



5034, 5054, 5080 Ninth Line

URBAN DESIGN STUDY

CITY OF MISSISSAUGA

OCTOBER 2021

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1.0 INTRODUCTION

As the last remaining greenfield site in Mississauga, the vision and design objectives for Ninth Line is the result of many years of public consultation and updated provincial, regional, and municipal planning policy direction. In addition to the City's Official Plan vision and the Ninth Line Neighbourhood Character Area Policies and Zoning, the Shaping Ninth Line Urban Design Guidelines (herein referred to as the Guidelines) have served as the basis for the planning and design of the proposed development described in this study.

Six (6) Neighbourhood Character Area Precincts were established for Ninth Line through the consultation process and are defined in the Official Plan policy. The 5034, 5054, 5080 Ninth Line development described in this study is located within Precinct 5 (16.20.3.5 Community Park/Residential Area) and shall align with the vision for this neighbourhood, as well as the guiding principles for Ninth Line as an active, diverse, and healthy community, reflecting contemporary best practices in urban design.



Figure 2: 5034, 5054, 5080 Ninth Line will be an active, diverse, and healthy community, reflecting contemporary best practices in urban design

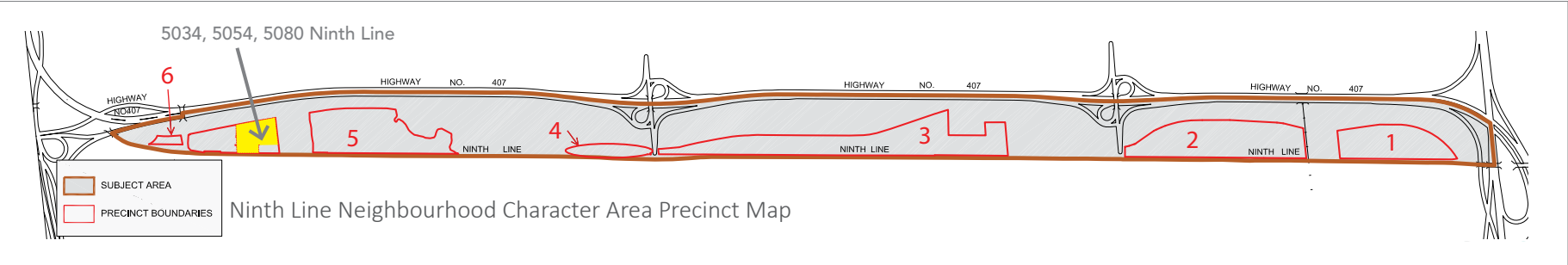


Figure 1: Ninth Line Neighbourhood Character Precinct Map (Source: Ninth Line Urban Design Guidelines) and Location of 5034, 5054, 5080 Ninth Line

1.1 Study Purpose & Document Structure

The purpose of the 5034, 5054, 5080 Ninth Line Urban Design Study is to demonstrate that the proposed development adheres to Official Plan policies, the City's standards and guidelines, and good urban design practices. It also describes how the proposed development considers the existing context, the surrounding built form, and pedestrian, cycling and vehicular transportation routes, and demonstrates how the design is in line with site specific features demonstrated in each chapter of the Guidelines.

In response to the City's Urban Design Study Terms of Reference and the site specific requirements for 5034, 5054, 5080 Ninth Line, this document has been structured in the following manner:

SECTION 1.0 - INTRODUCTION

Provides an overview of the goals and objectives for the development, and includes an analysis of the existing site and surrounding neighbourhood.

SECTION 2.0 - ANALYSIS OF THE PROPOSED DEVELOPMENT

Provides details on site design, built form and uses, access, circulation, and sustainable design strategies.

SECTION 3.0 - SUMMARY AND CONCLUSIONS

Provides a summary of the main points of the Urban Design Study for consideration.

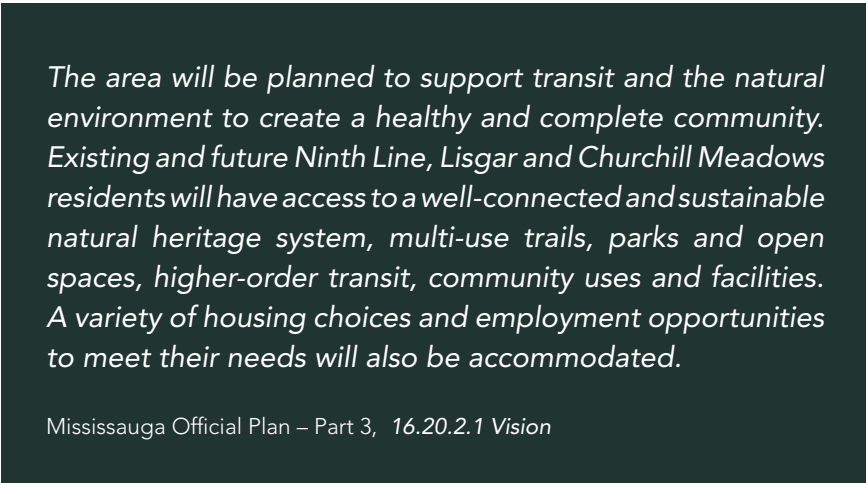


Figure 3: Shaping Ninth Line Urban Design Guidelines

1.2 Goals & Objectives

The vision for 5034, 5054, 5080 Ninth Line is based on the guiding principles contained within Shaping Ninth Line Urban Design Guidelines which aim to promote the creation of sustainable developments that will form a gateway into the City of Mississauga along Ninth Line. Given the close proximity of the natural heritage system and the existing compact neighbourhoods to the east of Ninth Line, 5034, 5054, 5080 Ninth Line will focus on supporting the surrounding developments in creating a healthy, complete community that offers access to interregional transit network, community uses and facilities and medium density housing as an alternative housing choice to the surrounding low density housing.

