



# Town of Milton

## Derry Green Corporate Business Park

### Urban Design Guidelines

BMI/Pace - June 2010



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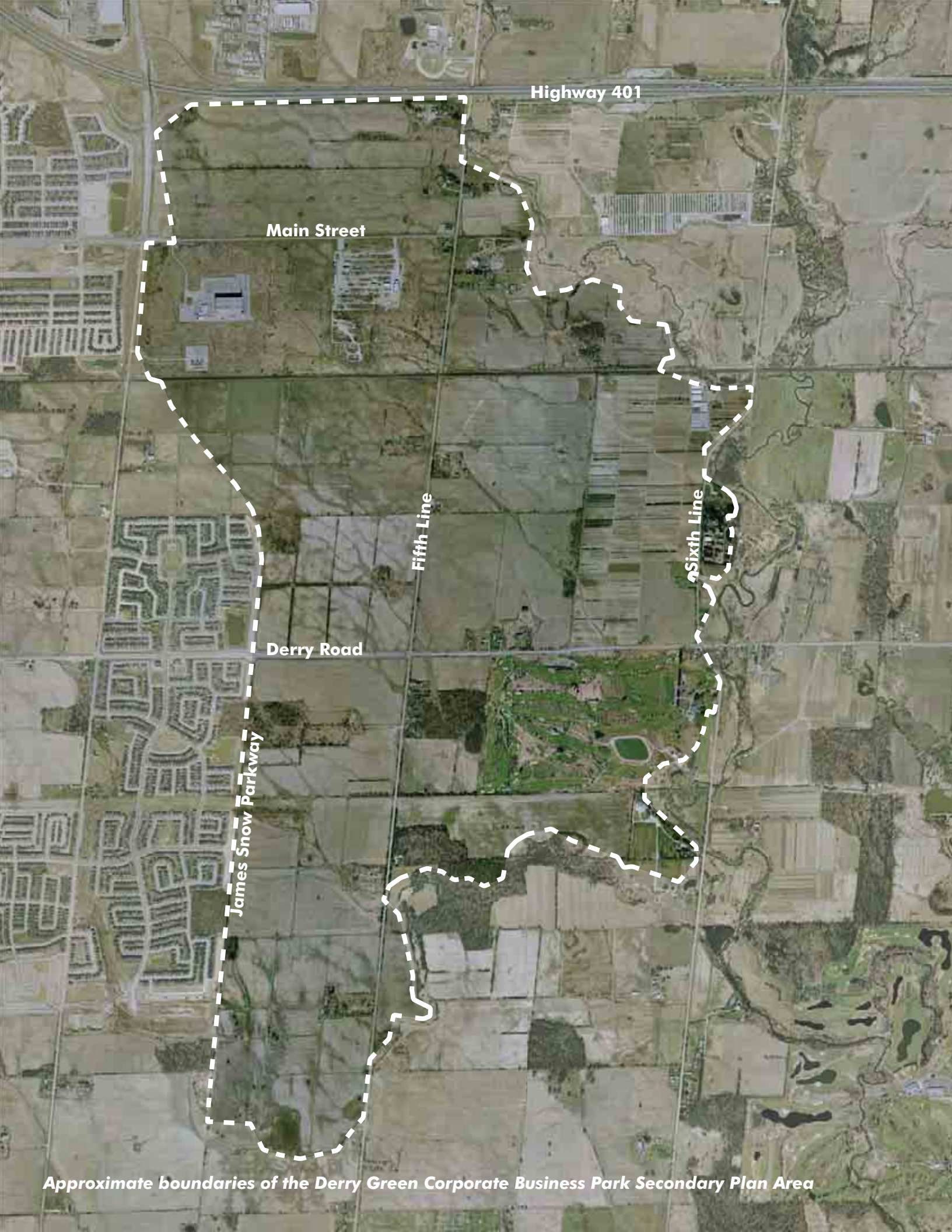
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# 1 introduction



Highway 401

Main Street

Fifth Line

Sixth Line

Derry Road

James Snow Parkway

*Approximate boundaries of the Derry Green Corporate Business Park Secondary Plan Area*



# 1 introduction

## 1.1 Introduction & Context

In accordance with the Official Plan, a detailed planning framework must be prepared before development of the Derry Green Corporate Business Park can proceed. To provide the requisite framework, the Town of Milton authorized the preparation of the Derry Green Corporate Business Park Secondary Plan and this urban design guideline document, as well as a number of other implementation plans and guidelines.

The guidelines aim to fulfil the vision and objectives of the Derry Green Corporate Business Park Secondary Plan for this employment area based on strong urban design recommendations to ensure quality development. The intent of the guidelines is to establish a planning framework that will allow for the creation of a highly-connected and well-planned employment area.

These urban design guidelines support the vision and objectives of the Secondary Plan and provide design direction for both the public and private realm, including built form, site planning, open space, and streets. This promotes the development of a progressive employment area which preserves natural systems and is attractive, pedestrian-oriented, and pedestrian-scaled.



*Aerial view of the Business Park Area.*

# 1 introduction

## 1.2 Secondary Plan Area & Surroundings

The Derry Green Corporate Business Park is located on the east side of the Milton Urban Expansion Area. The Urban Expansion Area has experienced significant residential and employment development in recent years, with a substantial amount of additional development expected to take place in the near future. The Secondary Plan Area will accommodate a significant component of new employment uses, particularly because of its prominent and accessible location adjacent to Highway 401, and its direct access from the interchange at James Snow Parkway (Regional Road 4).

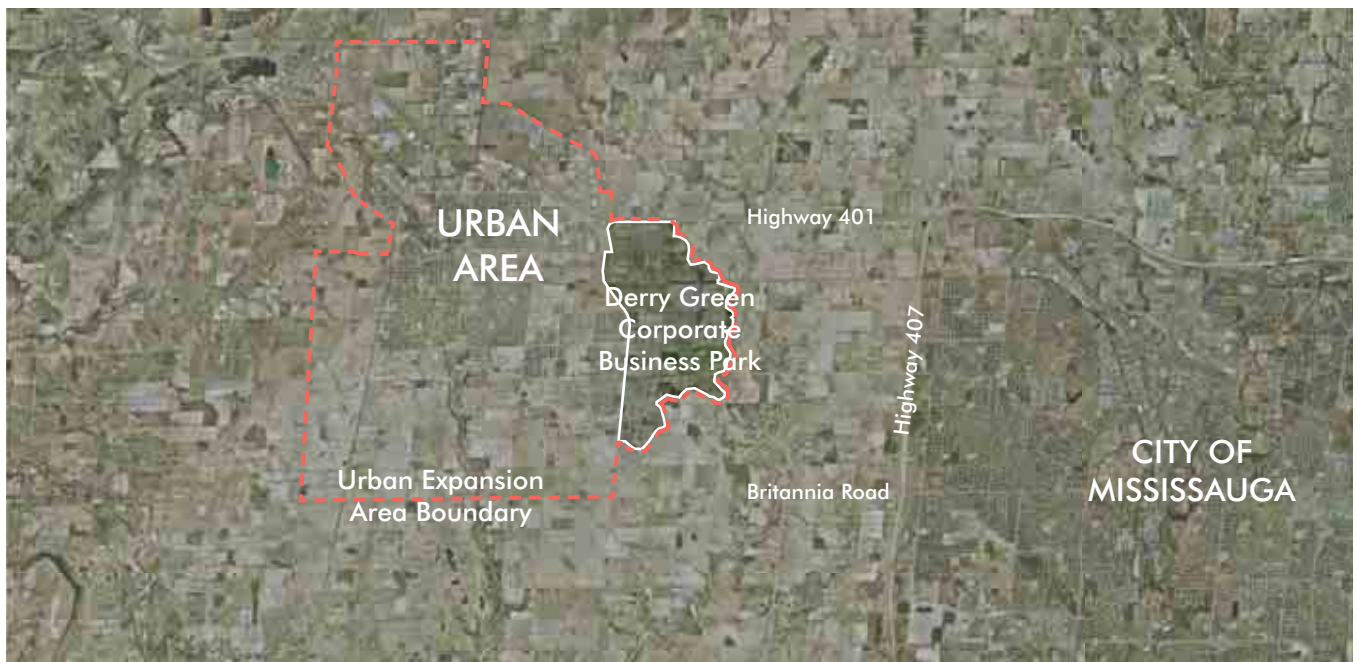
The Secondary Plan Area is generally bounded by Highway 401 to the north, the west edge of the floodplain of the Middle Branch of Sixteen Mile Creek to the east, the Centre Tributary of the Middle Branch of Sixteen Mile Creek to the south, and James Snow Parkway to the west.

The total area of the site is approximately 800 hectares (2,000 acres), and contains a range of natural features, including watercourses, terrestrial features, and other natural amenities.

For further information on the Secondary Plan Area, please refer to the background documents.



The Secondary Plan Area is surrounded by residential uses and natural features.



Aerial map of the Secondary Plan Area in context.

### **1.3 Purpose of Guidelines**

The urban design guidelines in this document establish the physical design framework that will lead to the development of a high-quality, sustainable and integrated employment area. They contain a detailed set of objectives, illustrated recommendations and guidelines that will greatly assist the Town in influencing the urban form within the Secondary Plan Area.

### **1.4 Structure of Guidelines**

The urban design guidelines document for the Derry Green Corporate Business Park is structured as follows:

Section 1 - Introduction

Section 2 - Urban Design Vision

Section 3 - Built Form Design Guidelines

Section 4 - Open Space Design Guidelines

Section 5 - Street Design Guidelines

Section 6 - Sustainability Guidelines



*Aerial view of the Secondary Plan Area.*



# 2

## urban design vision

# 2 urban design vision

## 2.1 Urban Design Vision and Secondary Plan

The Derry Green Corporate Business Park should reflect the vision and policy framework established by “Destiny Milton II” and the Official Plan. The Town’s vision requires that the focus of any new development should be the reinforcement of the strong sense of community and environment already evident in Milton.

In addition to the vision reflected in Destiny Milton II and the Official Plan, a specific framework for the area is required as a basis for the planning of the Secondary Plan area. The vision statement for this area states that:

“The Derry Green Corporate Business Park will be based on strong design requirements to ensure the achievement of quality development, while providing for a full range of employment uses in a variety of different environments. These will include prestige offices, campus settings in close proximity to the Greenlands System, street related employment uses and light industrial development.”

The Secondary Plan is designed to implement this vision statement, and achieve the goals and objectives established in the Town’s Official Plan. In particular, the Plan provides the opportunity to implement the directions in the Official Plan to:

- Develop a safe, liveable, attractive and healthy community;
- Protect the heritage and community character;
- Encourage compact development;
- Provide for a well-integrated and diverse transportation system;
- Identify and enhance gateways;
- Maintain, enhance and restore the natural environment; and,
- Preserve, enhance and extend the urban open space system.

The Secondary Plan’s Land Use Plan establishes a regular grid network of streets subdividing the area into usable blocks. The grid is modified to respect the significant natural and cultural heritage features of the area, such as Sixteen Mile Creek, woodlots and other natural features, as well as existing residences.

The Secondary Plan has resulted in Official Plan designations for the Secondary Plan area, which are similar to those of the current Official Plan, but with additional policy direction. The majority of the developable lands (445 ha), with the exception of an 8 hectare Community Park, are designated “Business Park Area” (300 ha), with an area south of the railway track designated “Industrial Area” (130 ha). In addition, a limited number of sites are included with a new designation, “Prestige Office Area” (7 ha).

The Secondary Plan:

