Mid-block Row Housing Building and Site Design Analysis

Administration undertook an analysis of 86 recently approved mid-block row housing development permits. Five site and building design features were considered:

- Facade design facing the street and the interior side lot line
- Building length
- Interior side yard functionality
- Building entrance location and unit configuration
- Site Coverage

Facade Design

Facade design was assessed to determine how windows, exterior finishing materials and entrances were incorporated. The review found that street-facing facades for mid-block row houses often resemble the side of a building, with fewer and smaller windows, less defined entrances and fewer finishing materials than the average front facade.

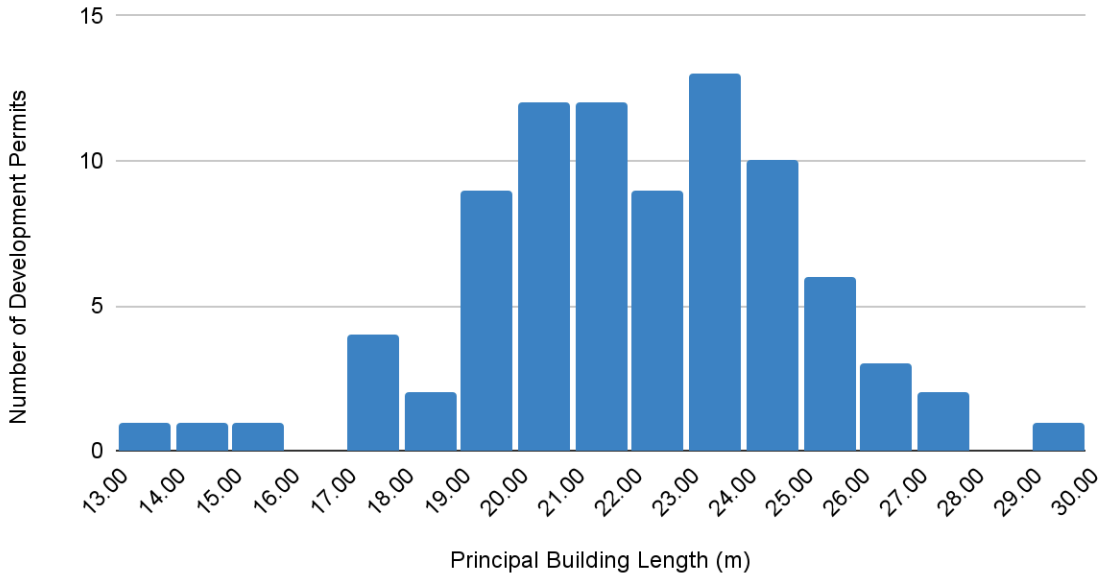
Figure 1 below compares a facade with a small percentage of window coverage with a facade with a higher percentage of window coverage.