As part of the six Neighbourhood Character Area Precincts, 5034, 5054, 5080 Ninth Line development will focus on a Community Park, further framed by appropriate massing and scale of the built form that will be oriented to support a strong and permeable street edge along Ninth Line. In line with the Guidelines' broader goals, the following key objectives will be fundamental to developing 5034, 5054, 5080 Ninth Line:

BUILT FORM

- Provide for a diversity of community infrastructure and facilities to meet the daily needs of residents, employees and visitors
- Demonstrates distinct and appropriate design for all buildings, streets and open spaces

PARKS, OPEN SPACES AND NATURAL HERITAGE

- Provides parks and open space in close proximity to adjacent neighbourhoods

CONNECTIONS

- Reinforces pedestrian supportive streets
- Provides visual/physical connections between open spaces
- Enhances views from Highway 407 where practical



Figure 4: Image example of medium density residential development with units fronting onto an amenity area.

1.2.1 Guiding Principles

The following summary of the guiding principles for Ninth Line will shape the design framework for the proposed development of 5034, 5054, 5080 Ninth Line.



A network of sidewalks and/or multi-use trails will promote circulation throughout the development, providing for direct connections to open spaces and existing neighbourhoods.

TRAIL NETWORK & COMMUNITY-WIDE CONNECTIONS



Pedestrian supportive streets and safe pedestrian crossings of Ninth Line will be incorporated into the development.

PEDESTRIAN SUPPORTIVE STREETS / SAFE PEDESTRIAN CROSSINGS OF NINTH LINE



A system of parks and open spaces for all ages and abilities, that encourage passive and active all-season use, promote unique experiences, and incorporate natural features, will be well integrated into the community.

ACTIVE & PASSIVE PARKS & OPEN SPACES, WELL INTEGRATED INTO NEIGHBOURHOODS



The existing greenlands on the north side of the proposed development will be maintained and protected, with views and visual connections from the community park provided where possible.

PROTECTED NATURAL HERITAGE SYSTEM



The land use concept will promote innovative development strategies which can serve as a model for sustainability within Mississauga.

LOW IMPACT DEVELOPMENT STRATEGIES



The development will support offering a mix of housing opportunities to accommodate people with diverse preferences and socioeconomic characteristics, and a diversity of employment opportunities to meet current and future needs.

MIX OF HOUSING & DENSITIES



The proposed concept will achieve appropriate interfaces with the Transitway route and the existing residential community to the east by ensuring desirable transitions, and demonstrating distinct and appropriate design for all buildings, streets, and open spaces.

APPROPRIATE INTERFACES WITH SURROUNDING LANDS



The concept will support transit and active transportation as key components of the transportation network, and promote development which reflects land use planning practices conducive to good public health.

TRANSIT & ACTIVE TRANSPORTATION OPTIONS

1.3 Analysis of the Existing Site & Neighbourhood

1.3.1 Site Context

5034, 5054, 5080 Ninth Line development is located within the Ninth Line Corridor, a significant greenfield area along the western limit of the City of Mississauga that is mandated for strategic development. Within the broader Ninth Line area, 5034, 5054, 5080 Ninth Line development sits at the southern end of the corridor and forms part of Precinct 5. The development is bound by Britannia Road West to the north, Ninth Line to the east, Eglinton Avenue West to the south, and Highway 407 to the west. 5034, 5054, 5080 Ninth Line will occupy 5.82 hectares (14.38 acres), with a total developable area of 4.07 hectares (10.06 acres) following land dedication for public roads and park and MTO Transitway corridor. Currently, it is underdeveloped and composed of two private properties with vast field area. Despite the current conditions, the development on this edge offers significant opportunity to create a key gateway and transition to the City of Mississauga.

On the east side of Ninth Line just south of Britannia Road West is Churchill Meadows, an established residential neighborhood. It contains mostly single detached houses, a block of townhouses, and a compact McLeod Park Community Park. This low-density residential neighborhood will be considered in the design of 5034, 5054, 5080 Ninth Line development when planning land uses, built form, connections, and open space linkages. North of 5034, 5054, 5080 Ninth Line development is an existing designated heritage house which will be preserved and considered as a valuable historical feature that will influence the design of the development. The north-east edge of Ninth Line is characterized by a mix of low-density residential and mixed use development. South-east of Eglinton Avenue West and Ninth Line are primarily employment lands. The west side of Highway 407 is framed by Greenlands and a Hydro One Transformer Station, as well as an overhead hydro corridor and Canadian Pacific Railway tracks that run parallel to the 5034, 5054, 5080 Ninth Line development.



Figure 5: Aerial of Ninth Line Character Area and location of 5034, 5054, 5080 Ninth Line



Figure 7: Southwest view of the heritage house from Ninth Line



Figure 9: West view of existing conditions of 5034, 5054, 5080 Ninth Line



Figure 8: East view of community street Northeast of Ninth Line



Figure 10: West view of townhouses across from 5034, 5054, 5080 Ninth Line



Figure 6: Aerial of 5034, 5054, 5080 Ninth Line and Local Surrounding Context

1.3.2 Surrounding Public & Private Open Spaces

The principles within the City of Mississauga Official Plan maintains that the Ninth Line Corridor’s open space network must link surrounding communities to encourage walking and cycling activity. As part of Precinct 5 of the Ninth Line Corridor, this development will have a community park focus. It is critical for this proposed development to incorporate public and private open spaces within the area, strategically weaving these spaces with surrounding parks, open spaces, and natural systems to contribute to the broader inter-connected green network in the community.

The 5034, 5054, 5080 Ninth Line development proposes a public park located south of the existing heritage building at the north-east corner of the development, as well as strategically located privately operated public-accessible spaces (POPs), outdoor amenities, and private amenity areas above grade. The combination of these elements will provide opportunities for environmental protection, visual and physical access, as well as passive and active recreation that complements the Ninth Line Community's overall parks and open space system.