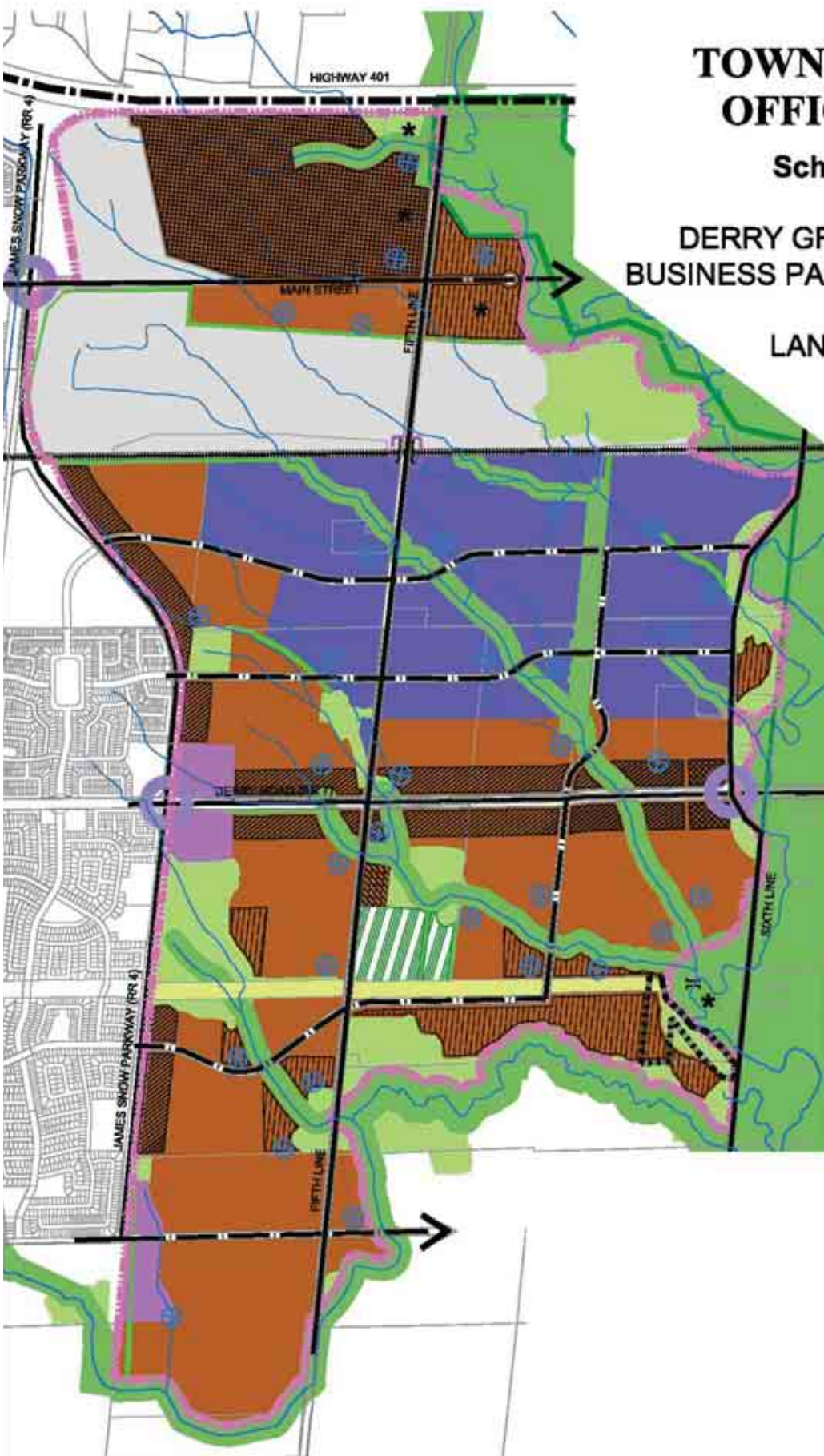
- Provides flexibility in responding to the market, while ensuring significant opportunity for business park and prestige office uses. This is particularly important in the lands closest to the existing residential development;
- Will allow for the development of a road system which will provide an efficient way for employees to travel between blocks, whether by automobile, transit, walking or cycling. The system must promote efficient goods movement and support future effective and efficient transit service; and,
- Provides benefits for the servicing of the area, including maximum flexibility in terms of connectivity and the minimal amount of servicing infrastructure.

# TOWN OF MILTON OFFICIAL PLAN

## Schedule C.9.B

### DERRY GREEN CORPORATE BUSINESS PARK SECONDARY PLAN

#### LAND USE PLAN



- SECONDARY PLAN BOUNDARY
- PROVINCIAL FREEWAY
- EXISTING ROADS
- PROPOSED ROADS
- CANADIAN PACIFIC RAILWAY
- CULTURAL HERITAGE RESOURCES
- BUSINESS PARK AREA
- GATEWAY AREA
- NATURAL HERITAGE ORIENTED AREA
- STREET ORIENTED AREA
- NATURAL HERITAGE ORIENTED AREA - TEMPORARY USE AREA
- COMMUNITY PARK
- ENVIRONMENTAL LINKAGE AREA / PIPELINE EASEMENT
- GREENLANDS A AREA
- GREENLANDS B AREA
- INDUSTRIAL AREA
- ENVIRONMENTAL LINKAGE AREA
- PRESTIGE OFFICE AREA
- PARKWAY BELT WEST PLAN AREA / UTILITY CORRIDOR AREA
- RESIDENTIAL SPECIAL POLICY AREA
- GATEWAY
- POTENTIAL RAILWAY GRADE SEPARATION
- STORMWATER MANAGEMENT FACILITY
- WATERWAY



Land Use Plan

# 2 urban design vision

## 2.2 Business Park Areas - General

Business Park Area designations are located along major streets and throughout the interior of the Derry Green Corporate Business Park. Built form and architectural standards applied to Business Park Area uses should be designed to ensure high-quality development, although with a more flexible approach than for Prestige Office and other special designations.

The guidelines provide direction for the design of individual sites including elements such as landscaping, building placement and loading, in less prominent locations. The guidelines recognize the operational needs of manufacturing and other industries that typically require large areas of site servicing, storage and loading.

## 2.3 Special Business Park Areas

High profile sites, such as those located on major gateway roads, and those which are adjacent to the Greenlands System, require the highest design standards.

The following section describes the special Business Park Areas, which are:

- Gateway Areas;
- Natural Heritage-Oriented Areas; and,
- Street-Oriented Areas.



*Examples of building typologies appropriate for the General Business Park Areas.*



### 2.3.1 Business Park Area - Gateway Areas

There are two Business Park Area - Gateway Area sites:

- The site between Main Street & Highway 401
- Intersection of Derry Road and Sixth Line.

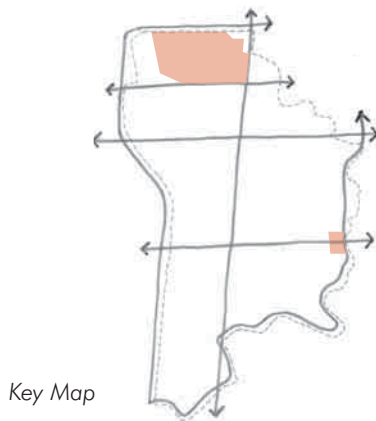
These sites act as the introduction to Milton for visitors, and should be carefully designed to reflect the importance of the Business Park area to its immediate surroundings and the Town as a whole.

The larger of the Gateway Areas, on the north side of Main Street, plays a prominent role in the Secondary Plan area, as it is the only site visible from Highway 401. Given the size of this site, a more campus-like design is an option which can be considered. This campus-like development is envisioned as a series of buildings connected by well-designed open spaces. A high-quality of architectural design is encouraged for this site to define the image of Milton from Highway 401. In addition to the visibility of this site, the ease of access from Highway 401 will make it a highly desirable location for prestige office uses.

A smaller gateway area site is located at the intersection of Derry Road and Sixth Line. This site should be developed with prominent buildings, and should also use landscaping to reflect its proximity to the natural areas on the east side of Sixth Line.

Buildings in these areas must be designed as prominent focus buildings to capitalize on their high visibility and access to surrounding areas. Taller, articulated building elements in the form of towers, bays or other details should be used to emphasize the focal nature of these buildings, particularly at the intersections of existing or new routes. Sites in the Gateway Areas will emphasize their role as entry points to the Town of Milton and the Business Park Area.

Please refer to section 3.3 and 3.4 of this document for detailed guidelines for buildings in the Business Park - Gateway Areas.



Key Map



Examples of building typologies appropriate for the Business Park - Gateway Areas

# 2 urban design vision

## 2.3.2 Business Park Area - Street-Oriented Areas

There are a number of streets that should be well-defined through built form, to reflect their role as primary entrances to the Urban Area. These streets should also be designed to help the Business Park Area feel and appear like an extension of the surrounding communities. These sites include:

- The east side of James Snow Parkway from the CP Rail to Louis Saint Laurent Avenue, with the exception of sites within Prestige Office Areas); and
- The north and south frontages of Derry Road.

Sites in Street-Oriented Areas should be developed with a continuous frontage of buildings along the front property line. Buildings should be designed to foster a more urban character and create streets that encourage pedestrian movement. This will improve the vitality of streets within the Business Park Area and enhance the spatial experience of employees and site visitors.

Both Derry Road and James Snow Parkway are important connections to adjacent residential neighbourhoods. Through properly scaled, street-oriented design, these streets will encourage pedestrians and other active transportation modes to move between the neighbourhoods and employment areas.

Both the scale and siting of buildings will contribute to the pedestrian-orientation of the street. The street edges will be defined through the introduction of minimum and maximum building setbacks and direct pedestrian access from the street. By locating surface parking at the rear or sides of buildings and limiting the percentage of frontage that can be allocated to parking, a continuous street edge can be developed.

Please refer to section 3.3 and 3.4 of this document for detailed guidelines for buildings in the Business Park - Street-Oriented Areas.



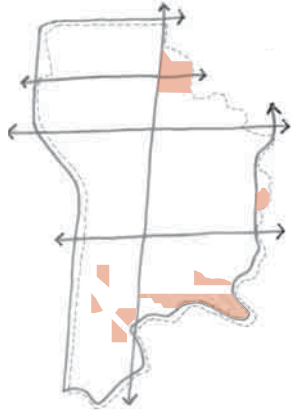
Examples of building typologies appropriate for the Business Park - Street Oriented Areas

### 2.3.3 Business Park Area - Natural Heritage-Oriented Areas

There are several sites that have been designated as Natural Heritage-Oriented Areas. These sites do not necessarily have prominent locations within the existing or proposed street network, but should be considered distinct because of their proximity to significant natural heritage features or green spaces and potential to permit the restoration of natural features.

These sites should be developed to provide physical and visual connections to surrounding natural heritage features, which can enhance these features and employee morale and promote physical activity, as well as contributing to the unique character of the Business Park Area as a whole. These sites include:

- Segments on either side creek (name) to the north and south of the Union Gas Easement;
- East side of the intersection of Main Street and Fifth Line;
- A small parcel of land on the east side of Sixth Line between the CP Rail and Derry Road; and,
- Portions on the south and north sides of the Union Gas Pipeline, between Fifth Line and Sixth Line.



Key Map

The design of sites in Natural Heritage-Oriented Areas requires a balanced approach which coordinates landscape, topography and special features (i.e. woodlots or watercourses). This includes site access requirements including roads, driveways, parking, service and loading areas to create an integrated building and site setting. Buildings developed on sites within Natural Heritage-Oriented Areas must be carefully designed to fit into their physical and natural environment. Features of the sites, such as significant tree stands, topographical features, and watercourses are to be integrated into the building and site design. It will be particularly important on these sites to consider the design of impervious surfaces such as surface parking lots, roofs, etc., and to be sensitive to impacts on surrounding natural systems. Alternatives such as pervious paving or green roofs should be encouraged.

Sites within this area may be developed as a hybrid of street-oriented and campus-type development, provided that any street-oriented development results in a reasonable balance of built form and open space. Site design should not result in the creation of residual space (i.e. parking), but should integrate opportunities for useable spaces such as courtyards, forecourts and green space.

Please refer to section 3.3 and 3.4 of this document for detailed guidelines for buildings in the Business Park - Natural Heritage-Oriented Areas.



Examples of building typologies appropriate for the Business Park - Natural Heritage Oriented Areas.

# 2 urban design vision

## 2.4 Prestige Office Areas

Sites in Prestige Office Areas are located at key entrances to the Business Park. These areas also act as the “interface” with the larger community, in particular the residential communities to the west. Therefore, their use and form should be of the highest quality and most compatible with low-rise residential uses. Particular attention should be paid to architectural design.

Two areas have been identified as Prestige Office Areas:

- The northeast and southeast sides of the intersection of Derry Road and James Snow Parkway; and,
- The northeast and southeast sides of the intersection of Louis Saint Laurent Boulevard and James Snow Parkway.



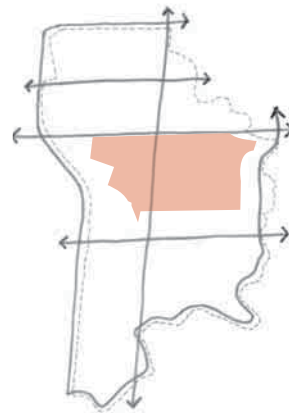
Key Map



Examples of building typologies appropriate for the Prestige Office Areas.

## 2.5 Industrial Areas

Industrial Areas are located in the interior of the Derry Green Corporate Business Park. Built form and architectural standards applied to Industrial Areas should be less restrictive than those standards applied to Business Park uses.



Key Map



Examples of building typologies appropriate for Industrial Areas.



# 3

built

form

design

guidelines

# 3 built form design guidelines

## 3.1 Built Form Design Guidelines

Section 3: Built Form Design Guidelines is intended to be used by both developers and the Town to achieve the highest quality buildings and open spaces for the Business Park Area.

The guidelines are divided into the following sections:

- Site Organization
- Building Orientation
- Building Design
- Building Articulation
- Parking
- Yard Treatments



*The Derry Green Corporate Business Park will feature both street oriented and campus-style layouts. The above example illustrates a campus type development.*

## 3.2 Site Organization

### 3.2.1 Site Safety

In the Derry Green Corporate Business Park, there is a need to promote safety, through the site layout and design of buildings, for those who may be travelling through or working on site.

#### Design Guidelines:

- a. Site and building design must adhere to CPTED (Crime Prevention Through Environmental Design) principles, including:
  - Clear, unobstructed views of parking areas, parks and open spaces from adjacent public streets.
  - Safe public use and natural surveillance opportunities, particularly after dark, and provide users with informed choices for alternative pedestrian and bicycle routes.
  - Sight lines between buildings along pedestrian walkways and bicycle paths must be unobstructed and well lit.
  - Views between the interior of public buildings to exterior public spaces should be promoted through the location of windows and other building openings.
  - The selection, siting and maintenance of landscape elements must consider views for safety and surveillance opportunities.
  - Lighting of pedestrian walkways should occur only on main pedestrian routes and outdoor spaces to prevent a false sense of security in remote, less populated areas.
- b. Where required to monitor access to a site or individual building, guardhouses and security gates must be located in an unobtrusive manner and utilize materials that are complementary to the main building. Checkpoints must be located so that they do not conflict with travel routes or restrict the queuing of vehicles or through traffic movement.



