

# **Northdale Land Use and Community Improvement Plan Study**

## **Urban Design and Built Form Guidelines**

**JUNE 2012**





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# 1. Introduction

## 1.1. Northdale Urban Design Guidelines

The City's Official Plan provides special design policies for a number of land use designations and the general urban design policy section. The Northdale Land Use and Community Improvement Plan Study Official Plan Amendment provides supplemental design guidelines for the Northdale neighbourhood that are outlined in this document. The Official Plan provides policies that support a high standard of urban design for both public and private projects that contribute to an attractive and liveable City. The policies are further augmented with the City's Urban Design Manual, that provide more detailed guidelines for urban design, built form and landscaping.

These guidelines apply to the entire Northdale neighbourhood which is bound by King Street North, University Street West, Phillip Street and Columbia Street West, as identified as Specific Provision Area 45 (Northdale Neighbourhood) on Schedule "A6" – Specific Provision Areas, of the Official Plan.

The Northdale neighbourhood will develop incrementally, over time with a more consistent built form and streetscape pattern. These Supplemental Guidelines provide guidance to facilitate intensification in the Northdale neighbourhood with emphasis on a compact, sustainable, mixed use neighbourhood that promotes active transportation, transit oriented development, vital main streets and social neighbourhoods.

These guidelines are supplemental to the City of Waterloo Urban Design Manual and should be read in conjunction with that document as well as the Zoning By-law Amendment for Northdale. The guidelines focus specifically on issues that are unique to the Northdale neighbourhood and build on the guidance of the City-wide Urban Design Manual.

## 1.2. Purpose

The purpose of the Northdale Urban Design Guidelines is to:

- foster design excellence in the Northdale neighbourhood;
- implement the Northdale Land Use and Community Improvement Plan Study Official Plan Amendment recommendations;
- implement the City's Urban Design policies established in the Official Plan;
- incrementally implement the vision for the Northdale neighbourhood;
- provide specific built form, landscape and sustainable site and building design guidelines to assist Council in achieving the vision and principles established for Northdale;
- provide eligibility criteria for the CIP's Financial Incentive Programs, with respect to design and sustainable development;
- provide the City with a tool for the review and evaluation of development applications and financial incentive programs and supporting materials; and,
- provide supporting strategies for development implementation.

## 1.3. Urban Design Guiding Framework

### 1.3.1. Urban Design Manual

The Urban Design Manual was approved by Council in September 28, 2010. The primary purpose of the Manual was to implement the City's urban design objectives and policies through the development review process and for select public realm improvement projects. The Manual was based on specific policy objectives established in the Urban Design section of the City's Official Plan, as outlined in Section 2.3.3.4. A summary of the Official Plan Urban Design Objectives are to:

- Promote a high standard of urban design;
- Respect context and promote sense of place;
- Enhance connectivity and interaction;
- Promote creativity and innovation; and,
- Encourage sustainable design.

The urban design objectives provide a policy basis for the manual and the City's design guideline implementation. The Urban Design Manual also provide guidance to assist in the implementation of the Height and Density Policy Study, and the City's Strategic Plan (2008). The Manual is structured in three parts that include:

1. General City Design Guidelines;
2. Supplemental Guidelines; and,
3. Site Plan Review Guidelines.

### 1.3.2. General City Design Guidelines

The General City Design Guidelines implement the City's urban design objectives in the public and private realm, and apply to all development projects throughout the City with emphasis on the Site Plan Review Process. Supplemental Guidelines establish detailed design guidelines for specific types of developments or locations in the City. The Site Plan Review Guidelines include process guidelines and technical standards for the City's Site Plan Review Process. The process guidelines identify the Site Plan review and approval steps and include check lists for submission requirements. This site plan section also includes a series of design standards for site plan drawing details and plan submissions.

The Urban Design Guidelines apply to all areas of the City. Supplemental Guidelines that are particularly relevant to Northdale include:

- Streetscape Guidelines (3.1.1);
- Master Planned Development (3.1.2);
- Site Services (3.1.3);
- Tall Buildings (3.1.4);
- Mid-Rise Housing Geared to Student Accommodations (3.1.5);
- Parking Structures (3.1.6); and,
- Signage (3.1.8).



### **1.3.3. Area Specific Guidelines**

Area Specific Guidelines that apply to Northdale are the Nodes and Corridors (3.2.1) guidelines that promote:

- an urban built form along the corridors by locating buildings close to the street and with appropriate massing to reduce adverse impacts on surrounding properties and the public realm;
- provide a transition in building setback to establish a coordinated streetscape character and corridor function;
- pedestrian friendly streets through articulated building design and complementary landscaping; and,
- promote transit oriented design with building entrances located along and facing the public street; and, compatible transition to surrounding neighbourhoods.

### **1.3.4. Supplemental Design Guidelines**

The Northdale Urban Design Guidelines are Supplemental Design Guidelines that apply to the Northdale neighbourhood (Section 3.2.2). These guidelines work in tandem with the General City Design Guidelines. Both sets of guidelines — Northdale and the General City Design Guidelines — should be consulted in the development and review of the project design. In the event of a conflict between the General and Northdale Guidelines, the Northdale Guidelines supersede. They have been developed to coordinate closely with the Northdale Zoning By-law Amendment.

The Northdale Zoning By-law Amendment applies the principles of the Northdale Official Plan Amendment by defining the quantitative structure of the neighbourhood. These Urban Design Guidelines provide detailed guidance for the quality of the neighbourhood.

## 2. Vision

### 2.1. Vision

**“By 2029, Northdale is revitalized and reurbanized into a diverse, vibrant and sustainable neighbourhood, integrated with educational, residential, commercial, cultural, heritage and recreational functions, and improved open space, pedestrian, cycling and transit networks.”**

Vision Statement for Northdale

Northdale is a neighbourhood in transition. It is anticipated that Northdale will accommodate a large portion of the City's infill and intensification growth over the next twenty years given the proximity of the neighbourhood to the Universities, designated nodes and corridors, and planned Major Transit Station Areas (MTSAs). As such, the policies of the Official Plan 45B support the reurbanization of Northdale as a vibrant, sustainable and mixed use community. Northdale will become a complete community that accommodates a diverse demographic and range of land uses, housing types, institutional and community uses, commercial and retail uses and employment uses that are supported through an integrated network of pedestrian-oriented streets, pathways, and cycling facilities which support active transportation and increased densities. The cultural heritage attributes of Northdale will be recognized and provide inspiration for the development of the neighbourhood.



## 2.2. Principles

The over-arching vision for Northdale is further supported by the following principles. Northdale will be:

- 1. Integrated:** Northdale is ideally situated within proximity to the Universities, Uptown, and major employers and will be integrated within the urban fabric of the City and surrounding community through improved transportation, cycling and pedestrian networks.
- 2. Diverse:** Northdale will be a diverse, vibrant, mixed use and urban neighbourhood where residents live, work, learn and play. It will be comprised of a variety of housing types and tenures which provides affordable housing and accommodates a diverse demographic including students, families and professionals, and supportive commercial, employment, institutional and community services.
- 3. Identifiable:** Northdale will have a unique, renowned identity as a place in which residents, students and professionals are inspired by their environment and the energy and creativity of Waterloo's world-class Universities and employers.
- 4. Supported:** Northdale will be an important opportunity for public and private investment and redevelopment as the neighbourhood evolves and urbanizes, and supported through appropriate infrastructure and services.
- 5. Memorable:** Northdale will celebrate its cultural and built heritage resources through conservation, adaptive reuse and/or through contextual redevelopment which recognizes the community's heritage resources, including the Veterans' Green Park and housing, and retention of mature trees.
- 6. Interactive:** Northdale will be enhanced through a network of additional parks, open spaces, walkways and improved streetscaping which provides for recreational, passive and community gathering spaces, which complement the Veterans' Green Park.
- 7. Durable:** Northdale will be a sustainable and environmentally progressive neighbourhood, and provide an exemplary level of quality architecture, urban design, public realm and open spaces that are robust and durable.
- 8. Safe:** Northdale will be a safe neighbourhood which incorporates crime prevention through environmental design practices, and provides for street-related, ground floor animation areas, and building heights and setbacks which encourage 'eyes on the street', and through building designs and support services which enhance safety.
- 9. Flexible:** Northdale will evolve and transition over time, as such the planning framework, regulations, buildings and land uses will be adaptive to changing market conditions, transportation, and housing needs.
- 10. Collaborative:** Partnerships will be enhanced and forged between the City, Universities, developers, residents and landowners to facilitate synergies to further the redevelopment objectives and enhance the community.

## 2.3. Preferred Neighbourhood Elements

Based upon the vision and principles established for the Northdale neighbourhood, a number of preferred neighbourhood elements have been identified which provide more detailed planning and land use objectives to guide the reurbanization of Northdale. The preferred neighbourhood elements provide the basis for the preferred land use plan for Northdale, which is implemented through the land use designations and policies of this Plan, the implementing Zoning By-law, the Northdale Urban Design Guidelines, and the Community Improvement Plan for Northdale. The following preferred neighbourhood elements provide the guiding principles for the reurbanization of Northdale.

### 2.3.1. Neighbourhood Structure

**NS.1** The low-density, single detached house will no longer be the predominant housing form in the Northdale neighbourhood. Instead, the City will favour a vibrant, more intensive, mixed-use community.

**NS.2** New development will be focused on mixed-use, mixed-density, transit and pedestrian supportive principles, allowing for a diversity of people and activities.

**NS.3** Clear land use, urban design and built form policies, regulations and guidelines will guide future development. Building height and density will generally be greater on the periphery of the neighbourhood, and transition towards medium density forms in the interior of the neighbourhood.

### 2.3.2. Buildings & Development

**BD.1** New buildings, enhancements to the public realm and related development elements should be constructed in a sustainable manner, conserving energy and resources, using durable materials and, where feasible and appropriate, achieving LEED® certification.

**BD.2** Buildings will be brought to the street edge by establishing build-to lines, maximum setbacks and urban design/built form policies, regulations and guidelines to create a sense of street enclosure, limit breaks in the street wall, and maximize the principles of “eyes on the street”.

**BD.3** Appropriate and compatible building design techniques will be used, including transition in building heights, step-backs and angular planes, and building articulation.

**BD.4** The location of ground-floor windows, doors, and main entranceways will support visibility and transparency at grade, and access from the street.

**BD.5** Indoor and outdoor common amenity areas will be encouraged for housing developments to promote a healthy social environment both within buildings and along the street. Outdoor elements could include porches; squares or patios adjacent to the street; roof gardens; and, on larger sites, internal courtyards connected to the public realm. Indoor common amenity areas may include recreational, study and living areas.

**BD.6** Generally, parking requirements will be minimized in Northdale, to recognize that the community is being planned to support rapid transit facilities and will continue to accommodate a large portion of students and University related faculty and staff, area business employees, and permanent residents, resulting in a walkable, mixed-use community that has exceptional access to transit. Parking areas will not be permitted in the front yard, and rear yard parking will be preferred. Underground or decked parking will be encouraged for higher density building forms.

### **2.3.3. Public Realm**

**PR.1** On active street frontage areas, retail, commercial and community uses will be required at the street-edge to animate and activate the public pedestrian realm. On convertible street frontage areas, intermediate streets, frontages will be designed to be convertible from residential to an animated retail, commercial or community use at some point in the future.

**PR.2** Every opportunity to enhance and create parks, parkettes, greenways, plazas, and active open spaces, will be explored to enhance public interaction. These opportunities will be created through the redevelopment of lands.

**PR.3** Improvements to road and pedestrian/cycling connections will be established through the redevelopment of lands to promote connectivity and provide better access.

**PR.4** The development of new buildings and the public realm will incorporate principles of Crime Prevention Through Environmental Design (CPTED), which may address such matters as: appropriate landscaping, lighting, and visibility and animation of the ground floor. New development will also have regard for the principles of universal accessibility.

**PR.5** Improved streetscaping should be provided in the form of tree lined boulevards, enhanced landscaping, paving and traffic calming, where feasible and appropriate, and through the provision of consistent and attractive street furniture to define the public realm and neighbourhood character.

### **2.3.4. Universities and Schools**

**US.1** The Universities should meet the requirements of the Urban Design and Built Form Guidelines, through development approval applications, particularly in relation to public realm and active frontage policies and regulations.

**US.2** The potential future redevelopment or repositioning of Waterloo Collegiate Institute

should ensure that the open space components of the campus are maintained for community use and the campus may redevelop for other educational, recreational or cultural purposes, and/or for mixed residential development with medium to high density uses in a manner compatible with the surrounding neighbourhood.

### **2.3.5. Heritage Resources**

**HR.1** The Veterans' Green park will be retained and provide a community cultural heritage and open space focus.

**HR.2** Development applications within and adjacent to the Veterans' Green Housing and surrounding Wartime Housing, are encouraged to have consideration for the potential conservation of heritage resources on-site and/or the incorporation or adaptive reuse of the heritage resources as appropriate.

### **2.3.6. Incentives and Bonuses**

**IB.1** Community improvement incentives will be established which relate eligibility criteria to achieving key land use and urban design objectives, including sustainable site and building development, open space development, and property improvement, among other matters.

**IB.2** A bonusing framework will be established to advance key public policy objectives, including provision of public park land (beyond minimum requirements for dedication or cash-in-lieu), public art contribution, provision of affordable housing, outdoor amenity space/courtyard that functions as public space (beyond minimum requirements), conservation/incorporation of heritage resources associated with the Veterans' Green Park, Veterans' Green Housing and the Wartime Housing, active transportation connection in accordance with Plan/Urban Design Guidelines (i.e., pedestrian walkways), provision of maintenance/monitoring agreement for on-site security and/or supervision.

## 2.4. Preferred Structure Plan

The Preferred Structure Plan is based on the community vision and incorporates the principles and preferred elements. The plan is meant to be read and applied in conjunction with the Official Plan, District Plan Amendment and Zoning By-law Amendment, Community Improvement Plan and Urban Design Guidelines for Northdale. Many of these strategies and options represent contemporary and best practices with respect to community building and urban design.

The Preferred Structure Plan extends the existing nodes and corridors planning framework, to create a dense, compact neighbourhood by directing future land use and development. The structure of the future neighbourhood is defined along its edges by main streets that are lined with active uses and are occupied by higher densities encouraging transit use and active transportation. Columbia Street and University Avenue are treated as primary streets that give priority to active transportation and street vitality. These streets would accommodate wider sidewalks, pedestrian lighting, and have more amenities such as street furniture.

Hazel and Albert Streets are treated as main thoroughfares that provide north-south connections through the neighbourhood to enhance connectivity to both Universities. Hickory Street is envisioned as a pedestrian/cyclist priority street as it is the only continuous east-west connection through the internal neighbourhood. Hickory Street would also have wider sidewalks and bike lanes and would be greener than the major streets with green boulevards, rainwater gardens and front yard planting.

The Preferred Structure Plan shows the potential of Hickory Street extending to Phillip Street allowing for a connection to the University of Waterloo through the review of development approvals. The large Phillip Street block, if redeveloped, would be best served by new public streets that define blocks and allow for eyes-on-the-street within new developments. These blocks would also include pedestrian connections to

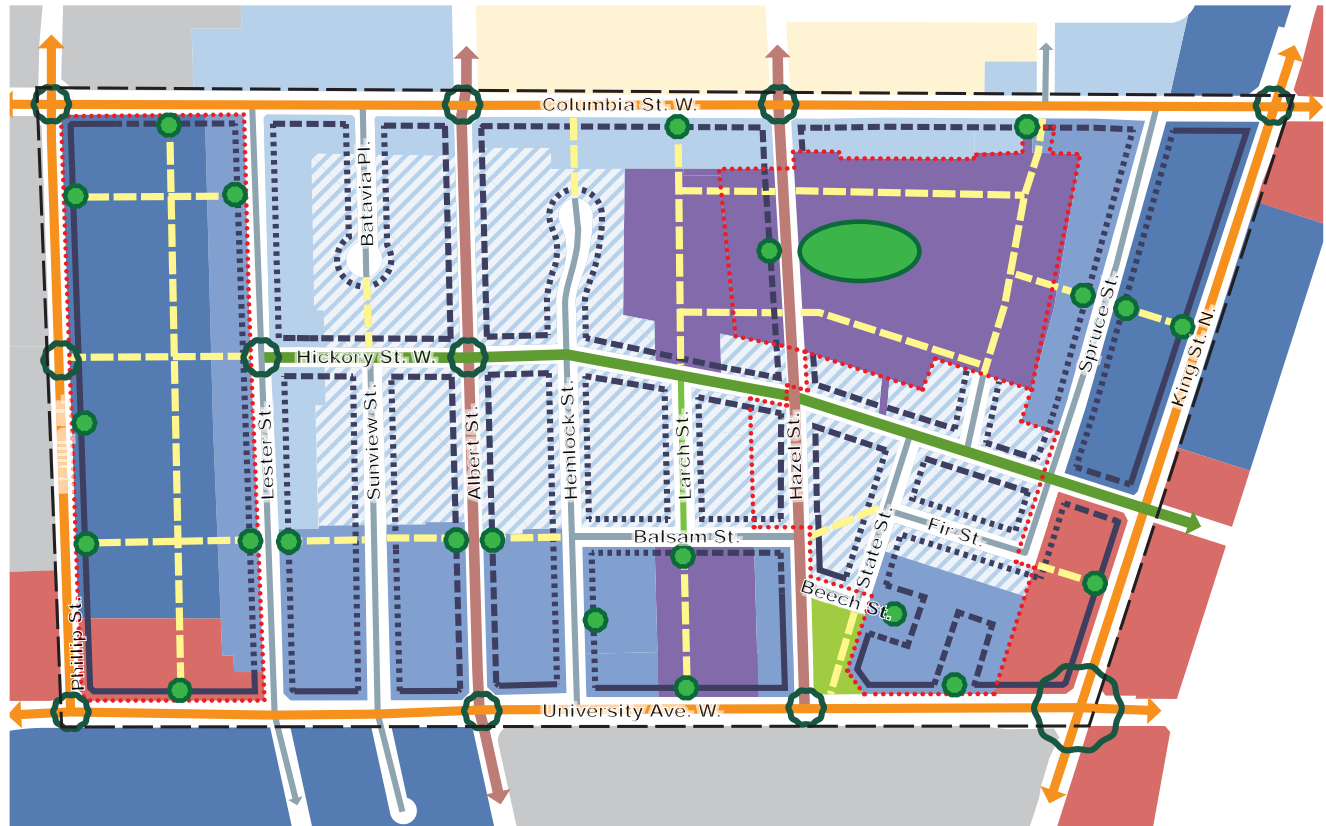
increase the permeability of the area. Hazel, Albert and Hickory Streets will be lined with convertible frontage buildings that can accommodate either residential or commercial uses over time.

The Plan introduces transition areas of medium or medium-high density between the lower and higher densities. These transition zones were added along the western edge of Spruce Street, the eastern edge of Lester Street. Along University Avenue, the majority of lands south of Balsam Street have been designated as medium-high mixed use areas due to their proximity to the universities.

The remainder of the interior blocks are envisioned as residential streets. These streets would be quieter and lined with street-related residential units in low to medium density buildings.

The Waterloo Collegiate Institute school site has been designated as institutional and a large open space has been shown as a potential future park that would be preserved should that site be developed in the future.

A series of possible mid-block connections have been determined to create pedestrian/cyclist connectivity through the neighbourhood. Parkette/public square locations have been shown across the plan at key terminus or mid-block locations. These public spaces would be developed through redevelopment and the specific locations would be determined through block plans. A series of potential parkettes is shown along the axis of Balsam Street showing the potential to create a pedestrian pathway that would connect east-west through the midblock.



Land Use		Streetscape	
	Mixed-Use High Density Res. (25 storeys, 750 bph)		Main Street
	Mixed-Use Medium-High Density Res. (12 storeys, 600 bph)		Mixed Use Street
	Mixed-Use Medium Density Res. (6 storeys, 450 bph)		Green Street
	Low Density Res. (6 storeys, 250 bph)		Residential Street
	Low Density Res. (3 storeys max.)		Woonerf/Shared Street
	Medium-High Density Institutional		Potential New Street or Pedestrian/Cycling Connection
	Employment		Major Gateway
	Mixed-Use Community Commercial		Minor Gateway
	Open Space		Potential Neighbourhood Park
Frontage at Grade			Potential Parkette/Square Location
	Active Frontage (1-3m Setback)		Specific Provision Area
	Convertible Frontage (1-5m Setback)		Study Area
	Neighbourhood Frontage (3-6m Setback)		

bph = bedrooms per hectare

## 2.5. Public Realm Structure



A key structuring element of the Northdale Preferred Structure Plan is an interconnected and permeable open space network. The network is made up of a hierarchy of streets, walkways and open spaces. Bounded by active Main Streets, Northdale is bisected by Mixed Use streets and one Green Street. The remainder of the neighbourhood is defined by residential streets with mid-block walkways allowing for connection through the neighbourhood. Small parkettes or squares are connected to mid-block connections while one potential large park is shown as a future possibility within the Waterloo Collegiate Institute site. Specific public realm guidance can be found in sections:

- 4.3. Streets - Main Street
- 4.4. Streets - Mixed-use Street
- 4.5. Streets - Green Street
- 4.6. Streets - Residential
- 4.7. Streets - Woonerf (Shared Street)
- 4.14. Parks & Open Space
- 4.15. Parkettes & Squares

Study Area

### Streetscape

- Main Street
- Mixed Use Street
- Green Street
- Residential Street
- Woonerf/Shared Street
- Potential New Street or Pedestrian/Cycling Connection



Major Gateway



Minor Gateway

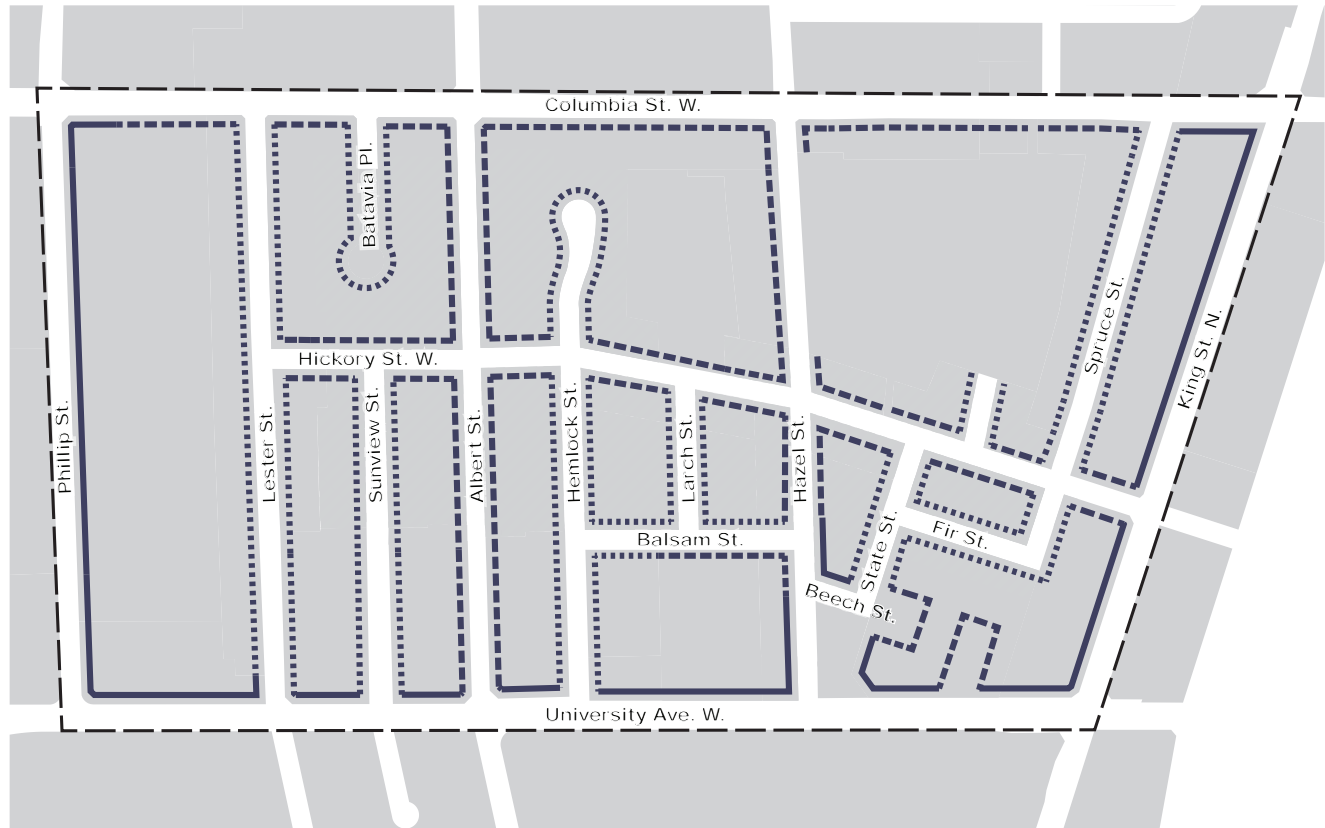


Potential Neighbourhood Park



Potential Parkette/Square Location

## 2.6. Built Form Frontage at Grade



Streets in Northdale will be framed by built form. There are three types of built form frontage that frame the street: Active Frontage, Convertible Frontage and Neighbourhood Frontage. Specific guidance regarding frontage types can be found in sections:

- **5.2. Active Frontage**
- **5.4. Convertible Frontage**
- **5.6. Neighbourhood Street Frontage**

— — Study Area

### Frontage at Grade

— Active Frontage (1-3m Setback)

— — — — — Convertible Frontage (1-5m Setback)

· · · · · Neighbourhood Frontage (3-6m Setback)



### 3. Neighbourhood Structure

Northdale will evolve over time. The urban structure will diversify as new development opens the potential for new streets and blocks. A fine-grained street network will allow for pedestrian connections to main streets, university campuses and transit corridors. The urban grain of the Northdale area will be defined by a diverse mixture of developments including campus buildings, mixed-use buildings and ground-related buildings. Essential to the success of these new developments is ensuring that the neighbourhood becomes more permeable. Mid-block connections and other pedestrian paths reduce walking distances and provide choices of routes. An integrated network of pedestrian walkways and crosswalks will provide pedestrian infrastructure that supports active mobility.