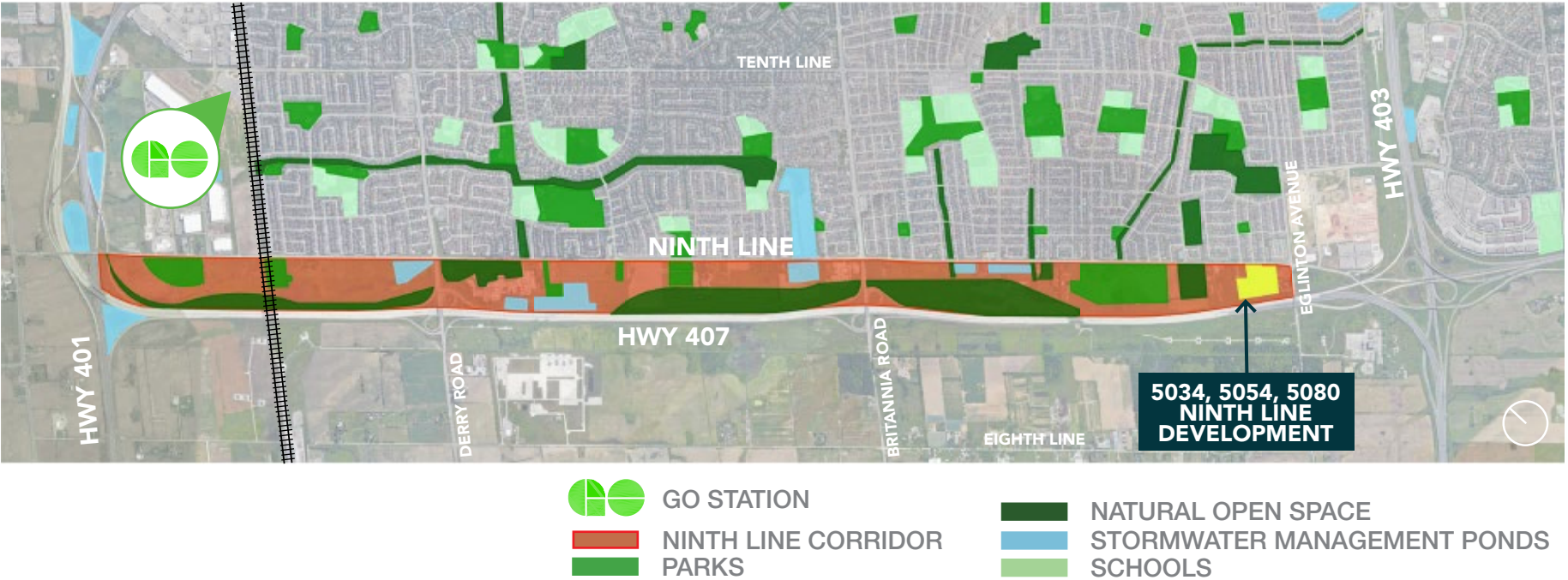


Figure 11: Surrounding Public and Private Open Spaces

1.3.3 Transportation Network

The proposed Ninth Line South community is largely influenced by the existing road fabric and active transportation network. The road network is structured by the north-south arterial road (Ninth Line) and east-west regional arterials roads (Britannia Road and Eglinton Avenue East). Existing minor collector roads to the east (Erin Centre Boulevard) also feed into Ninth Line near the proposed community. The Ninth Line community is well-connected to Highway 407 directly to the west, Highway 401 to the north, and Highway 403 to the south.

The existing arterial and collector road fabric is expected to carry the majority of cycling and vehicular traffic within the greater area, and will serve to link the Ninth Line community. The Official Plan identifies a long term cycling plan to connect key City destinations and locations, such as transit stations, with cycling routes. The proposed community will be integrated with these cycling routes, as well as the existing multi-use trails in the adjacent neighbourhoods to the east (refer to Figure 12 below). In conjunction with the surrounding open space network, the transportation network establishes the framework for community design and guides the layout of street hierarchy, parks and open space amenities, and built form typologies.



Figure 12: Existing and Proposed Transportation and Pedestrian / Cycling Network

1.3.4 Ninth Line Interface

The benefits of addressing Ninth Line through a strong built form relationship is a primary tenet of the Guidelines, and it's a principle that has been incorporated into the community in order to achieve an urban character that *"promotes the highest level of design, including attractive buildings that frame and address the street"*. Achieving a more urban condition translates into positive outcomes related to traffic speed and pedestrian and cycling usage.

"Arterial roads, including Ninth Line...should have an urban character and should promote the highest level of design, including attractive buildings that frame and address the street, cycling facilities, and pedestrian-supportive boulevards..."

From Shaping Ninth Line Urban Design Guidelines, City of Mississauga, 2017



These benefits, intended to serve the proposed community, the existing community to the east, as well as the streetscape appearance and function of Ninth Line itself, include the following:

- Bringing built form massing to the Ninth Line interface frames the street and reduces the perceived scale of the road, helping reduce excessive speeding and increase pedestrian and cyclist comfort;
- Engaging Ninth Line will better activate the street and function for something other than a through-fare for car trips;
- The urban front door relationship increases 'eyes on the street' and results in a safer street environment (refer to the cross-section of the dual front townhouses in Figure 2.11);
- The arrangement of land uses along Ninth Line with focus on a Community Park, will provide an interesting balance between built form and open space conditions that helps support an interesting streetscape environment, while still achieving height, massing and land uses that are compatible with the existing neighbourhood to the east;
- The existing west side of Ninth Line is somewhat disengaged from the street as it is characterized by suburban conditions. The result is that Ninth Line is seen only as a means of moving vehicular traffic and does little to contribute to an urban character and function. Having attractive and active open spaces along Ninth Line will help alleviate this perception as noted above.

Figure 13: Rendering example showing the proposed sidewalk and multi-use trail along Ninth Line with townhouse massing that frames the street and provides an urban front door relationship that increases 'eyes on the street'.