### 3.2.2 Site Layout

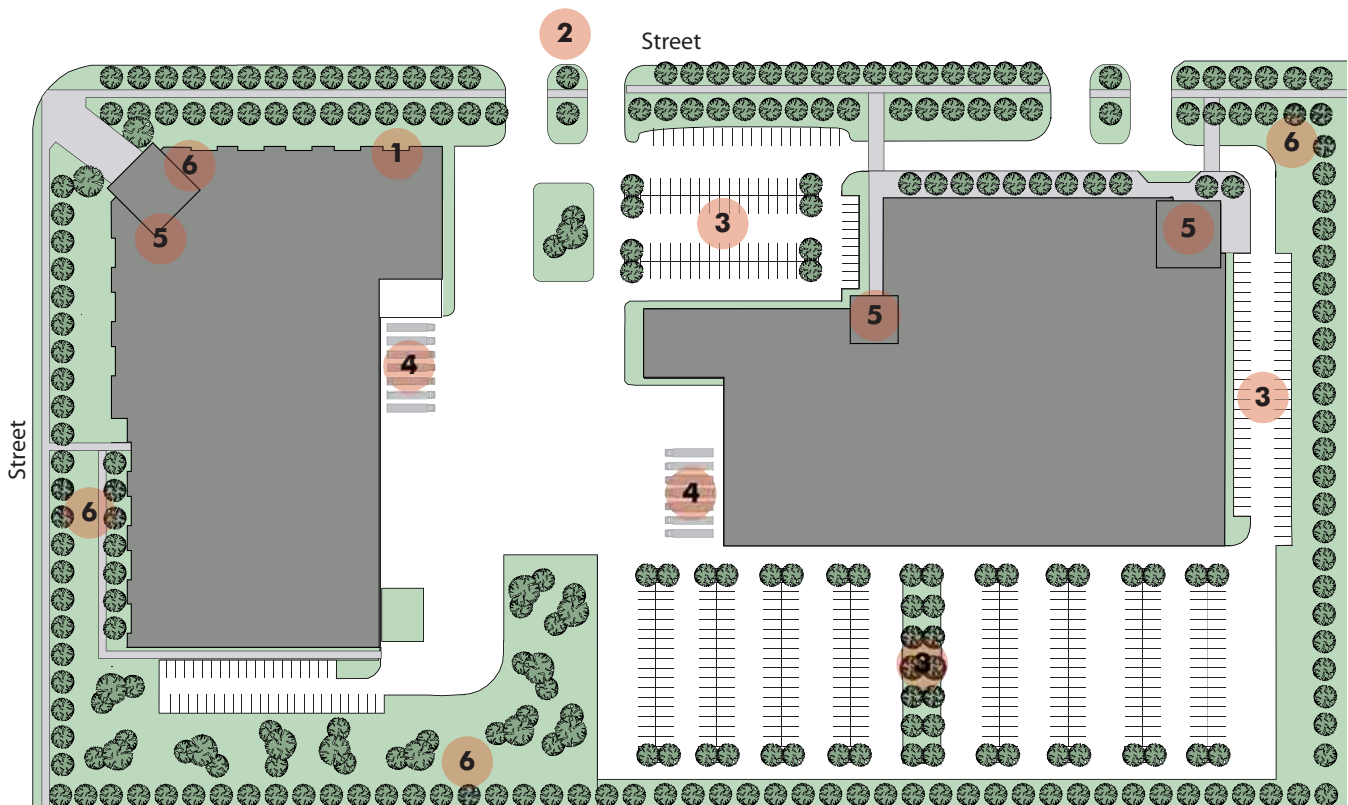
The intention of the site layout guidelines is to maximize the potential benefits of the land in the process of designing buildings.

#### Design Guidelines:

- a. Site design must define a well organized system of entrances, driveways and parking areas that minimizes conflicts between pedestrians, bicycles, and vehicles.

#### Legend:

- 1 Front Yard Setbacks are minimized in order to allow buildings to address the street.
- 2 Shared Driveway between properties reduces curb cuts and interruptions to pedestrians.
- 3 Parking Areas in the front yard are minimized. Large surface parking areas are placed to the side and rear of the building.
- 4 Service and Loading areas are located to the side and rear of buildings and screened from public view.
- 5 Building Entrances are visible from the public street.
- 6 Site Edges and Streets are well landscaped without impeding site visibility and public safety.



Site design guideline for light industrial development. Key site design features include: orientation of building to the street, shared driveway, service area screening, reduced parking areas at frontage and minimum building setbacks.

# 3 built form design guidelines



*Pedestrian walkway paving should differ in material and appearance from vehicular routes.*



*An interconnected, covered pedestrian system facilitates pedestrian travel between buildings.*

## 3.2.3 Circulation

Access, to and circulation within, individual properties must provide safe and well-defined routes for vehicles, pedestrians, and where appropriate, bicycles. The use of landscaping, paving materials, lighting, signs and other distinct treatments to define these areas will contribute to the overall safety, quality and sense of orientation within each site throughout the Derry Green Corporate Business Park.

### Design Guidelines:

- a. Public boulevard should be a minimum of 4.5 metres wide with a minimum 1.8 metre sidewalk. Boulevards should be provided on both sides of all streets, including existing and proposed streets. A width of 4.5 metres allows for pedestrian movement and sustainable tree planting methods.
- b. Pedestrian walkway paving treatments should differ in material and appearance from vehicular routes. A variety of materials may be used, including stone, concrete and unit brick pavers.
- c. Access to public spaces at ground level must be barrier-free.
- d. Curb ramps must provide barrier-free connections between the roadway and boulevard.
- e. Tree planting and other landscaping must not be an obstacle to the barrier-free path of travel.
- f. The use of well-signed routes will assist orientation on public walkways and through public spaces.
- g. Where pedestrians are required to walk long distances, walkways should provide some weather protection.

### 3.3 Building Orientation

Building orientation is an important element which impacts the pedestrian realm. In order to foster a pedestrian-friendly environment within the Derry Green Corporate Business Park, buildings should frame the public realm through minimal distances between the front building façade and front property line. This will help enhance the spatial experience of employees and site visitors and encourage pedestrian and bicycle movement.

#### General Design Guidelines:

- a. The siting and orientation of buildings should create new and enhance existing views and vistas. building orientation should make optimum use of sun availability and angles, enhance the character of existing land forms and site features, and strengthen the relationships between buildings on individual parcels.
- b. Buildings must be organized to define the public realm and frame abutting streets, internal drive aisles, boulevards, parking areas and amenity spaces.
- c. Buildings and main entrances must front onto the public street to encourage a pedestrian-orientated streetscape and maximize public surveillance of the street. Buildings fronting onto two or more public streets must provide entrances on each façade.
- d. Corner buildings and buildings that terminate primary view corridors should reinforce their prominent location through appropriate building massing, setbacks and building base design.
- e. Main building entrances must be easily identifiable through location and articulation. Buildings must provide a well-defined entrance hierarchy for pedestrian and vehicular uses from the street and adjacent parking areas to the building.



*Building orientation should capitalize on natural systems such as natural daylighting and ventilation.*

# 3 built form design guidelines

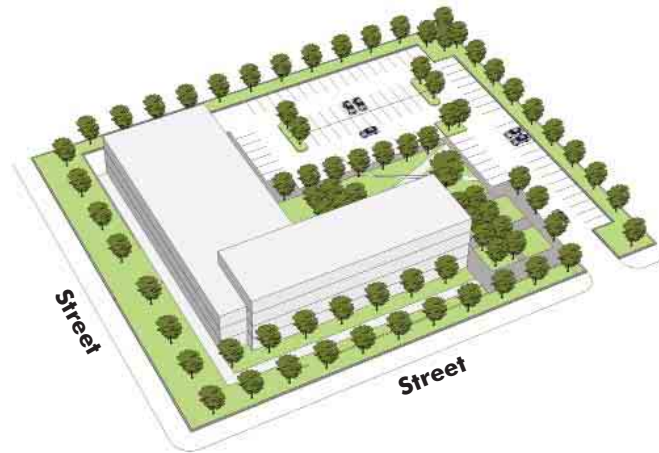
## 3.3.1 Building Orientation - Special Character Areas

### Business Park - Gateway Areas

Developments within the Business Park - Gateway Area must pay special attention to the orientation of frontages along Highway 401 and other adjacent major streets. All buildings should be designed so that all elevations facing a street, including Highway 401, present an attractive, articulated elevation.

Additionally, in these areas:

- Views of primary buildings should be permitted, although trees and landscaping will be used to screen elements such as parking, service and loading areas.
- Parking which is visible from Highway 401 should be limited and screened by berms and landscaping.
- Service and loading facilities will not be permitted in any areas facing Highway 401 and, regardless of location, must be screened from Highway 401.



Site layout should break-up large areas of parking and encourage buildings to frame the streets.



Credit: Robbie Young + Wright / IBI Group Architects

Buildings in the Business Park - Gateway Areas should be visible from Highway 401 and other adjacent major streets and feature the highest-quality of design.

## Business Park - Street Oriented Areas

Street-oriented design is encouraged throughout the Derry Green Corporate Business Park, but in particular for buildings facing primary streets. This includes portions of the east side of James Snow Parkway and Derry Road.

- a. Building setbacks must be minimized to define a more consistent and urban street edge.
- b. Buildings should face the public street and apply the highest design standards to primary building façades.
- c. Where retail and service commercial uses are permitted, active uses including accessory uses and service uses (e.g. cafés and financial institutions) should be located at grade along public boulevards. This reinforces a sense of animation and safety.
- d. Buildings must occupy a minimum 60% of the total lot frontage.
- e. Buildings must be designed with continuous street façades. Variations in setbacks may be used to incorporate opportunities for public open space, mid-block pedestrian walkways, and/or main entrance ways.



*Minimal building setbacks will allow buildings to frame the street and provide a more human scale.*

## Business Park - Natural Heritage Oriented Area

Developments within the Business Park - Natural Heritage Oriented Areas, must pay special attention to the orientation and layout of buildings in relation to existing natural spaces. Developments in these areas may have a more campus style layout, where buildings are interspersed throughout the landscape.

- a. Development of the site should provide open space opportunities by incorporating natural heritage features into the site design.
- b. Building orientation, design, and massing must optimize connections and views to natural heritage features.
- c. Stormwater management ponds should be integrated into the site design and coordinated with existing natural features.



*In Business Park - Natural Heritage-Oriented Areas, natural features should be incorporated into site design and should influence building layout.*

# 3 built form design guidelines

## 3.4 Building Design

Buildings within the Derry Green Corporate Business Park should demonstrate a high-quality of architectural design that reflects their context and function. Buildings should also be developed using design and building principles that are consistent with sustainable development practices (see Section 6: Sustainability for further details).

### Design Guidelines:

- a. A substantial building façade fronting the public street close to the sidewalk or setback line is encouraged to define a more urban street edge except where conditions such as site topography, integration of building forecourts, limited front yard parking, or other conditions warrant a larger building setback.
- b. Buildings facing James Snow Parkway, Derry Road and Main Street in particular, should apply a level of design that reinforces the role of these streets as gateways to the Derry Green Business Park Area and the community.
- c. Buildings on corner sites must be located close to the street to reinforce their focal role. Entrances must be located at or close to the corner.
- d. Building design flexibility should be maximized to satisfy the varied demands of current and future users and residents.



*All buildings in the Derry Green area should be of a high-quality design.*



*Buildings should align with the boulevard or street frontage.*



### 3.4.1 Building Base Design

The building base is defined as the lower portion of a taller building (in this context, the building base is typically between 2 to 3 storeys). Only buildings over 4 storeys require a defined building base. Guidelines for the building base should also apply to the ground floor of shorter buildings.

A well designed building base will provide definition to the pedestrian realm and a human scale at grade. This will help integrate the building with adjacent streets and open spaces.

#### Design Guidelines:

- a. The building base should be designed and massed to create a pedestrian-oriented streetscape.
- b. Strong street presence of the base building may be achieved by articulation through a variety of means, such as step-backs, building materials, cornices or other architectural elements.
- c. Large expanses of glazing on the ground floor and at building base levels should be applied to create visual interest for pedestrian and indoor uses.
- d. Taller floor-to-ceiling heights at grade, minimum 4.5 metres, are recommended to create a strong street presence and flexible spaces at grade.
- e. Building façades facing onto streets and public spaces should provide weather protection in the form of covered walkways, canopies and/or awnings at the ground floor level.



*The building base must receive the greatest amount of architectural detailing and contain the highest design standards.*



*The building base should include an abundance of glazing, to create an interesting façade for pedestrians.*

# 3 built form design guidelines

## 3.4.2 Building Height & Massing

Building height and massing will be particularly important along the edges of the Derry Green Business Park Area, where there is a transition to surrounding neighbourhoods or natural areas.