#### 3.1. Preferred Elements

**NS.1** The low-density, single detached house will no longer be the predominant housing form in the Northdale neighbourhood. Instead, the City will favour a vibrant, more intensive, mixed-use community.

**NS.2** New development will be focused on mixed-use, mixed-density, transit and pedestrian supportive principles, allowing for a diversity of people and activities.

**NS.3** Clear land use, urban design and built form policies, regulations and guidelines will guide future development. Building height and density will generally be greater on the periphery of the neighbourhood, and transition towards medium density forms in the interior of the neighbourhood.



### 3.1.1. Safety

A consistent principle that can be found throughout the Northdale Urban Design Guidelines is the promotion of environmental design strategies that can be employed to promote safety and reduce the incidence of crime in Northdale. Crime Prevention through Environmental Design (CPTED) encourages the examination of the physical design of a building or site with reference to the primary function, as well as supporting concepts such as natural surveillance, access control, territorial reinforcement and maintenance. The following summarize the CPTED principles.

1. Encourage active open spaces and porous built form that allows for 'eyes on the street'. Program space for year round use at varied hours to create active outdoor spaces.
2. Review maintenance and operations policies for streetscapes, parks and open spaces within the neighbourhood to ensure that adequate maintenance is being undertaken.
3. Encourage mid-block pedestrian connections through large block development. Distinguish space from public realm through alternative paving materials, landscape treatment or architectural cues. (UDM 2.3.1.5).
4. Design sites, buildings and landscaping to avoid entrapment areas with emphasis on:
  - locating and designing buildings, structures and the site with clear sightlines into building entrances, parking areas, amenity spaces and site servicing areas;
  - flanking open spaces with public roads to improve the safety of park use through casual surveillance;
  - providing low growing plant material in areas along pedestrian walkways and in areas of potential entrapment;
  - providing adequate lighting in areas of pedestrian activity and use; and,
  - avoiding recessed or narrow spaces which are not supported with natural surveillance and security lighting (UDM 2.1.4.2).
5. Provide visible sight lines and direct pedestrian access to open spaces.



## 3.2. Structuring Elements

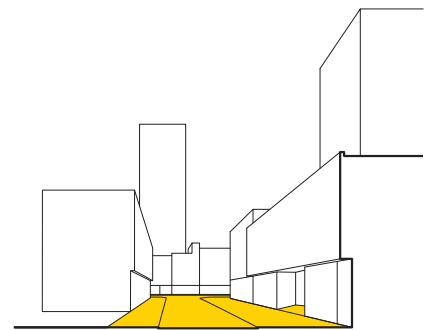
This document provides guidance for the future urban structure of Northdale in two major categories, public realm and built form. Public realm is comprised of public spaces such as streets, parks, and parkettes whereas built form is made up of predominantly private developments in the form of buildings. Buildings define the edges of the public realm where the movement and activities of everyday life occur.



### 3.2.1. Public Realm: Parks and Open Spaces

New parks and open spaces will bring life to the Northdale neighbourhood and provide necessary social space for the population. As the neighbourhood intensifies, the need for parks and recreational areas will increase. Guidance for these new amenities can be found in sections:

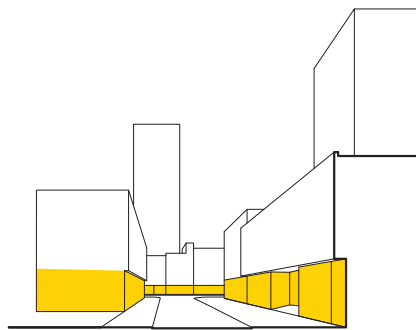
- 4.14. Parks & Open Space
- 4.15. Parkettes & Squares



### 3.2.2. Public Realm: Streets

The Northdale neighbourhood will be structured by a network of streets and pedestrian connections that define the public realm, allow for movement through the neighbourhood and act as social spaces for leisure activities. Streets define the image and character of neighbourhoods. Not only do they serve the essential function of moving people and vehicles, they provide public access to residences, businesses, and shops.

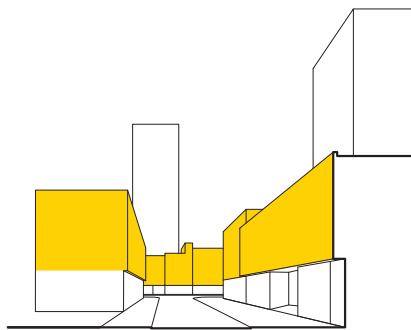
- 4.3. Streets - Main Street
- 4.4. Streets - Mixed-use Street
- 4.5. Streets - Green Street
- 4.6. Streets - Residential
- 4.7. Streets - Woonerf (Shared Street)



### 3.2.3. Built Form: Frontage at Grade

The edges of buildings define the boundary between the public and private realm. A building's frontage at grade defines the image of the street. The permeability and transparency of the grade related units frame the experience of walking along a street. A pedestrian friendly neighbourhood requires integration between built form and the adjacent pedestrian environment. Grade related edges should allow for a mixture of uses and display activity to animate the street. There are three types of frontage at grade for which guidance can be found in these sections:

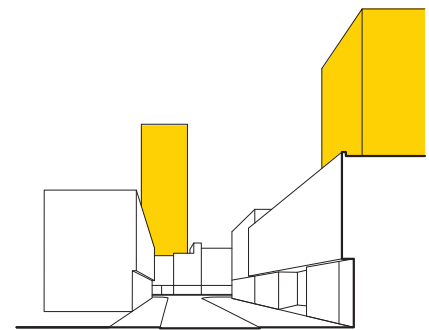
- 5.2. Active Frontage
- 5.4. Convertible Frontage
- 5.6. Neighbourhood Street Frontage



### 3.2.4. Built Form: Street Wall

Street enclosure is an essential urban quality that ensures a comfortable pedestrian environment. Streets are enclosed or framed by the buildings that line their edges. A consistent street wall defines a space that feels like an urban room. New developments should be built with a consistent setback to help define the street edge. Podiums help improve the scale of the street and mitigate the effect of tall buildings and preserve sky views. They also help improve micro-climate conditions by deflecting winds from the sidewalk. Guidance for street walls can be found in this section:

- 5.10. Street Wall



### 3.2.5. Built Form: Towers

Towers accommodate density within the urban fabric as well as offering privacy and views to their residents. In the Northdale neighbourhood towers are defined as the taller portion of buildings that rise above the street wall or podium. Towers within Northdale are setback from the street and have a maximum floorplate size as well as a minimum separation from other towers. These guidelines ensure that taller buildings do not dominate the skyline. Guidance for towers can be found in this section:

- 5.11. Towers

## 4. Public Realm

### 4.1. Preferred Elements

**The future landscape of the Northdale neighbourhood should encourage creativity and innovation through the development of spaces that demonstrate a balance between built form and natural elements. The creation of destination space that acknowledges the role that microclimate, safety, visual interest and socio-spatial interaction offers opportunity for the community to re-introduce themselves to each other, and to the rest of the city.**

**PR.1** On active street frontage areas, retail, commercial and community uses will be required at the street-edge to animate and activate the public pedestrian realm. On convertible street frontage areas, intermediate streets, frontages will be designed to be convertible from residential to an animated retail, commercial or community use at some point in the future.

**PR.2** Every opportunity to enhance and create parks, parkettes, greenways, plazas, and active open spaces, will be explored to enhance public interaction. These opportunities will be created through the redevelopment of lands.

**PR.3** Improvements to road and pedestrian/cycling connections will be established through the redevelopment of lands to promote connectivity and provide better access.

**PR.4** The development of new buildings and the public realm will incorporate principles of Crime Prevention Through Environmental Design (CPTED), which may address such matters as: appropriate landscaping, lighting, and visibility and animation of the ground floor. New development will also have regard for the principles of universal accessibility.

**PR.5** Improved streetscaping should be provided in the form of tree lined boulevards, enhanced landscaping, paving and traffic calming, where feasible and appropriate, and through the provision of consistent and attractive street furniture to define the public realm and neighbourhood character. Expanding on the Preferred Elements, the following pages will cover public realm strategies that apply specifically to Northdale. There are three components in particular that will be expanded upon.



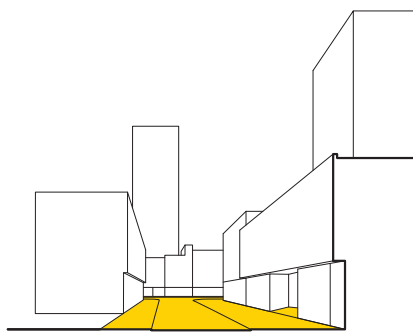
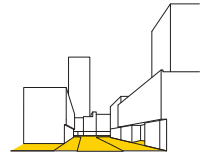
#### 4.1.1. Parks & Open Spaces

Today, Northdale is deficient in quality public open spaces. Ideally, public open space should be within a five minute walk of all residents, as they provide much needed areas of refuge within our urban centres. They are the spaces in which nature becomes accessible for urban dwellers, an island of green within a sea of hard spaces. A diversity of public open spaces is also important to the animation of the urban environment. Veterans' Green is the only park in the Northdale neighbourhood. Many of the residents use the fields of Waterloo Collegiate Institute as a park. Through future development, increased park space will be sought in the form of plazas and parkettes and a larger park through the possible conversion of some of the Waterloo Collegiate Institute lands should the school be redeveloped.

There are two park and open space types discussed:

- 4.14. Parks & Open Space
- 4.15. Parkettes & Squares





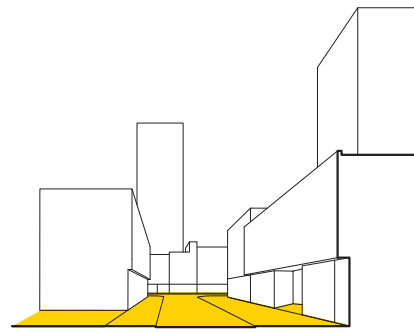
#### 4.1.2. Streets

Streets are not simply transportation corridors; they are public spaces where a range of community activities take place. Streetscapes can define the character of a neighbourhood by shaping the experiential qualities of the urban environment. Due to the lack of parks and open spaces in Northdale, streets should function as public spaces as well as connections.

In Northdale streets should follow the 'Complete Street' approach where the street comfortably accommodates a range of modes of transportation as well as diverse set of activities. The retrofit of existing streets, as well as the planning and design of new streets should exercise an integrated approach that treats streets as public realm, and addresses the needs of all users.

Five types of streets were identified for the Northdale area and are discussed in sections:

- 4.3. Streets - Main Street
- 4.4. Streets - Mixed-use Street
- 4.5. Streets - Green Street
- 4.6. Streets - Residential
- 4.7. Streets - Woonerf (Shared Street)



#### 4.1.3. Public Realm Concepts

The landscape legibility and sense of place in Northdale has been eroded over the years through the expression of competing visions and direction, as well as a lack of consistency in maintenance of both public and private space. The repositioning of the landscape as a catalyst for community requires its re-imagination in Northdale, encouraging creativity and innovation through the development of spaces that demonstrate a balance between built form and natural elements. The creation of destination space that acknowledges the role that microclimate, safety, visual interest and socio-spatial interaction offers opportunity for the community to re-introduce themselves to each other, and to the rest of the city. The unification of the streetscape can provide strong visual coherence, and reinstate a sense of collective identity within Northdale.

There are two concepts discussed:

- 4.18. Urban Quality in Open Spaces
- 4.19. Sustainability in the Public Realm

## 4.2. Streets - Composition

**Streets in Northdale can be divided into two parts: the roadway and the boulevard. The function of the roadway is for vehicular movement, parking and cycling while the boulevard is used for pedestrian activity, planting, lighting, furniture and access to buildings. Streets play a defining role in terms of the establishment of community identity and aesthetic character. They are also integral to the economic success of a neighbourhood, and provide vital community functions. The guidelines for each street type on the following pages follow this organization to guide the design and detailing of streets and streetscape elements in Northdale.**

### 4.2.1. The Roadway

The Roadway section of the streets is primarily for the movement of vehicles, bicyclists, and transit. The primary design considerations for the roadways in the Northdale neighbourhood should be safety, access and mobility. Safety is a priority particularly for more vulnerable groups (children, the elderly, those with disabilities) and more vulnerable modes of mobility such as walking, and bicycling.

Within their limited right-of-way, street designs should provide efficient ways to move people and goods throughout the neighbourhood. In Northdale streets will give priority to walking, bicycling, and transit by providing safe, accessible, convenient, and comfortable facilities for these modes, particularly on designated routes and at critical network connections.

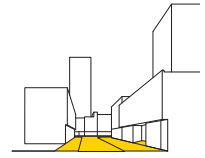
The City of Waterloo Transportation Master Plan (TMP) contains a Complete Streets policy which guides the establishment of active transportation and multi-modal transportation opportunities within the City. Hickory, Albert and Hazel streets are designated as City-wide Cycling and Multi-use Routes in the Official Plan. King Street and University Avenue are regional roads and are designated as “Neighbourhood Connector - Avenue” in the Context Sensitive Regional Transportation Corridor Design Guidelines and should conform to those regional standards notwithstanding the Northdale Urban Design Guidelines.

### 4.2.2. The Boulevard

The Boulevard of the street must be designed to provide safe, efficient and accessible pedestrian movement, as well as provide space for a variety of other needs such as trees, lights, furniture, utilities, signs, access to buildings. Urban design and programming consideration should be given to adjacent spaces so that the street itself is enlivened. Programming consideration should be given to activities within the street right-of-way, in an effort to animate the space throughout all four seasons, and throughout both the day and night. The Northdale Urban Design Guidelines organizes boulevard space into four functional zones:

1. Edge Zone
2. Furnishing Zone
3. Sidewalk Zone
4. Frontage Zone





### Edge Zone

The Edge Zone is the area between the curb and the furnishing zone. It provides space for snow windrow storage, garbage, road signs and utility posts as well as acting as a safety buffer for vehicular overhang such as door swings, mirrors, and bicycle handles.

### Furnishing Zone

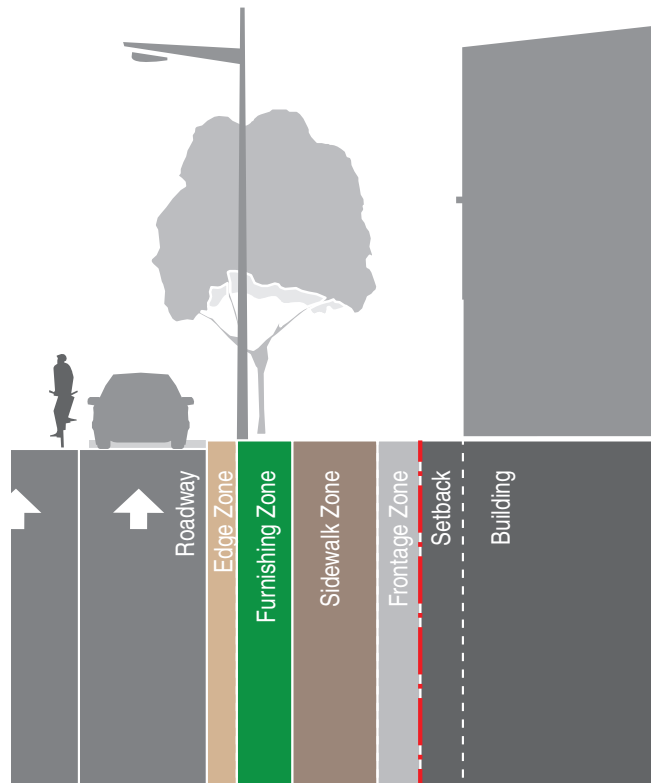
The Furnishing Zone is located between the Edge Zone and the Sidewalk Zone and provides space for trees, underground utilities, street furniture, light standards, garbage receptacles, bus shelters and other fixed elements. The zone is typically characterized by decorative paving features. This zone provides an important separation between pedestrian and vehicular movement. Utilities, services and elements within this zone should be coordinated so that they do not obstruct the sidewalk zone.

### Sidewalk Zone

The Sidewalk Zone accommodates pedestrian movement and must be a smooth continuous, straight, unobstructed path with sufficient width to serve pedestrian flow. Sidewalks should connect directly to buildings, walkways and crosswalks in a manner that meets accessibility standards.

### Frontage Zone

The Frontage Zone is the area between the sidewalk and the adjacent building or property line. This area provides space for activities such as entries, cafes, signage, outdoor product displays, furniture, and landscaping.



### 4.3. Streets - Main Street

The bounding streets of Northdale, University Avenue West, Columbia Street West, King Street North and Phillip Street are classified as main streets within the established street hierarchy of this plan. King Street and University Avenue are regional roads and are designated as “Neighbourhood Connector -Avenue” in the Context Sensitive Regional Transportation Corridor Design Guidelines and should conform to those regional standards notwithstanding the Northdale Urban Design Guidelines. As part of due course in existing roadway maintenance and upgrade, the following guidelines are suggested for the main streets:



#### 4.3.1. Composition

1. Main Streets within Northdale should consider the incorporation of dedicated or shared lanes for alternative modes of transportation such as buses and bicycles in accordance with the City of Waterloo Transportation Master Plan (TMP).
2. Establish pedestrian refuge islands integrated into centre median planting features where feasible to enhance safety for pedestrians and establish consistency along the streetscape.
3. Enhance the aesthetic of street corridors through the incorporation of consistent street tree planting along the length of corridors within wide boulevards and centre medians. Establish allées to define the pedestrian realm and buffer from the vehicular zone.

**The following elements should be considered within the Roadway and Boulevard areas of Main Streets in Northdale:**

#### 4.3.2. Roadway

##### Lanes

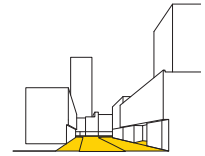
- 4.8.1. Mixed Roadway
- 4.8.2. Bus Lanes & Busways
- 4.8.3. Bike Lanes & Paths

##### Crosswalks & Medians

- 4.9.1. Stamped Concrete Crosswalk
- 4.9.2. Thermoplastic Imprinting Crosswalk
- 4.9.4. Median

##### Materials

- 4.13.7. Asphalt



#### 4.3.3. Boulevard Edge Zone

Minimum Dimension: 0.5 meters

##### Materials

4.13.1. Concrete

4.13.7. Asphalt

#### 4.3.4. Boulevard Furnishing Zone

Minimum Dimension: 2.0 meters

##### Lighting

4.11.1. Street Lighting

4.11.2. Pedestrian Lighting

##### Furniture

4.11.3. Bus Stop Shelters

4.11.4. Bike Racks and Posts

4.11.5. Bike Shelters

4.11.6. Benches

4.11.6. Benches

##### Planting

4.12.1. Individual Tree Pit

4.12.2. Connected Tree Pits

##### Materials

4.13.4. Modular Cobblestone

4.13.5. Unit Pavers

#### 4.3.5. Boulevard Sidewalk Zone

Preferred Dimension: 2.1 meters

##### Materials

4.13.1. Concrete

4.13.2. London Pavers

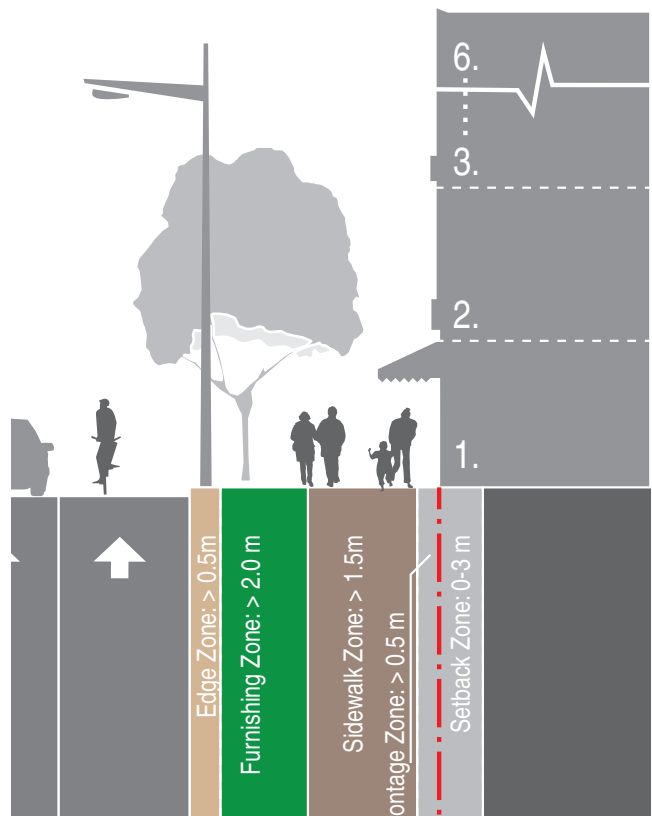
#### 4.3.6. Boulevard Frontage Zone

Minimum Dimension: 0.5 meters

##### Materials

4.13.1. Concrete

4.13.2. London Pavers



## 4.4. Streets - Mixed-use Street

The mixed use streets of Northdale are Albert Street and Hazel Street. Mixed use streetscapes should be designed to foster social interaction and engagement, with a porosity to built form that allows for the interaction between public and private space. Activated by a variety of uses and activities, mixed use streets are vibrant urban spaces. As part of due course in existing roadway maintenance and upgrade, the following guidelines are suggested for mixed use streets:



### 4.4.1. Composition

Mixed-use Streets within Northdale should consider the incorporation of dedicated or shared bicycle lanes or sharrows in accordance with the City of Waterloo Transportation Master Plan (TMP). Establish curb extensions where feasible to enhance safety for pedestrians and establish consistency along the streetscape. Consideration should be given to flexible parking that incorporates a moveable bollard system, and parking stalls delineated with paving materials of a pedestrian character.