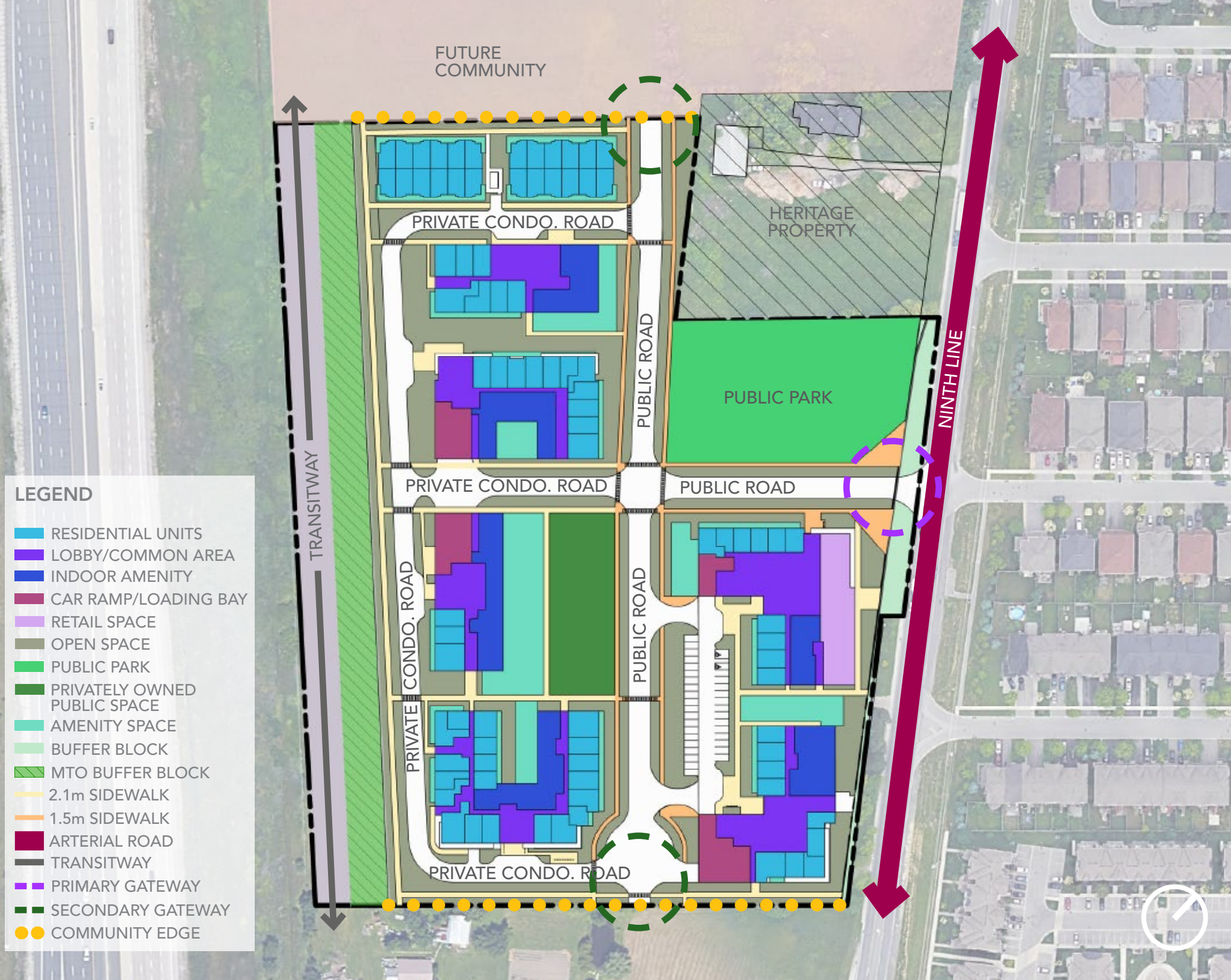
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2.0 ANALYSIS OF THE PROPOSED DEVELOPMENT

Consistent with the vision and principles set out in policies of the Official Plan (Ninth Line Vision and Ninth Line Character Area), the proposed Ninth Line South community is designed to be an urban, pedestrian, and transit supportive neighbourhood that will integrate well with the existing residential community to the east. The development will be characterized by predominantly medium density residential units. It conforms to the Guidelines' Land Use Concept Plan with proposed residential medium density development, preserved natural and cultural heritage features, and an active transportation link planned along the entire length of the Ninth Line lands.

With neighbouring community centre lands to the north and future development plans to the south, the community constitutes a logical progression in the strategic growth of the Official Plan's Ninth Line Character Area.