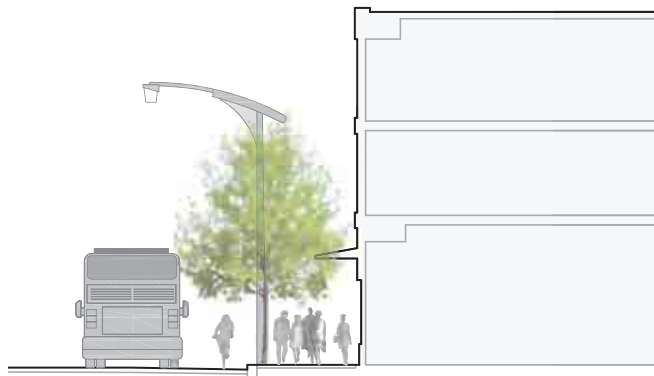
### Building Height Design Guidelines:

- a. Building heights of 2 to 3 storeys or equivalent are recommended throughout the Secondary Plan Area. Taller buildings should be incorporated in the Business Park - Gateway Area locations or within the Prestige Office Area, with heights ranging from 3 to 6 storeys.
- b. Minimum building heights are as follows:
  - Business Park - Gateway Areas:
    - 2 storeys or equivalent along Derry Road & Sixth Line
    - 3 storeys or equivalent along the 401 boundary
  - Business Park - Street Oriented Areas: Two storeys along James Snow Parkway and Derry Road are encouraged
  - Business Park - Natural Heritage Oriented Areas: no minimum height

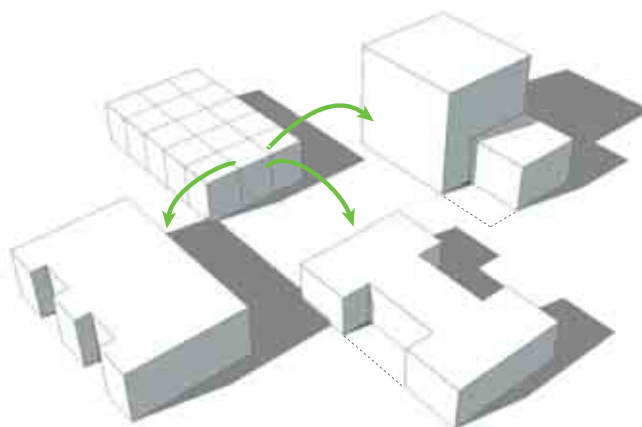
- Prestige Office Areas: 3 storeys / no equivalent permitted
- d. Taller buildings at major intersections are recommended to reinforce the prominence of these locations through appropriate massing, building projections, recesses at grade, lower storey design and open space treatments. Taller building heights (above 3 - 4 storeys) are recommended to be considered at the intersections of James Snow Parkway and Derry Road and James Snow Parkway and Main Street to emphasize the entrance into the Derry Green Corporate Business Park.
  - e. Visual Angular Plane Analysis should be used in combination with other tools (i.e. sun/shade analysis, 3D modelling) to determine appropriate building envelopes.

### Building Massing Design Guidelines:

- a. Throughout the Secondary Plan Area, the mass of very large buildings should be divided into a group of buildings clustered into a campus development to create a sense of community, particularly in Gateway and Street Oriented Areas and Prestige Office Areas.



Buildings should be a minimum of three storeys in Prestige Office Areas, for example at the corner of James Snow Parkway and Derry Road.

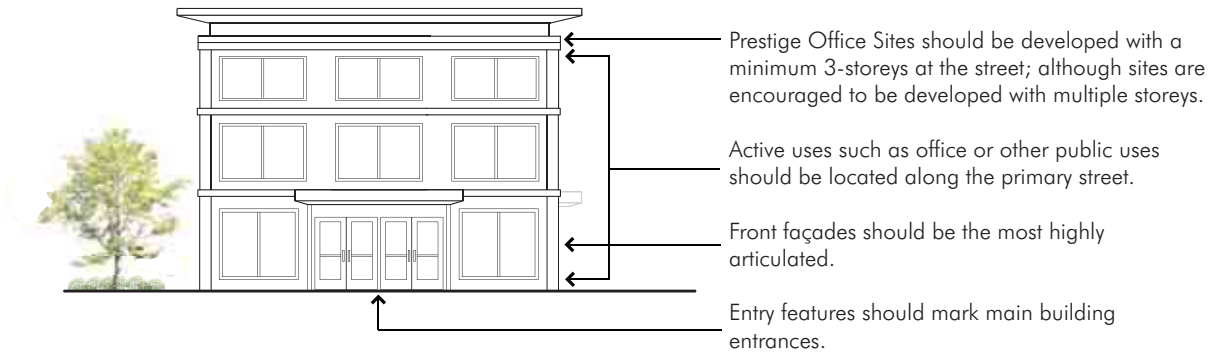


Building massing should be varied. The image above illustrates how a building with the same floor area can be developed with a variety of massing options.

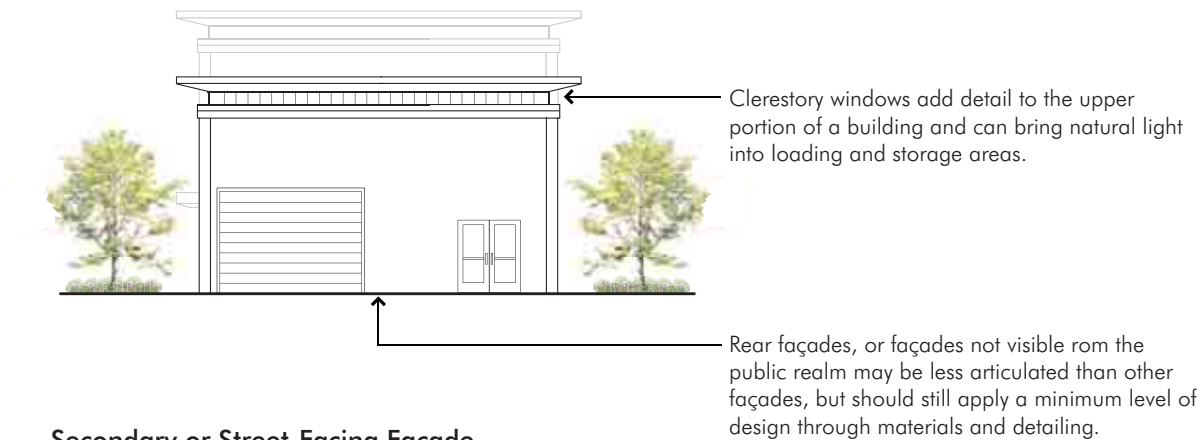


## Sample Façade Articulation & Detailing for Prestige Office Site

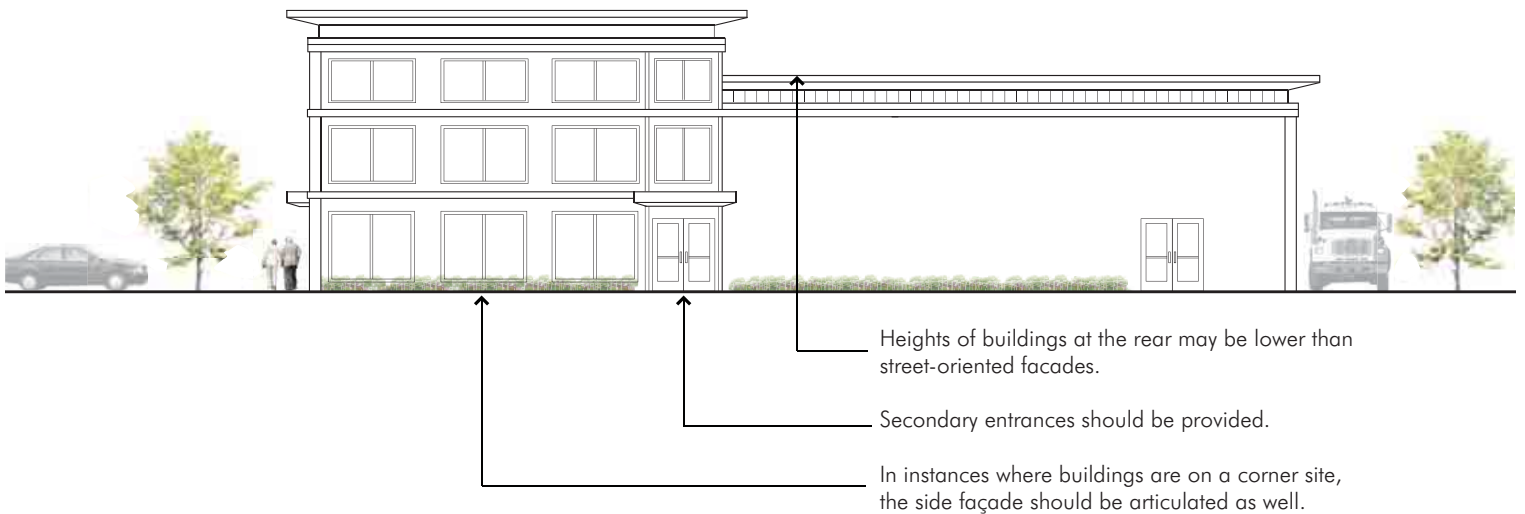
### Primary Street-Facing Façade



### Rear Façade



### Secondary or Street-Facing Façade



# 3 built form design guidelines

## 3.4.3 Building Articulation

Building articulation refers to the organization of building façade elements including walls, entrances, roofs, windows and projections or recessions. The articulation of buildings is of particular importance at the street level. This will enhance the spatial experience of employees and visitors within the Derry Green Corporate Business Park.

### Design Guidelines:

- a. Blank façades that extend the entire length of the building parallel to a public street are not permitted. Building façades should include the following elements:
  - Windows;
  - Awnings and canopies;
  - Outdoor terraces and patios;
  - Projections and recesses; and,
  - Architectural details and change of materials.
- b. Secondary building façades fronting onto public streets must have a level of design equal to the front or primary building façade.
- c. Functional building elements, such as vents or rainwater leaders or utility metres or connections, within the wall plane, must be integrated into the architectural design.

## 3.4.4 Buildings Entrances

Entrances should express the importance of the connection between the interior and exterior of a building. The scale, proportion, and articulation of an entrance can have a profound visual impact on the appearance of a building from the street and surrounding buildings.

### Design Guidelines:

- a. Main entrances to buildings should be emphasized through canopies, awnings, double-height glazing or taller, non-habitable building structures. The volume and height of such structures emphasize the prominence of entrances, particularly at a corner location.
- b. Ramps and other methods for achieving accessibility should be coordinated with the design of the building.



*The main entrance of this building is highlighted through a change in material and building massing.*



*Material changes and vertical articulation along the façade of this building minimize the visual perception of the relatively long façade.*

### 3.4.5 Building Materials

The appropriate choice of materials and material colours can make a building more attractive and visually appropriate within its surroundings. The intention of these guidelines is to ensure the use of appropriate materials in order to achieve these goals throughout the Business Park Area.

#### Design Guidelines:

- a. The front façade of buildings should utilize a high standard of design and variety of materials. Wall facing material should be combined to create front building façades with a distinct, well-balanced street presence.
- b. Materials used for the front façade should be carried around the building or at a minimum to all building façades fronting onto public streets or spaces.
- c. Building materials should be chosen for their functional and aesthetic quality as well as for energy and maintenance efficiency. Exterior finishes should exhibit quality of workmanship, a long life cycle and ease of maintenance.
- d. Lintels, cornices and other details are recommended to be incorporated within brick and stone walls to reduce the heavy effect of these materials.
- e. Despite the use of various architectural styles, design standards should be consistent and building materials and finishes must be complementary.
- f. Cladding materials may include brick, stone, metal, glass, in situ concrete, and pre-cast concrete. Stucco should not be used as a principal wall material at the lower levels of a building. Vinyl siding, plastic, plywood, concrete block, and metal siding utilizing exposed fasteners are strongly discouraged.



Brick



Man-made or natural stone

### 3.4.6 Windows

Windows provide a visual connection between the interior and exterior of a building. They create opportunities for natural lighting, energy savings, enhanced architectural character, and casual surveillance. The following guidelines aim to promote the effective placement and design of windows for the purpose of achieving these goals throughout the Business Park.

#### Design Guidelines:

- a. Windows facing the street frontage on the ground floor should be large, occupying a significant portion of the street elevation between the ceiling and floor at grade.
- b. Clear glass is preferred for all glazing at grade level to promote a high level of visibility.
- c. Skylights and clerestory windows are encouraged. Skylights should be treated as distinct roof elements and be coordinated with other roof and building elements. Skylights should be located behind the roof ridge, away from the street view. Clerestory windows should be detailed to provide a structural and coordinated junction between the building wall and roof.



Prefinished Metal Panel



Wood

Samples of preferred architectural materials.

# 3 built form design guidelines

## 3.4.7 Roofs

The design of a roof impacts the overall look of a building from the street and adjacent properties. It can also impact a building's energy demands and rate of consumption. Roofs can be designed to be accessible, and can house both built and landscaped amenities. The following guidelines aim to ensure that roofs in the Business Park are designed to maximize their functionality and aesthetic quality in order to achieve these goals.

### Design Guidelines:

- a. Roof materials/colours must complement the building cladding materials. On sloped roofs, a single roofing colour and material is recommended for visual continuity.
- b. To create greater interest in the skyline, taller buildings may introduce articulation in the upper floors. This can be achieved through the use of terracing and/or architectural elements including projecting roof lines, trellises or vertical elements. This will be particularly important in the Business Park - Gateway Areas as well as the Prestige Office Areas.
- c. Rooftop mechanical equipment must be integrated with the building design and rooftop units and vents should be screened using materials complementary to the building. Parapets should be used to screen rooftop mechanical units.

- d. Consideration should be given to roofs for private and communal outdoor patios, decks, and gardens.
- e. Roof design should incorporate natural light to reduce dependence on internal artificial lighting.

## 3.4.8 Weather Protection

Weather protection elements provide functionality and add to architectural character and complexity at the base of a building by articulating building elevations and entrances.

### Design Guidelines:

- a. Canopies and porticoes are recommended to provide weather protection to pedestrians and help articulate building elevations and principal building entrances. These features should be permitted to project beyond the property line, provided that there is adequate height clearance.
- b. The design of convertible colonnades that provide climate protection in winter and shaded breezeways in warmer seasons should be incorporated as a means of weather protection.



The green roof of this Ford plant in Michigan is visible from the Visitor Centre's observation tower.



Transparent covered walkway integrating pedestrian seating.