**The following elements should be considered within the Roadway and Boulevard areas of Mixed-use Streets in Northdale:**

### 4.4.2. Roadway

#### Lanes

##### 4.8.1. Mixed Roadway

##### 4.8.3. Bike Lanes & Paths

##### 4.8.4. Sharrows

#### Crosswalks & Medians

##### 4.9.2. Thermoplastic Imprinting Crosswalk

##### 4.9.3. Curb Extension

#### Materials

##### 4.13.7. Asphalt



#### 4.4.3. Boulevard Edge Zone

Minimum Dimension: 0.75 meters

##### Materials

4.13.1. Concrete

4.13.3. Imprinted Asphalt

#### 4.4.4. Boulevard Furnishing Zone

Minimum Dimension: 2.0 meters

##### Lighting

4.11.1. Street Lighting

4.11.2. Pedestrian Lighting

##### Furniture

4.11.3. Bus Stop Shelters

4.11.4. Bike Racks and Posts

4.11.6. Benches

4.11.7. Waste Receptacles

##### Planting

4.12.1. Individual Tree Pit

4.12.2. Connected Tree Pits

4.12.4. Stormwater Capturing Tree Pits

##### Materials

4.13.4. Modular Cobblestone

4.13.5. Unit Pavers

4.13.6. Permeable Concrete Pavers

#### 4.4.5. Boulevard Sidewalk Zone

Minimum Dimension: 2.0 meters

##### Materials

4.13.1. Concrete

#### 4.4.6. Boulevard Frontage Zone

Minimum Dimension: 0 meters

##### Materials

Match front yard landscaping





## 4.5. Streets - Green Street

Hickory Street West is characterised as a green street in Northdale, and when redesigned will give priority to pedestrian circulation and adjacent open space connections with an aim to increase public open space. The green street approach gives priority to the street as a public open space and verdant place. Key to a successful green street is flexible in design, and careful programming of elements. Intended to be implemented as part of due course in existing roadway maintenance and upgrade. the following guidelines are proposed:



### 4.5.1. Composition

1. Green Streets within Northdale should consider the incorporation of sharrows for bicycles and traffic calming measures in accordance with the City of Waterloo Transportation Master Plan (TMP).
2. Encourage narrow road width and tight curb radii when setting design criteria for the roadway for traffic calming purposes.
3. Enhance the aesthetic of the green street corridor through the incorporation of consistent street tree planting along the length of corridors within wide boulevards and centre medians.
4. Actively investigate opportunities to establish pocket parks, and transitional or flexible space within the right-of-way. Explore parking stall designs that allow for conversion to usable public space when needed.

### 4.5.2. Roadway Lanes

- 4.8.1. Mixed Roadway
- 4.8.4. Sharrows

#### Crosswalks & Medians

- 4.9.2. Thermoplastic Imprinting Crosswalk
- 4.9.3. Curb Extension

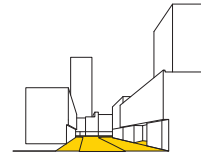
#### Traffic Calming

- 4.10.1. Speed Tables
- 4.10.2. Gateway
- 4.10.3. Chicane
- 4.10.4. Traffic Circle

#### Materials

- 4.13.7. Asphalt

**The following elements should be considered within the Roadway and Boulevard areas of Green Streets in Northdale:**



#### 4.5.3. Boulevard Edge Zone

Minimum Dimension: 0.75 meters

##### Materials

4.13.6. Permeable Concrete Pavers

#### 4.5.4. Boulevard Furnishing Zone

Minimum Dimension: 2.5 meters

##### Lighting

4.11.1. Street Lighting

4.11.2. Pedestrian Lighting

##### Furniture

4.11.4. Bike Racks and Posts

4.11.3. Bus Stop Shelters

4.11.6. Benches

4.11.7. Waste Receptacles

##### Planting

4.12.6. Street Swale



##### Materials

4.13.6. Permeable Concrete Pavers

#### 4.5.5. Boulevard Sidewalk Zone

Minimum Dimension: 2.0 meters

##### Materials

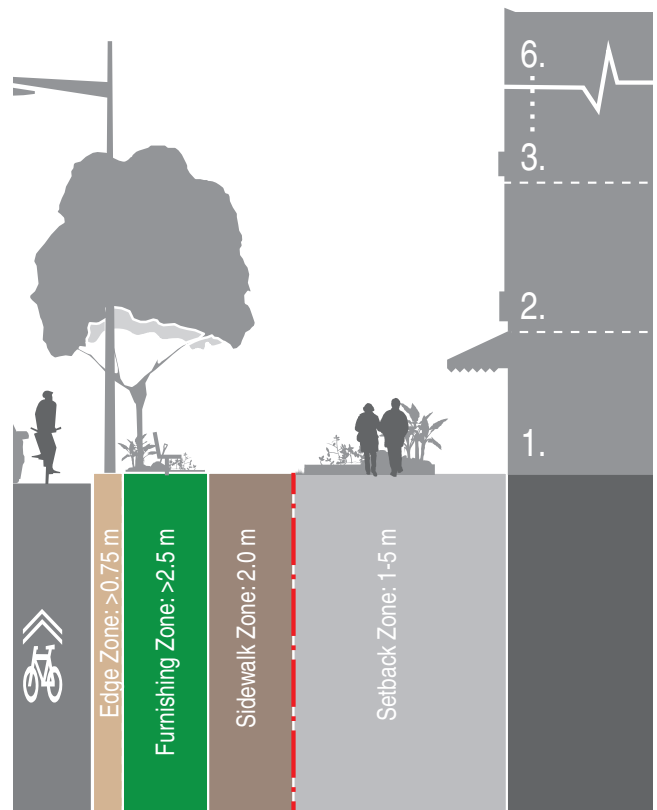
4.13.1. Concrete

#### 4.5.6. Boulevard Frontage Zone

Minimum Dimension: 0 meters

##### Materials

Match front yard landscaping





## 4.6. Streets - Residential

The streets interior to Northdale are predominantly residential in character. Residential streets have a more intimate character, with a geometry that accommodates neighbourhood traffic volumes. Streetscape elements vary, and often include sidewalks and street trees as their most defining characteristics, establishing continuity along corridor where built form character, massing and setback often varies. As part of due course in existing roadway maintenance and upgrade, as well as where new residential streets are proposed, the following guidelines are proposed:



### 4.6.1. Composition

1. Residential Streets within Northdale should consider slower speed limits and traffic calming measures in accordance with the City of Waterloo Transportation Master Plan (TMP).
2. Establish curb extensions where feasible to enhance safety for pedestrians.
3. Where appropriate, and in accordance with the TMP, introduce traffic calming measures such as increased side friction through consistent street tree plantings and planted centre medians, and raised speed reducers.
4. Encourage integrated stormwater management that considers bioswales and rain garden boulevards, particularly where no curb and gutter system exists.

**The following elements should be considered within the Roadway and Boulevard areas of Residential Streets in Northdale:**

### 4.6.2. Roadway Lanes

#### 4.8.1. Mixed Roadway

#### Crosswalks & Medians

#### 4.9.2. Thermoplastic Imprinting Crosswalk

#### 4.9.3. Curb Extension

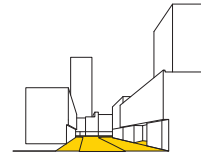
#### Traffic Calming

#### 4.10.1. Speed Tables

#### 4.10.2. Gateway

#### Materials

#### 4.13.7. Asphalt



#### 4.6.3. Boulevard Edge Zone

Minimum Dimension: 0.75 meters

##### Materials

4.13.3. Imprinted Asphalt

4.13.6. Permeable Concrete Pavers

#### 4.6.4. Boulevard Furnishing Zone

Minimum Dimension: 2.0 meters

##### Lighting

4.11.1. Street Lighting

4.11.2. Pedestrian Lighting

##### Furniture

4.11.4. Bike Racks and Posts

4.11.5. Bike Shelters

4.11.7. Waste Receptacles

##### Planting

4.12.4. Stormwater Capturing Tree Pits

4.12.5. Planted Area

4.12.6. Street Swale

##### Materials

4.13.4. Modular Cobblestone

4.13.5. Unit Pavers

4.13.6. Permeable Concrete Pavers



#### 4.6.5. Boulevard Sidewalk Zone

Minimum Dimension: 2.0 meters

##### Materials

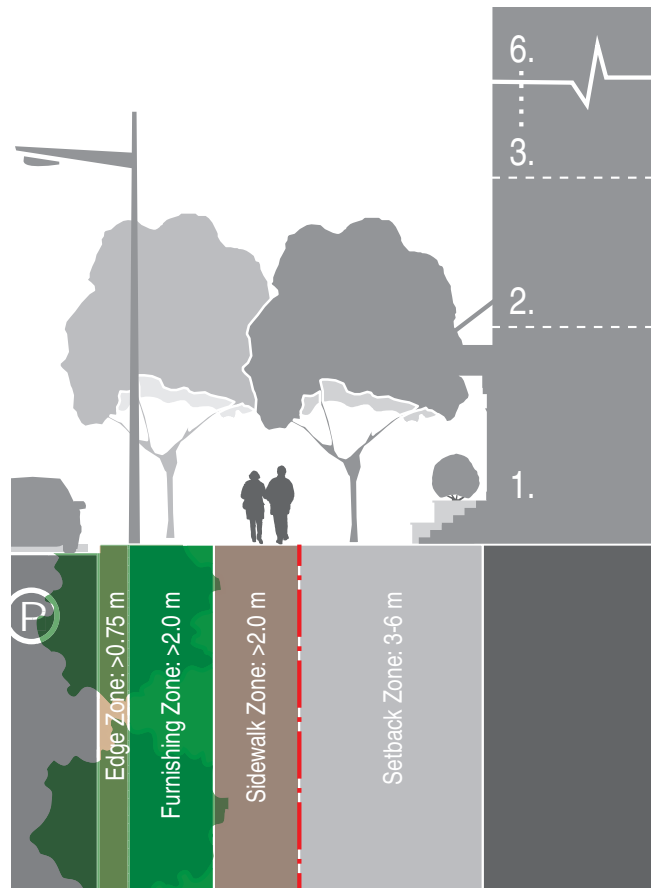
4.13.1. Concrete

#### 4.6.6. Boulevard Frontage Zone

Minimum Dimension: 0 meters

##### Materials

Match front yard landscaping



## 4.7. Streets - Woonerf (Shared Street)

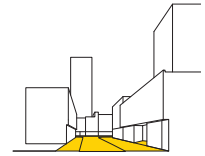
Larch Street in Northdale has been identified as a **woonerf** (Dutch for living garden) or **shared street** that will integrate uses within the right-of-way removing the boundaries established in typical separated roadways between vehicles, cyclists, and pedestrians. Woonerfs are not intended to act as through streets and only serve uses located along their length. The design intention is to integrate uses, and thereby increase safety by slowing down traffic. The implementation of a woonerf should consider the following:



### 4.7.1. Composition

A comprehensive design exercise should be conducted to transform Larch Street to a Woonerf. Due to their complex nature shared streets need to be designed in a collaborative manner with city staff, landowners and residents. Specific design issues that should be considered for the Larch Street Woonerf are:

1. Grade separated sidewalks will be eliminated and focus will be placed on differentiated material use.
2. Surface treatments will include varied materials to provide visual and textural cues to users across the width of the right-of-way.
3. Gateway or entry points should be well defined by a change in paving and signs to indicate a change in road behaviour expectations.
4. Incorporate changes in texture, bollards or other property demarcation elements to define parking spaces.
5. Draw from a palette of streetscape materials that is consistent and visually strong to establish a consistent visual character along the length of the street.
6. Integrate street furniture in such a way so as to encourage community engagement within the streetscape, and promote driver engagement.
7. Permit only vehicles with an origin or destination within the woonerf
8. Speed limits within the woonerf should be limited to 20 kph
9. Avoid long sight lines that might encourage higher speeds
10. Vertical elements should be limited to 0.75m high to allow for views from the car
11. Traffic calming should be achieved using speed bumps, chicanes, parking space locations
12. Design lighting so that speed reducing features are visible at night
13. Cluster or group utilities where possible to minimize visual impact.



The following elements should be considered within the Roadway and Boulevard areas of the Woonerf (Shared Streets) in Northdale:

#### 4.7.2. Combined Roadway & Boulevard

Maximum Dimension: 7 meters

##### Lanes

##### 4.8.5. Shared Street

##### Traffic Calming

##### 4.10.2. Gateway

##### 4.10.3. Chicane

##### Lighting

##### 4.11.1. Street Lighting

##### 4.11.2. Pedestrian Lighting

##### Furniture

##### 4.11.4. Bike Racks and Posts

##### 4.11.5. Bike Shelters

##### 4.11.6. Benches

##### 4.11.7. Waste Receptacles

##### Planting

##### 4.12.1. Individual Tree Pit

##### 4.12.2. Connected Tree Pits

##### 4.12.4. Stormwater Capturing Tree Pits

##### 4.12.5. Planted Area

##### 4.12.6. Street Swale

##### Materials

##### 4.13.3. Imprinted Asphalt

##### 4.13.4. Modular Cobblestone

##### 4.13.5. Unit Pavers





## 4.8. Streetscape Elements Roadway

Streets within Northdale should include dedicated or shared lanes for alternative modes of transportation such as buses and bicycles in accordance with the City of Waterloo Transportation Master Plan (TMP). Explore opportunities to link the streetscape into the urban fabric through the interconnection of adjacent corridors, landscape and built form.



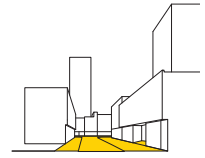
### 4.8.1. Mixed Roadway

A Mixed Roadway is the versatile portion of the street that, though mainly designed for vehicular travel, is able to provide basic accommodation for other modes such as buses and bikes. Mixed Roadways separate vehicles and pedestrians, unlike Shared Streets where all modes are accommodated across the entire right-of-way.



### 4.8.2. Bus Lanes & Busways

Bus Lanes and Busways are roadway types designed specifically for buses. By separating buses from the rest of the traffic, bus service is significantly improved especially during rush traffic. Busways are typically found on the far left lane of the street, while Bus Lanes can be found on either the far left or far right lane. Bus lanes are defined with markings similar to mixed roadways, while Busways have traffic elements that physically separate them from other traffic on the street. The main streets of Northdale have the future potential of including Bus Lanes and Busways into their right of way.



#### 4.8.3. Bike Lanes & Paths

Bike Lanes and Paths are roadway types that separate cyclists from other vehicular traffic. This creates a safety zone that ameliorates the speed conflict that often arises between cyclists and other motorized vehicles. Bike Lanes have part of the roadway dedicated for bicyclists only, while Bike Paths are physically separated from traffic. The full benefits of bike lanes and paths come from providing continuous, non-interrupted routes, as well as connecting to existing bike-friendly routes whenever possible. Streets within Northdale should include bike lanes or paths particularly on fast moving streets.



#### 4.8.4. Sharrows

Visualized on the roadway with two chevrons followed by a bicyclist symbol, the sharrow is used to informally guide bike traffic to the safer portions of the mixed roadway. Some of its features are to help cyclists avoid biking too close to parked cars, while also reminding motorists to provide ample space for cyclists on the roadway. It encourages a “play nice” attitude on more complicated roadways where separation of traffic would be difficult to implement. Sharrows are a good solution for lower speed roads in Northdale.



#### 4.8.5. Shared Street

Shared Streets are an informal layout of street program with little to no demarcations or curb edges to separate users from each other. Inspired by the “woonerf” found in residential neighbourhoods in the Netherlands, speeds are brought down to very low levels through a variety of traffic-calming tools and visual cues that encourage caution. Shared streets can be designed to fit a variety of contexts, and what sets them apart is their priority on the pedestrian above all. Larch Street in Northdale is envisioned as a future shared street.





## 4.9. Streetscape Elements Crosswalks & Medians

Crosswalks and medians in Northdale will help connect the neighbourhood internally and externally. Future street designs should look for opportunities to create pedestrian refuge islands integrated into centre median planting features where feasible to enhance safety for pedestrians and establish consistency along the streetscape. Crosswalks should be emphasized through the use of distinctive paving materials such as unit pavers or thermoplastic imprinting, providing visual cues to motorists regarding the pedestrian scale within the public realm. Where on-street parking is proposed, encourage the establishment of landscaped curb bulbs for buffers.



### 4.9.1. Stamped Concrete Crosswalk

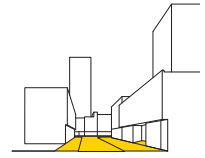
The deployment of stamped concrete to create crosswalks can help visually and tactually distinguish between the roadway and the crosswalk zone. Stamped concrete offers the higher quality appearance of unit pavers without maintenance and accessibility issues. Should be avoided in areas experiencing frequent subsurface work due to utilities. Ideal for areas of higher pedestrian activity, such as main streets.



### 4.9.2. Thermoplastic Imprinting Crosswalk

This technique uses a plastic resin to fill a design engraved into existing asphalt roadway by reheating and imprinting the asphalt. Enables flexibility to create unique designs through colors and patterns to emphasize the pedestrian scale. Is installed 1/4 inch below the surface of the asphalt and will need re-application within 5 to 10 years.





#### 4.9.3. Curb Extension

Also known as a “bulb-out”, curb extensions are used when the sidewalk can expand into the adjacent roadway (usually a parking lane) to shorten the distance of a crosswalk. Typically deployed on intersections but can be applied mid-block. Curb extensions can accommodate more pedestrians on sidewalks with heavy pedestrian activity. The curb extension also provides the opportunity for a broader program of planting and furniture in the public realm. Where on-street parking is proposed, encourage the establishment of landscaped curb bulbs for buffers. Explore parking stall designs that allow for conversion to usable public space when needed.



#### 4.9.4. Median

A traffic element primarily used to separate lanes, be it for opposite directions, different modes or just different lanes. Can be made minimally as small paved islands or with generous widths to accommodate lush green landscapes. Benefits range from having a traffic-calming effect, reducing collisions due to better controlled environments to conduct left-turns, and an opportunity to beautify the roadway. Attention should be paid to the new traffic circulation pattern as a result of a new median.

## 4.10. Streetscape Elements Traffic Calming

Due to the length of the straight streets in Northdale, traffic calming might be necessary as the neighbourhood intensifies. Where on-street parking is proposed, encourage the establishment of landscaped curb bulbs that buffers between parked cars and pedestrians. Pedestrian crosswalks should be highlighted through the use of distinctive paving materials such as unit pavers or thermoplastic imprinting, providing visual cues to motorists regarding the pedestrian scale within the public realm.



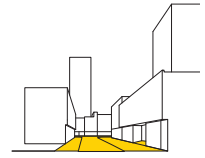
### 4.10.1. Speed Tables

Similar to speed bumps, they are zones of the roadway raised 8-10 cm for the purpose of slowing down oncoming vehicular traffic. Speed tables have a larger area of raised roadway than the speed bumps, typically as long as the full length of a car or more. Is often used to emphasize the crosswalk for stop control. While it is an effective speed-controlling element, it does affect emergency vehicle movements and snow-plowing services.



### 4.10.2. Gateway

Typically a visual but preferably physical narrowing of the entrance by means of curb extensions, planters, larger furniture zones and public art. A useful traffic-calming feature that helps demarcate the transition into a slower-moving, residential and sometimes shared street. Consideration should be taken towards how it affects drainage, the accessibility to subsurface utilities, and the maintenance of the extra street program. Where appropriate, and in accordance with the TMP, introduce traffic calming measures such as increased side friction through consistent street tree plantings and planted centre medians, and raised speed reducers.



#### 4.10.3. Chicane

The placement of curb extensions are staggered to make the roadway zig-zag, encouraging slower and more attentive driving. There are opportunities along the widened parts of the curb to further beautify and green the streets; creating small public spaces along the sidewalk and merging stormwater facilities in the landscape features of the street.



#### 4.10.4. Traffic Circle

Commonly used in areas with lower traffic volumes, it is a round traffic island placed at the centre of an intersection. Traffic Circles easily accommodates unusual intersections (one with more or less than four roads, or with roads coming at different angles). Reduces vehicle conflict by guiding all flow of traffic around the same way. The island is an opportunity to create a focal point by providing landscaping or accommodating for public art.



## 4.11. Streetscape Elements Lighting and Furniture

The proper placement of Street Furniture in the furniture zone is important to ensure that the streetscape is safe, organized, and aesthetically pleasing. Placing furniture and lighting within the furniture zone allows the sidewalk to be free of obstructions, but allow easy access to those amenities. Street lights illuminate the roadway, while lower pedestrian lighting provides light to the sidewalk. Reduce or mitigate visual clutter where possible along main streets by eliminating unnecessary signage, co-ordinating street furnishings, and providing a consistent street tree planting plan.

### 4.11.1. Street Lighting

Street lighting should provide adequate lighting of the roadway during night-time. Consider lighting designs that reduce light pollution and provide clean white light with true colour rendering that delineates paving features.

### 4.11.2. Pedestrian Lighting

Consider the use of pedestrian or low level lighting only where design parameters permit to encourage pedestrian character. The use of metal halide or LED lighting is encouraged to provide clean white light with true colour rendering that delineates paving features.



### 4.11.3. Bus Stop Shelters

Shelters provide transit riders on busy bus lines with adequate protection from the elements and water splashes from passing vehicles. Shelters should include furniture for waiting passengers to either sit or to lean up against a wall while they're waiting.





#### 4.11.4. Bike Racks and Posts

Bike racks are typically metal structures that accommodate the parking of many bikes on the same rack. Placement can be on the furniture zone, but can also take up a segment of an on-street parking zone (bike corrals). Bike posts are stand alone structures for parking one or two bikes. Bike posts can be distributed widely without the visual or physical impact of bike racks.

#### 4.11.5. Bike Shelters

Bicycle parking shelters are protected areas for locking bicycles in public space. They encourage cycling by providing a safe, sheltered place to lock bicycles. The design closely resembles bus shelters, using the same high-quality materials.



#### 4.11.6. Benches

Benches are best situated in areas highly trafficked by pedestrians, including commercial/retail areas, transit stops, parks, outdoor amenities and locations with good views. They should be in close proximity to a waste receptacle whenever possible to discourage littering. Frequent maintenance is required to keep the area around the bench as attractive and presentable as possible. Benches should be mounted to the ground.