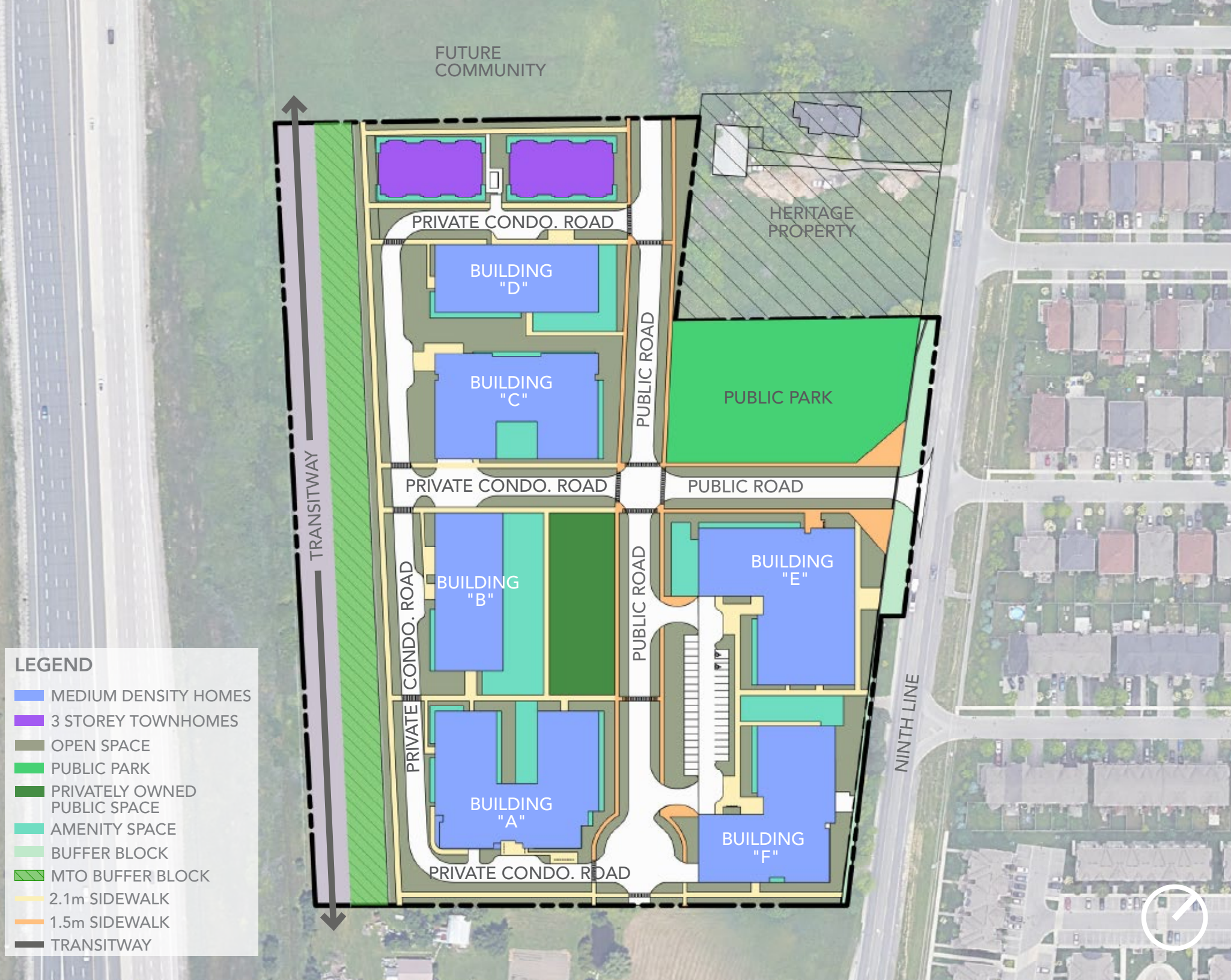
2.1 Structuring Elements

The structuring elements for the community will serve as the main building components for delineating the residential blocks, establishing the street network, and providing a strategic integration with the existing neighbourhood to the east.

The following describes the key structuring elements:

- Existing Arterial Road - Ninth Line frames the community on the west side, with built form providing a street facing condition that aligns with the Guidelines and other City of Mississauga policies.
- Proposed Internal Public Road - Provides the vehicular and pedestrian connection to Ninth Line.
- Proposed Internal Private Roads - Provide the key internal connections within the development.
- Open Spaces & Park Features - Include POPs, the amenity areas, public walkways and public park, which largely define community interfaces and views and provide natural spaces for socialization.
- Heritage Property - Abutting the southeastern corner of the development will celebrate the area's local history.
- Neighbourhood Gateway - Located at the public access road that forms the primary entry into the development.

Figure 14: Structuring Elements Plan for the 5034, 5054, 5080 Ninth Line development



2.2 Site Design

The 5034, 5054, 5080 Ninth Line development will be developed with a range of residential and open space uses, consistent with the City's Official Plan and Guidelines. The block layout and organization for the 5034, 5054, 5080 Ninth Line development aligns with Section 3.2.1 of the Guidelines, with specific reference to the following:

- New streets reinforce a well-connected grid system, including direct connections to the west side of Ninth Line, to provide convenient connections and promote permeability throughout the Ninth Line lands and the broader community

In accordance with Section 3.1.2 of the Guidelines (Public Open Space), the parks and open spaces in the 5034, 5054, 5080 Ninth Line development have been located along the edge of Ninth Line streetscape and designed to ensure safe and active use, walkable distance, and to reinforce a connected network of open spaces found in surrounding communities.

As per Section 3.1.1 of the Guidelines (Greenlands), the new layout of the development ensures that it preserves and enhances these existing and planned Greenlands for the benefit of Mississauga's residents and the environmental and ecological health of the 5034, 5054, 5080 Ninth Line development.

2.2.1 Land Uses

The proposed 5034, 5054, 5080 Ninth Line development is planned as a predominantly medium density residential development with strategically placed commercial/retail components at grade and medium density residential in the form of back-to-back townhouse units. Responding to the area's existing urban fabric, land uses have been distributed to respect and complement adjacent uses, support transit and active transportation, and comply with City Official Plan policies and the Guidelines for the Ninth Line Corridor.

The plan consists of:

- Blocks of medium density residential units (ranging between 6 to 12 storeys).
- Strategically placed at-grade retail/commercial uses contained within Building E.
- Medium density back-to-back townhouses proposed to be 3 storeys located at the north-west corner of the development.
- Compact, walkable private and public roads.
- A public park that provides views into the development from Ninth Line.
- A publicly-accessible privately owned amenity area for residents, integrated within the land use fabric.

Figure 15: Land Use Plan for the 5034, 5054, 5080 Ninth Line development



2.3 Landscape & Open Spaces

2.3.1 Public Park

Centrally located within the 5034, 5054, 5080 Ninth Line development, the public park will form a development node that has been designed to serve as one of the central gathering places for the surrounding neighbourhood. Framed by ample landscaping, strong building facades, the greenlands and the heritage building, the public park will provide a variety of programming opportunities that are focused on a neighbourhood-wide catchment area, particularly given the proximity of the existing neighbourhoods to the east of the development.

The Ninth Line Urban Design Guidelines identifies the public park in Precinct 5 as one of the significant public open spaces for the broader Ninth Line community. To serve the diverse needs of current and future residents, this park will include opportunities for passive and active uses such as an open area for free play or leisure, a designated children's play area, and a designated senior's play area.

To contribute to a livelier public realm and to increase visibility and perception of safety along Ninth Line, the public park will be located at the intersection of Ninth Line and the proposed Mahoney Gate. To reinforce safe connections, planned and potential controlled pedestrian crossings will be incorporated within the park area through the use of enhanced paving and landscaping. These design measures will serve a calming function, in addition to defining pedestrian and cyclist routes and adding character to the streetscape.