### 3.4.9 Signage

Provisions for signs within private development in the Derry Green Corporate Business Park must comply with the Town's applicable sign by-laws. In addition to adhering to by-law regulations, the appearance of the signs must reinforce the architectural design of surrounding buildings through design and choice of colour, material and their placement at entrance areas and on the building façade.

#### Design Guidelines:

- a. Permitted signage types must comply with the Town's sign by-law.
- b. Signage must be integrated into the site plan for each proposed development to ensure coordination of design.
- c. Signage should be integrated into building design to reduce clutter.
- d. Stand alone signs must be shared among tenants and/or integrated in landscaping.
- e. Freestanding signs addressing private development must be located within the property line and mounted in a landscaped setting. Their design should be compatible with the building design.
- f. Multiple tenant development should use common or coordinated signage to encourage properly scaled and integrated signage design and to reduce the overall amount of signage.
- g. To ensure public safety, sign location should not compromise pedestrian and/or vehicular sight lines, and optimize visibility for through traffic.
- h. Front lit signage, back lit individual block letter signs and/or logo signage is encouraged, particularly those that face the public street or are parallel to a pedestrian walkway.
- i. Up-lighting of signs should be prohibited to limit light pollution, with the exception of low accent lighting for monument signage.
- j. Addresses must be easily visible from the street.
- k. Building identification should be coordinated with the principal building façade and must be compatible with the building design in scale, colour and materials.



*Example of integrated signage appropriate for the Business Park.*

# 3 built form design guidelines

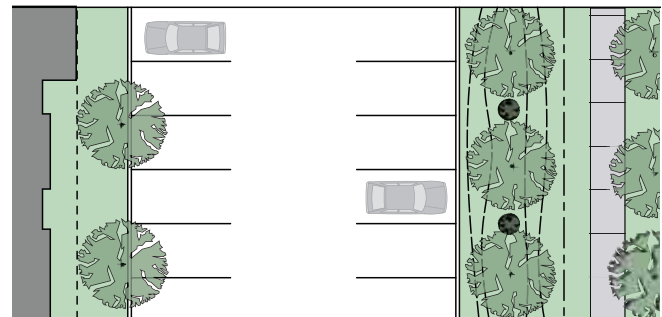
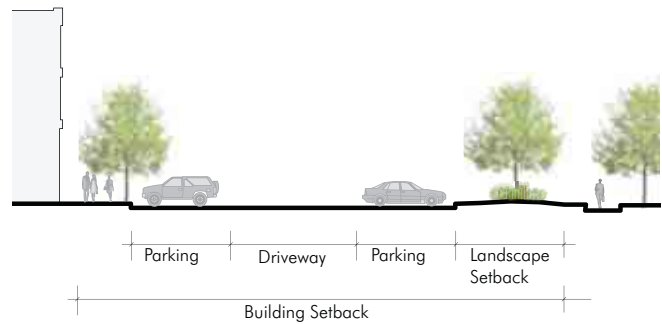
## 3.5 Parking

### 3.5.1 Surface Parking

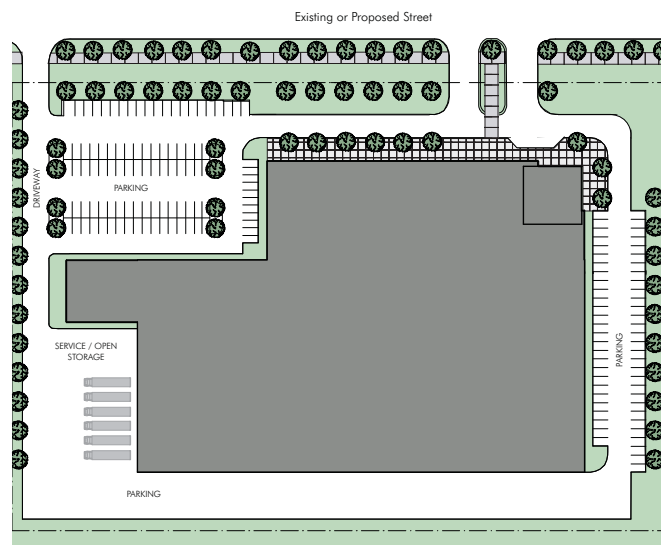
In general, large areas of surface parking are discouraged. Where they are required, they should not dominate the streetscape and be designed to be visually unobtrusive. The following guidelines outline methods to reduce the prominence of surface parking.

#### Design Guidelines:

- Parking between the primary building façade and the public street is discouraged (except for on-street parallel parking). Rear-yard, side-yard and structured parking are alternatives.
- Large areas of unbroken parking must be avoided. Landscaping and/or paving articulation should be used to define smaller areas, improve edge conditions and provide for pedestrian walkways. The amount of landscaping should be proportionate to the overall parking lot size. Landscape, or other parking area screening devices, must not obstruct the primary building façade or visibility of the parking area.
- Parking areas should be designed to limit pedestrian - vehicular conflicts and provide safe and convenient movement of vehicles.
- Permeable paving, swales and other features to manage stormwater on-site should be incorporated.
- Pick-up and drop-off areas must not interfere with pedestrian circulation.
- Freestanding or building-mounted light standards should be provided at pedestrian level, along pathways and at a broad area level for general visibility and security within parking areas.
- Opportunities for shared parking between users as a result of staggering peak parking demands, should be explored to reduce the total number of parking spaces required within each site.



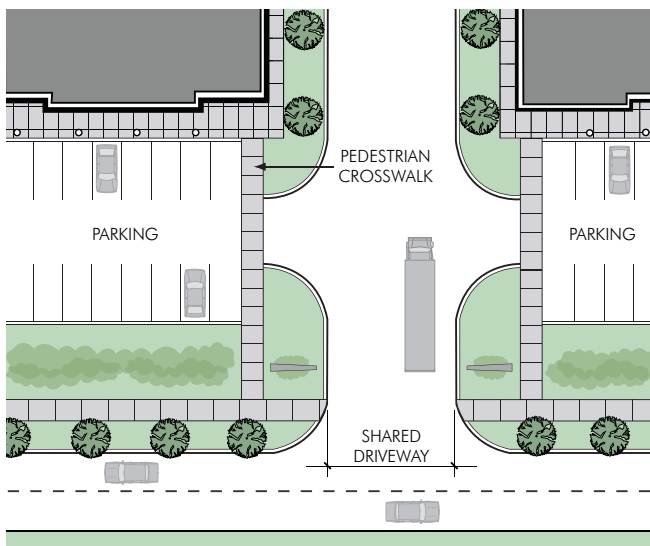
*Internal pedestrian pathways and landscaping are integral to pedestrian safety and comfort in surface parking lots.*



*As this guideline illustrates, buildings should occupy a minimum 60% of the total lot frontage.*



*Parking areas should not be a dominant feature of industrial uses, as seen from public areas.*



*Highly visible pedestrian pathways and internal landscaping is desirable.*

# 3 built form design guidelines



*Parking structures should contain active uses at grade.*



*The principles of Crime Prevention through Environmental Design (CPTED) were used in the design of this parking structure.*

## 3.5.2 Structured Parking

Where large amounts of parking are required, structured parking is preferable to surface parking. Structured parking may be located above or below grade, however below-grade is preferred. Parking structures should have a high level of design, similar to buildings in the Derry Green area.

### Design Guidelines:

- a. Above-grade parking structures fronting onto public streets and public open space should be developed with building uses “wrapping” the façade to preclude blank façades, where possible.
- b. Parking within a structure should be screened from view at sidewalk level. The street-level wall should be enhanced by architectural detailing, artwork, landscaping or similar treatment that will add visual interest.
- c. Access to structured parking should be from secondary streets or the interior of blocks. Ramps at street corners or view termini should be avoided and should be located away from public areas.
- d. Pedestrian entrances for parking structures should be located adjacent to main building entrances, public streets or other highly visible locations.
- e. The materials used for parking structures should be complementary with surrounding non-parking buildings. Raw, unpainted and untextured concrete should be avoided.
- f. All sides of the parking structure with public pedestrian entrances should be surrounded by boulevards with street trees of at least 4.5 metres in width. Pedestrian-scaled lighting should be provided on all boulevards flanking a parking structure.



### 3.5.3 Bicycle Parking

The accommodation of safe and convenient bicycle parking is an essential element of the Derry Green Corporate Business Park. Bike racks should be placed in highly active pedestrian areas, including the main entrances of buildings and at transit stops.

#### Design Guidelines:

- a. The placement of bicycle racks within the pedestrian realm should not impede pedestrian movement.
- b. The post-and-ring design constructed of aluminium or galvanized steel is preferred as larger units can impede pedestrian movement and snow clearing.
- c. In addition to bicycle racks, bicycle lockers are strongly encouraged especially for large office or industrial developments and at major transit hubs.
- d. The number and configuration of bike racks at any location will be evaluated on a case-by-case basis.
- e. Short-term or visitor bicycle parking should be sheltered and located near building entrances and pedestrian walkways.



*The post-and-ring design is recommended for bicycle racks.*



*Bicycle parking should be convenient and located close to the main entrance of buildings.*

# 3 built form design guidelines

## 3.6 Yard & Setback Treatments

### 3.6.1 Front Yard Treatments

Front yards are visibly prominent and may include a building's primary entranceway, landscaped areas and primary signage. Front yards should be designed with aesthetics in mind, and the objective should be to exclude any features or uses that have a negative visual impact on the streetscape (e.g. servicing, etc.).

#### Design Guidelines:

- a. Along major streets, maximum setback lines are encouraged in order to define a more urban street edge. The required minimum building frontage should be in proportion to the lot frontage.
- b. Front yards that are not used as common open spaces (e.g. plazas, patios, etc.) should be landscaped with trees, shrubs and native plantings. Large expanses of grass are discouraged.
- c. Where parking lots are permitted, planting strips should be provided between the street line and parking lots. Landscape materials should include a combination of salt tolerant ground cover, low shrubs and high-branching deciduous trees. Shrubs and ground cover should occupy a reasonable amount of the planting strip to form a continuous low screen, in combination with features such as low walls and fences, wherever possible to buffer parking areas.
- d. To maintain pedestrian views into sites, fences, walls, or continuous planting of tall shrubs should not be higher than 1.2 metres.
- e. High-branching deciduous trees, which are aligned on the front property line must be coordinated with street trees to maintain views through to private development.
- f. Accent planting and coordinated signs should be provided within the front yard at main driveway entrances, subject to sight line requirements.
- g. Trees may be used to line main driveways, indicating their priority over other vehicular circulation routes.
- h. Fencing is discouraged adjacent to major streets, including James Snow Parkway, Derry Road, Main Street, Fifth Line, Sixth Line or other proposed major roads. Where these are required to screen small areas of buildings, fencing should be combined with landscaping.

### 3.6.2 Side Yard Treatments

Side yards divide adjacent properties, abut surrounding features, or align side streets, and should be designed to conceal unsightly servicing elements through the use of planting strips, landscape treatments or fencing.

#### Design Guidelines:

- a. Where neighbouring properties have adjacent surface parking lots, a coordinated planting strip that is wide enough to plant trees and/or other landscape edge treatments (i.e. minimum 3.0 metres) should be provided between the parking lots. This allows sufficient area for parking lot edge treatments, drainage, access, vegetation, and fencing. A minimum width of 0.8 metres should be included for snow storage.
- b. Landscape strips should be planted with a combination of high branching, coniferous and deciduous trees and low ground covers that do not obscure pedestrian views.
- c. Landscaping, where provided to buffer parking areas from neighbouring properties, should form a continuous visual barrier.

### 3.6.3 Rear Yard Treatments

Rear yards divide adjacent properties, abut surrounding features, or abut surrounding features (e.g. CP Rail, creek, etc.) , and should be designed to conceal unsightly servicing elements through the use of planting strips and other landscape treatments.

#### Design Guidelines:

- a. Rear yards should provide as a minimum, a landscape edge treatment to include adequate space for tree planting or other landscape treatments.
- b. Where lane access or service driveways are located in the rear yard, the landscape edge must be wide enough (i.e. minimum 3.0 metres) to plant trees and/or other landscape. This serves as an adequate buffer in combination with fencing at abutting property lines.

### 3.7 Servicing, Loading & Storage

Where service and loading areas are required, they should be located and designed to be visually unobtrusive. Landscape treatments are encouraged to provide additional screening to service area enclosures within the Derry Green Corporate Business Park.

#### Design Guidelines:

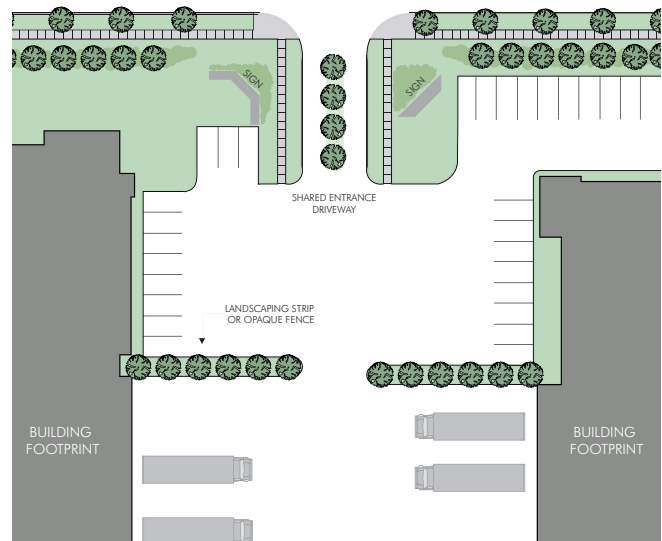
- Ideally, service, loading and garbage storage areas should be enclosed within the building.
- Where loading docks, storage and service areas are located outside, they should be located in areas of low visibility. This may include the side or the rear of buildings.
- Service areas for delivery, loading and garbage pick-up are encouraged to be coordinated. This will reduce the number of curb cuts along the public street and within parking areas, and assist in ensuring these areas are screened from public view.
- Service areas should be separated from pedestrian amenity areas and walkways.
- Loading areas must be designed to allow for manoeuvring on-site, not from adjacent public streets.
- When occupied, loading areas should not impede on-site vehicular circulation.
- Loading, service and outside storage areas may occupy the full rear yard if adequate landscape edge and buffer treatments are provided.
- Outdoor storage and refuse areas should not encroach into the rear or side or front yard setback. Such areas should be screened with a minimum height that ensures service and refuse areas are not visible. Service and refuse areas should be paved with an impervious surface of asphalt or concrete.