Figure 1 - Street-facing Facade Comparison

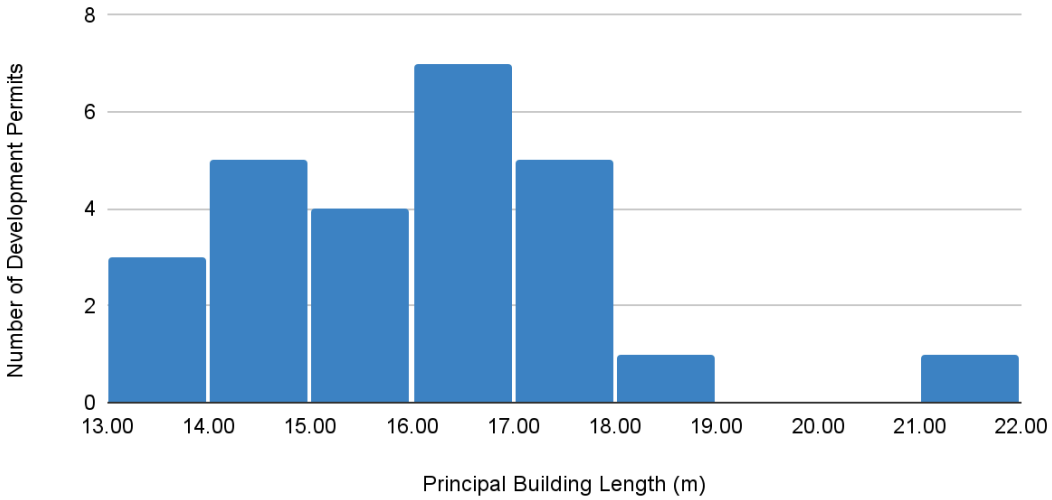
Building Length

Building length was assessed to determine the average building length of mid-block row housing developments in comparison to other housing types. The average principal building length in the sample of 86 mid-block row house development permit applications in the RS Zone was 22 m. The average principal building length in a sample of 26 single and semi-detached development permit applications on narrow lots in the RS Zone was 16 m.

Graph 1 - Mid-Block Row Housing Building Length in the RS Zone (2024)



Graph 2 - Single Detached Housing and Semi-detached Housing Building Length on Narrow Lots in the RS Zone (January - February 2024)



To reduce building mass and shadowing on neighbouring properties, Administration proposes to reduce the maximum building length along an interior side lot line on interior lots from 30.0 m to:

- 50% of site depth or 25.0 m, whichever is less

The proposed amendment will reduce building length while still allowing development of multiple units on a site. It will also limit the maximum building length to 25.0 m along the side lot line for larger lots that have significantly larger site depths such as pie-shaped lots.

