Mid-Rise Buildings on Toronto's Avenues – Responding to the Public Realm

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Introduction

The Avenues and Mid-Rise Buildings Study explores opportunities to encourage a built form that enhances the public realm, improves the pedestrian experience, responds to the surrounding context and is sensitive to adjacent land uses. Toronto's Avenues are an important part of the history of the City, some of them once forming part of the concession road system originally intending to separate and service farm lots. Today they shape Toronto's identity.

Although there are many layers that influence the public realm, this Study is premised on the idea that mid-rise buildings are a contextually sensitive solution that will help to create a lively high quality built environment and walkable public realm on Toronto's Avenues. The objective of this Study is to encourage the development of mid-rise buildings on the Avenues through updated zoning by-laws, design guidelines and compliance alternatives. For purposes of this Study, mid-rise buildings are defined as buildings that are no taller than the street right-of-way.

Currently, the City of Toronto is at the stage of drafting a set of performance standards to influence the shape of future development along the Avenues. They will take the form of measurable criteria that will be used by planners to evaluate how existing and planned buildings behave towards each other, fit the context the Avenue as a whole and most importantly interact towards the public realm. These performance standards will be used by the City of Toronto to inform design guidelines and updated zoning by-laws.

Policy Context

Toronto's Official Plan recognizes that the future of the city is one of growth, rebuilding, reurbanizing and of regenerating within the existing urban structure. The City is forecasted to grow by 537,000 people by the year 2031[1]. Building on the existing urban structure of the City, the Official Plan it adopts a growth management framework which identifies areas in the city are intended to grow – the Downtown and Central Waterfront, the Centres, the Avenues and Employment Districts – and those that are to remain stable – Neighbourhoods and Green Space.

The Official Plan identifies Avenues as important "corridors along major streets where reubanzation is anticipated and encouraged to create new housing and job opportunities while improving the pedestrian environment, the look of the street, shopping opportunities and transit service for community residents"[2].

Underneath the Avenues overlay are land use designations which can be divided into two categories: those that are intended to reinforce the existing physical character of the City (Neighbourhoods, Apartment Neighbourhoods, Parks and Open Space Areas and Utility Corridors), and those that are anticipated to accommodate employment and population growth (Mixed Use Areas, Employment Areas, Regeneration Areas and Institutional Areas).

This Study addresses only those properties that are designated for growth and that directly front onto an Avenue. The Study will also exempt properties that have been part of an Avenue Study, are part of a Secondary Plan Area or have undergone an area specific planning study that resulted in updated zoning by-laws.

Figure 1-1 Toronto Official Plan Urban Structure Map 2

The Built Environment

A good public realm is an essential ingredient of city-building and Toronto's streets should be considered and planned as a key shared asset amongst its citizens and visitors. The Official Plan recognizes this:

> "City streets are a significant public open space that serve pedestrian and vehicles, provide space for public utilities and services, streets and landscaping, building access, amenities such as view corridors, sky view and sunlight and are public gathering spaces. Streets will be deigned to perform their diverse roles, balancing the spatial needs of existing and future users within the right-of-way. This includes pedestrians, people with mobility aids, transit, bicycles, automobiles, utilities and landscaping"[3].

Avenues and Mid-Rise Buildings Study aims to implement this vision.

Urban design literature also advocates that in urban areas, streets constitute a significant part of the public open space and are seen as the most important symbol of the public realm, functioning as places for social interaction, leisure activities, travel and shopping[4]. Jacobs suggest that people's image of a city is often that of its streets: "Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting if they look dull, the city looks dull"[5].

For streets support social behaviour certain environmental and design conditions are needed. In a study of three neighbourhood commercial streets in the Boston metropolitan area in Massachusetts, Mehta identifies the microscale physical characteristics and ground floor uses that

are able to support stationary and social activities on[6]. Findings indicate that a physically well-designed street for people, with generous sidewalks, ample seating and street furniture, tree cover and other landscape elements as well as articulated street façades of buildings built to the sidewalk become more useful and meaningful for people.

Mid-Rise Performance Standards

The draft Mid-Rise Building performance standards, recommending in the on-going consultant Study being undertaken by Brook Mcllroy Planning + Urban Design/Pace Architects, builds on findings from previous Avenue Studies and incorporates best urban design and built form principles and practices from Toronto and other cities on around the world. Some of the performance standards have roots in a research conducted by the Berkeley Environmental Simulation Laboratory and the Centre for Landscape Research at the University of Toronto which analyzed the effect of future development on street level conditions of sun, wind and thermal comfort[7]. Performance standards describe how planned buildings should behave toward each other and how they should enhance the public and private realms. They may be implemented as zoning by-laws, urban design guidelines, or other means such as compliance alternatives.

The following sections outline the performance standards that are intended to contribute to success of Toronto's public realm and[i] enhance the pedestrian experience.

