

Building Stepback Analysis and Commentary

Current City requirements updated in Envision St. John's state a building over a certain height within a minimum distance to a lot boundary is to be stepped-back over a certain elevation.

In assessing the requirement for the building step-back in this situation, it is important to note that stepping-back the building as shown in the attached figures increases construction costs significantly and reduces density via decreasing the number of units. Both these factors combined render the development not feasible with a building step-back.

This building is targeted at a broad range of younger working people, families, and retirees. The only way to make the building feasible with a step-back as noted in the regulations would be to raise rents to offset the loss in density and increased costs. This would render rents in the building unaffordable to most of the market. Rents at that level introduces too much market risk for the developer (and likely will not be approved for third party financing given risk of high rents) and prevents much needed new, good quality constructed rental product in the City.

If the building were to be stepped-back as shown in the attached figures, the structural design becomes more complicated and expensive, having to introduce transfer concrete slabs and beams, additional snow loading factors where roofing abuts a vertical structure, and loss of efficiency given non-uniform features. Interior layouts also become less efficient with plumbing and electrical design and construction costs increasing substantially given lack of vertical stacking from top to bottom. The building will be more complicated and time consuming to step-back which increases both construction overhead costs and interest on construction financing, both of which have large impacts.

From discussions with City staff, we understand the rationale for this step-back is to mitigate wind tunneling, reduce the number of people looking down on neighboring properties from taller structures, and to minimize any shadowing impacts. The following commentary and attached back-up and analysis demonstrates that, for the subject development (given its design, grades, immediate area characteristics, and location relative to neighboring properties), the building step-back either provides no additional benefit for the above noted rationale or insignificant benefit.

Wind Tunneling

Not a factor on this site given no taller adjacent buildings in close proximity.

Shadowing (see Appendix A attached)

There is an existing structure on the subject site. Hence, the incremental shadowing of the new building with and without a step-back was analyzed. The attached shadow analysis contains a significant amount of detail, ***but the summary shows that not having the building step-back has a shadowing impact on most of the impacted neighboring properties less than 3% of daylight hours in a given year. Even when there is impact, this impact is sometimes limited to as little as ¼ of a backyard for the 3% of daylight hours.***

Some of these daylight hours within the 3% are also in the winter months where it is unlikely people are spending any time in their back yards. Taking this into account and the fact that people will not always be at home during the noted 3% of daylight hours, the percentage impact on people is actually much less.

Sight Lines From Above (see Appendix B attached)

When reviewing the attached sightline analysis, there is only one relevant side of the property to review with

respect to the step-back. On this relevant side facing Chaulker Place, the most meaningful sightline impact is from lower levels of the building where a step-back is not required in the regulations. It is important to note that the narrowest elevation of the rectangular building is facing Chaulker place, so only two units on each floor have direct view planes onto Chaulker Place.

Creating a building step-back only eliminates view planes from above into rear yards from four units in total. These view planes would not be into windows, given the high angle. The view planes would be from someone standing on their balcony looking down, when most will be looking out at views when there (balconies are used infrequently and for a low percentage of the year).

Taking the above summary and attached analysis into account, a building step-back, in this scenario, either provides no benefit or insignificant benefit to neighboring properties. In addition, a step-back will stop the development.

In this light, we are requesting the development be permitted to proceed without the step-back. In our opinion, the benefit to St. John's of having a badly needed new, dense high-quality purpose-built rental product, attainable for a broad segment of the market unable to find suitable housing, is greater than stopping the development for negligible benefit achieved via requiring a building step-back.