Figure 2 - Maximum Building Length Comparison: 45 m Site Depth

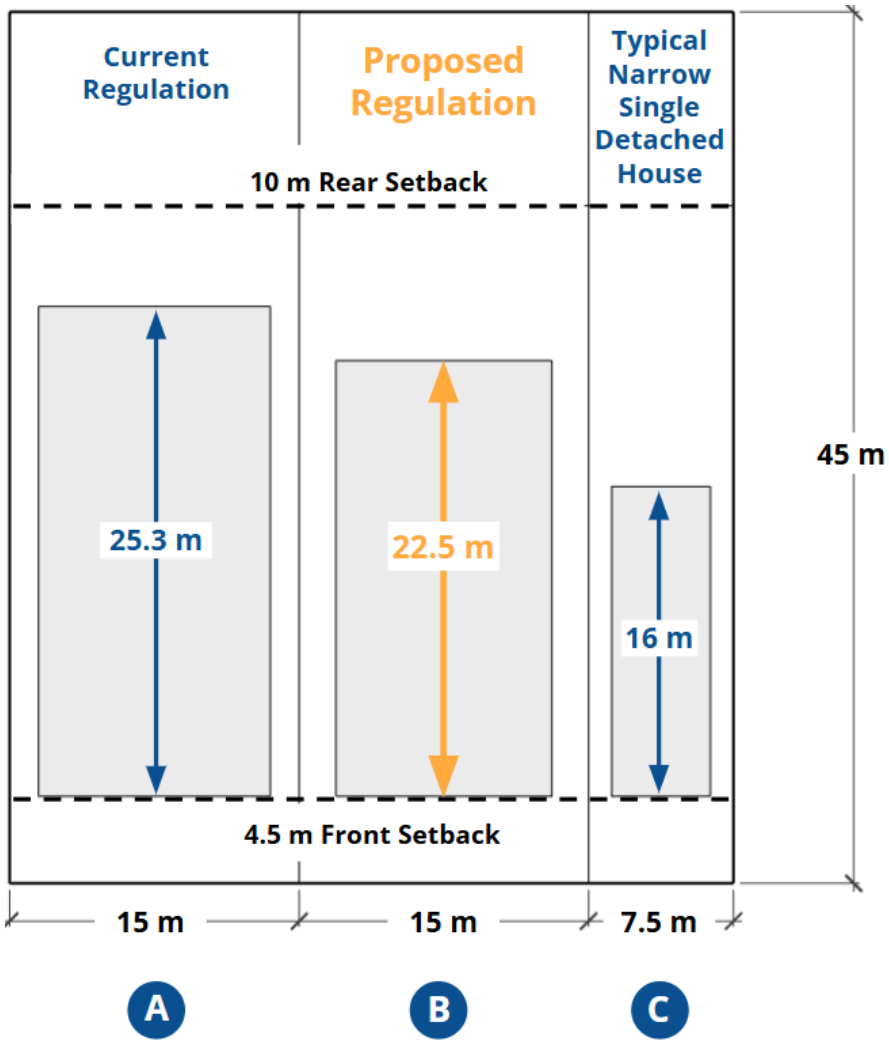


Figure 3 - Maximum Building Length Comparison: 36 m Site Depth

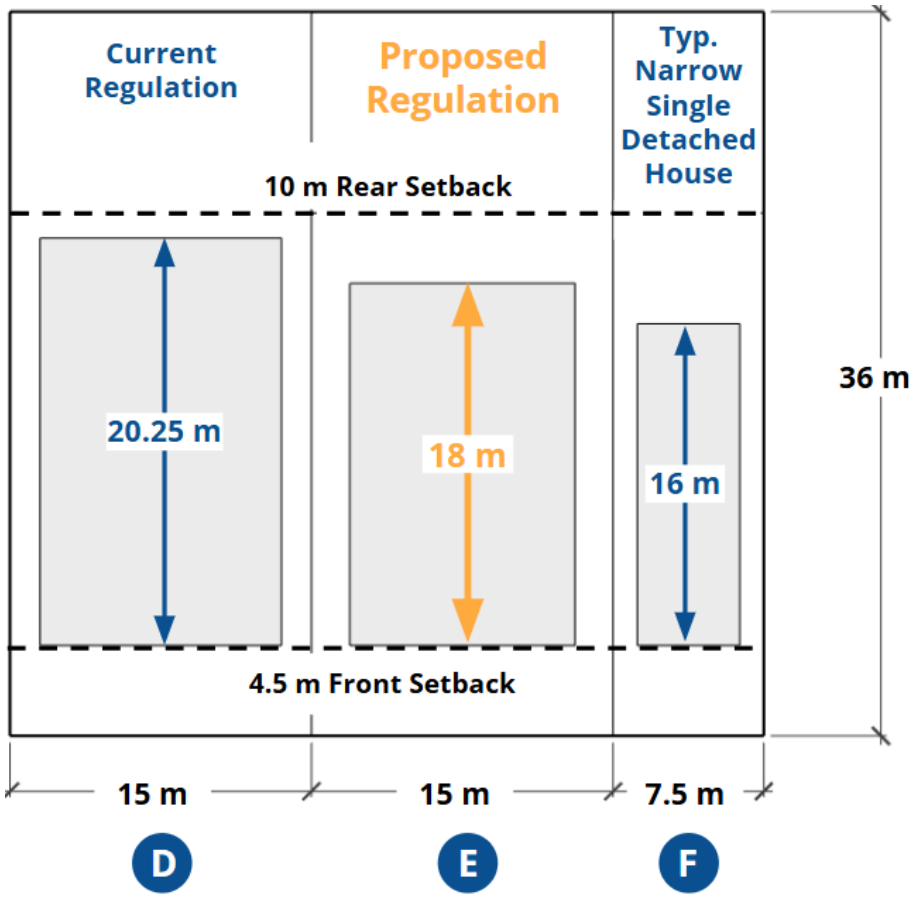


Table 1 - Maximum Building Length Comparison

	45 m Site Depth			36 m Site Depth		
	A	B	C	D	E	F
Site Area	675 m2	675 m2	337.5 m2	540 m2	540 m2	270 m2
Site Width	15.0 m	15.0 m	7.5 m	15.0 m	15.0 m	7.5 m
Building Width	12.0 m	11.2 m	5.1 m	12.0 m	11.2 m	5.1 m
Building Length	25.3 m	22.5 m	16.0 m	20.25 m	18.0 m	16.0 m
Side Setback	1.5 m	1.9 m	1.2 m	1.5 m	1.9 m	1.2 m
Site Coverage	45%	37%	24%	45%	37%	30%
Maximum Number of Dwellings	8	8	4	7	7	3