Maximum and Minimum Allowable Height

While recognizing that building height is only one aspect of regulating building design both minimum and maximum building heights are suggested. To make better use of exiting infrastructure and prevent inefficient development,

[i] For a full list of the draft performance standards recommended visit: http://www.toronto.ca/planning/midrisestudy.htm

the Study recommends that all new buildings on the Avenues must achieve a minimum height of 10.5 metres (up to 3 storeys) at the street frontage. This height is sufficient to accommodate a 4.5 metre floor to floor height for the ground floor which will allow flexibility in the range of possible ground floor and marketability of retail spaces.

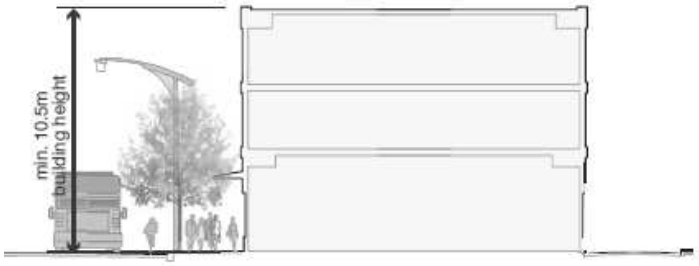

Figure 1-2 The minimum permitted height is 10.5 metres or 3 storeys.

The recommended maximum heights are related to the width of the Avenue right-of-way. There are 4 prevailing right-of-way widths – 20, 27, 30, and 36 metres which result in building heights of 6, 8, 9 and 11 storeys respectively. It is important to note however, that the dimensions of the development lot will impact the ability of the development to achieve the maximum allowable height.

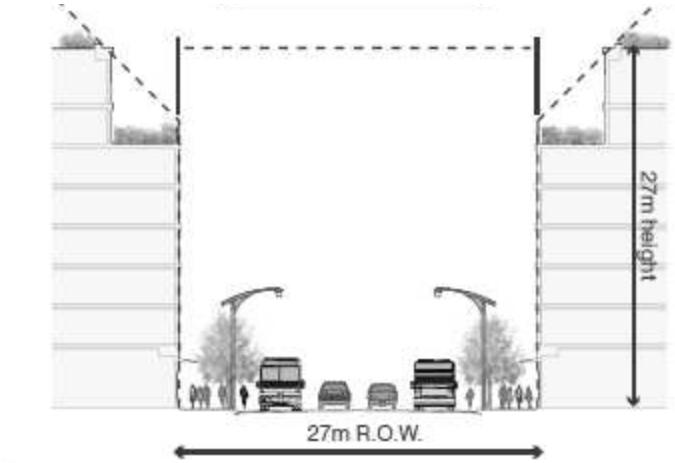

Figure 1-3 Example of maximum allowable height on a 27 metre right-of way

The maximum and minimum heights is the first step in preserving Toronto's main street character and creating what the Study calls mid-rise urbanism – a city form that distinguishes many iconic world cities and is embraced by popular culture. These standards will also help to create the feeling of an outdoor room as the walls (building façades) will bear relation to the floor (streets) and ensure sky views.

Front Angular Planes

To ensure adequate thermal comfort on Avenue sidewalks a front angular plane will sculpt mid-rise buildings to provide a minimum of 5 hours of sunlight onto the sidewalks between the spring equinox and fall equinox (March 21st and

September 21st). An angular plane is created by extending a line at a specified angle, upward and inward over a lot. Proposed buildings will be subject to a 45º angular plane taken from a height equivalent to 80% of the right-of-way.

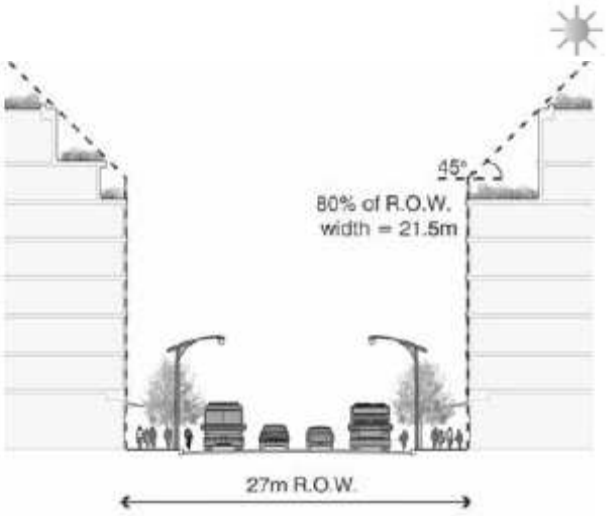

Figure 1-4 Example of the front angular plane requirement on a 27 metre right-of-way

Minimum Sidewalk Zones

As Toronto's Avenues face competing demands for space to accommodate a range of uses in the right-of-way, this Study prioritizes pedestrians by requiring a minimum sidewalk widths of 4.8 metres on right-of-ways narrower than 30 metres and 6.0 metres on right-of-ways greater than 30 metres. Sidewalk sections outline requirements for the curb/edge zone, continuous tree trench and the pedestrian clearway.

