The need for angular plane assessments in mid-rise Developments within a MTSA

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What does angular plane mean?

An imaginary line used to control the height and/or depth of buildings.

Used to protect the public realm from buildings that cast massive shadows all day long and to create consistent transitions from low- to mid-rise buildings.

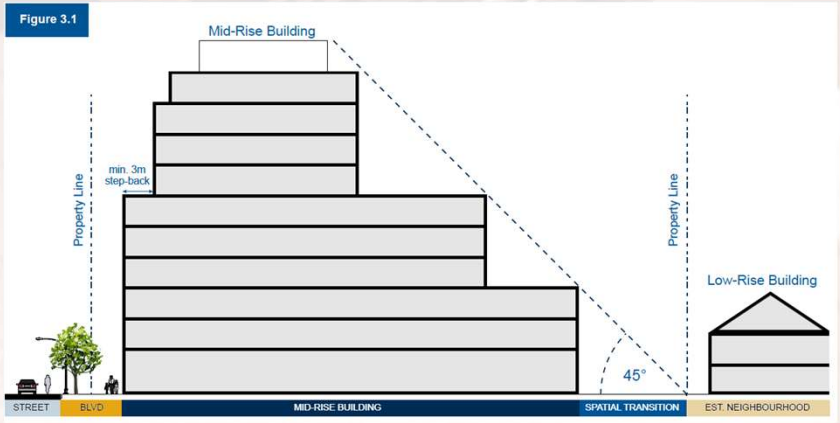


Fig. 4.5: City of Burlington DGMR, 3.0 Built Form: Transitions Figures

6.7. Building Transitions

6.7.1. Where a **tall** or **mid-rise building** is proposed that abuts a property identified as Established Neighbourhood Area on Schedule B-1 of the **Burlington Official Plan**, or abuts a property identified as Low to Mid-Rise Residential Precinct on Schedule B-1 of this By-Law, or abuts an existing or new **park**, including linear **park** and greenway, **development shall** incorporate transitions to minimize the impact of shadow and maximize access to sunlight, sky view, and privacy on neighbouring properties:

a) No **building should** extend beyond a 45 degree angular plane measured from the shared **lot line**; or

b) Where there is a compelling planning reason to consider an alternative approach to the 45 degree angular plane, one (1) or more of the following methods to achieve transition **shall** be incorporated to the satisfaction of the Approval Authority, including but not limited to:

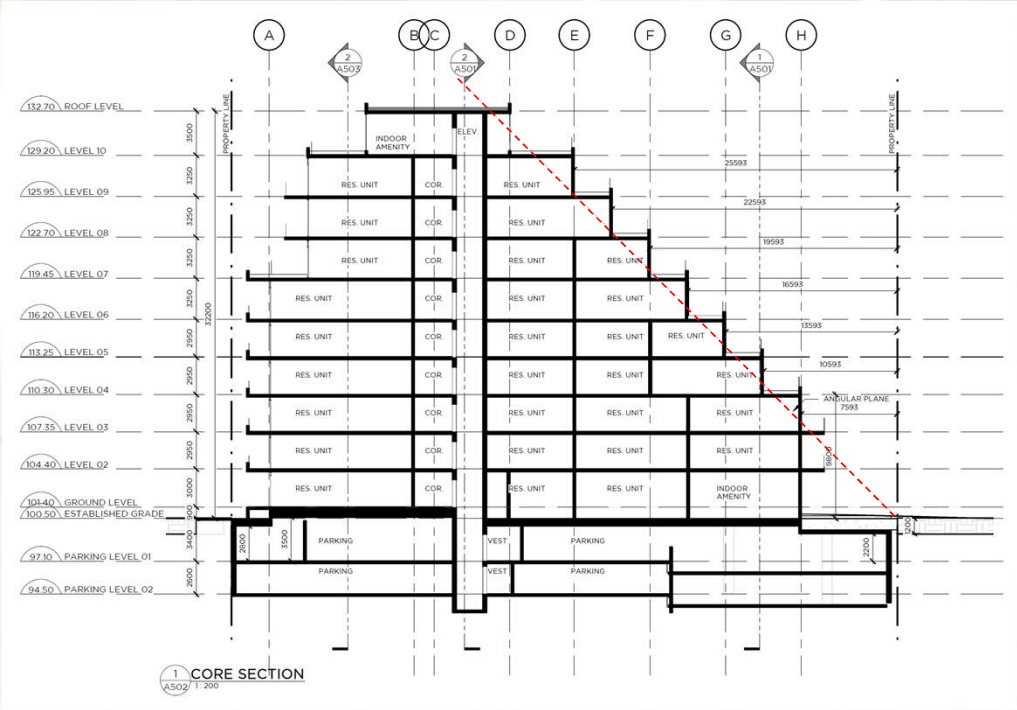
i) Increased **yard setbacks;**
ii) **Building** stepbacks;
iii) Reduction in **building** massing;
iv) Introduction of intervening **ground-oriented dwelling** or built form; or
v) Other approaches informed by relevant **City** approved urban design guidelines.