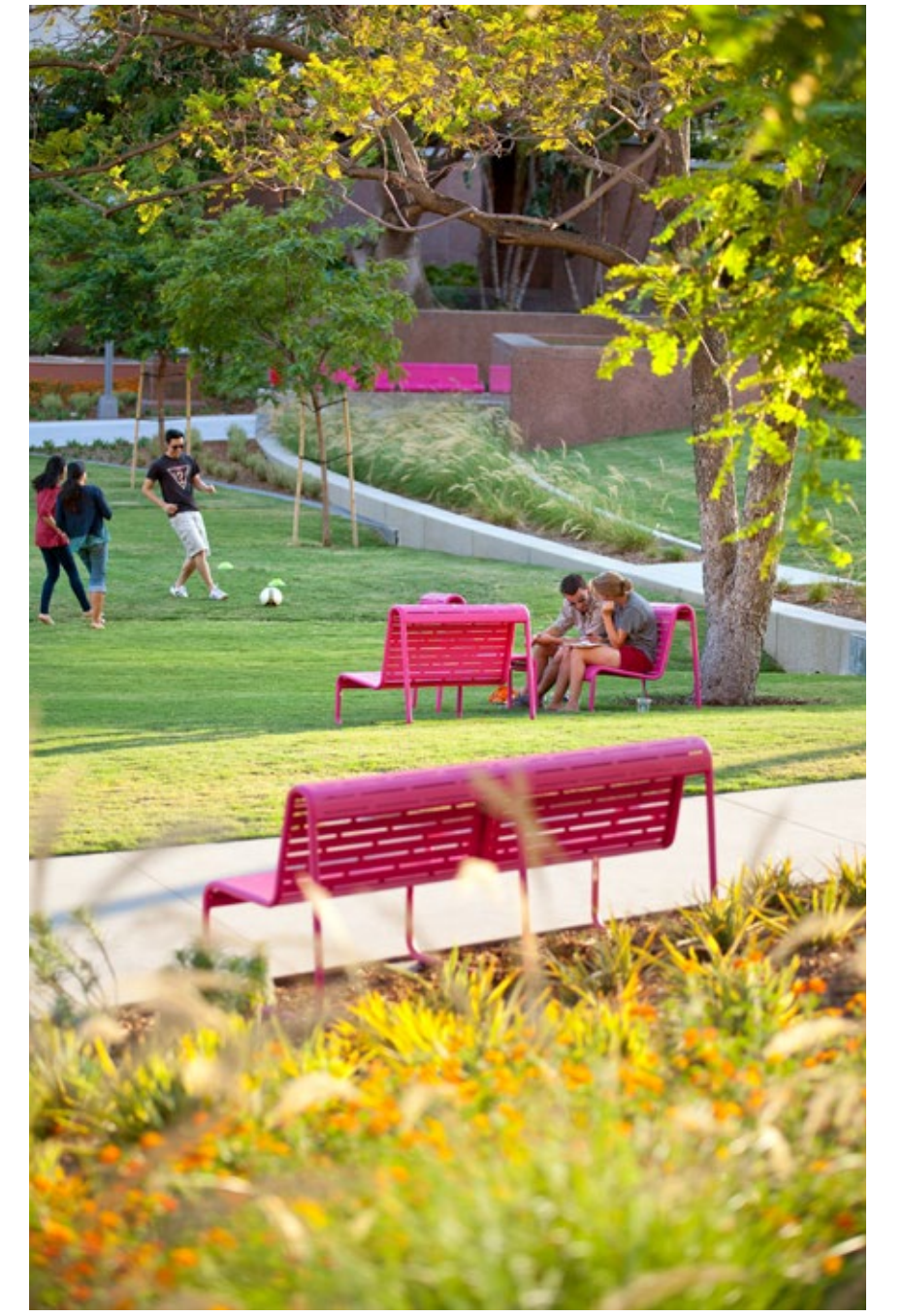


Figure 16: Landscape and Open Space Plan for the 5034, 5054, 5080 Ninth Line development

2.3.2 MTO Buffer Block

The 5034, 5054, 5080 Ninth Line development has been designed to foster a healthy and connected community by including natural spaces to encourage an active interaction with the environment, and providing areas where social interaction can naturally occur. The MTO buffer block interface along the south-west boundary of the development is part of a community-wide strategy to achieve a logical transition between the development, the abutting parkway belt and Highway 407. Opportunities have therefore been provided for pedestrian and vehicular access by means of direct street frontage and multi-use pathways, which allow for convenient connection throughout the 5034, 5054, 5080 Ninth Line development.

- Providing active transportation options for residents of all ages and abilities is a fundamental component of the sustainable, healthy living strategy for the development.
- To complement this greenway interface, the multi-use pathway (see Figure X), will be framed by landscape buffer block to create a welcoming and smaller-scaled pedestrian focused interface that connects the whole development; and
- The townhomes will be designed around a seamless blend of indoor-outdoor living and offer convenient access to the multi-use pathway from residents' homes.

2.3.3 Privately Operated Public-accessible Spaces (POPs)

Privately Operated Public-accessible spaces or POPs will be an integral component of the development in its aim of creating common spaces that benefit not only 5034, 5054, 5080 Ninth Line development but also the wider Ninth Line community.

These spaces will combine with the adjacent public park to provide a range of high-quality, comfortable shared and private outdoor amenity spaces. Adjacent to the public park at the south west corner of proposed Mahoney Gate, POPs will be predominantly intended for passive recreation and will provide a variety of programming opportunities, which may include:

- Shade structure with seating and decorative paving as primary focus and gathering;
- Primary entry amenity with seating and decorative paving;
- Pattern of paths that help frame the spaces and uses;
- Unprogrammed lawn areas for flexible passive and active recreation use;
- Formal and informal layout of trees to define paths and to provide shade that will support a comfortable micro-climate; and
- Due to their open and adaptable nature, POPs areas can be used for pop-up or seasonal events as well.