### 3.8 Outdoor Storage

Outside storage areas are only permitted in Industrial Areas in the Secondary Plan area. Where these areas are permitted, storage should be screened from public view through architectural screening, landscape buffering, berms or a combination of such treatments.

#### Design Guidelines:

- Outdoor storage should be located at the rear of lots, screened by building placement or by landscape screening.
- Outdoor storage enclosures should be constructed of materials to match or complement the building material. Screens should be fully opaque, but may be combined with landscaped materials.



Shared access for loading areas is encouraged. The loading for this building is screened using landscaping.



The loading area for this building is located off the primary road and screened using landscaping.

# 3 built form design guidelines

## 3.9 Service Stations / Gas Bars

Service station / gas bar design should fit into the community context through high-quality site planning and architectural design. Pedestrian and vehicular access should be equally considered, particularly where sidewalks cross vehicular access points. Service stations / gas bars should demonstrate a high quality of site design through coordinated built form and landscape design, particularly at the street edge.

### Design Guidelines:

- a. Service station buildings should be street oriented to define the street edge. On corner lots, buildings should be located at the corner. An active entrance facing the street is encouraged.
- b. Transparent windows and doors should be used for service station buildings to ensure visibility between the store, gas bar and surrounding streets.
- c. Consistent building materials should be used for the service station building. High quality materials such as stone, brick and wood are preferred.
- d. Parking spaces and gas bars should be setback from the street edge and screened through the use of landscaping and/or building.
- e. On-site circulation should be designed to avoid conflicts between pedestrians and vehicles. Barrier-free pedestrian walkways and driving surfaces should be distinguished by using varied paving treatments.
- f. Barrier-free pedestrian walkways should be provided between the public sidewalk and building entrances. On a corner lot, a pedestrian walkway should be provided from each adjacent sidewalk. Pedestrian walkways should also be provided from parking areas to building entrances.
- g. Clear sightlines and views should be provided between uses on site (i.e. pumps, service station and car wash) and the public street to promote public safety.
- h. Any building with direct exposure to the abutting streets should be designed with appropriate architectural treatments or details on main walls and windows. Main entrances should be defined and oriented towards the street for pedestrian access.
- i. Signage should be integrated into the massing and articulation of a building. This can be accomplished by using canopies, taller building elements or a variety of other building elements.
- j. A landscape buffer should be located along the side and rear yard of the property to provide screening from adjacent uses.



*Planted low walls and landscaping should be used to buffer parking areas and stacking lanes and should be used to define the street edge.*





# 4

open

space

design

guidelines

# 4 open space design guidelines

## 4.1 Greenlands System

The Derry Green Corporate Business Park Area should capitalize on and celebrate its natural setting as an important feature of the area.

The integration of existing natural features and the design of new open spaces will make this area an enjoyable and attractive place to work in and visit.



*Large trees and extensive landscaping should be used to create buffers within Community Parks.*



*Natural heritage features such as the woodlots in the photo above have already been retained on the west side of James Snow Parkway and incorporated into the surrounding developments.*

### 4.1.1 Existing Natural Features - Greenlands System

Significant natural features including woodlots, and wetlands are recommended to be retained as key elements in the overall structure of the Derry Green Corporate Business Park Area as part of the Greenlands System. Their presence will serve as important defining and orienting elements within the open space and street system.

Immediately to the east of the Secondary Plan Area is the Middle Branch of Sixteen Mile Creek and to the south is the Centre Tributary of the Middle Branch which is located at the southern end of the Secondary Plan Area. In addition, a number of stream corridors and natural features are also designated as part of the Greenlands system in the Secondary Plan. The designations generally prohibit any buildings or structures or the placing or removal of fill. Environmental Linkage Areas are subject to refinement as part of the secondary plan.



*Where demand warrants, cycling paths should be separated from walking trails.*



### 4.1.2 The Community Park

The Community Park must support the larger community identity and be easily accessible from the Business Park as well as the wider community.

#### Design Guidelines:

- a. The Community Park should:
  - Provide a variety of active/recreational sports facilities (e.g. soccer pitches, baseball diamonds, as well as spaces for passive recreational use).
  - Have highly visible connections that link the major park amenities and facilities through trails, walkways and bicycle paths to other parts of the Corporate Business Park and the Urban Area.
  - Provide amenities including visitor drop-off, pedestrian scale lighting, and signage to assist in orientation and use of park amenities.
  - Limit vehicular connections through parkland to emergency vehicle routes and access to major park facilities and parking areas.



The Community Park should be connected to other parts of the Business Park and the Urban Area.

### 4.1.3 Utility Easement: Union Gas Pipeline

The 40-metre easement accommodating the Union Gas Pipeline in the Business Park provides an opportunity to extend the significant east-west green space and recreational connection already established to the west across the Secondary Plan Area. The alignment of streets and public open space should occur on both sides of the easement to promote safety and use through visual and physical access.



The existing Utility easement would be utilized as an open space connection in adjacent neighbourhoods.



The Community Park should include programed uses, such as playing fields, that can be utilized by surrounding communities.

# 4 open space design guidelines

## 4.2 Open & Green Spaces

### 4.2.1 Semi-Private Open Space

Landscaping within private property that is perceived to be shared amenity space should be designed to provide a high level of comfort for pedestrians. Paving materials should include high-quality, easily replaced, low maintenance materials. Site furnishings such as public art, shelters, signage or fencing must be manufactured from high-quality, durable materials. Lighting should be provided in all publicly accessible areas and must be designed to provide safe light levels.

#### Design Guidelines:

- a. Employee and visitor amenities should be located in convenient locations in relation to building entrances. Amenities may include, among other similar facilities:
  - Landscaped seating area with benches;
  - Outdoor dining area;
  - Water feature;
  - Art installations;
  - Outdoor employee amenity area; and/or,
  - Parks or trails.
- b. The above amenities should be directly accessible from public or semi-private spaces (except for employee-focused amenities) and constructed of materials congruent in quality and appearance with those of the main buildings.
- c. Plant material incorporated into public amenity spaces should have the following characteristics:
  - Low maintenance, pest and disease resistant;
  - Free of features that could poison or cause injury to pedestrians;
  - Selected and placed to ensure clear views into and out of amenity spaces;
  - Arranged/massed to provide maximum effect and efficiencies in maintenance and watering; and,
  - Provide variety, interest and form during all seasons of the year.



Credit: Baird Sampson Architects

Buildings should frame open spaces for use by employees.



## 4.2.2 Landscape Buffers

Landscape buffers are green planted areas that are no less than 3.0 metres wide and are typically found adjacent to side or rear yards and provide a visual barrier where undesirable elements should be screened. In a few locations these may be used along the front yard, such as to screen parking areas. Buffers are primarily required where the impacts of employment related development could impact Greenlands areas.

The Gateway Area at Highway 401 is key to enhancing the image of Milton from the highway corridor. The Secondary Plan requires a landscape corridor along Highway 401 in this location.

Landscape buffers vary in size depending on the proposed site. Where landscape buffers are required there should be a combination of tree plantings and tall grasses or shrubs, provided an appropriate level of visibility is maintained to the site.

### Design Guidelines:

- a. Additional landscaping should be required in the Natural Heritage Oriented Areas to integrate new development more closely to the adjoining natural heritage features. This may include the use of additional planting, adjacent to these features, around edges of properties and in areas visible from the public realm. Trees and other plantings should be utilized in a naturalized manner rather than sculptured lawns and flower beds.
- b. Plant material for landscape buffers should be chosen for their ability to withstand the climate, for its visual interest throughout the year and for ease of maintenance. Intricate planting patterns should be avoided.
- c. Low maintenance and hardy, salt resistant plantings should be used at the street edge. Plantings should be used to define entrances, to accent open space areas and define walkways and roads.
- d. A densely landscaped, 30 metre setback should be provided along the Highway 401 corridor.



*Landscaping may define site edges and buffer sites from adjacent roads.*



*The existing land topography is used to frame the building entrance and create an integrated building and landscape design.*

# 4 open space design guidelines

## 4.2.3 Stormwater Management Facilities (Wetlands, Wetponds, Hybrids)

Stormwater Management Facilities should be designed with landscaping and integrated as positive and safe amenities within the community and open space system.

### Design Guidelines:

- a. Stormwater Management (SWM) Facilities should be integrated as community amenities to optimize their use as a component of the publicly accessible open space network.
- b. SWM facilities must be considered important and desirable as community open space. Street and block patterns must utilize views and access to the SWM facilities through street frontage, wherever possible.
- c. Public exposure required for SWM facilities will vary depending on the surrounding land uses and the location of the facility. A portion of SWM facilities shall be bounded by a combination of roads and open space to allow appropriate use, access and views.
- d. Stormwater management facilities must be designed as positive visual features and should incorporate an arrangement of planting that does not interfere with their function.
- e. The design of stormwater management facilities should limit the use of fencing in order to promote public visibility and surveillance opportunities. At private property limits, facilities will need to be fenced to comply with the Town's Engineering Standards.
- f. Where feasible, provide sitting areas with pathway connections at stormwater management facility edges to encourage public safety through frequent use and casual surveillance opportunities.
- g. Managing access to the perimeter of facilities should be provided on a site-by-site basis through a combination of facility edge treatments.
- h. Shallow slopes should be incorporated for direct access areas and overlooks with railings or densely planted areas should be applied to discourage direct access.
- i. A hierarchy of design treatments must be developed to address the various conditions of facility design and locations including urbanized edges.
- j. Edges of stormwater facilities abutting natural heritage features should remain naturalized, subject to providing adequate maintenance access.
- k. Impervious areas directly connected to the storm drain system are the greatest contributor to storm water pollution. Breaks in such areas, by means of landscaping or other permeable surfaces, must be provided to allow absorption into the soil and avoidance or minimization of discharge into the storm drain system.
- l. On-site infiltration should be provided in areas that have increased infiltration potential through source centres and related best management practices (BMPs).
- m. Public education displays should be used to increase public awareness and appreciation of the local environment.

Please note: the Town is currently developing "Low Impact Design Standards" that will apply to the Derry Green Business Park area. These standards will supersede the guidelines in Section 4.2.3 Stormwater Management Facilities.



*SWM facilities must be designed as positive visual features.*

# 5

# street design guidelines


# 5 street design guidelines

## 5.1 Streets & Blocks

The street network for the Derry Green Corporate Business Park is based on a grid system of blocks modified to accommodate natural features and create a sense of orientation and enclosure. This network maintains large enough parcels to accommodate business park and related uses. The interconnected street network is responsive to the area's natural heritage including creeks and greenlands system, as well as existing buildings and uses.

The proposed street pattern will promote the safe, efficient circulation of traffic including transit and non-vehicular traffic. The block lengths illustrated will provide greater walkability and convenient transit routes between the Business Park and residential neighbourhoods to the west.



Highlighted streets should have an enhanced streetscape design. 

### 5.1.1 Street Design

There are a number of existing streets within and surrounding the Derry Green Corporate Business Park Area. The design of these streets will play an important role in the image and character of the area.

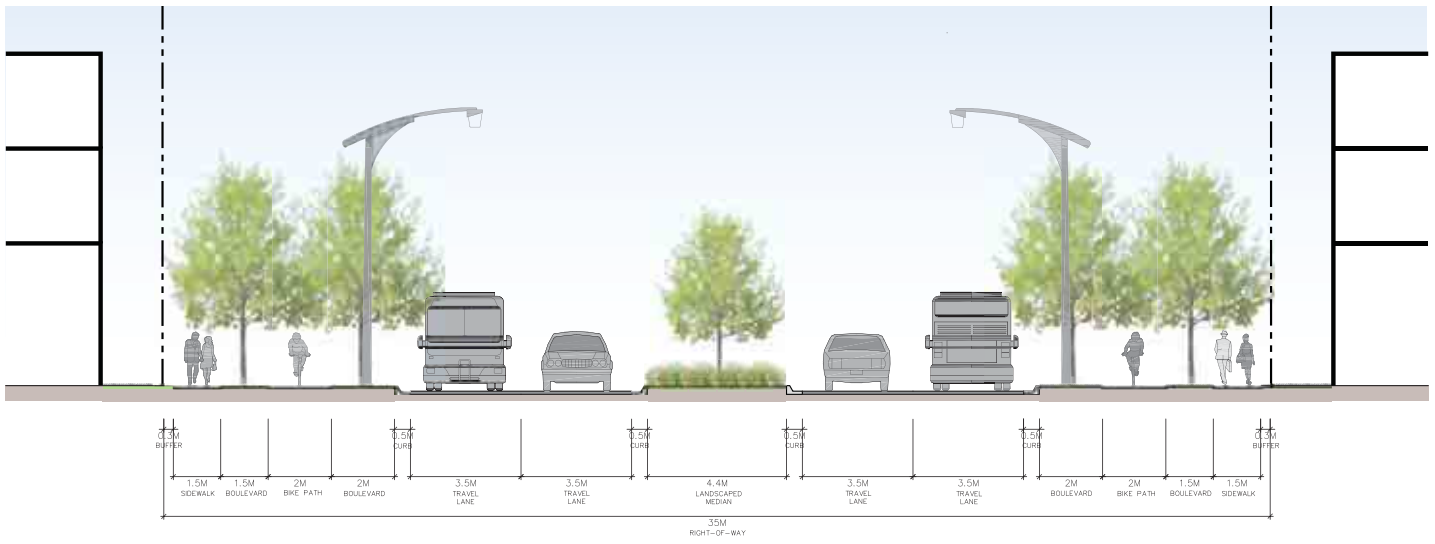
The setting of the Derry Green Corporate Business Park Area - the proximity to Greenlands System, the Highway 401 and the Milton community - all make the functional and aesthetic qualities of the streets integral to the success of the area. Key to the design of the streets will be the facilitation of pedestrian movement, achieved through appropriate and sensitive street and building design.

