue: Method under consideration, but not proposed (street method)

Comments received

The starting point to measure height should be in the street, since taking it there will manage the perception of the building from the street, and will generally allow the same building to be constructed on adjacent lots because the street will follow the block face of the area.

Options for changes

Include this method.

Do not include this method.

Recommended option

Do not include this method.

Rationale

There are four methods proposed already: corners method, walkout method, large site method, and infill method, plus an alternative method. Having additional methods is unnecessary. If this method is proposed, then it should be accompanied by removing an existing method.

Issue: Definition Changes

Comments received

What does “at or nearest Grade” mean, in the definitions?

Recommended option

This wording was replaced with “the top of the floor on the level that is directly above the average Grade Elevation of the Site”.

Additional Evaluation Criteria for Section 14 – Special information requirements

Issue: Wind Study

Comments received

Wind study requirements are redundant with what an engineering consultant will provide in their reports.

Wind Studies should apply only to Mature Neighbourhood Overlay areas and only to buildings greater than six storeys in height.

Options for changes

- Keep the proposed amendments as they are.
- Delete the amendments to wind studies.
- Delete the reference to particular engineering requirements.
- Add scope limitations to Mature Neighbourhood Overlay areas.
- Add scope limitations to apply only to buildings greater than 6 storeys.

Recommended option

- Delete the reference to particular engineering requirements.
- Add scope limitations to apply only to buildings greater than 6 storeys.

Rationale

Specific wind speed requirements associated with comfort categories was removed, but the evaluation criteria were retained. This will provide Development Officers and designers with subjective evaluation criteria, which can be used to support a decision. The concern with including engineering criteria such as wind speeds, is that the Development Officer would not have sufficient information or expertise to challenge an engineering report.

Specified that wind studies are only required for buildings that are taller than six storeys. This is already the unwritten standard, and now it is included as a written standard.

Justification for limiting the wind studies to Mature Neighbourhood Overlay areas is lacking. Wind will affect infill developments and greenfield developments equally, and pedestrian comfort is important across the city.

Issue: Shadow Study

Comments received

- Shadow study requirements are supported, and will be helpful in evaluating proposals for variances such as Tower Stepbacks and Tower Separations.
- Clarify that the shadow three-dimensional size effectively means that it only applies to a variance situation, because the applicant would be requesting something outside of the building pocket. The allowable building pocket should be based on the largest permitted use and the minimum setbacks of that use. In other words, a larger discretionary use should not set the standard for potential shadow effects. The shadowing effect of a discretionary use is one of the factors the Development Officer can use to assess the suitability of a discretionary use on a Site.
- An equinox reference should be added to this requirement.
- Consider the shadow impacts across roadways too, not just adjacent buildings.

Options for changes

- Add clarification regarding variances.
- Add equinox reference.
- Add reference to street shadow, not just adjacent property shadow.

Recommended option

- Add equinox reference.
- Add clarification regarding variances.

Rationale

References to the spring equinox were added. Using the winter solstice in Edmonton would not be a useful measure for this purpose, as the sun sits very low in the sky, and there are few hours of daylight during this time.

Reference to variance was added to this section.

Issue: Drainage Information

Comments received

The proposed drainage information is good. However, is this necessary? The site should already be suitable for development at the time of a development permit.

Would the inclusion of this make permitted uses discretionary? Drainage information is provided at subdivision stage, so there is no need to duplicate process.

What is the trigger for this additional information?

It should reference required compliance with Drainage Bylaw 16200.

However, grading may be needed in Mature Neighbourhood Overlay for re-development projects.

Options for changes

Delete the proposed amendments.

Delete only the proposed wording about suitability for all intended uses (proposed Section 52.6).

Include a reference to compliance with Drainage Bylaw 16200.

Recommended option

Delete only the proposed wording about suitability for all intended uses (proposed Section 52.6).

Rationale

Including Section 52.6 as worded will give the Subdivision Appeal Board jurisdiction to vary aspects of the Drainage Bylaw, which is not the intent of the proposed amendment.