Figures 2 and 3 compare the current regulations (A and D) with the proposed regulations (B and E) and typical narrow lots with single detached housing (C and F) on common lot sizes found in Edmonton.

Diagrams A and D show that the current maximum building length of 30.0 m is typically constrained by maximum site coverage. In diagram A, a 30.0 m building could be achieved if larger side setbacks are provided.

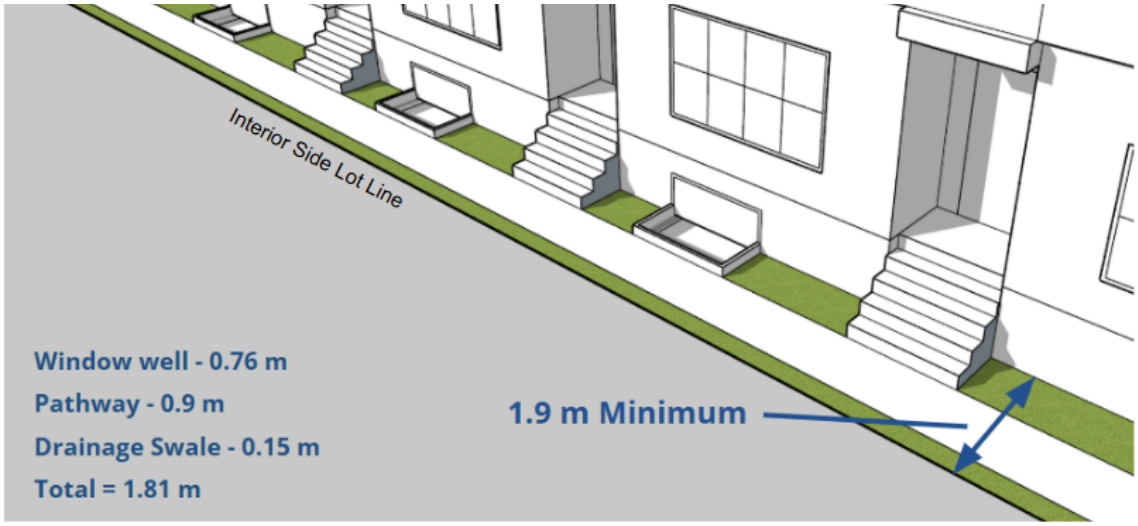
In the examples shown, the proposed amendment to maximum building length would result in an approximate eight per cent reduction in principal building site coverage on a typical sized lot in comparison to what can be achieved under the current regulations. Assuming the building has a 4.5 m front setback, the proposed amendment would also result in a larger rear setback. For lots with a site depth of 45.0 m, the rear setback would be 18.0 m (40 per cent of site depth), and for lots with a site depth of 36.0 m, the rear setback would be 13.5 m (37.5 per cent of site depth). In this way, the proposed amendment could make it easier to provide garages, parking spaces, outdoor amenity areas or to meet the minimum 30 per cent soft landscaping requirement on site.

Interior Side Setbacks

Interior side yards of mid-block row housing were reviewed to determine typical features. Most side yards incorporate a drainage swale, pathway, window wells, and entrance stairs. There are a variety of ways to incorporate these features. For example, drainage swales vary in width depending on their design, window wells vary in width depending on if they are needed for egress, and space needed for stairs depends on the height of the entrance and whether or not the stairs are recessed into the building.