#### 4.11.7. Waste Receptacles

Waste receptacles should be placed along commercially active streets, parks and open spaces, and accompany street benches whenever possible. They should be services accordingly to keep the area around the waste respectable as attractive and presentable as possible.





## 4.12. Streetscape Elements Planting

**Northdale should take advantage of integrated stormwater management that considers bioswales and rain garden boulevards, particularly where no curb and gutter system exists. Street corridors should be enhanced through the incorporation of consistent street tree planting within wide boulevards and centre medians. Planting design details such as continuous street tree trenches and structural soils to improve the long term prospects for successful establishment. Allées can define the pedestrian realm and buffer from the vehicular zone.**

### 4.12.1. Individual Tree Pit

Enables the planting of a single tree in the sidewalk. The size of a fully grown tree is limited by the volume of earth in the pit; Trees often have a better chance of thriving when given ample space for their roots to expand. There is an opportunity to design the grate that covers and protects the earth around the tree pit from pedestrian and vehicular traffic.



### 4.12.2. Connected Tree Pits

Connected tree pits form a single trench, giving more space and air to the trees that share the space. It is not recommended to cover the tree-pit with a walkable surface unless there is an alternative method of hydration in place other than traditional runoff from precipitation. Employ planting design details such as continuous street tree trenches and structural soils to improve the long term prospects for successful establishment.

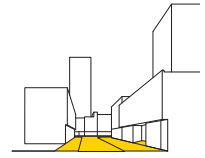


### 4.12.3. Tree Pit Design

Identify the location of all existing and proposed above and below ground utilities including street lighting early in the design process to facilitate the preparation of a feasible tree planting plan. The use of structural soils or structural soil cells (or equivalent) may provide opportunity to maximize amounts of soil volumes available for growth and root structure to ensure the health and vitality of new street tree planting. Provide the largest possible space for the roots of each planted tree.







#### **4.12.4. Stormwater Capturing Tree Pits**

Designed either for individual or a series of connected tree pits, Stormwater Capturing Tree Pits connect to the stormwater system of a nearby roadway and have the ability to properly filter and bank water, reducing the need for human maintenance and external water for its survival.



#### **4.12.5. Planted Area**

Located in trenches either on a portion of the sidewalk, the furniture zone, traffic islands or medians, Planted Areas are great ways to beautify the streetscape, and a good opportunity to capture and store stormwater similar to the Stormwater-Capturing Tree Pits. Much more flexible in size, length and depth than tree pits, it can easily be implemented in a variety of settings.



#### **4.12.6. Street Swale**

A naturalized version of the Planted Areas, it is a serviced and intentionally greened ditch along the side of roads. It can accommodate a variety of services such as capturing stormwater overflow from nearby systems. It can also be an enhancement of the streetscape when planted with grasses/other vegetation that can tolerate periodic flooding. Maintenance would be required to clean the swale of debris and unclog when needed.



#### **4.12.7. Utility Coordination**

Street tree locations should be coordinated with underground utilities and infrastructure to minimize root pruning during utility maintenance, mitigate potential damage, and to ensure optimal tree growth. Joint utility trenches and other strategies should be considered to minimize road dimensions.

## 4.13. Streetscape Elements Materials

**Clearly identify the pedestrian realm within the right-of-way through the use of differentiating materials and the establishment of planted buffers. Establish ribbon sidewalks that are generous in their width. Consider the use of alternative paving materials such as unit pavers or impressed asphalt to reinforce residential character and establish pedestrian scale character particularly at crossing points and intersections. Draw from a palette of streetscape materials that is consistent and visually strong to establish a consistent visual character along the length of main street corridors.**

### 4.13.1. Concrete

A solid surface material made out of a mixture of cement, water and other aggregates. Usually employed for sidewalks and curbs, it is cast in place and left to harden into an impervious and extremely durable road surface. Porous concrete is beginning to be used for its water-absorbing features in favour of the impervious kind, which is part of a concerted effort to reduce pressure on stormwater systems.



### 4.13.2. London Pavers

Smooth concrete tiles of a characteristically large rectangular size, typically staggered in pattern. Works to emphasize generous sidewalks and small to medium sized public spaces. Appropriate to use over larger stretches, usually over a block or more, to create continuous pedestrian zones.

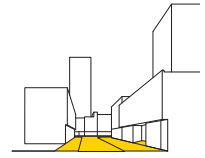


### 4.13.3. Imprinted Asphalt

Regular asphalt imprinted with a pattern made to resemble pavers. Sometimes coated with different colors of protective paint to provide visual cues in traffic for “pedestrian-only” or “non-vehicular” areas. Cheaper and easier to maintain than unit pavers.







#### 4.13.4. Modular Cobblestone

Modular cobblestones look precisely like normal cobblestones but are easier to install due to their pre-assembly on a grid. They are saw-cut and therefore provide a much straighter and regular surface appropriate for unhindered foot- and bicycle traffic. Often used to emphasize districts of historic character, it can also be used on driveways and front yards/entrances. Easy to remove and reinstall for utility access.



#### 4.13.5. Unit Pavers

Similar to single-unit cobblestones or floor tiles, unit pavers are easy to remove and reinstall in case of utility access and is often used along furnishing zones for that reason. They also require regular maintenance to keep level, with the asphalt pavers having the advantage of being recyclable. Asphalt and concrete is a widely available and cost effective.



#### 4.13.6. Permeable Concrete Pavers

Permeable Pavers are specially designed to absorb more water into the subsurface than regular pavers. Presents advantage in moderately temperate climates where probability of ponding and icing over of the roadway is much less than on conventional roads. Requires a thorough review of requirements to be properly implemented and maintained.



#### 4.13.7. Asphalt

A standard roadway material, made out of an aggregate mix glued together with a binder like bitumen or concrete. The mix is spread out and compacted with a heavy roller to create an impervious and extremely strong road surface. Very durable in heavy trafficked areas and easily maintained. Can be coloured and imprinted, and is a recyclable material.



## 4.14. Parks & Open Space

**Northdale lacks good quality public open spaces. Ideally, public open space should be within a 5 minute walk of all residents, as it provides much needed areas of refuge within urban neighbourhoods. They are the spaces in which nature becomes accessible for urban dwellers, an island of green within a sea of hard spaces. A diversity of public open spaces is also important to the animation of the urban environment. In addition to general guidance provided in the city's Urban Design Manual the establishment of other parks or open space within Northdale should consider alternative approaches such as:**

### 4.14.1. Veterans' Green

Currently, there is only one public open space within the Northdale neighbourhood, the Veterans' Green Park. The park was constructed by community volunteers and is a strong symbol of Waterloo's support for its past.

Opportunities to build on and enhance this include:

1. Develop an understanding of the designed landscape of Veterans' Green as well as the planning principles that created the visual relationships and spatial organisation of the park.
2. Protect and maintain built form and vegetation that contribute to the visual relationships of the park.
3. Incorporate more seating opportunities within the park, including flexible seating, to allow park users to control microclimate and immediate environment, and encourage more passive use of the park.
4. Emphasize the historical context of Veterans' Green through the design elements of the park, reinstating the function of the green as social centre and community hub.
5. Design elements should not mimic heritage elements; rather they should be distinguishable, and selected with sensitivity to the heritage character of the landscape and surrounding context.
6. Circulation systems should be integrated so that connections are made to and throughout the park, reconnecting it to the community.







#### 4.14.2. Connected

Establish connections to the University of Waterloo East Campus gateway and future LRT station through open space connections to Phillip Street. Design park spaces and all open space linkages including trails to be part of the larger network of Open Space linked by trails, connecting new and old neighbourhoods (UDM 2.3.1.1).



#### 4.14.3. Feature Water Systems

Embedding nature within the urban fabric by blending boundaries between what has been traditionally defined as park space and integrating sustainable practices such as rain water recycling that reduce load on traditional infrastructure.



#### 4.14.4. Temporary Park Spaces

Allowing for engagement with the landscape through the development of temporary park space, engaging the neighbourhood as well as the academic community to experiment with both the form and function of public space.



#### 4.14.5. Student Activities

In addition to standard facilities required by the parks department for the overall population, provide a variety of functional spaces that focus on the needs of the predominant student population. These should include quiet places for reading and talking as well as active places such as lawns, running tracks, swimming pools, skateboard parks, bmx facilities, and other student and youth-focussed recreation activities.



## 4.15. Parkettes & Squares

The Structure Plan for the Northdale neighbourhood identifies potential parkette/square locations. The locations identified are notional and would be specifically located through block plans and negotiations with landowners. New development should include alternative park spaces such as pocket parks or linear parks that include high quality design elements. These parks can provide linkages to adjacent open spaces and increase porosity of built form. Parkettes are small, intimate urban open spaces that serve the immediate neighbourhood. They are often defined by surrounding built form, and are connected through street frontage and pedestrian access ways. The following should be considered regarding parkettes or pocket parks:

### 4.15.1. Location

Identify small underutilized open space that could be improved, or define such space in new or infill development. Parkettes should be sited to position them as focal points within the neighbourhood, terminating view sheds and defining neighbourhood character.



### 4.15.2. Connection

Ensure that parkettes or pocket parks are linked to the overall urban fabric through direct connections to the streetscape, as well as connections to pedestrian and cycling linkages. Ensure that adequate visibility is maintained throughout the site through the careful consideration of sight lines and adequate lighting levels, in accordance with Crime Prevention Through Environmental Design (CPTED) principles.



### 4.15.3. Theme

Incorporate innovative interpretive elements into plazas and amenity areas that speak to the history of the neighbourhood, as well as specific built or cultural heritage landscape elements that are proximate. Explore opportunities to engage the neighbourhood in their open space through the incorporation of urban agriculture and community garden elements.







#### 4.15.4. Public Art

Encourage the incorporation of public art and designed elements within the parkette. Locate public art in visible locations or amenity spaces visible to the public or intended users. For sensitive features, consider internal locations in public view, such as foyers or display areas (UDM 2.4.2.3).



#### 4.15.5. Amenities

Provide amenities such as conversation grouped furniture to encourage social interaction, as well as adequate trash receptacles, recycling facilities and lighting, trees or shade structures are provided to ensure that the space is comfortable and safe. Consider all four seasons in the design to maximize usability of a site as well as strengthen its presence within the community by providing space for varied uses such as markets, skating rinks, or water features.



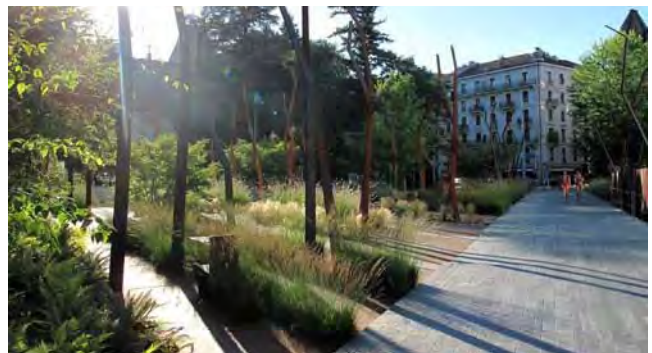
#### 4.15.6. Flexible

Parkettes should be defined by bleeding green edges into the adjacent hardscape, strengthening their connection to the streetscape by interweaving hard and softscape at boundaries.



#### 4.15.7. Enclosure

Create an animated destination point by providing a sequence of experiences for open space users by varying the elements incorporated into the design. Provide both prospect and refuge for open space users; create spaces that evoke a feeling of enclosure and safety with protection from the elements as well as open spaces that are more freely programmable.



## 4.16. Mid-Block Pedestrian Connections (Mews)

**Large blocks in Northdale should be divided by mid-block pedestrian connections that connect to adjacent pedestrian routes. Pedestrian connections improve pedestrian activity, link internal developments to the main streets, provide access to open space, and preserve natural light access to new developments. Pedestrian mews should be designed and function as pedestrian streets with great attention given to activating the edge and providing natural surveillance.**

### 4.16.1. Public

Mid block public mews provide direct access to main streets and act as a public right-of-way between private properties. Public mews should be appointed with a high level of landscape design including paving, planting, lighting and street furniture that is comparable to public streets.



### 4.16.2. Shared

A shared mews is a common open area that is shared between two or more properties. Shared access mews require landscape design and consideration of access and privacy. A mutual agreement between the owners of abutting properties is required. The City may require an agreement of public access in the case of the shared mews.

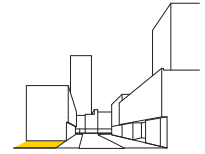


### 4.16.3. Private

Mews that are located on one property that separate buildings are considered private mews. Design of individual access and privacy is required. Internal paths that link these spaces to the main streets are required. Entry points into private mews should be controlled.





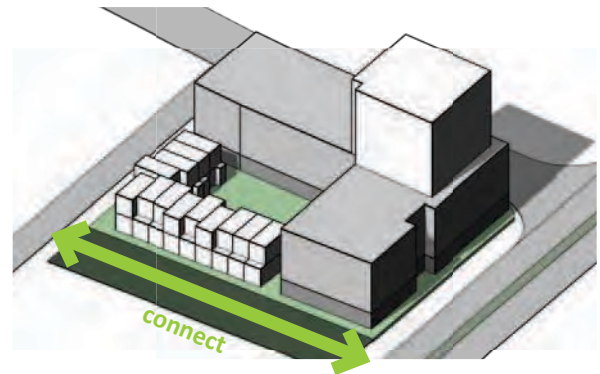


#### 4.16.4. Mid-block Surveillance

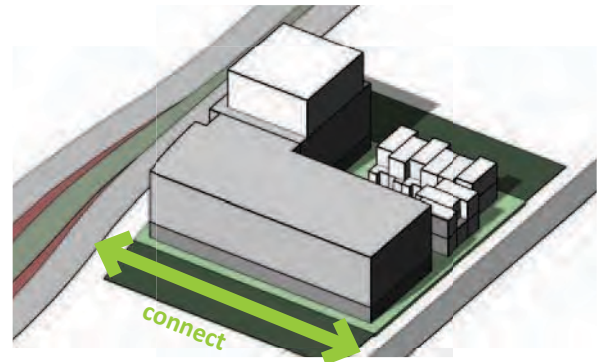
Provide windows that look on to mid-block pedestrian pathways to improve security along the path. Provide measures for maintaining privacy on properties adjacent to the path through setbacks, landscaping, screening and/or fencing. Provide adequate and attractive seating along routes to further casual encounters and maintain natural surveillance.



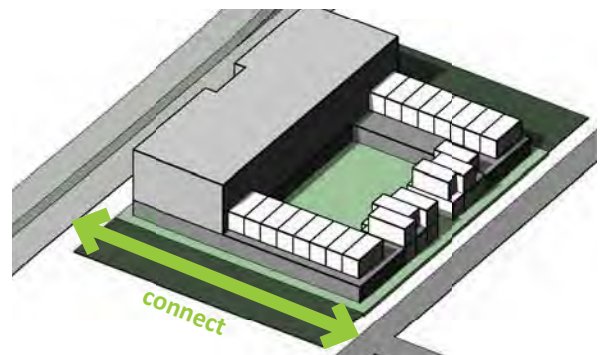
A mixed approach to pedestrian mews requires defining individual addresses and designing building flanks to relate to the space. Townhouses should have addresses along these mews.



A uniform block of building may line the edge of the pedestrian mews. At grade spaces should activate the mews. This can include retail spaces or building amenity spaces.



The pedestrian mews may connect between the development and internal lanes or streets. The mews should have outdoor spaces for building inhabitants and include private yards space and patios.



## 4.17. Blocks

A fine grain of streets and blocks is essential to pedestrian-oriented, transit-supportive neighbourhoods. Although most of the Northdale neighbourhood is comprised of a fine-grained street network the large lots along Phillip Street should be divided into smaller parcels to create more pedestrian-friendly blocks. The Waterloo Collegiate Institute site, similarly, would require new streets and blocks to facilitate redevelopment, should that occur. As large lots are subdivided into smaller parcels, new street frontage allows buildings to relate to the public realm. These public routes separate buildings and ensure that they are accessible to vehicles, cyclists and pedestrians. New streets can provide addresses and emergency access while facilitating loading, deliveries and service.

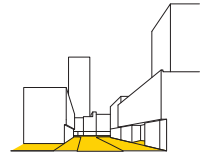
### 4.17.1. Block Size and Public Streets

Properties longer than 100m in depth require public streets for access and permeability. Public streets are an essential component of CPTED principles as they encourage casual surveillance from the street and access to police and emergency services. Public streets also provide building address and necessary building separation in denser urban areas. For short connections under 100m in length through block pedestrian connections, mews or private roads can be created to allow for access instead of public roads. Easements might be required to ensure access to the public is maintained.

### 4.17.2. Network

New streets and connections should define developable blocks while connecting to existing streets and public pathways. If through-block connections are not possible a U-shaped streets and cul-de-sacs can provide access to the middle of the property. Ensure that street layout maximizes the potential for future connections should adjacent properties be developed. A block plan can assist with the location of new streets and pathways. Large sites should be divided so that there is at least one through-street or pathway a minimum of every 150m, bisect the street length or match existing street connections, whichever is the shorter distance.

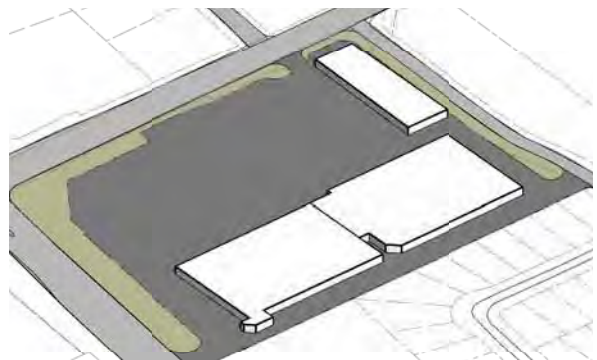




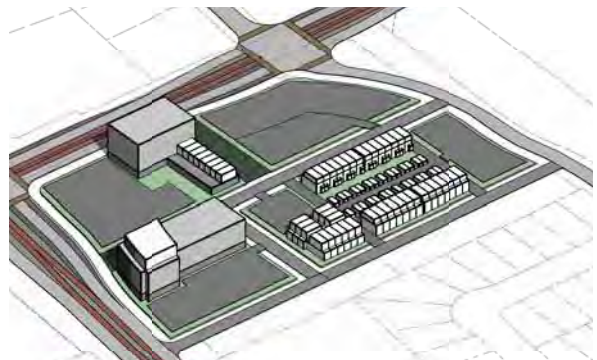
#### 4.17.3. Phased Redevelopment

Larger properties might require a phased redevelopment plan. A block plan must be developed to plan phased development comprehensively so that the site can develop incrementally while maximizing its value as a place. The example below demonstrates the evolution of a large site through phased redevelopment.

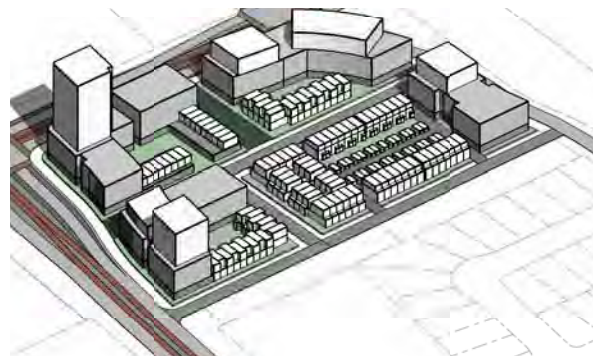
Consider the development potential for large sites and plan for long-term redevelopment.



A block plan should inform the need and location for new streets and parks. The diagram illustrates the first stage of subdivision, the creation of new streets and the first phase of development. Surface parking remains on some areas of the site to satisfy interim parking requirements.



The remainder of the block is developed with infill buildings. The entire site is built up with surface parking replaced below grade. Surface parking lots are converted to mid-block connections and private open spaces.





## 4.18. Urban Quality in Open Spaces

The quality of streetscapes and public open spaces impacts everyone. It has a direct effect on the experience of place, its ease of use and enjoyment. High quality materials in design solutions does not necessarily add to total cost, if you factor in maintenance and operational costs during its lifetime. High quality design can also increase revenue in retail markets where experiential qualities of a space are key. When designing and detailing urban elements in Northdale, the following should be considered:

### 4.18.1. Utilities

Utilities will be clustered or grouped where possible to minimize visual impact and utility providers will be encouraged to consider innovative methods of containing utility services on or within streetscape features such as gateways, lamp posts, transit shelters etc. Consolidate utilities and services in underground tunnels, duct banks or wherever feasible. Utilities should be located to minimize their impact on the root systems and canopies of boulevard trees.



### 4.18.2. On-street Parking

On-street parking provides protection to sidewalks and will supply important visitor parking spaces in a denser Northdale. Future street designs should coordinate on-street parking with driveway access and street tree planting to ensure that sufficient parking is supplied without detracting from the public realm.

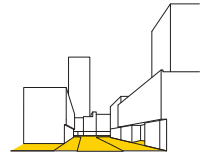


### 4.18.3. Design on the Human Scale

Encourage design that results in the creation of public realm spaces that are of a human scale and provide opportunities for the public to engage in community activities.







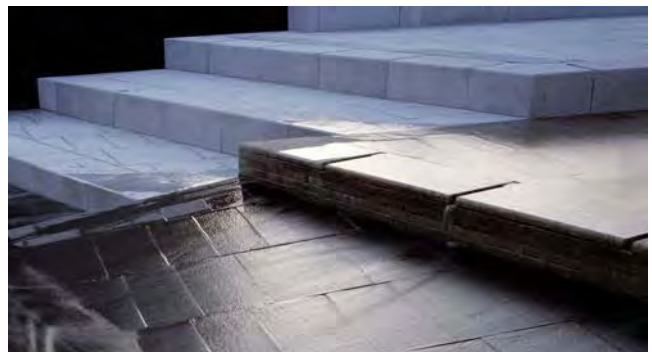
#### 4.18.4. Consider All-season Use

Consider the experience of place during all four seasons, day and night to foster the creation of public space that is comfortable and inclusive at all times.



#### 4.18.5. Materials

Use of high quality materials is encouraged throughout the public realm in order to enhance the spatial aesthetic as well as improve durability and maintenance. Draw from a palette of landscape materials that is consistent and visually strong to establish a consistent visual character within parks and open spaces.



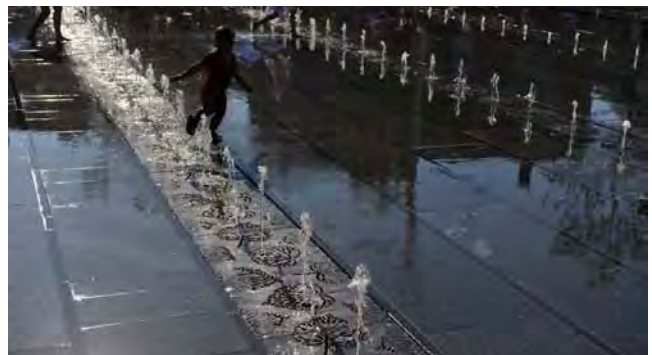
#### 4.18.6. Focal Points

Generate lively urban space by establishing focal points, meeting places, modifiers or definers that will enhance Northdale's image locally and regionally.