Source: **Community Planning Permit By-law** - Proposed – May 2024

Community Planning Permit By-law

The Challenges of using Angular Plane for mid-rise buildings

- Example



Draft Plans for 40-70 Plains Road East

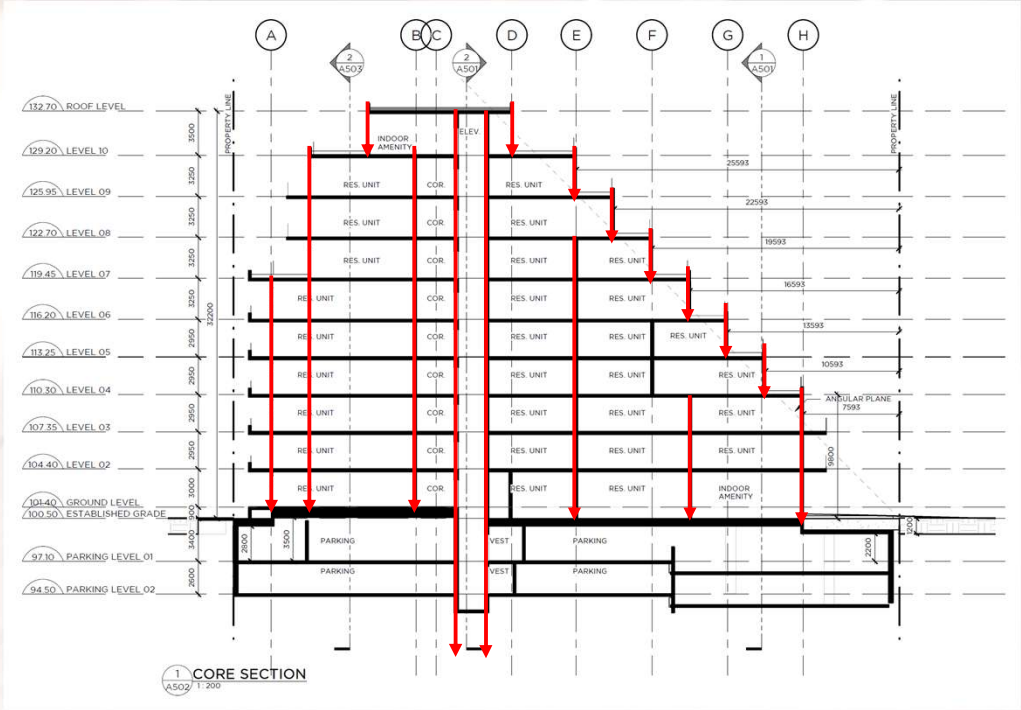
Laneways

Laneways Laneways are not specifically listed in the OP classifications; therefore, this may require definition as an MTSA specific typology which may or may not be added to the OP in a future iteration. Rear laneways are important public access features which help to accommodate additional parking, back of house servicing and loading for future developments and will be considered during the ASP process. They are also used to complement and further extend the existing public street network and establish a finer grain of detail within the development blocks.