The review concluded that to allow for a 0.15 m swale, 0.9 m pathway and 0.76 m window well or portion of a stairwell, the minimum space required is 1.81 m. For ease of implementing the minimum spatial requirements, Administration proposes to increase the minimum interior side setback for row housing and mulit-unit housing to 1.9 m where a side entrance is provided.

Figure 4 - Minimum Side Setback Diagram

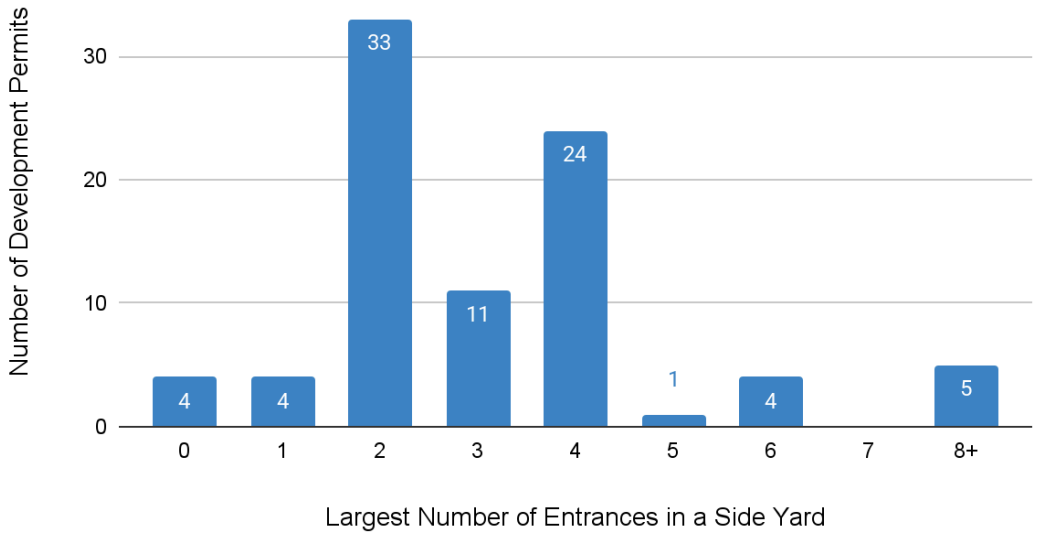


Where a side entrance is not proposed, the minimum interior side setback for row housing and multi-unit housing would be 1.2 m.

Building Entrances in the Side Yard and Unit Configuration

A review of side entrances on mid-block row housing found a range of zero to ten entrances in the side yard with approximately half (47%) of developments having a maximum of two entrances per side yard.

Graph 3 - Number of Side Entrances for Mid-block Row Housing Developments in the RS Zone (2024)



The review found three common mid-block row housing arrangements. The first is a linear arrangement where dwellings face the side lot line, typically with four main entrances facing one side lot line and four secondary entrances facing the other. In rare cases, 5 to 8 entrances face one side lot line.

The second is a quad arrangement where two dwellings face the front lot line and two dwellings face the rear lot line. In this arrangement, typically two secondary entrances face one side lot line and two secondary entrances face the other.

The third is a staggered arrangement where entrances in one of the side yards face the front lot line. Typically, three main entrances face the front lot line and three secondary entrances face the side lot line or the rear lot line.

The number of units in each row house configuration ranged from six to eight. Eight units (four principal dwellings and four secondary suites) were most common in the linear and quad configurations.