Minimum sidewalk zones are to be achieved over time as redevelopment occurs along the Avenues. Recognizing that this will create a 'saw tooth' building façade effect in the short term, buildings will be required to provide a front setback to achieve the minimum sidewalk width.

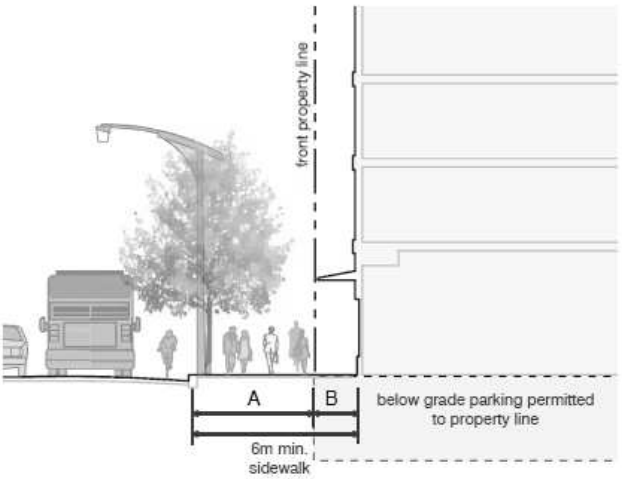

Figure 1-5 Diagram of 6 metre sidewalk suggested for Avenues with right-of-ways greater than 30 metres

Vehicular Access

To encourage a public realm that favours pedestrians, the Study recommends an uninterrupted pedestrian realm by locating driveways and vehicular access point to the rear from a back lane or along the side streets side of buildings. For mid-block sites without rear lane access, a front driveway will only be permitted if its located a minimum of 30 metres from the center of the lane to the centre of the nearest side street, appropriate spacing is maintained so that driveways are a

minimum of 30 metres apart and shared access is secured so that as the bocks redevelops, new driveways are not needed.

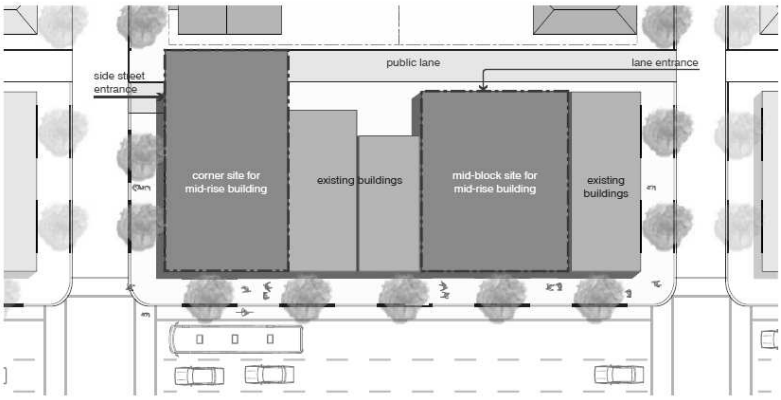

Figure 1-6 Vehicular access should be located off side-streets or the rear laneway.

Other performance standards that will help create a visually appealing, comfortable and vibrant public realm include mandating that buildings with frontages of 60 metres or more be articulated or "broken up' through upper storey step-backs and architectural details and construction materials.

Conclusion

The Avenues and Mid-Rise Buildings Study is a step towards implementing the Official Plan vision for Toronto's Avenues. The performance standards will help shape buildings so that they respond to the public realm and create better pedestrian conditions along the city's main arterial corridors.

Endnotes

[1] City of Toronto (2003) *Flashforward: Projecting Population and Employment to 2031 in a Mature Urban Area*: Section 2: How Many People will there be in the GTA?
[2] City of Toronto (June 2006) *Toronto Official Plan* Section 2.2.3 Avenues: Reurbanizing Arterial Corridors
[3] City of Toronto (June 2006) *Toronto Official Plan* Section 3.1.1 The Public Realm
[4] Jacobs, J. 1961. *The death and life of great American cities*. New York: Vintage Books.
Appleyard, D. 1981. *Livable Streets*. Berkeley: Univ. of California Press.
Gehl, J. 1987. *Life between Buildings*. New York: Van Nostrand Reinhold.
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Carmona, M., T. Heath, T. Oc, and S. Tiesdell. 2003. *Public spaces – Urban spaces: The dimensions of urban design.* Oxford, UK: Architectural Press.
[5] Jacobs, J. 1961, p29. *The death and life of great American cities*. New York: Vintage Books.
[6] Mehta, V. 2007. *Lively Streets: Determining environmental characteristics to support social behaviour*. Journal of Planning Education and Research 27: 165-187.
[7] Bosselman P., E. Arens, K. Dunker and R. Wright, 1995. *Urban Form and Climate: Case Study, Toronto*. Journal of the American Planning Association, 61:2