Source: City of Burlington - Major Transit Station Areas, Area Specific Plans & Final Report by Dillion Consulting – June 2022

Example: Point Loads

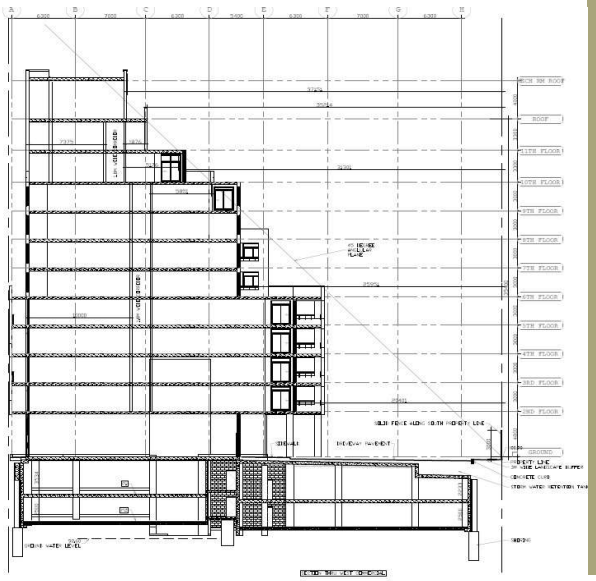
- Example



Draft Plans for 40-70 Plains Road East

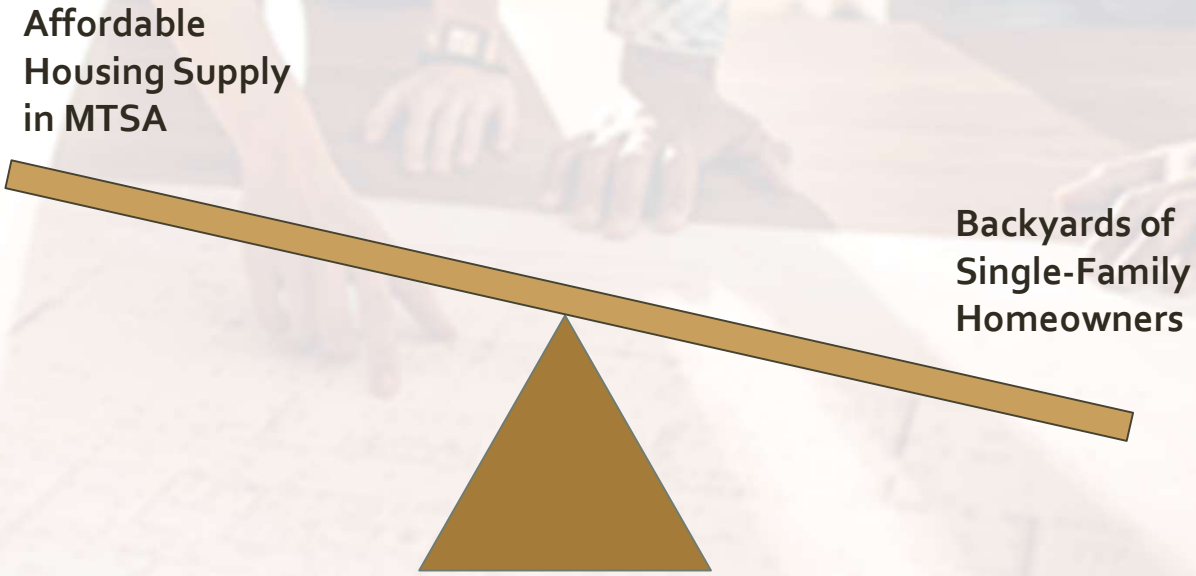
The Hidden Costs of Angular Plane as a metric

- Construction Costs
  - Multiple point loads
  - Mechanical stacking
  - Multiple unit layouts
- Sustainability
  - Larger building envelope causes more heat and cooling loss
- Unit Cost
  - Loss of square footage
  - Loss of units, which results in fewer affordable units



Draft Plans for 100 Plains Road East

Where are we at?



What are other municipalities doing?

The draft updates to Performance Standards for rear transition, recommended to be used as the basis for consultation, provide alternative approaches to rear transition for a variety of adjacent conditions. The draft updates continue to provide transition in built form as directed by the Built Form policies and other development criteria set out in the Official Plan, but with alternative approaches that would reduce or eliminate the continuous step-backs that have often been the result of applying the rear angular plane in the existing Performance Standards. **These changes will allow for more regular floorplates, improve constructability, and allow for development in a mid-rise form on some shallow sites that under the existing Performance Standards, would not have accommodated a mid-rise scale of development**. The draft updates encourage a mid-rise form that supports generous sunlight on adjacent sidewalks and the public realm, while also balancing transition to various rear conditions and supporting intensification through flexibility in built form massing.