While the guidelines in Section 5 outline best practices for all streets (existing and proposed), there are certain streets that should achieve a particularly high level of design, these include:

- James Snow Parkway: a major gateway to the Urban Area and a key interface between the Business Park and the residential community to the west;
- Derry Road: a major gateway to the Urban Area from the east and an important pedestrian connection;
- Main Street: connects to Milton's heritage Main Street and abuts some of the largest Gateway parcels in the area; and
- Sixth Line: an important connection to the natural areas to the east, Sixth Line will have to be realigned south of Derry Road because of flooding impacts. Any redesign should reference the unique natural features of the area.

These streets will significantly contribute to the character of the Derry Green Corporate Business Park.

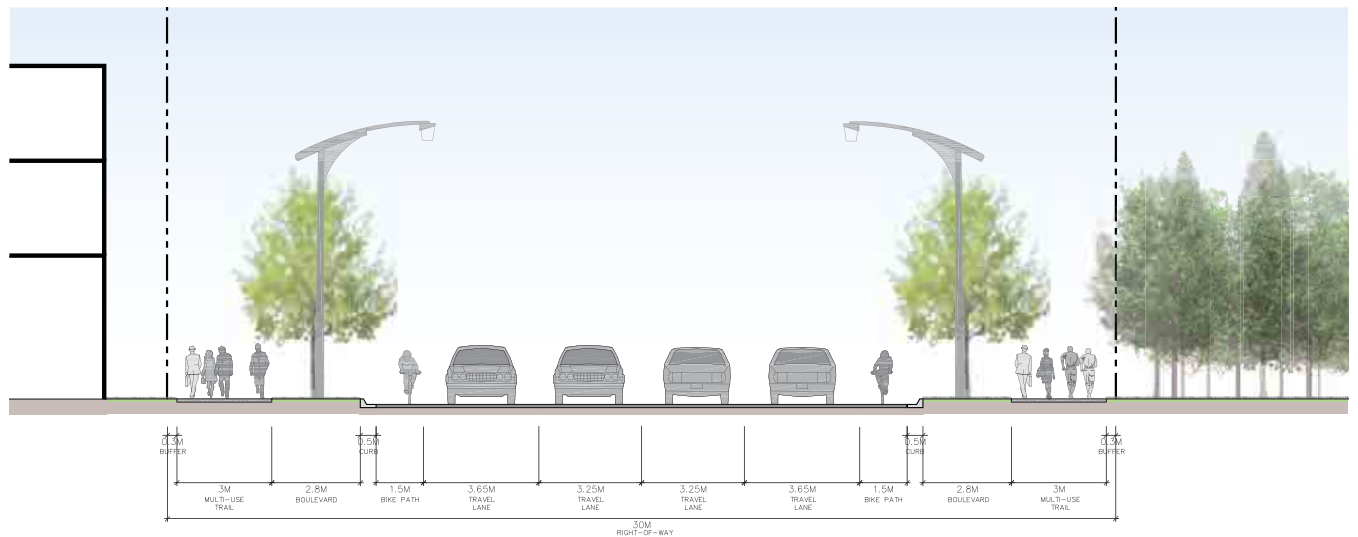
## James Snow Parkway / Derry Road (Interim Condition)



## Main Street



## Sixth Line



# 5 street design guidelines

## 5.1.2 Boulevard & Sidewalk Design

Boulevards should be designed as high-quality public spaces to promote active use and enhance the pedestrian experience. Amenities such as street furniture, street trees, special paving treatments and wayfinding signage should be incorporated to promote a 'sense of place' throughout the Derry Green Corporate Business Park Area.

### Design Guidelines:

- Public boulevards should be a minimum of 4.5 metres wide with a minimum 1.8 metre sidewalk. Boulevards should be provided on both sides of all streets, including existing and proposed streets. A width of 4.5 metres allows for pedestrian movement and sustainable tree planting methods.
- The sidewalk surface must be constructed of poured, brushed concrete. Higher quality treatments may be considered in key focal areas.
- Street trees should be located within the boulevard and planted in an adequate pit under a metal grate. Tree trenches and/or structural soil should be used to promote longevity and health of trees.
- The design of sidewalks and boulevards must take into account elements such as street furniture and transit shelters, ensuring that an adequate, barrier-free path of travel is achieved.

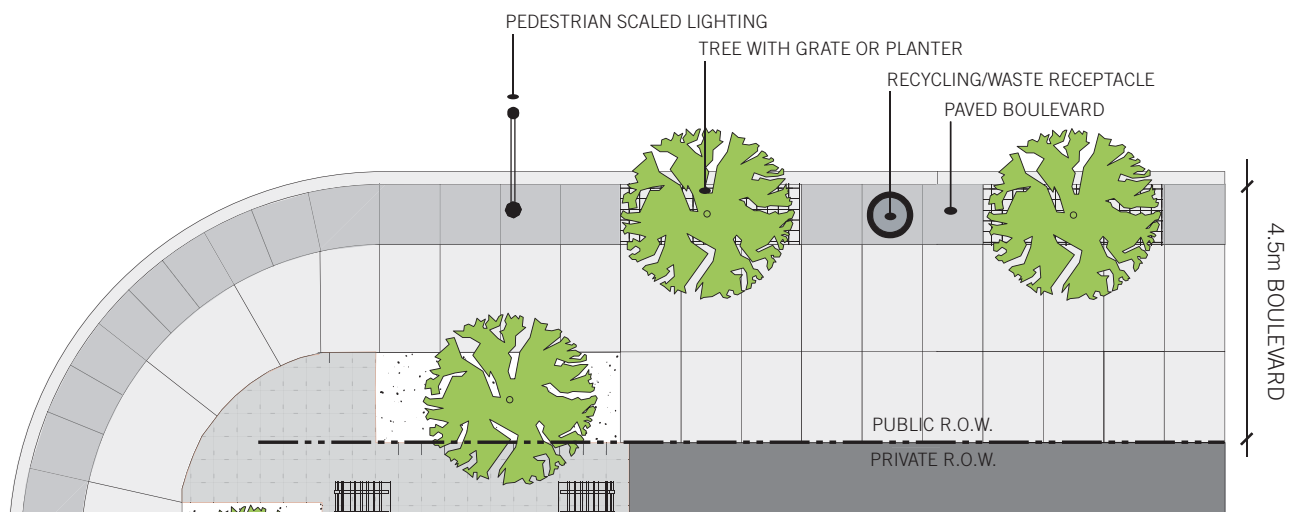
Sidewalk design should comply with the Town's Engineering Standards.

## 5.1.3 Crosswalk Design

Crosswalks ensure continuity of the sidewalk network and provide visual cues to vehicles, indicating the presence of a pedestrian crossing. Highly visible and well signed crosswalks promote safety, and may also function as a traffic-calming measure. They also help to encourage pedestrian movement by improving accessibility throughout the Derry Green Corporate Business Park and at connections with surrounding communities.

### Design Guidelines:

- Crosswalks must be continuous and connected to adjacent sidewalks. Crosswalks must be clearly designated for safety, with appropriate surface markings or variations in construction material, and signage.
- Gateway intersections should use feature paving to signify the priority of pedestrian crossings at these locations.
- Surface markings for crosswalks are recommended to be simple and legible. Concrete banding or painted lines are sufficient and may be combined with textured edges to increase legibility and assist individuals with visual impairments.
- Additional mid-block crosswalks with signals should be provided on long blocks.



Boulevard design should provide the appropriate amenities, while still allowing adequate space for the sidewalk.



#### 5.1.4 Recreational Trails

A recreational trail system should be established as an integral component of the public open space system and to capitalize on the natural features of the area. The system should be an integrated network of both on and off-road trails and cycling lanes. By utilizing the open space network of natural features, the Community Park, Pipeline Easement, stormwater management facilities and the CP Rail corridors, a trail system can provide pedestrians and cyclists with connections and recreational opportunities throughout the area. The trail system can also enhance the workplace environment by providing commuters with alternative transportation options and improved access to natural amenities.

##### Design Guidelines:

- a. Trails along streets and as part of the Greenlands System should be planned in a coordinated manner to connect with existing and proposed trails in other parts of Milton and in adjacent municipalities.
- b. The design of trails should reflect the function and nature of the type of open space or other area it occupies. Trails designed for use by cyclists should be a minimum of 3.0 metres wide to allow for two-way cycling or pedestrian passage.
- c. Lighting on trails should be determined on a case-by-case basis, particularly where lighting may disturb natural habitats, have high maintenance costs or where trails at night may be unsafe.
- d. Trails that are accessible and visible from the public street or other public areas are preferred.



*Recreational trails should be planned in a coordinated manner to connect to existing and proposed trails.*

# 5 street design guidelines

## 5.2 Landscaping

Proper soil and planting practices will help urban trees succeed along roads, pathways, parking areas and on rooftops. Trees provide shade and comfort to pedestrians, enhance the visual and environmental qualities of the street and help bring a human-scale to streets that are not framed by buildings.

### Design Guidelines:

- a. Trees should be incorporated into public street design which will frame all streets and pathways.
- b. To sustain trees, planting must occur in sufficiently deep and wide planting areas which are backfilled with appropriate soil.
- c. Native and disease-resistant species for street trees should be used to promote long-term growth.
- d. Street trees should be planted next to streets and transit stops at regular intervals, with the balance of boulevard planting used to enhance street edges and open spaces.
- e. Street trees should be planted between 6.0 and 8.0 metres on centre and should use a continuous trench below the boulevard to allow for adequate root growth.
- f. Street trees must be setback a minimum of 1.0 metres from the curb line and preferably 2.5 metres to protect from salt penetration.
- g. All boulevards must be designed to accommodate street trees. The boulevard width should therefore be a minimum of 4.5 metres in width.
- h. Resilient tree species that are able to withstand an urban setting with minimal maintenance must be selected.
- i. Monoculture planting may, in the case of disease, be entirely lost and is therefore strongly discouraged.
- j. Tree planting trenches must be adequate for root growth.
- k. Plantings should be selected that require little maintenance and do not require the use of pesticides and fertilizers.
- l. Careful consideration must be given to the type and location of trees. Higher branching trees must be positioned to ensure there is no interference with truck traffic. Sight lines must also be considered in the location of trees planted at intersections.
- m. Spaces between structures not occupied by parking, streets, boulevards or walkways should be landscaped as usable open space, and accessible to pedestrians.
- n. Existing significant trees, tree stands, and vegetation should be protected and incorporated into site design and landscaping.
- o. Landscape design must incorporate a wide range of strategies to minimize water consumption, e.g. native species, use of mulches and compost, alternatives to grass and rainwater collection systems.



*Tree planting trenches must be adequate for root growth.*



*Boulevards should include landscaping within the public realm (and in some instances, the private realm).*

### 5.3 On-street Parking

On-street parking will help animate the streets, reduce vehicle speeds and serve as a protective buffer between pedestrians and moving vehicles. Where on-street parking is applicable, the design must comply with the Town's Engineering Standards.

#### Design Guidelines:

- a. On-street parking is recommended to assist in traffic calming.
- b. Parallel on-street parking is preferred over perpendicular or angled parking to minimize the overall width of the roadway.
- c. On-street parking may be situated within bump-outs, where appropriate.
- d. Bump-outs should be landscaped with street trees or low level ground cover and be designed to accommodate snow loading.
- e. Permeable paving should be incorporated for parking areas.



*On-street parking may be appropriate on some streets within the Derry Green area. On-street parking will help to buffer pedestrians from traffic and provide short-term visitor parking.*

# 5 street design guidelines

## 5.4 Street Furniture

Street furnishings including benches, street lighting, transit shelters, planters, and recycling/waste receptacles should be provided throughout the Secondary Plan Area and should be of a consistent design (using Town standards). The following guidelines reflect the importance of these features to the overall function and image of the Derry Green Corporate Business Park area as an attractive pedestrian-orientated setting for employment uses.

### General Design Guidelines:

- Street furnishings should be designed with a “theme” providing a consistent and unified streetscape appearance.
- A palette of street furniture should be selected for its durability, ease of maintenance, compatibility with Milton’s climate, and availability for future replacement.
- Street furnishings should be placed in a coordinated manner that does not obstruct pedestrian circulation on sidewalks, and vehicular circulation to driveways, parking, loading and service areas.



Seating should be placed in areas with high pedestrian activity and located adjacent to the sidewalk.