2.3.4 Terrace & Private Amenity Spaces

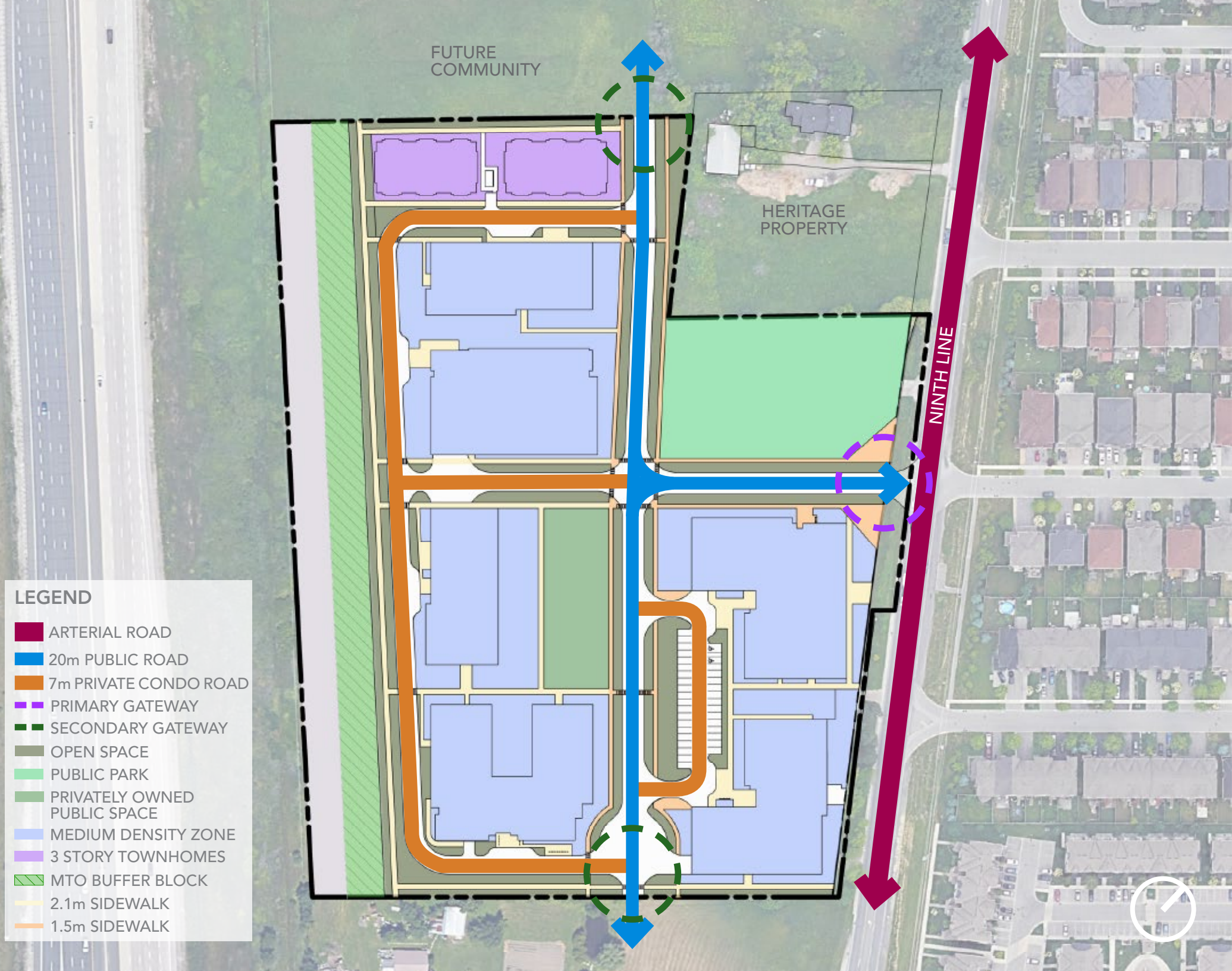
One of the most valuable features of utilizing green roof infrastructure is that it generates a wide range of social, economic and environmental benefits, in both the public and private realms. By increasing amenity and green space through the use of landscaped terraces and podiums, the sustainable design is intended to provide a range of high-quality, comfortable private and shared outdoor amenity spaces which will:

- Maximize access to sunlight;
- Minimize noise and air quality impacts from site servicing, mechanical equipment, etc.;
- Include high-quality, universally accessible and environmentally sustainable materials, four season landscaping, seating, pedestrian-scale lighting, trees, shade structures, weather protection, screening; and
- On terraces and podiums framing open spaces, upgraded architectural treatment will be provided with respect to window treatments, wall articulation, brick detailing, etc.

These spaces are predominantly intended for passive use, with some play opportunities, which may include:

- Shade structure with seating as primary focus and gathering area;
- Pattern of paths that helps frame the spaces and their uses;
- Unprogrammed lawn areas for flexible passive recreation use that may include picnic and seating areas; and
- Areas for naturalized planting or wildflower gardens that may integrate planting programs that support City of Mississauga green initiatives.





2.4 Road Network, Vehicular Access & Circulation

A well-defined, linked, and easily recognizable hierarchy of streets forms the structure of the community. It provides for the safe and convenient movement of pedestrians, cyclists, and vehicles, serves as the main space for social interaction, and establishes the first visual impression of the community. Designed as a modified grid pattern, the road network responds to the site's structural elements, facilitating movement and circulation, supporting accessibility, and promoting a safe, pedestrian-oriented lifestyle.

Vehicular access to the future community will occur from a 20.0m local public right-of-way road that connects to Ninth Line and future communities to the north and south. Internal 7.0m private condominium roads are designed to reinforce a pedestrian focus and ensure safe connections within the community, connecting residents to amenities, such as parks and open spaces.

The following street types are located in the development:

- 35.0m Arterial Road - Ninth Line
- 20.0m Public Road - frontages on both sides
- 7.0m Private Condominium Road - frontages on both sides

Figure 17: Road Network, Vehicular Access and Circulation Plan for the 5034, 5054, 5080 Ninth Line development

2.4.1 Concept Street Sections

The streetscape sections on the following pages illustrate the relationship between built form and the key street typologies, the existing greenlands as well as the transition of heights between the proposed mid-rise buildings and 3-storey townhomes.

