

# Enclosure Ratio Study

## McLeod Avenue

August 2022

# Introduction

This study utilises the urban design principle of Enclosure Ratio to inform on how considerations on Building Height may support development on McLeod Avenue in achieving pedestrian orientation as intended by the City Centre Area Redevelopment Plan.

## Enclosure Ratio

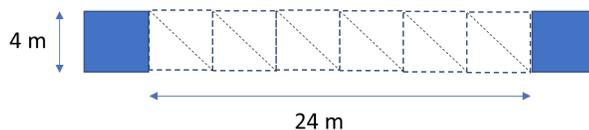
Enclosure refers to the extent to which vertical edge elements (e.g. buildings, walls, trees or other items) work to frame a street. In urban design this matter is examined as a ratio between the height of existing vertical edge elements and the available street width to understand to what extent a space would be comfortable for people. Considering enclosure ratios in streetscaping is an important principle for ensuring the creation of places that pedestrians want to occupy.

### Urban Design Principle of Enclosure Ratio

An Enclosure Ratio compares Building Height to Street Width. Ideal ratios for a human scale street are 1:1, 1:2, or 1:3. An enclosure ratio greater than 1:4 is car-oriented, which is more uncomfortable for pedestrians. McLeod Avenue has a street width of 24 metres, and the following enclosure ratios have been determined for one, four, and six storey buildings.

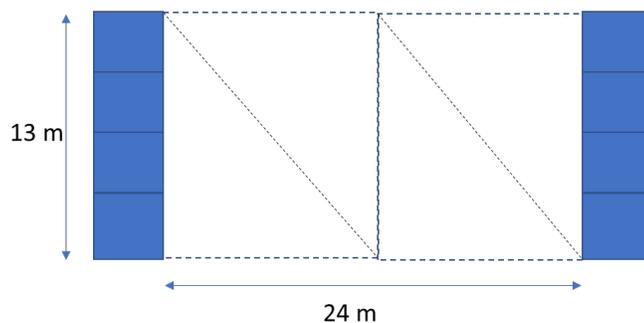
- **Single Storey development:** At 4 m in height, the McLeod Avenue enclosure ratio is 1:6.

#### 1 storey Ratio 1:6

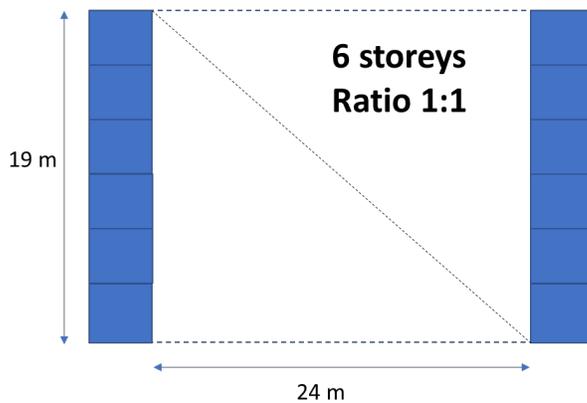


- **Four-Storey development:** At 13 m in height, the McLeod Avenue enclosure ratio is 1:2.

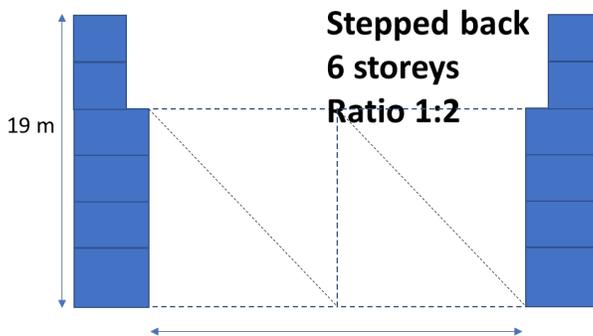
#### 4 storeys Ratio 1:2



- **Six-Storey Building:** At 19 m in height, the McLeod Avenue enclosure ratio is 1:1. This height would represent a space that supports pedestrian enclosure.



- **Building Step-Backs:** Design features like building step-backs can also be used to fine-tune enclosure parameters to create appropriate enclosure areas.



## Summary

This study considered enclosure ratios for McLeod Avenue’s 24 metre road width for buildings up to six-storeys in height. A six-storey building to a maximum height of 19 m would have an enclosure ratio of 1:1, or 1:2 if step-backs are applied, and both possibilities would provide a comfortable space for pedestrians.

In conclusion, a six-storey building possibility on McLeod Avenue would achieve an enclosure ratio supportive of pedestrian oriented development consistent with the vision expressed in the City Centre Area Redevelopment Plan. The use of taller mixed-use buildings would also allow for increased residential density that would provide more nearby residents to support city centre commercial uses and also contribute to the City Centre area achieving a density target of 100 dwelling units per net hectare as required by the Edmonton Metropolitan Region Growth Plan.