### 5.4.1 Transit Stops & Shelters

The intent of the following guidelines are to encourage the design of high-quality transit infrastructure that will promote transit use throughout the Derry Green Corporate Business Park and be well integrated within the Town’s local and regional systems.

### Design Guidelines:

- Transit stops should be conveniently located for pedestrian access and should be located near major intersections and building entrances.
- Far-side stops (after an intersection) are encouraged for safety and efficiency.
- Transit stops should provide for weather protection, with shelters/enclosures.
- Transit shelters should include seating, trash receptacles, lighting and route information.
- Transit shelters should be located in a way that does not interfere with pedestrian circulation and provide barrier-free access.



Transit stops should have enclosed shelters such as the one shown above, with seating and route signage.

### 5.4.2 Seating

Seating should be provided throughout the Secondary Plan Area, particularly in areas of heavy pedestrian traffic, such as intersections, parks, plazas, and areas adjacent to building entrances and transit stops. Seating may be provided through benches or less formal seating, such as planters with seat walls. Seating will help to foster a pedestrian-friendly environment for employees and visitors in the area.

#### Design Guidelines:

- a. Seating areas and benches should be oriented towards the sun, whenever possible. Benches should be sited and maintained so that they can function all year round.
- b. Seating elements other than manufactured benches may be utilized. Precast concrete blocks or slabs, square cut boulders and seatwalls make interesting and durable places to sit. Raised planters located in the boulevards should be designed to provide seating along parking structures fronting onto public streets and public open space.



Street furniture should be designed with a consistent palette that is coordinated within the Derry Green area.

### 5.4.3 Public Art

Public art contributes to the visual quality and complexity of the Business Park, and can be used to contribute to the identity, history, and overall character of the area. The provision of public art is encouraged throughout the Derry Green Corporate Business Park.

#### Design Guidelines:

- a. Recommended public art locations include sites of cultural significance or high-use areas. This includes public parks, plazas, street intersections, walkways, trails, courtyards, and institutional or public building sites.
- b. Public art should be designed specifically for that site and add to the identity and profile of the community.
- c. Public art pieces should be durable and easily maintained.
- d. Public art should provide an opportunity for casual surveillance such as views from adjacent buildings and/or public streets.
- e. Public art should be both physically and visually accessible and barrier-free. The incorporation of universal design principles is encouraged. For example, public art is encouraged to incorporate Braille on interpretive materials and include tactile elements whenever possible.



Public art can be located within the public realm in an unobtrusive and simple manner, by incorporating it into street furniture or pavement details. Derry Green Corporate Business Park

# 5 street design guidelines

## 5.4.4 Lighting

Sustainable lighting practices reduce light pollution, conserve energy and reinforce pedestrian character. Down-cast lighting will avoid wasting energy to illuminate the sky.

### Design Guidelines:

- a. The design and location of lighting must consider the impacts of light pollution, energy efficiency and any other potential negative impacts.
- b. In high pedestrian activity areas, where higher levels of pedestrian lighting is appropriate, pedestrian-scaled light standards or illuminated bollards are preferred.
- c. Lighting equipment must be selected that provides an appropriate level of illumination, may be powered by alternative energy sources and is easily maintained and replaced.
- d. Light emitting diodes (LEDs), solar power, road reflectors and other alternative lighting and energy sources should be encouraged for energy efficiency. Sensors could also be used to help regulate when lights turn on and off, and their level of brightness.



Example of appropriate down-cast and pedestrian-scaled lighting design and placement.

## 5.4.5 Recycling/Waste Receptacles

Recycling/waste receptacles help ensure that the Business Park remains clean and appears welcoming to employees and site visitors. Receptacles should be located at street corners in highly active pedestrian areas and be coordinated with the overall street furniture palette.

### Design Guidelines:

- a. All recycling and waste receptacles should be configured as side opening containers for convenient maintenance.
- b. Receptacles should be located in conjunction with seating areas, pedestrian entrances, transit stops, parking areas, washrooms, key destinations and at regular intervals along circulation routes.
- c. Recycling and waste receptacles should be grouped together or integrated in a single litter container and should be wildlife proof.
- d. Recycling/waste receptacles should include slots for recycling as well as litter.



Waste receptacles should provide deposits for recycling as well.

### 5.4.6 Utilities

The coordinated design and integration of service infrastructure and utilities contributes to the visual quality of the Business Park. For that reason they must be considered as an integrated component in the design of sites and buildings.

#### Design Guidelines:

- a. New services should be located underground and must be encouraged to locate in one initial common trench. Trunk hydro services may be located above ground, but will be encouraged to be located underground, where appropriate.
- b. Opportunities must be explored for grouping utilities in single locations above grade (e.g. the flankage yard of the public right-of-way). Such locations should be guided by the location and primacy of streets, stormwater management facilities, parks and other components of the open space systems.
- c. Utilities, including utility cabinets, transformer vaults, hydro metres and gas metres, should be incorporated into buildings. Where this is not possible, utilities must be placed in discrete locations and/or screened from view as much as possible and preferably not at corners or other locations visible to pedestrians.
- d. New and innovative solutions for integrated utility services should be explored and encouraged to minimize street clutter. Products that incorporate street lighting and telecommunication boxes within the same pole are encouraged.

### 5.4.7 Signage

A signage strategy will help reduce the amount of street clutter in the Business Park, while helping to ensure that wayfinding is easily understood and highly visible to employees and site visitors. A hierarchy of signage must be implemented uniformly throughout the Derry Green Corporate Business Park. A signage strategy encompassing street signs, directional signage and commercial signage must be developed.

#### Wayfinding & Directional Signage

A comprehensive wayfinding strategy, including mapping at key locations, such as the community park, trails and key intersections must be developed.

#### Street Furniture Signage

Street furniture should not include signage (i.e. benches with advertisements) with the exception of small, unobstrusive plaques to indicate the source of funding for the streetscape item.



Example of appropriate design and placement of wayfinding & directional signage.

# 5 street design guidelines

## 5.5 Special Intersections

The Secondary Plan identifies three gateways, including:

- Derry Road & James Snow Parkway;
- Derry Road and Sixth Line; and,
- Main Street & James Snow Parkway.

Derry Road is one of the most important connections within the Derry Green Corporate Business Park area, and it will likely be heavily travelled by all modes of transit, as well as pedestrians and cyclists. The frontage of Derry Road within the Secondary Plan Area, is designated almost entirely as Business Park - Street Oriented, Business Park - Gateway, and Prestige Office. In these areas, buildings will frame the street and the highest design standards should apply.

For these reasons, the entry points of Derry Road, into the Secondary Plan Area, should be designed to invite people onto this special street. These two intersections will be very different in character. The James Snow Parkway intersection will have a more urban character framed by buildings and the Sixth Line intersection will reference the natural heritage of the Greenlands Area that comprises the eastern boundary of the Secondary Plan Area.

The intersection of Main Street and James Snow Parkway is also an important intersection, because it is a major gateway to the Corporate Business Park from the Highway 401 interchange.



Visualization of the intersection of James Snow Parkway and Derry Road, looking east.



Visualization of the intersection of Sixth Line and Derry Road, looking south.



# 6

## sustainability guidelines

# 6 sustainability guidelines

## 6.1 Sustainable Development

The Derry Green Corporate Business Park Urban Design Guidelines are based on a conceptual design, which maximizes the potential for sustainable development through such features as:

- A modified grid street network which enhances opportunities for transit; and,
- The protection of a Greenlands System.

The organization and layout of individual sites should follow best practices for achieving sustainability objectives.



*Simple additions to the building envelope, including louvers for windows, will help reduce energy consumption for building heating and cooling.*

## 6.1.1 Building Design

The incorporation of sustainable building features should be encouraged in order to increase the performance of a building with respect to its energy efficiency and on-site waste treatment.

### Design Guidelines:

- a. New developments are encouraged to seek LEED or equivalent certification. This distinguishes building projects that have demonstrated a commitment to sustainability by meeting higher performance standards in environmental responsibility and energy efficiency.
- b. Building and sites system energy consumption (HVAC, hot water, lighting) should be reduced through the use of appropriate mechanical and construction technology (natural cooling, light recovery, passive solar design, etc.).
- c. Renewable energy systems should be incorporated to power on-site light standards and to supplement building power requirements, for example, solar panels on flat roofs.
- d. Innovative wastewater treatment, water reduction and sustainable irrigation strategies are encouraged, including the use of water efficient plumbing fixtures.
- e. Building construction and operation methods should aim to reduce dependence on non-renewable resources. This can be accomplished by using appropriate recycled materials and by promoting adaptive reuse of existing structures. Marginal energy costs should be reduced by promoting locally manufactured or fabricated products and materials.



*Sustainable buildings should feature visible “green” features.*

### 6.1.2 Energy

Improved energy efficiency and air quality should be addressed through building and site design. There are numerous methods of improving energy efficiency and air quality, including: passive solar design, green roofs, and natural ventilation.

Alternative energy sources may also be integrated on-site, such as: wind turbines, solar and photovoltaic panels and geothermal. As new technologies arise, it is important that these features be well designed and integrated into overall building and site design.

#### Design Guidelines:

- a. Renewable technologies should be integrated into building façade, roof and site designs, and should not detract from the public realm.
- b. In some cases, renewable technologies may be made into prominent features to showcase and promote their use.
- c. Opportunities should be incorporated to locate renewable technologies in places where they can also provide amenities, for example by configuring solar hot water technologies as balcony awnings, or integrating photovoltaics into canopies.
- d. Alternate heating and cooling systems are encouraged. One example of an alternate system is District Energy.
- e. Natural ventilation systems should be incorporated as an alternative means to air conditioning through the promotion of passive convection cooling and ventilation. Passive systems can minimize or eliminate mechanical systems for heating, cooling and ventilating buildings.



Examples of appropriate alternative energy generation methods that should be encouraged, including wind turbines and photovoltaics.

### 6.1.3 Material Choice

Careful selection of materials used in construction can enhance sustainability by helping to reduce the waste and energy required to extract and manufacture new materials and by preventing the expenditure of fossil fuels used for transportation.

#### Design Guidelines:

- a. If there are no salvageable materials available from an existing development site, efforts should be made to purchase materials from building demolition sales, salvage contractors and used materials dealers. Materials could be reused in new buildings and in public amenity areas (e.g. outdoor paving).
- b. Many new and established construction products made with reprocessed waste materials are available for specification on new projects. Construction materials containing post-consumer waste or recovered materials have the greatest recycling merit and should be used where feasible.
- c. New materials should be locally sourced. Canadian products are also generally designed to withstand our climate.
- d. Materials selected for use in the pedestrian environment must be durable to avoid premature replacement.



Efforts should be made to purchase salvageable materials from building demolition sales, salvage contractors and used materials dealers.

# 6 sustainability guidelines



*Stormwater facilities should be centralized wherever possible, with source central BMPs located on individual sites.*

## 6.1.4 Addressing Surface Run-off

Developments within all public rights-of-ways in the Derry Green Corporate Business Park should incorporate sustainable practices to manage storm-water.

### Design Guidelines:

- a. Landscaped areas must be placed to maximize the total amount of water infiltration. In cases where the footprint of a building occupies a large portion of the site, thus reducing the available space for surface landscaping treatments, green roofs should be incorporated.
- b. Landscape designs should incorporate a wide range of strategies to minimize water consumption. This may include the use of native species, mulches and compost, alternatives to grass and rainwater collection systems.
- c. Paved areas must be minimized and should use permeable pavers to maximize surfaces that allow infiltration of water and filter pollutants.
- d. Parking areas should use permeable pavers to allow infiltration, and be graded to drain into vegetative or grassy swales.
- e. The surface area of streets, driveways and parking areas must be as small as possible within allowable standards.

Please note: the Town is currently developing “Low Impact Design Standards” that will apply to the Derry Green Business Park area. These standards will supersede the guidelines in Section 6.1.4 Addressing Surface Water Run-off.

### 6.1.5 Stormwater Management Alternatives

Alternatives to end-of-pipe stormwater management facilities are encouraged, with preference given to source-level and conveyance-level options. To help maintain drainage conditions at development levels, stormwater should be managed through a fully integrated stormwater management system. This system should utilize filtration beds, bioswales, biofiltration trenches, rainwater collection, porous paving, and grading - among other methods - to direct water away from parking areas and the installation of green roofs.

Like end-of-pipe stormwater facilities, green roofs create prominent visual amenities that will help raise public awareness of stormwater management techniques. The promotion of stormwater reuse is also encouraged and may take the form of cisterns.

#### Design Guidelines:

- a. Impervious surface areas should be minimized on streets, paths and parking lots, and permeable materials should be substituted where appropriate.
- b. Alternative stormwater management features such as drainage swales should be visually prominent and publicly accessible to function as an educational resource and visual amenity.
- c. In some cases, stormwater collected from rooftops could be stored in cisterns for re-use.
- d. Stormwater may be used to irrigate adjacent landscaped areas.
- e. Where stormwater cannot be used in adjacent landscaped areas it should be collected, filtered and reused for other landscaped areas on-site.
- f. Snow storage locations should be provided to restrict toxic substances from entering the stormwater run-off system.
- g. Green roofs are encouraged as a means of retaining stormwater, improving air quality, cooling ambient air and adding visual interest.

Please note: the Town is currently developing “Low Impact Design Standards” that will apply to the Derry Green Business Park area. These standards will supersede the guidelines in Section 6.1.5 Stormwater Management Alternatives.



Wherever possible, bioswales and green roofs should be incorporated in addition to end-of-pipe stormwater management facilities.



Rain cisterns on this LEED Certified Platinum building in Maryland are used to store stormwater on site for re-use.