#### 4.18.7. Sensory Factors

Mitigate unpleasant sensory experiences, and create pleasant ones. Examples include creating "poop&scoop" stations for dog owners, providing lush planted landscaped areas around seating zones, and thoughtfully considering the placement of garbage bins around commercial and residential uses.



## 4.19. Sustainability in the Public Realm

Much of the rainwater that falls in urban environments lands on roads, parking lots and other impermeable surfaces, where it picks up dirt and pollutants before being channeled into the sewer system. From the micro to the macro scale, permeable surfaces greatly reduces the stresses placed on those resources that have been typically relied upon for stormwater management. The following guidelines are suggested for the incorporation of innovative rain water management:



### 4.19.1. New Projects as Stimulus

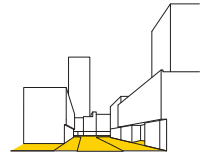
Consider green infrastructure as a stimulus for community renewal, incorporate innovative practices into retrofit or new design wherever possible. Where rear lanes and alleyways are implemented the use of high albedo paving, alternative drainage solutions such as rainwater infiltration trenches, and dark sky friendly lighting is encouraged.



### 4.19.2. Multifunctional Urban Elements

Connect neighbourhoods to their natural spaces through ecological urban design. Seek opportunities to solve design problems with green solutions such as bioswales or rain water infiltration trenches that weave through neighbourhoods rather than the traditional curb, catchbasins and sewer solution;





#### **4.19.3. Alternative Ice Control**

Where permeable paving is employed, carefully manage the use of salts for ice control.

#### **4.19.4. Traffic Islands**

Incorporate vegetated traffic islands into new streetscape plans to provide additional softscape areas for infiltration, shade paved areas and reduce the heat island effect.



#### **4.19.5. Embed Green in Parking**

Encourage green initiatives within and around parking areas to promote best environmental management practices and increase infiltration. Initiatives can include the use of permeable paving and bio-swales to promote the infiltration of stormwater and decrease runoff. Along on-street parking, employ planting design details such as continuous street tree trenches and structural soils to improve the long term prospects for successful establishment.



## 5. Buildings & Development

### 5.1. Preferred Elements

The ability of buildings to stand the test of time by remaining functional and ageless over a period of many years is a sign of good design. Increasingly, the wise use of resources and stewardship of the environment over the lifetime of a building are also aspects of design excellence. This is reflected in choices made about materials, details, ongoing maintenance, and the type of energy used for heating, ventilation, and cooling. The Northdale Guidelines play an important part in helping the design review process define, design, and build projects of excellence in Waterloo.

**BD.1** New buildings, enhancements to the public realm and related development elements should be constructed in a sustainable manner, conserving energy and resources, using durable materials and, where feasible and appropriate, achieving LEED® certification.

**BD.2** Buildings will be brought to the street edge by establishing build-to lines, maximum setbacks and urban design/built form policies, regulations and guidelines to create a sense of street enclosure, limit breaks in the street wall, and maximize the principles of “eyes on the street”.

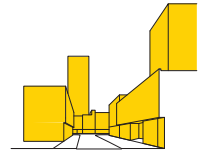
**BD.3** Appropriate and compatible building design techniques will be used, including transition in building heights, step-backs and angular planes, and building articulation.

**BD.4** The location of ground-floor windows, doors, and main entranceways will support visibility and transparency at grade, and access from the street.

**BD.5** Indoor and outdoor common amenity areas will be encouraged for housing developments to promote a healthy social environment both within buildings and along the street. Outdoor elements could include porches; squares or patios adjacent to the street; roof gardens; and, on larger sites, internal courtyards connected to the public realm. Indoor common amenity areas may include recreational, study and living areas.

**BD.6** Generally, parking requirements will be minimized in Northdale, to recognize that the community is being planned to support rapid transit facilities and will continue to accommodate a large portion of students and University related faculty and staff, area business employees, and permanent residents, resulting in a walkable, mixed-use community that has exceptional access to transit. Parking areas will not be permitted in the front yard, and rear yard parking will be preferred. Underground or decked parking will be encouraged for higher density building forms.





**Illustrations of 20+ year future Northdale Neighbourhood**



The images above presents a speculative built future of the Northdale neighbourhood following the vision and principles. The view looking from the corner of University and Phillip toward the North-East shows the arrangement and height of the buildings potential open spaces, pedestrian connections and streets.



## 5.2. Active Frontage

Active frontage areas are identified along the main streets of the Northdale neighbourhood. Buildings fronting these streets are intended to contribute to the animation and activity of the streetscape, with uses such as restaurants, cafes, grocery stores and retail stores. Active frontages should be permeable and transparent. Building facades that open up the street are encouraged.



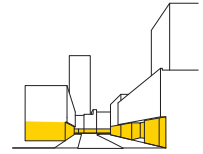
### 5.2.1. Permeable Edge

Active Frontage should engage the passersby with a “permeable edge” between the building and street as appropriate to building uses. Buildings should have frequent entrances where possible and ensure a physical and visual connection between people on the sidewalk and retail activities in the building.



### 5.2.2. Visibility

Maximize visibility into the building interior and merchandise displays using fenestration. If appropriate to the use, consider operational glazed wall-sized doors that can be completely opened to the street, increased height in lobbies, and/or special lighting for displays.



### 5.2.3. Shelter

Active Frontage areas should include overhangs or glazed canopies to provide shelter for pedestrians. Building overhangs can provide a sense of enclosure and shelter pedestrians from wind, rain, and sun are encouraged.



### 5.2.4. Ancillary Activities

Allow space for activities such as sidewalk vending, seating, and restaurant dining to occur. Consider setting structures back from the street or incorporating space in the project design into which active outdoor patios or cafes can extend.



### 5.2.5. Signage

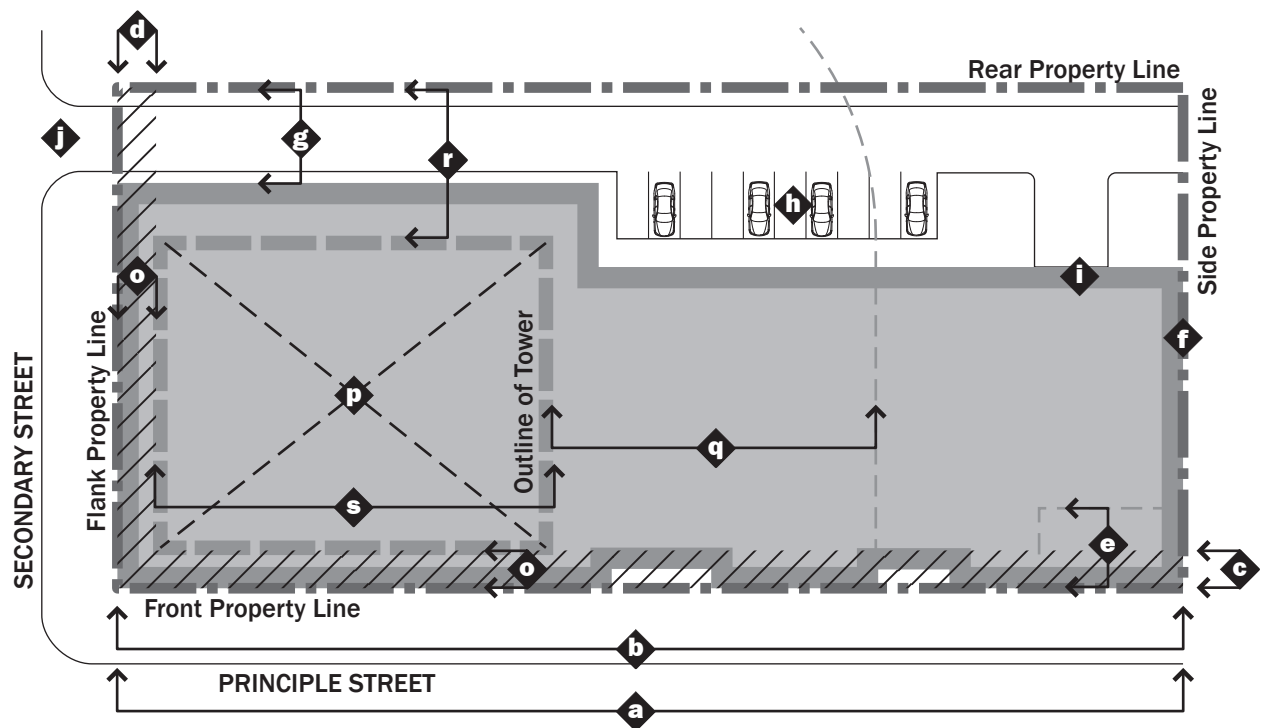
In addition to complying with the City's Sign By-law, integrate signage with the architecture. Define spaces to accommodate signs that respect building scale, architectural features, and signage uniformity. Building signage should be reflective of architectural form and style.

### 5.2.6. Utilities

Utilities, vents and other unattractive elements should be avoided on the lower levels of façades adjacent to the public realm or should be integrated into the architectural composition, where feasible.



### 5.3. Active Street Frontage Guidance



#### A. Site

##### 1. Street Frontage

<b>a</b>	Lot Frontage	20.0m	Minimum
<b>b</b>	Building Frontage	100%-Driveway Width	
<b>c</b>	Front Build within Zone	1.0-3.0m	
<b>d</b>	Flank Build within Zone	1.0-3.0m	
<b>e</b>	Cafe area setback	6.0m	Maximum
	Setback Zone Treatment	Paved	
	Landscape Open Space	30%	Minimum

##### 2. Buildable Area

<b>f</b>	Side Yard Setback	0m	
<b>g</b>	Rear Yard Setback	7.5m	

##### 3. Parking Lot, Loading, & Access

<b>h</b>	Parking Lot Location	Rear Yard	
<b>i</b>	Loading Facility Location	Rear Facade	
<b>j</b>	Driveway Access	Secondary street	

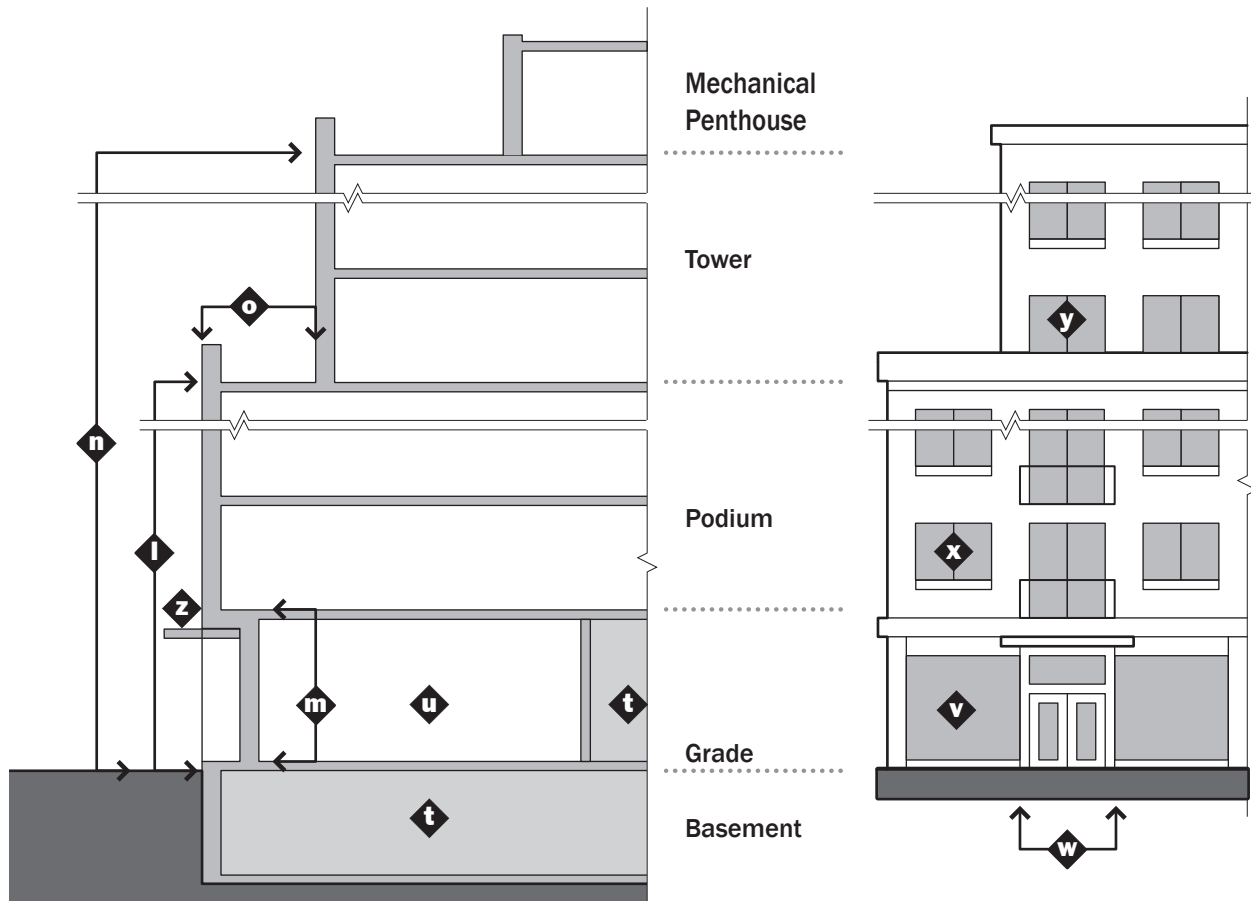
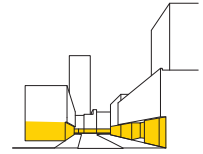
#### B. Built Form

##### 1. Podium

<b>l</b>	Podium Height	3 Storeys	Minimum <sup>1</sup>
		6 Storeys	Maximum
<b>m</b>	Ground Floor Height	4.5m	Minimum
	<sup>1</sup> ZBL Section 37.3.1 (m) for specific height		

##### 2. Tower

<b>n</b>	Building Total Height	ZBL Section 37.3.1 (n)	
<b>o</b>	Stepback above Podium	3.0m	Minimum
<b>p</b>	Tower Floor Area		
	above the 8th storey	750m <sup>2</sup>	Maximum
<b>q</b>	Tower Separation	25.0m	Minimum
<b>r</b>	Setback from Property Line	12.5m	Minimum
<b>s</b>	Horizontal Tower Dimension	35.0m	Maximum



## C. Use

### 1. Grade Level

Residential Permitted	No
Service Areas Permitted	Indoor amenity space, entrances/foyers, and service areas.
Parking Within Building	Permitted
<b>t</b> Parking Structure Location	Rear of the ground floor habitable space
<b>u</b> Habitable Area	25% Minimum
Habitable Width	100%
Habitable Area Use	lobbies, sitting areas, and hallways.

### 2. Upper Stories

Upper Story	ZBL Section 37.1.1
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## D. Entrances & Fenestration

### 1. Grade Level

<b>v</b> Transparency	75%	Minimum
Main Entrance Location	Front facade or corner of building	
<b>w</b> Residential Entrance Width	30% façade	Maximum
Street Entrances	1 per 25m of facade length	Minimum
Parking Entrances	1	Maximum

### 2. Podium

<b>x</b> Transparency	40%, per floor	Minimum
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### 3. Tower

<b>y</b> Transparency	50%, per floor	Minimum
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### 4. All Levels

<b>z</b> Architectural Projection	Bay window, eaves, awnings, canopies, & signs	
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## 5.4. Convertible Frontage

Convertible frontage in buildings can be used for live/work units. Convertible frontage should avoid creating conditions along the street that detract from the role of the sidewalk as an inviting and attractive public space. Convertible frontage areas should be designed to be easily converted between residential, commercial, retail, institutional or community uses and are designed as flexible spaces, with taller ground floors to accommodate a range of active uses with larger window/display areas and entrances. Convertible can be set back from the street to allow for a front yard condition. Live/Work housing can create new ways to live and work in the same space and provide flexibility in the use of the ground floor areas. Live/Work housing layers space with retail, office, and residential allowing a neighbourhood to become more vibrant throughout a 24-hour period.



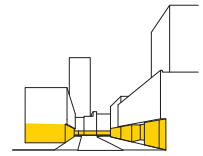
### 5.4.1. Permeable Edge

Convertible Frontage should engage the passersby with a “permeable edge” between the building and street as appropriate to building uses. Buildings should have frequent entrances where possible and ensure a physical and visual connection between people on the sidewalk and activities in the building.



### 5.4.2. Visibility

Convertible Frontage should protect for visibility into the building interior using fenestration while allowing for residential use. Window screening, shutters and planters can help transform transparent facades for residential uses.



#### 5.4.3. Shelter

Convertible Frontage areas should include overhangs or canopies over the front yard to provide shelter for pedestrians. Porch overhangs can provide a sense of enclosure and shelter pedestrians from wind, rain, and sun are encouraged.



#### 5.4.4. Front Yard Access

The main entrances of individual units should be accessed from the sidewalk. A maximum setback of 1.0 - 5.0 metres is allowed to ensure that the future potential for retail is preserved. The 5.0 metre front yard zone can accommodate front steps, a raised planter and porch or terrace area. Front yard fences should be less than 0.5 metre high. A small level change can be used to signify the threshold between public and private space.



#### 5.4.5. Signage

Integrate signage with the architecture. Define spaces to accommodate signs that respect building scale, architectural features, and signage uniformity. Building signage should be integrated with and reflective of architectural form and style.

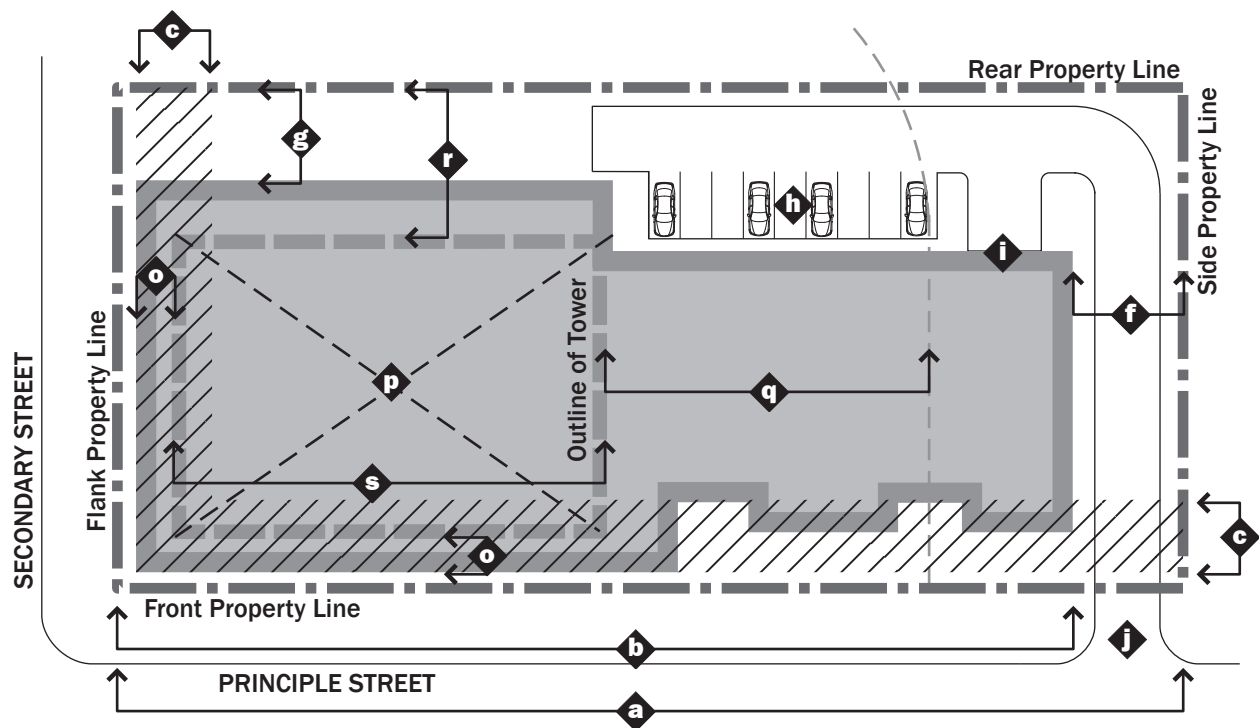


#### 5.4.6. Utilities

Utilities, vents and other unattractive elements should be avoided on the lower levels of façades adjacent to the public realm or should be integrated into the architectural composition, where feasible.