Figure 5 - Common Row House Entrance and Dwelling Configurations

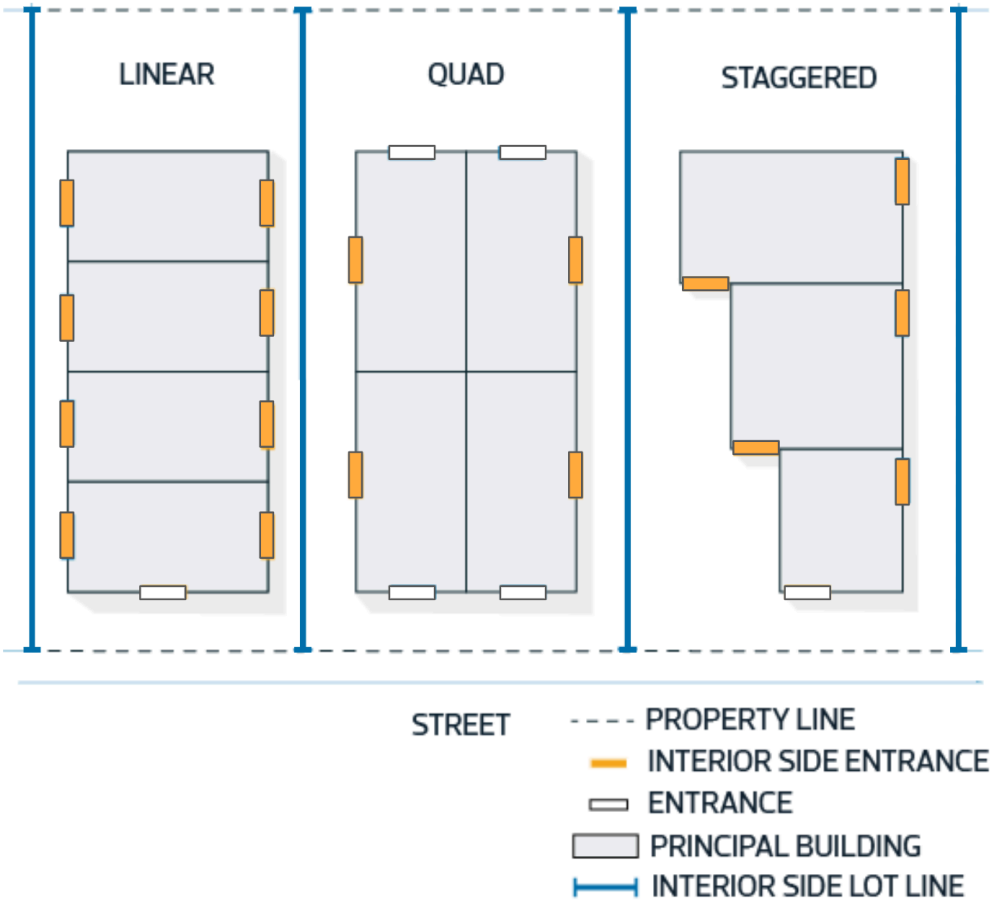
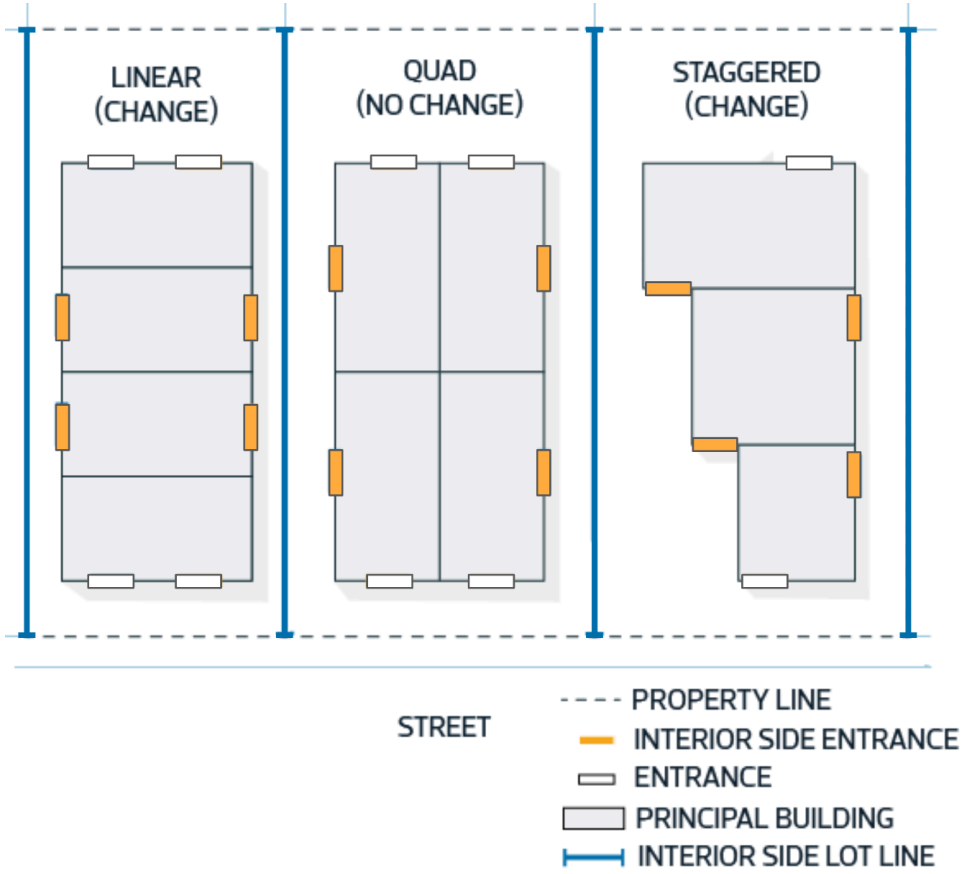