Source: City of Toronto - PH4.7 - Mid-Rise Buildings Rear Transition Performance Standards Review & Draft Update – June 2023

Toronto's Solution for Mid-rise

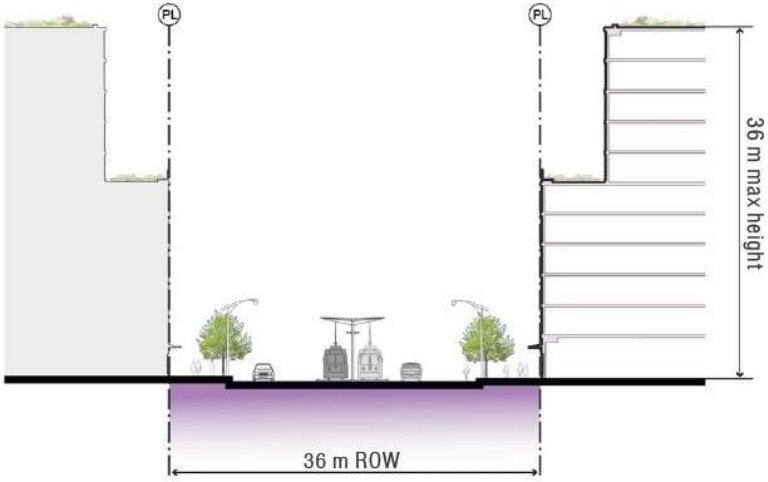
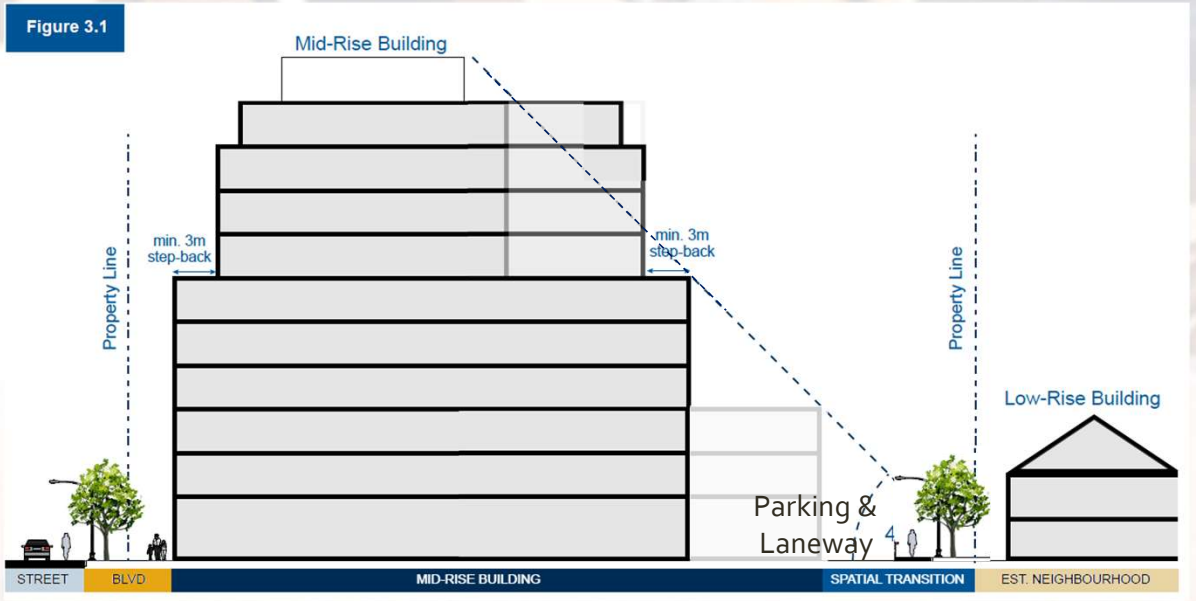


Figure 3.1.4: 1:1 on 36m ROW

Another possible solution



100 Plains Road East – Mid-block, facing towards Lake Ontario
Floors 1 to 11

Let's ride the future elevator

Conclusion:

Staff to explore options on better ways to deal with the angular plane for mid-rise buildings within the MTSA

Thank you

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