## 5.5. Convertible Street Frontage Guidance



### A. Site

#### 1. Street Frontage

<b>a</b>	Lot Frontage	20.0m	Minimum
<b>b</b>	Building Frontage	75%-Driveway Width	
<b>c</b>	Front Build within Zone	1.0-5.0m	
<b>d</b>	Flank Build within Zone	1.0-5.0m	
	Setback Zone Treatment	Paved or Landscape	
	Landscape Open Space	30%	Minimum

#### 2. Buildable Area

<b>f</b>	Side Yard Setback	5.5m	
<b>g</b>	Rear Yard Setback	7.5m	

#### 3. Parking Lot, Loading, & Access

<b>h</b>	Parking Lot Location	Rear Yard	
<b>i</b>	Loading Facility Location	Rear Facade	
<b>j</b>	Driveway Access	Any street	

### B. Built Form

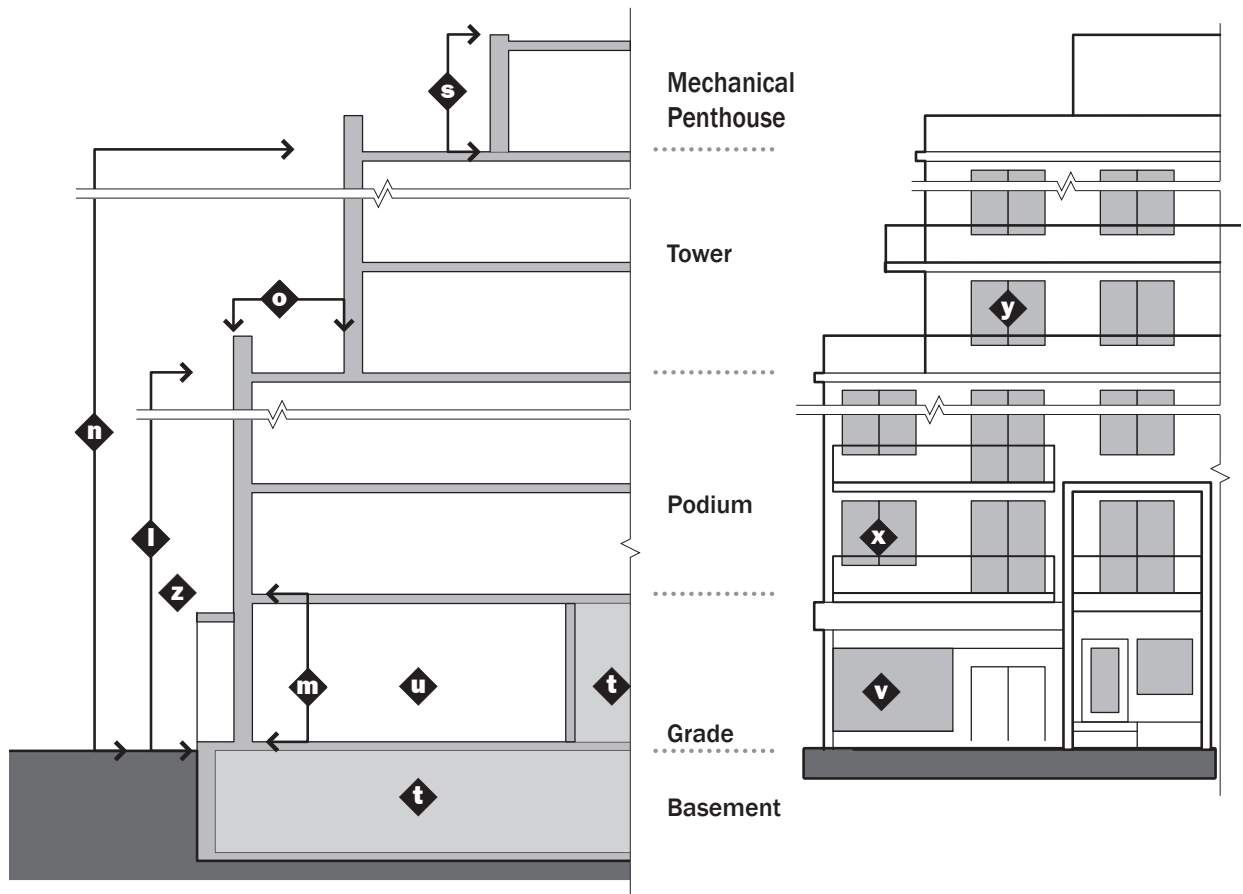
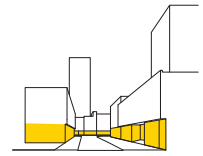
#### 1. Podium

<b>l</b>	Podium Height	3 Storeys	Minimum <sup>1</sup>
		6 Storeys	Maximum
<b>m</b>	Ground Floor Height	4.5m	Minimum

<sup>1</sup>ZBL Section 37.3.1 (m) for specific height

#### 2. Tower

<b>n</b>	Building Total Height	ZBL Section 37.3.1 (n)	
<b>o</b>	Stepback above Podium	3.0m	Minimum
<b>p</b>	Tower Floor Area		
	above the 8th storey	750m <sup>2</sup>	Maximum
<b>q</b>	Tower Separation	25.0m	Minimum
<b>r</b>	Setback from Property Line	12.5m	Minimum
<b>s</b>	Horizontal Tower Dimension	35.0m	Maximum



## C. Use

1. Grade Level		
Residential Permitted	Yes	
Non-Residential Permitted	Yes	
Parking Within Building	Permitted	
t Parking Structure Location	Rear of the ground floor habitable space	
u Habitable Area	25%	Minimum
Habitable Width	100%	
Habitable Area Use	All uses permitted in building	
2. Upper Stories		
Upper Story	ZBL Section 37.1.1	

## D. Entrances & Fenestration

<b>1. Grade Level</b>			
<b>v</b> Transparency	50%	Minimum	
Main Entrance Location	Front facade or corner of building		
Street Entrances	1 per 15m of facade length	Minimum	
Parking Entrances	1	Maximum	
<b>2. Podium</b>			
<b>x</b> Transparency	30%, per floor	Minimum	
<b>3. Tower</b>			
<b>y</b> Transparency	50%, per floor	Minimum	
<b>4. All Levels</b>			
<b>z</b> Architectural Projection	Bay window, eaves, awnings, canopies, & signs		



## 5.6. Neighbourhood Street Frontage

**Neighbourhood frontage areas are defined by units at grade with a direct access to the street from the main dwelling unit entrance. These frontages should be designed to encourage eyes-on-the-street, and social spaces that are clearly defined as private spaces such as stoops, porches and front yards. Neighbourhood frontages are setback from the street to provide sufficient space for entrances and on-site landscaping, as well as windows to provide street overlook.**

### 5.6.1. Defining Private Space

Define the threshold between private residential uses at grade and the public realm through measures such as screening, planting, and elevation changes. Provide a series of transitional filters for pedestrians passing from public spaces to private spaces. These could include: A front gate, a private front path, a porch, a stoop, a foyer or entrance hall. If front yard dimensions are limited use grade changes to create a sense of transition.



### 5.6.2. Visibility

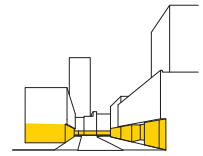
Neighbourhood Frontage should provide protection from direct visibility into private living spaces while allowing for controlled views out. Window screening, shutters and front yard landscaping can help provide privacy for residential uses. Setback entrances can define entries as semi-private. Specify solid rather than glass front doors. Include planting areas along the front wall, on the windowsill and/or between units.



### 5.6.3. Shelter

Neighbourhood Frontage areas should include overhangs or canopies over the front yard to provide shelter for pedestrians. The addition of a canopy over a front door or a recessed space is often sufficient to suggest semi-privacy. An enclosed porch can serve as a draft excluder, a house enlarger, a storage unit, a conservatory, and a secure point from which to view strangers.





#### 5.6.4. Front Yard Access

The main entrances of individual units should be accessed from the sidewalk. A maximum setback of 3.0 - 6.0 metres is allowed to ensure that the future potential for retail is preserved. The front yard zone can accommodate front steps, a raised planter and porch or terrace area. Front yard fences are discouraged and if necessary should be less than 0.5 metre high.



#### 5.6.5. Stoop or steps

Provide opportunities for interaction among residents and neighbours by designing private outdoor spaces slightly above grade. These spaces encourage outdoor occupation and passive surveillance of the street. The entrance is usually an exterior stair and landing.



#### 5.6.6. Porch

A porch provides a more private transition space between the dwelling and the public street. A porch should be large enough for two people to stand under cover outside of the door swing. Porches are typically elevated above grade to create a distinction between the public and private realm as well as providing an elevated view of the street.

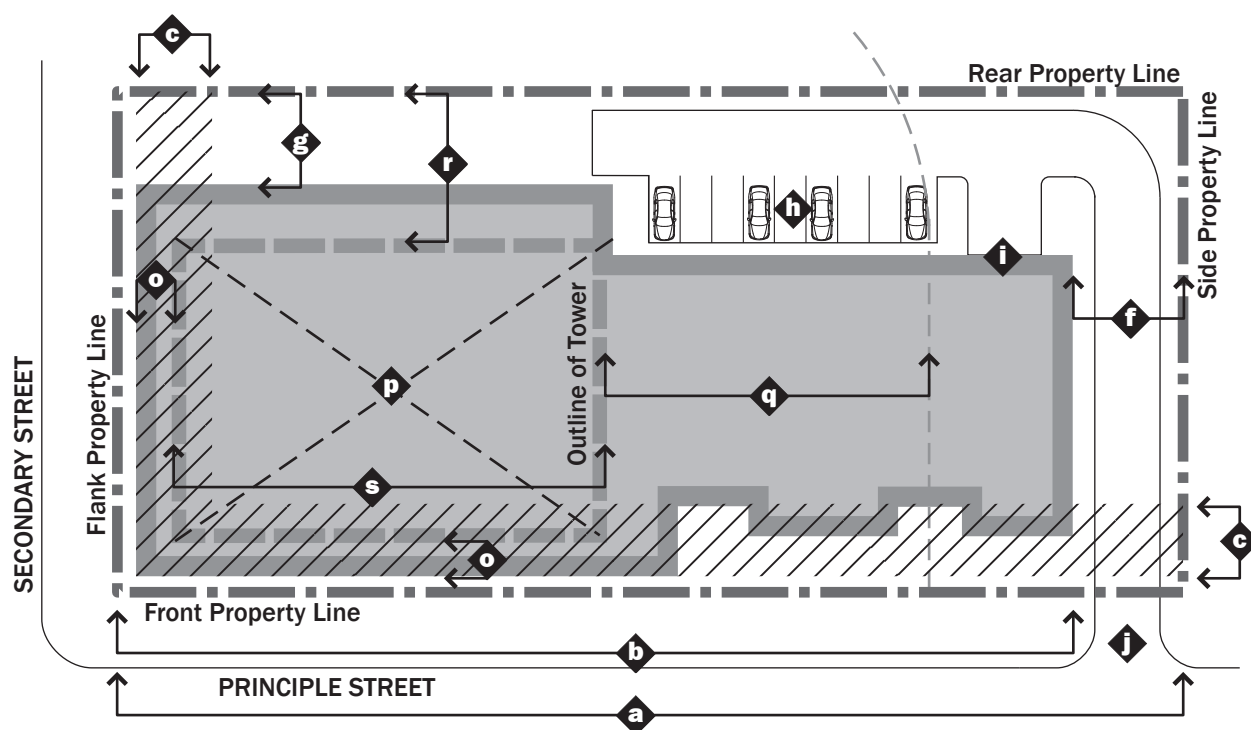


#### 5.6.7. Entrances

Where the front door must be a light source use translucent rather than transparent materials. Use sidelights and transom lights to allow for light and views to the outside. Entrances should have outside lights. Utilities, vents and other unattractive elements should be avoided on the lower levels of façades adjacent to the public realm or should be integrated into the architectural composition, where feasible.



## 5.7. Neighbourhood Street Frontage Guidance (Apartments)



### A. Site

#### 1. Street Frontage

<b>a</b>	Lot Frontage	20.0m	Minimum
<b>b</b>	Building Frontage	Not required	
<b>c</b>	Front Build within Zone	3.0-6.0m	
<b>d</b>	Flank Build within Zone	3.0-6.0m	
	Setback Zone Treatment	Landscape	
	Landscape Open Space	30%	Minimum

#### 2. Buildable Area

<b>f</b>	Side Yard Setback	5.5m	
<b>g</b>	Rear Yard Setback	7.5m	

#### 3. Parking Lot, Loading, & Access

<b>h</b>	Parking Lot Location	Rear Yard	
<b>i</b>	Loading Facility Location	Rear Facade	
<b>j</b>	Driveway Access	Any street	

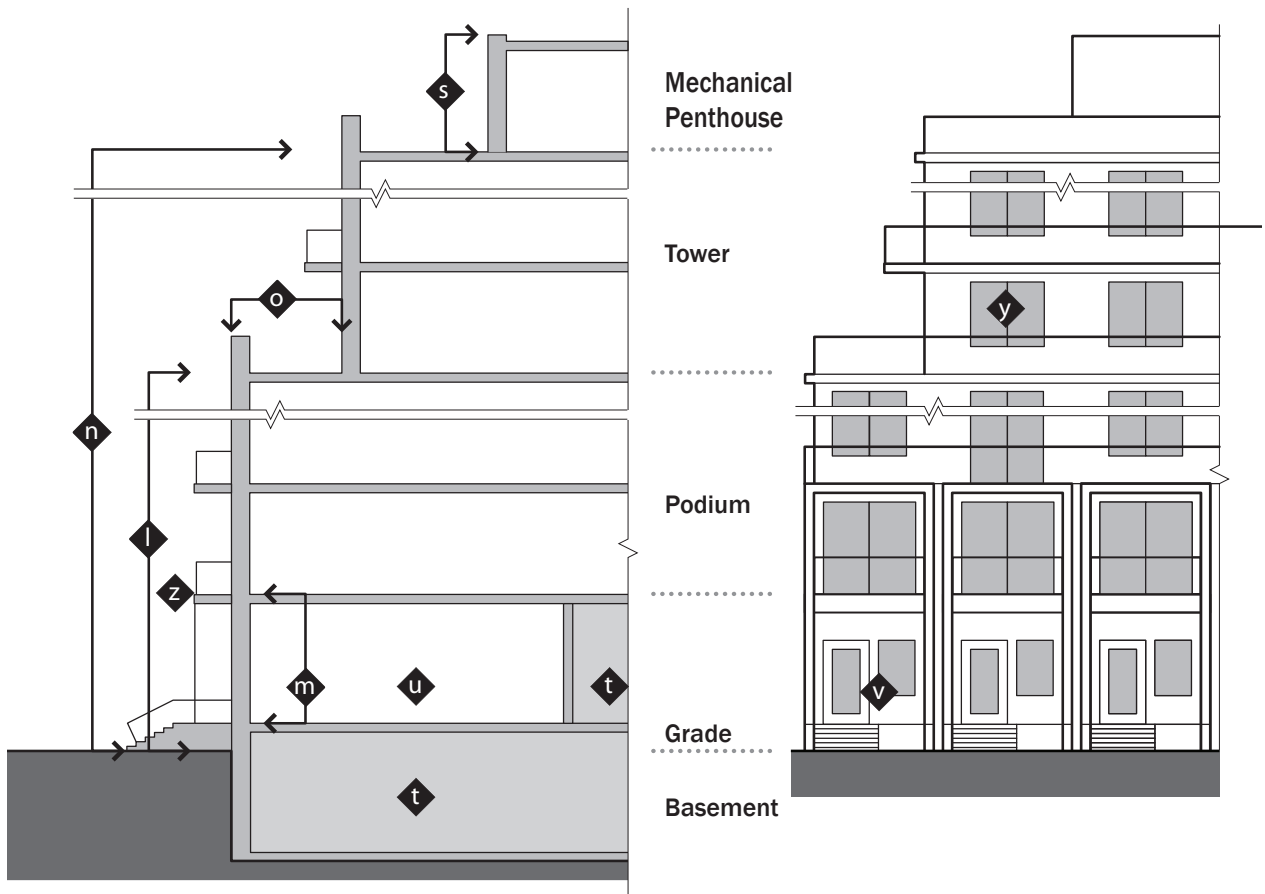
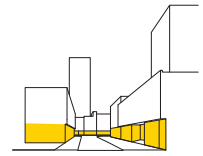
### B. Built Form

#### 1. Podium

<b>l</b>	Podium Height	3 Storeys	Minimum <sup>1</sup>
		6 Storeys	Maximum
<b>m</b>	Ground Floor Height	3.0m	Minimum
	<sup>1</sup> ZBL Section 37.3.1 (m) for specific height		

#### 2. Tower

<b>n</b>	Building Total Height	ZBL Section 37.3.1 (n)	
<b>o</b>	Stepback above Podium	3m	Minimum
<b>p</b>	Tower Floor Area	750m <sup>2</sup>	Maximum
<b>q</b>	Tower Separation	Refer to ZBL	
<b>r</b>	Setback from Property Line	Refer to ZBL	



## C. Use

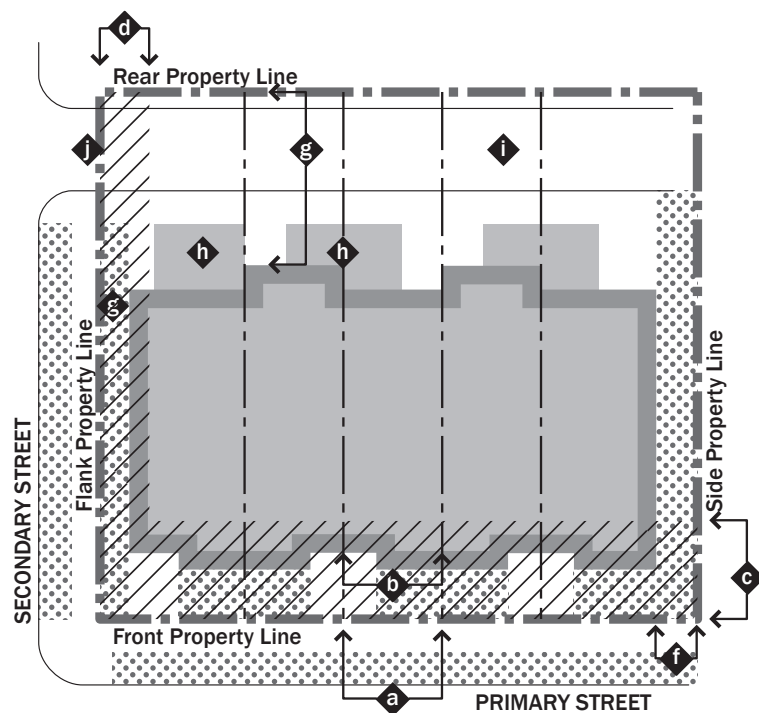
1. Grade Level		
	Residential Permitted	Yes
	Non-Residential Permitted	No
	Parking Within Building	Permitted
t	Parking Structure Location	Rear of the ground floor habitable space
u	Habitable Area	25% Minimum
	Habitable Width	100%
	Habitable Area Use	All uses permitted in building
2. Upper Stories		
	Upper Story	ZBL Section 37.1.1

## D. Entrances & Fenestration

<b>1. Grade Level</b>			
<b>v</b> Transparency	50%	Minimum	
Main Entrances Location	Each dwelling unit at grade		
Street Entrances	1 per 15m of facade length	Minimum	
Parking Entrances	1	Maximum	
<b>2. Podium</b>			
<b>x</b> Transparency	30%, per floor	Minimum	
<b>3. Tower</b>			
<b>y</b> Transparency	30%, per floor	Minimum	
<b>4. All Levels</b>			
<b>z</b> Architectural Projection	Bay window, eaves, awnings, canopies, & signs		



## 5.8. Neighbourhood Frontage Townhouse Guidance



### A. Site

#### 1. Street Frontage

<b>a</b>	Lot Frontage	5.5m	Minimum
<b>b</b>	Building Frontage	Not required	
<b>c</b>	Front Build within Zone	3.0-6.0m	
<b>d</b>	Flank Build within Zone	3.0-6.0m	
	Setback Zone Treatment	Landscape	
	Landscape Open Space	30%	Minimum
	Lot Area	1,000 m <sup>2</sup>	Minimum

#### 2. Buildable Area

<b>f</b>	Side Yard Setback	3.0m	
<b>g</b>	Rear Yard Setback	7.5m	

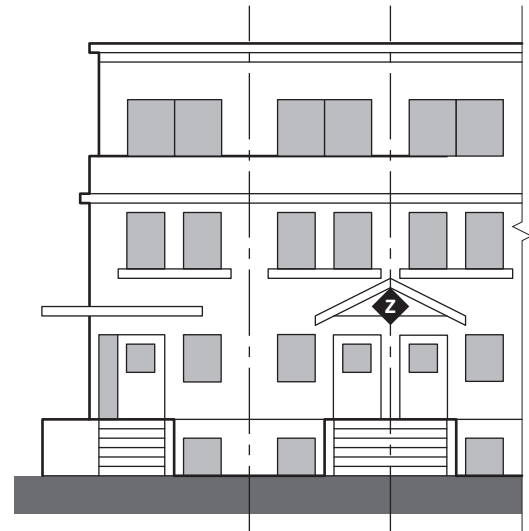
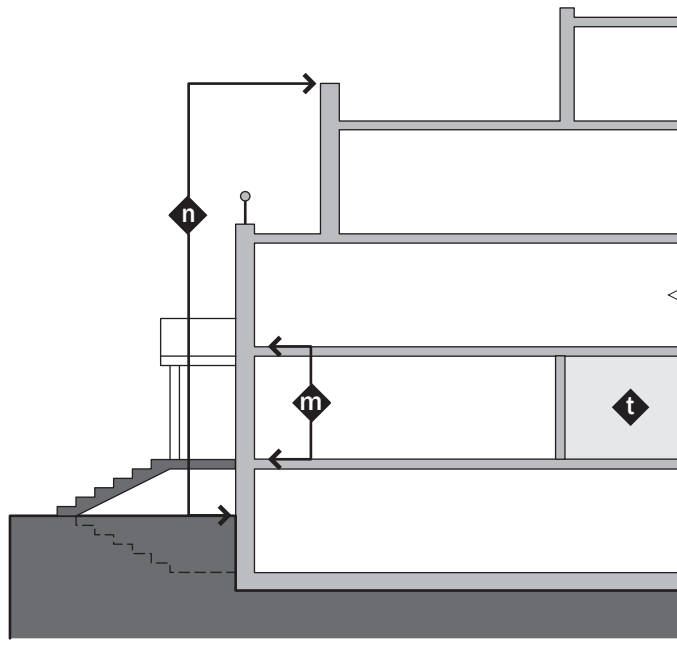
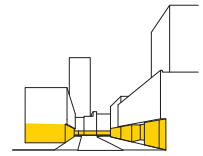
#### 3. Parking Lot, Loading, & Access

<b>h</b>	Parking Location	Rear Yard	
<b>i</b>	Loading Facility Location	Rear Facade	
<b>j</b>	Driveway Access	Any street	

### B. Built Form

#### 1. Height

<b>m</b>	Ground Floor Height	3.0m	Minimum
<b>n</b>	Building Total Height	ZBL Section 37.3.1 (n)	



## C. Use

### 1. Grade Level

Residential Permitted	Yes
Non-Residential Permitted	No
Parking Within Building	Permitted

<b>t</b> Parking Structure Location	Rear of the ground floor habitable space
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### 2. Upper Stories

Upper Story	ZBL Section 37.1.1
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## D. Entrances & Fenestration

### 1. All Levels

	Main Entrances Location	Each dwelling unit at grade	
	Street Entrances	1 per unit	Minimum
	Parking Entrances	1 per unit	Maximum
<b>z</b>	Architectural Projection	Bay window, eaves, awnings,canopies, & signs	

## 5.9. Frontage: Common Entrances

Entrances for new housing developments should be welcoming and allow space for waiting. Front entries should have sheltered entrances, transparent doors and sidelights, and a vestibule. Entrance spaces are important to the social life of the student residents and contribute to the life of the street by adding activity to the public realm. Outdoor spaces encourage passive surveillance which increases the perception of safety in the street. Atria and lobbies should be visible to the public realm. Views into the interior will create a more interesting pedestrian experience and will increase the safety of the neighbourhood.

### 5.9.1. Visibility

Design entries to be obvious, identifiable, and distinctive with clear lines of sight and lobbies visually connected to the street. Use transparent materials between 0.6 and 3.0 m off the floor for all common entry areas.



### 5.9.2. Lobbies

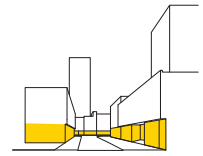
Lobbies provide a sheltered space to wait for visitors and residents. Ensure that there is a direct line of sight from lobbies to the street. Lobbies should be generously sized and provide a minimum of two seats or 1 seat for every 100 residents. Seating should be comfortable and welcoming. Built in seating can be more resilient and spatially efficient. Indoor amenity areas can be combined with lobbies to activate the space.



### 5.9.3. Shelter

Main entrances should include overhead shelter or canopies to provide outside shelter from wind, sun and rain. Canopies should be large enough to provide space to shelter two people outside of the door swing.





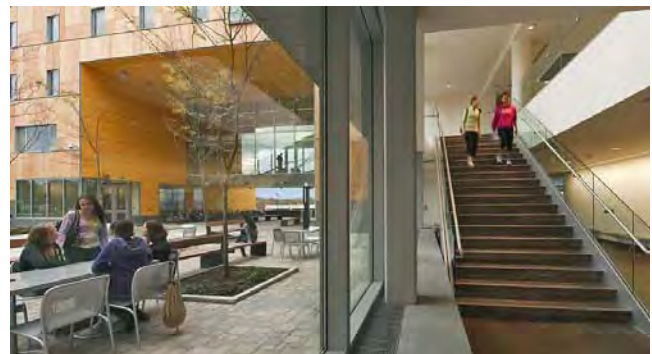
#### 5.9.5. Distinctive

Residential and commercial entries should be differentiated. Shared entrances to residential units, clearly accessible from the street should be provided. Each retail store in a building should be identifiable and accessible from the sidewalk.



#### 5.9.6. Plazas

Large buildings should include publicly accessible plazas associated with their entrances. These spaces should be accessible to pedestrians and connect the ground floor of the complex to the surrounding urban environment. Design the entry plaza as an ensemble of a variety of elements including the doors, overhead features, ground surface, landscaping, lighting, and other features.