Figure 6 - Impact of Proposed Entrance Regulation on Common Row House Configurations



As shown in Figure 6, the linear and staggered configurations will be the most impacted by the proposed maximum side entrance regulation, requiring a re-design of dwelling interiors and exteriors. The quad configuration will be the least impacted.

Steps in the Side Yard

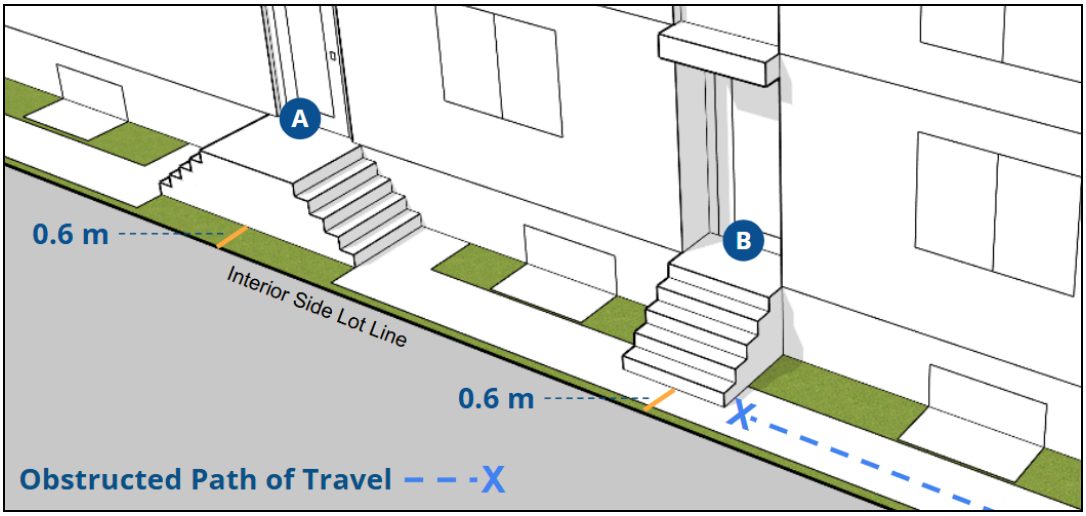
Currently, under Section 5.90 - Projections into Setbacks, unenclosed steps are allowed to project into an interior side setback as long as:

- a distance of 0.6 m is maintained between the steps and the interior side lot line; and
- the steps have a maximum height of 1.0 m (approximately 5 steps tall).