#### 5.9.4. Seating

Outdoor seating should be integrated with the entrance pathway. Seating can be provided by benches or integrated into the entrance design using seating walls.



#### 5.9.7. Transition

Transitional spaces such as stoops, courtyards, stairways can provide a sense of entry. Entries should include differentiated ground surfaces, special paving, landscaping, lighting and integrated signage.





## 5.10. Street Wall

The Northdale neighbourhood is planned so that buildings create a street wall that provides enclosure for the public realm. The street wall is comprised of the podium elements of buildings that range between 3-6 storeys in height. The street wall should be designed as an architectural concept that will result in a unified, functional and harmonious design that defines the street without creating a relentless facade.

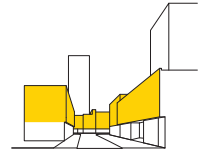


### 5.10.1. Architectural Quality

Design buildings to have architectural articulation that is rich in detail, enhances public streets, and creates interest as well as a sense of identity. Allow and promote architectural innovation in Northdale, particularly to create new landmarks and streetscape interest. Encourage the use of brick, glass, steel, stone and other complementary materials.

### 5.10.2. Differentiation

An identifiable break should be provided between a building's retail floors (ground level and, in some cases, second and third floors) and upper floors. This break may consist of a change in material, change in fenestration, or similar means. Incorporate horizontal and vertical elements that match or complement surrounding features. Use cornice, banding and other treatments to create a transition between different storey heights.



### 5.10.3. Reducing Perceived Mass

Use secondary architectural elements to reduce the perceived mass of larger projects. Consider creating recesses or indentations in the building envelope; adding balconies, bay windows, porches, canopies or other elements; and/or highlighting building entries. Buildings on blocks longer than 100m should be designed with breaks or as separate buildings to provide street variety, connections, views and opportunity for sunlight penetration.



### 5.10.4. Functional Design Elements

Consider architectural features that add depth, texture, and scale as well as serving other project functions such as shading devices and windows that add rhythm and depth as well as contribute toward energy efficiency and/or savings.



### 5.10.5. Blank Walls

Avoid large blank walls along visible façades wherever possible. Where expanses of blank walls, party walls, retaining walls, or garage facades are unavoidable, include design treatments that provide interest for pedestrians such as newsstands, green walls, landscaped areas, raised planters, wall patterns, trellises or public art.

### 5.10.6. Building Materials

The following building materials are preferred in the Northdale Study Area: architecturally finished block, stone, granite, metal and wood panels, brick, glass and spandrel glazing finishes. These elements will be approved through the site plan process and would help establish expectations for all buildings. The use of stucco as an exterior finish should be minimized especially at grade.



## 5.11. Towers

The proposed skyline of the Northdale neighbourhood will be shaped by towers that rise above podiums. Zoning requirements have limited the bulk and dispersion of towers in the neighbourhood to ensure sky view and limit the impact of shadows. Towers should be designed in conjunction with the podium of the building and the interplay of masses setback at different heights will improve the articulation and overall visual impression of the street. The architectural expression of entrances, corners, roof elements, balconies, and other projections can help break down the overall scale of long or tall building faces. Setbacks above podiums will help articulate the towers above. The setbacks will promote a better street edge and improve the pedestrian realm by allowing more solar access and reduced wind impact.

### 5.11.1. Shadow and Wind Impact

Design and mass buildings to minimize adverse impacts on adjacent properties, outdoor amenity spaces and public spaces with respect to sunlight access, wind tunneling effect, noise attenuation and snow disposition. (UDM 2.1.3.12)

Sun shadow and wind study requirements outlined in the Urban Design Manual apply to all development in the Northdale neighbourhood.

### 5.11.2. Tower Massing

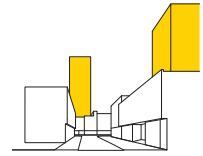
Towers should have slender massing and elegant proportions. Reducing the bulk of the top of a tower (“sculpting” the tower) can make it more attractive. If a project has more than one tower, they should be complementary to each other and employ the same architectural design approach.

### 5.11.3. Tower Form

Tower forms should appear simple yet elegant, and add an compelling sculptural form to the skyline. Towers should be designed to achieve a faceted geometry and be composed of simple forms. They should not appear cluttered with over-manipulated elements. Towers that have a clean silhouette should provide variety through subtle details in the facade and the articulation of a human-scaled elements at the street level.

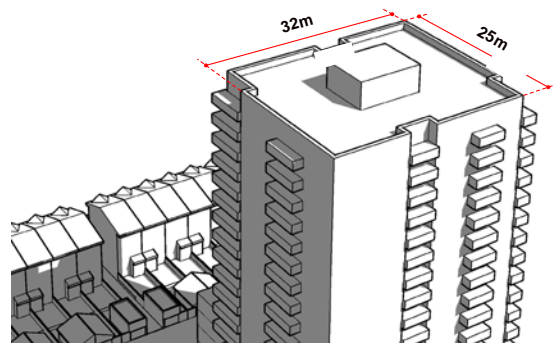






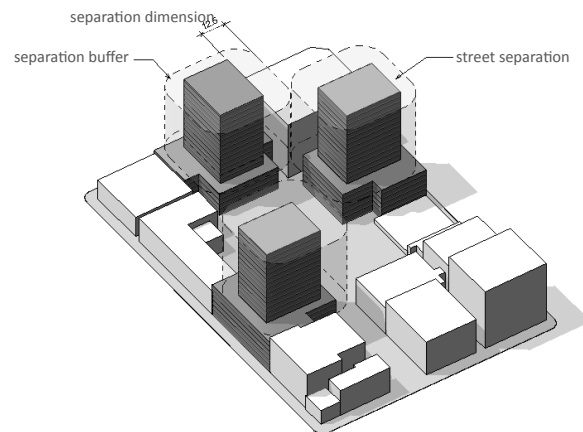
#### 5.11.4. Maximum Floorplate

Design tall residential buildings above any podium with a maximum floorplate of 800 m<sup>2</sup> (excluding balconies) to minimize shadow impacts on surrounding streets, sidewalks neighbouring buildings and private amenities. (ZBL 37.3.1t)



#### 5.11.5. Minimum Tower Spacing and Horizontal Tower Dimension

Towers must be set back a minimum of 12.5m from side and rear property lines measured from the external wall or exterior face of balconies. If more than one tower is included within one site the towers must be spaced apart so as to permit a minimum separation distance of 25m, measured from the external wall excluding balconies. The maximum horizontal tower dimension must be no greater than 35m, measured from the external wall excluding balconies. (ZBL 37.3.1t and u)



#### 5.11.6. Protect Microclimate

New development can affect microclimate and impact human comfort in the public realm. In addition to the tower setbacks, canopies and other projections may also be used to deflect wind conditions away from the public realm.

#### 5.11.7. Views toward Parks and Open Spaces

Maximize the opportunity for views from buildings adjacent to parks and open spaces. A large window, balcony, or porch provides a point of visual connection with the exterior.





## 5.12. Shared Private Open Space: Planning

Where landscape open space is required, integrate its design with the building. Plan the size, uses, activities, and features of each open space to meet the needs of expected users, ensuring each space has a purpose and function. Leave no “leftover” open spaces.

### 5.12.1. Connect Open Spaces

Site and design project-related public open spaces to connect with, or enhance, the uses and activities of other nearby public open space where appropriate. Look for opportunities to support positive uses and activities on adjacent properties and/or the sidewalk. Ensure that there are safe, direct, hard surfaced pathways from every dwelling to necessary on-site facilities



### 5.12.2. Multiuse Open Space

Incorporate common and private open spaces for use by all residents, and design them to encourage interaction. Some examples include areas for gardening, barbecues, resident meetings, gyms, and crafts or hobbies.



### 5.12.3. Functional Separation

Divide the open space into functional areas, each with a clearly specified purpose: a lawn area for games, and sitting in the sun, buffer planting between public and private uses, edge seating for passive viewing.





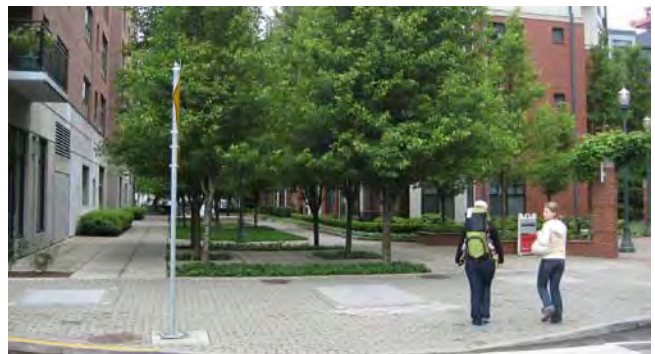
#### 5.12.4. Mature Vegetation

In an effort to retain and protect mature vegetation within Northdale, it is recommended that built form footprints should consider the mature vegetation on site early in the design process, and seek out all reasonable site solutions for retention and incorporation into the proposed site plan. Mature vegetation is to be retained and protected in accordance with section G of the SPRG.



#### 5.12.5. Reinforce Existing Open Space

Where a strong open space concept exists in the neighbourhood, reinforce existing character and patterns of street tree planting, buffers or treatment of topographic changes. Where no strong patterns exist, initiate a strong open space concept that other projects can build upon in the future. Provide visibility to any private open space in order to increase the surveillance of the open space and improve views.



#### 5.12.6. Match Uses to Conditions

Respond to environmental conditions such as seasonal and daily light and weather shifts, matching uses with appropriate conditions. For example, place outdoor seating and gathering areas where there is sunny exposure and shelter from wind. Plan for changing needs over time.



#### 5.12.7. Interior/Exterior Fit

Develop an open space concept in conjunction with the architectural concept to ensure that interior and exterior spaces relate well to each other and support the functions of the development.

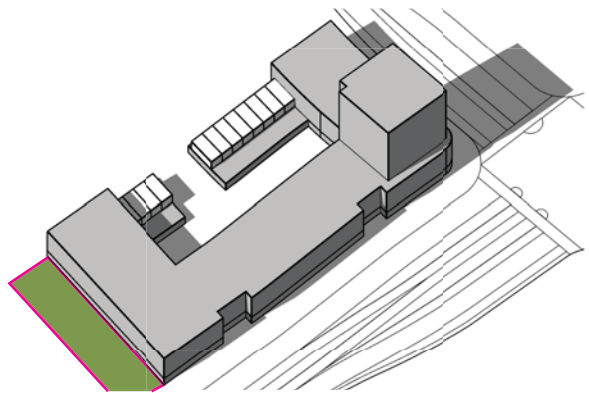


## 5.13. Shared Private Open Space: Types

**Shared Private Open Spaces** are spaces within a private development that are accessible to all residents. These areas provide spaces for larger gatherings, allow minor recreational activity, and provide social spaces beyond the confines of individual units. In higher density developments, these spaces ensure inhabitants have access to a large range of amenities to enrich their daily living. Four types of private open spaces include pedestrian mews, plazas, courtyards and roof gardens.

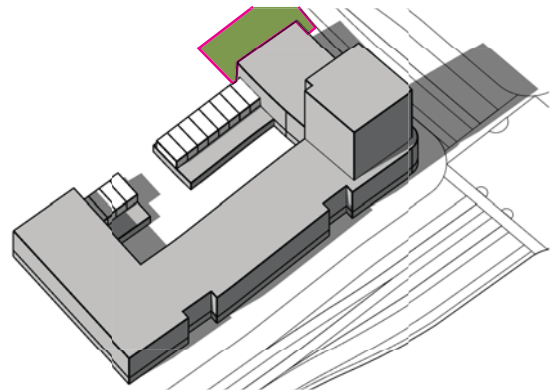
### 5.13.1. Pedestrian Mews

A pedestrian mews allows for connections between the building and surrounding streets while preserving space between buildings. Pedestrian mews are restricted to pedestrian use and limited vehicular access and should have a minimum width of 7 metres. Pedestrian mews should act like a pedestrian street and be lined with frequent doors and windows. Section 4.17 provides additional detail for pedestrian mews.

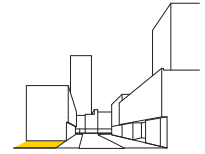


### 5.13.2. Plazas

A plaza is an open space that is used as public space and is directly connected to the public realm. Plazas are spatially defined by active building frontages. Plazas are typically made up of paving material and trees. Plazas should be located near the intersection of important thoroughfares. The minimum size of a plaza should be 500 square metres.

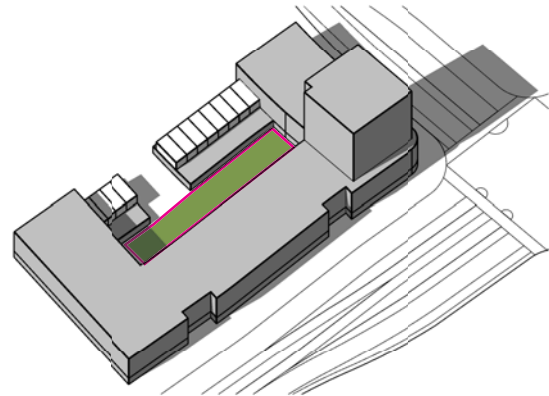






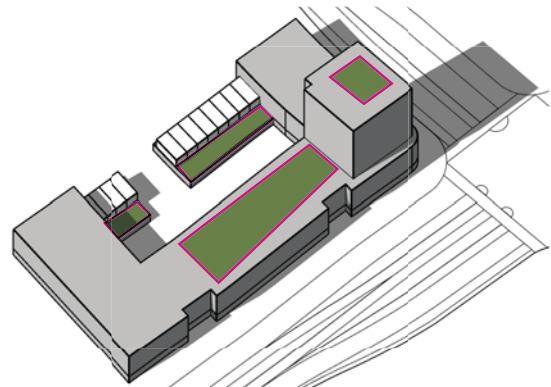
### 5.13.3. Courtyards

Courtyards provide quiet, private open space within the interior of a building block. Courtyards are defined by buildings and street walls on at least three sides. The entrance to the courtyard should be visually accessible from the street. Courtyards should provide amenities such as access to green space, activity space, and areas for recreation. Courtyards should be semi-enclosed or fully enclosed by the dwellings they serve and be seen from all of those dwellings. Design courtyards so that the ratio of building height to open space is in the ratio of 1:3 to 1:5, or as tight as 1:2 with careful landscaping. The shortest length across a courtyard should be a minimum 14.0 meters.



### 5.13.4. Roof Gardens

Roof gardens are shared open spaces on the top of buildings. Roof gardens provide private open space away from the street and offer distant views out toward the neighbourhood. Roof gardens should be connected to interior shared amenity spaces and are best located on the roof of the podium rather than the tower due to wind conditions. Roof gardens should not be located on the north side of a tower.





## 5.14. Shared Private Open Space: Details

**Private open spaces should be animated to provide key locations for meeting and gathering spaces. These spaces should be located along pedestrian routes and be activated with common spaces within buildings or private yards. Due to the proximity of uses in private open spaces design considerations include protection for privacy, sound, and views while maintaining natural surveillance over the open space.**

### 5.14.1. Separation

Clearly delineate public spaces (parks and streets), from community spaces (shared open space, entries, courtyards), and private space (front yards). Provide low fences and gates between yards and common areas. Provide window boxes or shelves for planters outside windows on the first 1-3 storeys

### 5.14.2. Planting

Select and locate trees so that they admit winter sun but provide shelter from summer sun to both open spaces and buildings. Define all edges of planting areas with edging treatment or retaining walls. Design retaining walls so that they can also be used for casual seating.

### 5.14.3. Features

Provide environmental interest such as plants that attract butterflies or songbirds, fragrant flowers, plants that have seasonal changes, fountains, reflecting pools, and trees that make pleasing sounds in the breeze.





#### 5.14.4. Microclimate

Design buildings that are lower on the east, south and west to maximize sunlight penetration into courtyards. Use building elements to modify climactic conditions. For example, fences may stop cold winds but still allow winter sun onto a patio pergolas with deciduous vines may block summer sun but allow winter sun to penetrate.



#### 5.14.5. Access

Provide access to the communal open space either directly from the dwelling via ground level private open space. Locate pedestrian routes so that people will regularly walk through communal open spaces on their daily route to parking, laundry etc. Provide direct visual access from the kitchen, living room, or dining room to the communal open space.



#### 5.14.6. Seating

Provide a variety of outdoor seating in all common spaces both shaded. Arrange some seating in conversation groups such as facing or perpendicular, or circular benches.

#### 5.14.7. Amenities

Provide picnic tables and barbecues within easy access of dwellings but in a semiprivate setting some distance from adjacent units. Large courtyards or play facilities should include a drinking fountain. Locate attractive litter and recycling receptacles along major pathways in close proximity but not adjacent to seating areas.





## 5.15. Shared Private Open Space: Amenities

New developments in Northdale are encouraged to provide interesting activities for residents to have socially engaged outlets for recreation. Spaces for active recreation not only enhance the daily lives of residents but add value to a development. Due to the lack of park space in the Northdale neighbourhood, private open space can provide needed space for leisure.

### 5.15.1. Lawns

Lawns provide a low cost, resilient open space for a variety of recreational needs from picnics and sun tanning to more active uses such as ball games.



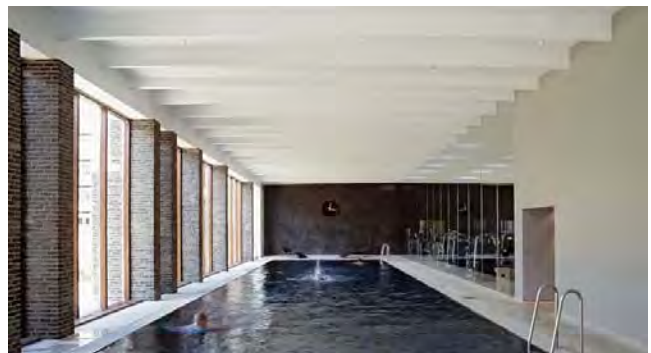
### 5.15.2. Courts

Traditional court games such as basketball, tennis, bocce, and volleyball are popular with university students, inexpensive, low-maintenance, and take little space.



### 5.15.3. Swimming Pools

Swimming pools are a significant investment both from a capital and maintenance perspective but offer a unique amenity for residents. Swimming pools in private student residences are gaining popularity in other cities.





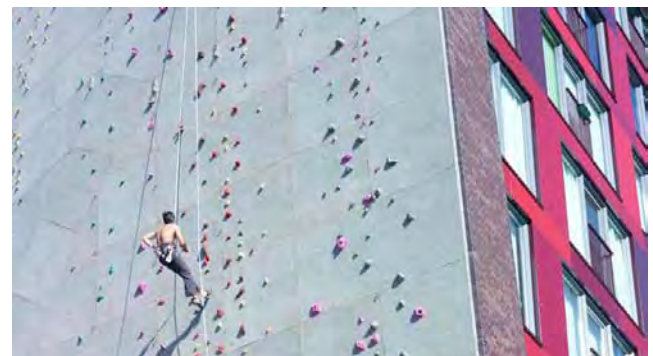
#### **5.15.4. Functional Public Art**

Functional public art pieces can bring delight to private open spaces and provide opportunities for social interaction and play.



#### **5.15.5. Unique Amenities**

Creative developments can define their identity by incorporating amenities unique to their residents needs. Such amenities bring differentiating value to a development and add interest to the neighbourhood.



#### **5.15.6. Allotment Gardens**

Allocate a sunny area within the communal landscaped space for residents to use for a community garden or individual allotments. Ensure that there is access to water, storage sheds and benches. The garden beds should be raised, fenced or surrounded by hedges for protection. Gardens can strengthen the local identity and community, and provide options for multi-unit residents.





## 5.16. Private Open Space: Balconies & Terraces

Balconies and terraces are an essential component of apartment buildings as they provide semi-private spaces that overlook the public realm. The first three storeys of mid-rise buildings are low enough that a person can talk to someone in the street. Outdoor communal spaces and semi-private spaces such as balconies, porches and verandas, allow residents relief from more compact units and encourage the social space of the street. These spaces contribute to safe streets by encouraging passive surveillance and “eyes on the street”.



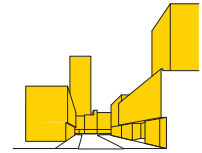
### 5.16.1. Private Amenity

Provide residential units with sufficient private amenity space, either as a terrace, balcony, or yard.



### 5.16.2. Privacy at Grade

Ensure that public paths do not pass next to the windows of dwellings. Privacy screens should be higher for privacy closer to the building and lower for visibility closer to the street. Provide screening for private terraces, yards or where adjacencies are close. Provide vegetative or semi-private fencing or screens that allows for permeable openings for viewing such as slots or lattice.



### 5.16.3. Active Street Frontage

Projecting balconies should not be located on the first 2 storeys of the front façade. Between 3 - 6 storeys balconies are encouraged and should be recessed behind the street wall. Juliette balconies provide interaction with the street while maintaining a consistent street wall.



### 5.16.4. Neighbourhood & Convertible Street Frontage

Balconies are encouraged for the first 2-6 storeys. Balconies in residential areas should be deep enough to allow for seating, small tables while allowing sufficient space for a person to pass.



### 5.16.5. Size and Access

Balconies should be a minimum of 3.0m x 6.0m in dimension. Provide sliding glass doors leading directly into balconies from the dwelling. Consider designing built in benches on balconies. Balconies or other permanent building elements should not encroach into the public right of way.



### 5.16.6. Privacy on Balconies

Provide recessed, rather than cantilevered balconies especially on the front of buildings, for privacy and protection. Provide solid or semi-solid screens between adjacent balconies to enhance privacy.



## 5.17. Arrangement Of Interior Uses

Urban design considerations for student housing includes a careful consideration of both the internal and external common spaces. Students need social spaces in their living units as they build their social skills and networks. By sharing common spaces that encourage interaction, units can have a smaller footprint and become more affordable. The relationship of private spaces with larger communal areas is important to the internal life of the residence.



### 5.17.1. Common Amenity Spaces

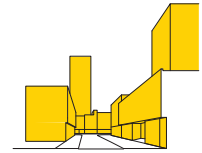
New developments should be designed to accommodate a mix of uses and programs that are adaptable to a variety of uses. Shared amenities could include movie rooms, meeting rooms, collective kitchens, dining rooms, laundry facilities, gyms or extended lobbies.



### 5.17.2. Location of Shared Amenities

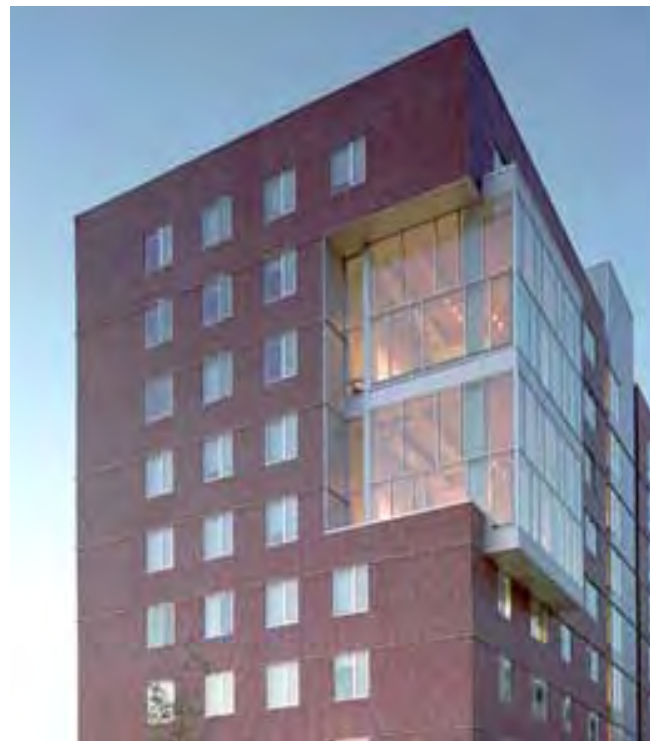
Locate the meeting room in a central visible location adjacent to high-traffic areas such as ground floor lobbies or major routes to shops - not the basement. Provide a washroom and at least minimal kitchen facilities.