As shown in Figure 7, some side yard steps are oriented toward the interior side lot line (B) and others are oriented toward the front and rear lot lines (A). Where steps are oriented toward the side lot line, the minimum 0.6 m distance between the

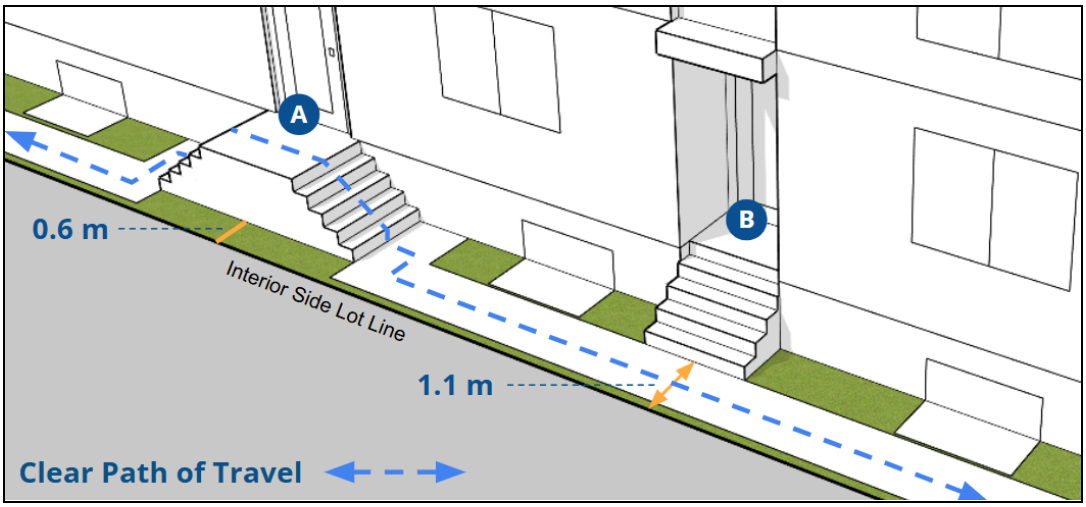
bottom step and the lot line does not provide sufficient space for a landing area and cannot accommodate the minimum 0.9 m pathway width.

Figure 7 - Current Step Regulations



As shown in Figure 8, Administration proposes to require a minimum 1.1 m distance between side yard steps and the lot line where the steps are oriented toward the side lot line (B). This will provide space for a 0.9 m pathway or landing area and a 0.15 m drainage swale. Steps that are oriented toward the front and rear lot lines, and that maintain a path of travel from the front yard to the rear yard (A), will still be allowed to project so that a minimum distance of 0.6 m is maintained to the interior side lot line.

Figure 8 - Steps Maintaining Clear Path of Travel



Site Coverage

Under Zoning Bylaw 12800, the RF1 - Single Detached Residential Zone allowed significantly less site coverage for a principal building than under the RF3 - Small Scale Infill Development Zone. To allow for a diversity of housing types, the current RS - Small Scale Residential Zone allows the same maximum site coverage that was permitted under the RF3 Zone for multi-unit housing in the form of row housing.

Table 3 - Site Coverage Comparison

	Principal Building	Accessory Building	Backyard Housing	Total Site Coverage
RF1 Zone	28%	12-14%	18%	40-42%
RF3 Zone	45%	17%	18%	45%
RS Zone	N/A	20%	20%	45%

Administration is not proposing to change the maximum site coverage regulation in the RS Zone. The proposed amendments to maximum building length and minimum side setbacks will result in an approximate three to eight per cent reduction in principal building site coverage on a typical sized lot.

Under the proposed regulations, a principal building with 1.9 m side setbacks on a 15 m x 45 m lot could achieve a maximum site coverage of 37%. On the same size lot, a principal building with 1.2 m side setbacks could achieve a site coverage of 42%. The proposed regulations would have a similar impact as reducing the principal building site coverage, leaving more space for garages, soft landscaping, parking pads, or outdoor amenity areas.