#### **5.17.3. Views and Connections**

Locate interior uses and activities to take advantage of views and physical connections to exterior spaces and uses, particularly activities along sidewalks, parks or other public spaces. Locate living rooms and or kitchens windows to permit good views and avoid direct views toward blank or monotonous facades.



#### **5.17.4. Architectural Expression**

Shared interior spaces should be transparent and visible from the public realm. These important elements of the building should be expressed architecturally on the facade of the building.



## 5.18. Access & Servicing

Access and servicing are essential functions of development that should have minimal impact on the public realm in Northdale. Attention to the placement of facilities such as garage entrances, private driveways, loading areas and shared service access are critical in the design of new residential dwellings. The placement of parking and servicing has the highest impact on the building's relationship to the street and careful attention is needed to maintain attractive pedestrian streets.



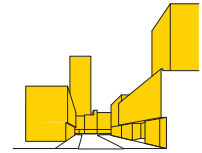
### 5.18.1. Driveways

Minimize the number and width of driveways and curb cuts, locating them so they are less visually dominant. Where feasible share the use of the driveway for loading, parking and for access to adjacent properties in order to reduce the extent of interruption along the streetscape. Driveways should be located as far from the nearest intersection as possible or a minimum of 30 metres from the centre of the driveway to the centre of the nearest side street.



### 5.18.2. Active Street Frontage

Where front driveways are permitted within active frontage areas, they should be located within the building massing with additional floors built above the driveway. These driveways should be integrated with the design of the streetscape and building.



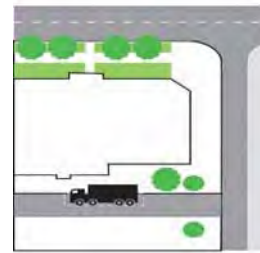
### 5.18.3. Safety

Limit conflict between pedestrians and vehicles using design techniques such as contrasting pavement to indicate vehicle entries or adding warning lights or other safety devices for vehicles exiting a garage and crossing a sidewalk.



### 5.18.4. Loading Access

Wherever possible, gain servicing/loading access from secondary streets. Share service and utility areas between different users within a single building or among different buildings. Integrate these areas into the architecture of the site.



### 5.18.5. Enclose Refuse and Loading

Where feasible, enclose all utility equipment within buildings or screen them from view. These include utility boxes, garbage and recycling container storage, loading docks, ramps, and air conditioner compressors. Provide loading, garbage, and recycling areas within multi-unit residential and mixed use buildings. Landscape buffers should comply with SPRG (4.13.H).



### 5.18.6. Integrate Hydro Transformers

Waterloo North Hydro should consider allowing private transformers to be located within denser buildings to avoid having to accommodate them in the public realm. Due to the future density of the Northdale neighbourhood and the aspirations for an improved public realm, pad-mounted transformers are discouraged within the front and flankage yards if driveway access is feasible.

## 5.20. Parking

Although parking facilities are required in large developments their impact can be minimized by thoughtful design approach. Parking facilities should ideally be underground, or behind buildings. If surface parking is unavoidable parking areas should maintain an attractive edge through screening, planting, or other design treatments. Safety in parking areas is an important issue. Parking areas should be well-lit, highly visible and accessible only to residents of the facility.

### 5.20.1. Visitor On-street Parking along Residential and Convertible Frontages

Encourage on-street parking on neighbourhood and convertible streets to provide pedestrian protection, promote passive surveillance of the street and provide additional temporary parking for shopping, deliveries and visitors.



### 5.20.2. Parking Location

Locate parking below grade wherever possible. When below grade parking is not feasible above-grade and surface parking structures should be behind buildings with development facing the street. This ensures the animation of adjacent street frontages.

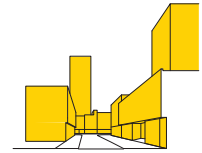


### 5.20.3. Screen Surface Parking

Should exposed surface parking be unavoidable, provide screening from any secondary streets using planting, landscaping, decorative walls, and/or fencing. Landscape buffers should comply with SPRG (4.13.H).







#### **5.20.4. Screen Structured Parking**

Should exposed structured parking be unavoidable, provide screening from any secondary streets using planting, landscaping, and/or decorative walls. Landscape buffers should comply with SPRG (4.13.H).



#### **5.20.5. Alternative Transportation**

If facilities for alternative transportation such as shared vehicles, carpooling, and charging stations for electric vehicles are provided, place them in prominent locations that are convenient and readily accessible to expected users.



#### **5.20.6. Safety**

Where the provision of parking is provided, include limited entry points, each with a gate accessible only to residents of the facility. Maximize casual surveillance by locating parking near streets or walkways and maximizing views into and through the facility. Ensure that parking areas are well-lit at all times.



#### **5.20.7. Bicycle Storage**

Provide secure, enclosed bicycle storage within developments. Bicycle storage areas must be locked and easily accessible to residents. Visitors' and customers' bicycle racks must be clearly visible from a main entry, covered, served with night lighting, and protected from damage from nearby vehicles.



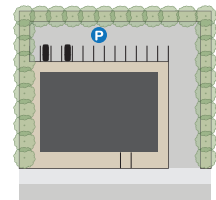
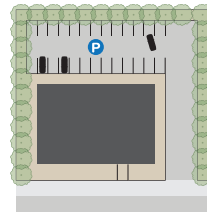


## 5.21. Site Planning

The vision of the Northdale neighbourhood includes streets lined with buildings that bring life to the public realm. In order to create a consistent and continuous street wall, building frontages have been specified in the Zoning By-law. Specific site conditions can present a challenge in achieving the intent of the frontage guidelines. In addition to the guidelines specified in the Site Plan Review Guidelines (SPRG) these additional considerations shall apply to the Northdale area:

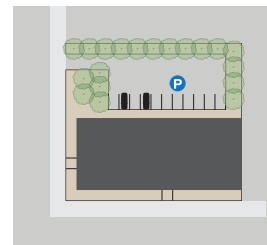
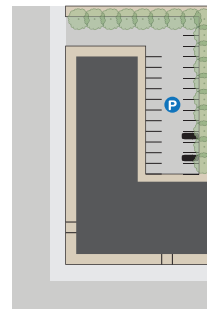
### 5.21.1. Midblock Lots

Midblock lots that are flanked on either side by adjacent properties should conform to the frontage requirements of the ZBL. One driveway is permitted to allow access to the rear of the lot. Parking should be accommodated underground or entirely in the rear of the building. Flankage set backs (if any) should have landscape buffers as specified in the SPRG (4.13.H).



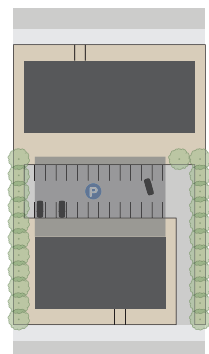
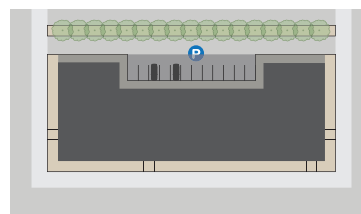
### 5.21.2. Corner Lots

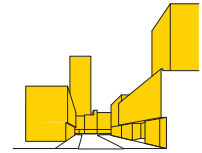
Corner lots should conform to the frontage requirements of the ZBL on all adjacent streets. One driveway is permitted to allow access to the rear of the lot. The driveway should be located on the secondary street. Parking should be accommodated underground or entirely in the rear of the building. On deep lots buildings should turn the corner and front all streets. Flankage set backs (if any) should have landscape buffers as specified in the SPRG (4.13.H).



### 5.21.3. Through Lots

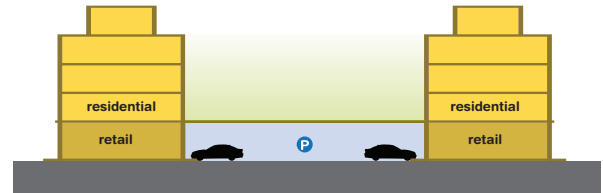
Through lots should conform to the frontage requirements of the ZBL on all adjacent streets. One driveway is permitted to allow access to the interior of the lot. The driveway should be located on the secondary street. Parking should be accommodated underground or entirely within the building. Flankage set backs (if any) should have landscape buffers as specified in the SPRG (4.13.H).





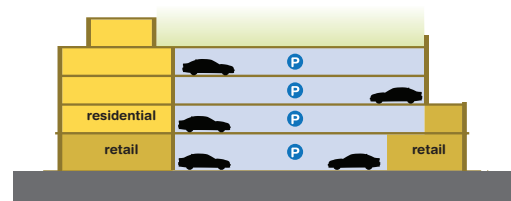
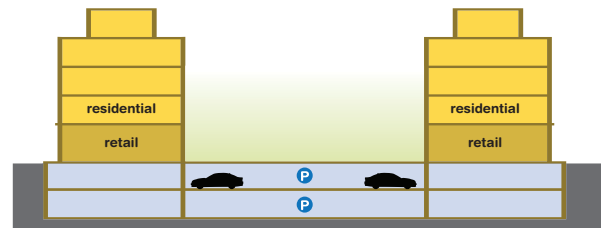
#### 5.21.4. Parking Structures

Parking structures should be located below or behind habitable buildings if at all feasible. Parking structures can be underground, shielded behind a multistorey building or half underground in an undercroft building. When site constraints do not allow parking structures to be shielded along side streets they should be enclosed with decorative translucent screening and be behind a landscape buffer. Access to parking facilities should be controlled and limited only to residents.



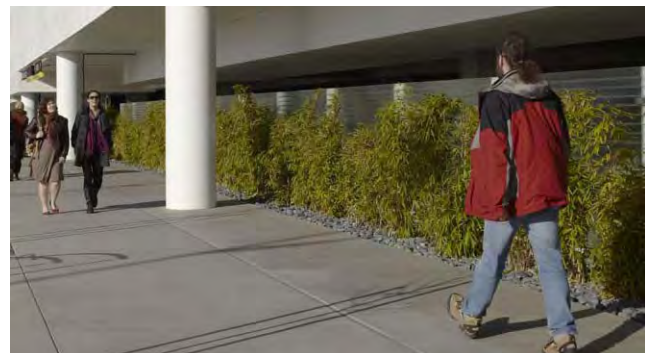
#### 5.21.5. Shared Driveways

If an agreement can be made between adjacent landowners driveways should be shared and centred on the shared property line. Shared driveways minimize the gap between buildings which creates a more continuous street wall and minimizes the interruption of the pedestrian route. Minimizing driveways also reduces the amount of impervious pavement.



#### 5.21.6. Landscape Buffers

Side and rear lots, exposed surface or structured parking, blank walls, and habitable rooms in close proximity to publicly accessible routes should be screened with landscape buffers as outlined in the SPRG (4.13.H).



## 5.22. Heritage

**Redevelopment or infill development adjacent to heritage resources will reflect the character, form and materials, as well as setbacks and heights while maintaining consistent streetscape orientation. Consideration will be given to the assessment of the cultural heritage landscape and the potential impact on defining features such as spatial organization, visual relationships, vegetation, and built form.**

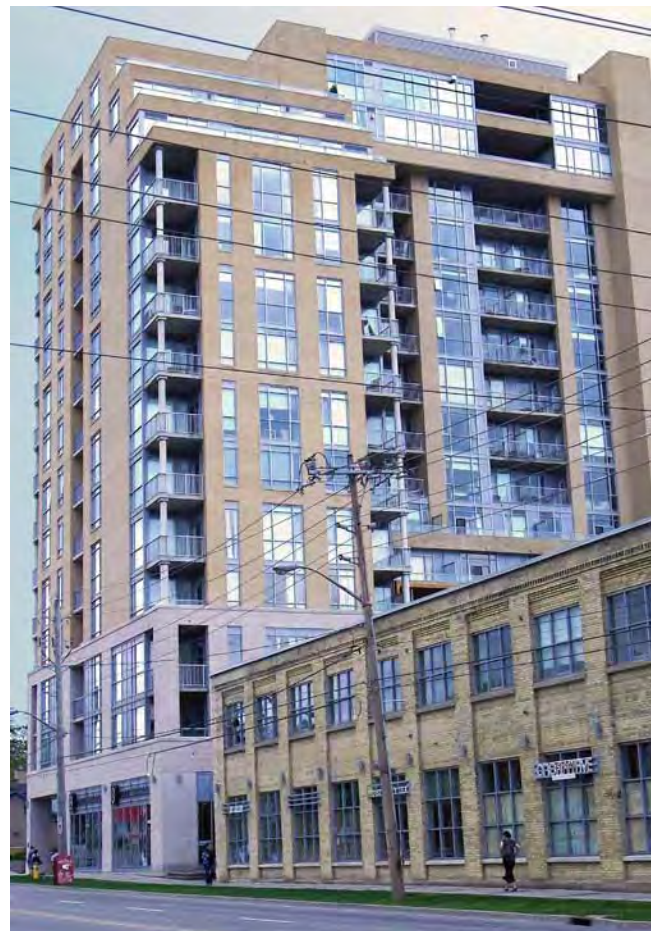
### 5.21.7. Veteran's Green Housing

Potential redevelopment or infill development within the Veteran's Green Housing complex, should maintain the spatial relationships between the built form and open space on site, as well as the visual and spatial connections to Veteran's Green Park. The original character and appearance of the buildings should be maintained and integrated into any new built form. Infill and additions should incorporate defining architectural elements such as gable rooflines and solids to voids ratios in contemporary building typologies while remaining sympathetic to the heritage character of the buildings and the surrounding landscape.

Complimentary or sympathetic materials may also reference original exterior finishes. Contemporary style is appropriate where it is complementary to defining elements such as solids to voids ratios, massing, and spatial relationships. Additions should be stepped back, or situated away from the principal façade. Signature architectural features such as gables or cantilevers should be retained, and left unobscured, wherever feasible.

Cultural heritage should also be addressed through: retention of mature vegetation wherever feasible; commemorative plaques, interpretive signage; naming of streets; and/or commemorative art/murals.

The City of Waterloo requires an Urban Design Study for new development located adjacent to heritage properties.







## 6. Implementation

### 6.1. Implementation

#### 6.1.1. Northdale Urban Design and Built Form Guidelines

The Northdale Urban Design and Built Form Guidelines are intended to guide site development to achieve the desired level of prescribed quality in the public and private realm. The City of Waterloo has been using design guidelines to guide development in specific locations across the City since 1982.

In 2006, the Province amended the *Planning Act* to broaden Site Plan Control to include detailed building design features (“exterior design”). The City has passed the necessary policy amendments (through Official Plan Amendment 72) to expand Site Plan Control with supporting Urban Design Objectives, Policies and Implementation Policies.

Furthermore the Northdale Land Use and Community Improvement Plan Study Official Plan Amendment states:

(48) Development applications, including applications for site plan approval shall be consistent with the urban design, land use and compatibility policies of this Plan and shall demonstrate that the development implements the City’s Urban Design Manual (Northdale Urban Design Guidelines) to the satisfaction of Council.

Public realm structure elements are to be implemented through the development review process particularly related to securing “potential parkette/square locations”, “new streets and connections” and “blocks”.

The design guidelines will be used to secure public realm improvements related to official plan amendment applications, zone change applications, minor variance applications and the site plan process.

#### 6.1.2. Block Plan

The City will ask Applicants to prepare a Block Plan for the Block Plan areas identified on Schedule “A45b” – Block Plan Areas to the Official Plan, prior to development occurring to facilitate the comprehensive redevelopment of these areas and ensure orderly and efficient development patterns.

The Block Plan shall implement the policies of the Official Plan and the City’s Urban Design Manual (Northdale Urban Design Guidelines). Block Plans are non-statutory documents and not subject to the requirements under the *Planning Act*; however, where required, Block Plans shall be prepared through an informal and open consultation process and shall require the endorsement of Council.

The Block Plan shall demonstrate conformity with and implement the Official Plan and development objectives for Northdale, and in accordance with the established land use designations, and shall provide more detailed guidance with respect to the following matters:

- a) Encourage the consolidation and assembly of land to address issues related to land fragmentation and provide for the comprehensive redevelopment of the Block Plan area.
- b) Require a parkland/open space area dedication of a minimum of 5% of the entire Block Plan area.
- c) Facilitate the implementation of new streets and/or pedestrian walkways in accordance with the policies of the Official Plan and the City’s Urban Design Manual (Northdale Urban Design Guidelines).

Where a Block Plan has been approved, development applications, including Site Plan approval applications shall demonstrate consistency and implementation of the Block Plan to Council’s satisfaction. The requirement for the preparation of a Block Plan may be waived, at Council’s sole discretion, if Council is of the opinion that the proposed development satisfies the policies of the Official Plan.

### 6.1.3. Public Realm Masterplan

The new streets, publicly accessibly open spaces and public parks in Northdale are critical components of a successful neighbourhood. The design of these spaces offers the remarkable opportunity to develop a sustainable, contemporary public realm that supports the needs of the Northdale neighbourhood. The City of Waterloo should initiate a coordinated strategy for the implementation of the future public realm by developing a Public Realm Masterplan for the Northdale neighbourhood.

The Public Realm Masterplan will articulate the vision established for Northdale by defining the distinct character of the public elements in the neighbourhood: the streets, public parks and publicly accessible open spaces. The Masterplan would provide common design specifications for street trees, landscaping, street furniture and lighting, as well as other elements of the public realm throughout Northdale. In addition the Masterplan would identify opportunities for heritage commemoration and create a public art strategy.

The public realm design of Northdale will support the development of public spaces, public rights-of-way and associated municipal infrastructure for the neighbourhood in coordination with residential and commercial development. It is important that these projects are well coordinated and integrated with the public realm design. An essential component of the Public Realm Masterplan is coordination with Public Works Services, the Engineering and Construction Division, The Fire Department and Waterloo North Hydro, The Region of Waterloo and other agencies for approvals, maintenance and operating implications. The Masterplan will outline the surface and underground composition of each public right-of-way in the neighbourhood. This includes coordination between the above ground roads, services and features with the underground services and infrastructure, taking into account existing surface features and underground structures that will remain in place.

The Public Realm Masterplan builds upon the vision established in the Northdale Urban Design Guidelines. The objective would be to clarify and further articulate the public realm components and provide parameters for future design work and development. The Masterplan should include cost estimates for all aspects of the public realm and provide capital costs estimates to Council.

The following elements of the public realm are to be considered in the Public Realm Masterplan:

1. Pavement Treatment: the selection and preparation of materials specifications for pathways, sidewalks, and publicly-accessible open spaces;
2. On-street parking: the location, arrangement and management of on-street parking in coordination with boulevard elements;
3. Traffic Calming: the selection and specification of appropriate traffic calming elements for each of the streets in the neighbourhood;
4. Street Trees: an existing tree preservation plan as well as the selection and layout of typical street tree/shrub species, and calliper, quantity;
5. Street Tree Planting: the detailed specification of tree pits, trenches, storm-water planters and other planting saturations.
6. Lighting: the preparation of a lighting plan, including layout, and selection and preparation of specifications for materials;
7. Street furniture: the selection and layout of street furniture, including benches, trash receptacles, bicycle racks, bollards and preparation of specifications regarding colour, size and materials;
8. Public art strategy: the identification of public art sites, opportunities, and phasing of a public art program;
9. Heritage strategy: the identification of key sites and preparation of guidelines; and,
10. Wayfinding – the design of street signs and of informational signage for vehicles, cyclists and pedestrians, and identification of specifications for materials, colour.

## 6.2. Incentives and Bonuses

### 6.2.1. Incentives and Bonuses

**IB.1** Community improvement incentives will be established which relate eligibility criteria to achieving key land use and urban design objectives, including sustainable site and building development, open space development, and property improvement, among other matters.

**IB.2** A bonusing framework will be established to advance key public policy objectives, including provision of public park land (beyond minimum requirements for dedication or cash-in-lieu), public art contribution, provision of affordable housing, outdoor amenity space/courtyard that functions as public space (beyond minimum requirements), conservation/incorporation of heritage resources associated with the Veterans' Green Park and Veterans' Green Housing, active transportation connection in accordance with Plan/Urban Design Guidelines (i.e., pedestrian walkways), provision of maintenance/monitoring agreement for on-site security and/or supervision.

### 6.2.2. Bonusing Considerations

The Specific Provision Area 45 (Northdale Neighbourhood) of the OPA 11.1.45 (38) states that the City may at its sole discretion, authorize increases in height and/or density in return for any of the following additional facilities, services or matters:

- a) The dedication of useable public parkland or cash-in-lieu of parkland, beyond the minimum requirements, to the City's satisfaction, and in accordance with the dedication of parkland or cash-in-lieu requirements.
- b) The provision of affordable housing as defined by this Plan, beyond the minimum requirements, and in accordance with Section 11.1.45 (11).
- c) The provision of active transportation connections, consisting of pedestrian/cycling paths/walkways in accordance with the policies of this Plan and the City's Urban Design Manual (Northdale Urban Design Guidelines).
- d) The provision of on-site maintenance/security monitoring agreement for enhanced on-site security and/or supervision and maintenance.
- e) Enhanced indoor and/or outdoor common amenity space areas, beyond the minimum requirements, and consistent with the policies of this Plan and the City's Urban Design Manual (Northdale Urban Design Guidelines).



### **6.2.3. Parkland**

The dedication of useable public parkland or cash-in-lieu of parkland, beyond the minimum requirements, to the City's satisfaction, and in accordance with the dedication of parkland or cash-in-lieu requirements. Parks must conform with the Urban Design Manual and section 4.14-4.15 of the Northdale Urban Design Guidelines. The location of new parks or parkettes should give consideration to the locations noted on the Northdale Structure Plan.

### **6.2.5. Active Transportation Connections**

The provision of active transportation connections, consisting of pedestrian/cycling paths/walkways in accordance with the policies of OPA 11.1.45 and the City's Urban Design Manual (Northdale Urban Design Guidelines). Midblock connections should be located roughly where shown on the Northdale Structure Plan and should conform to section 4.16 of the Northdale Urban Design Guidelines.

### **6.2.4. Enhanced common amenity space areas**

Enhanced indoor and/or outdoor common amenity space areas, beyond the minimum requirements, and consistent with the policies of OPA 11.1.45 and the City's Urban Design Manual (Northdale Urban Design Guidelines). Enhanced indoor common amenity space areas should conform to section 5.17 of the Northdale Urban Design Guidelines and include enhanced programming such as movie rooms, meeting rooms, collective kitchens, study rooms or dining rooms. Enhanced outdoor common amenity space areas should conform to section 5.12-5.15 of the Northdale Urban Design Guidelines and include enhanced programming such as swimming pools, public art, unique amenities, or allotment gardens.