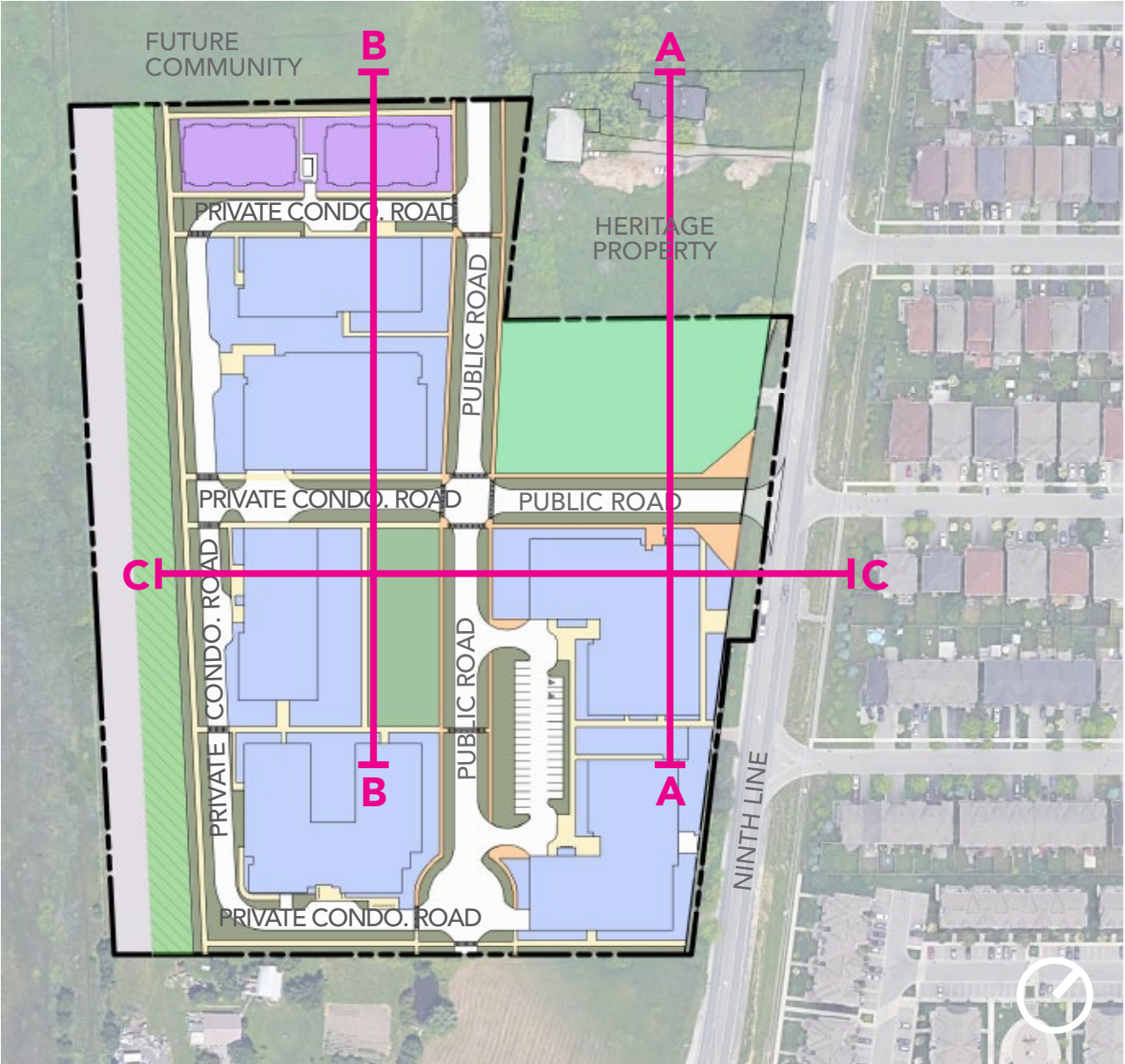


Figure 18: Key plan indicating the location of sections (refer to Figures 19 to 21)

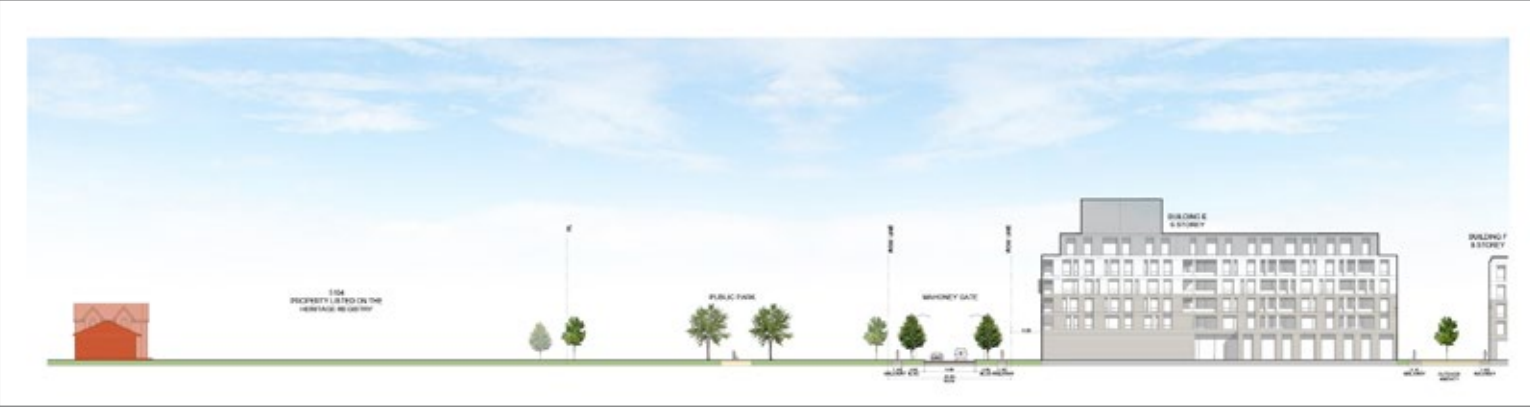


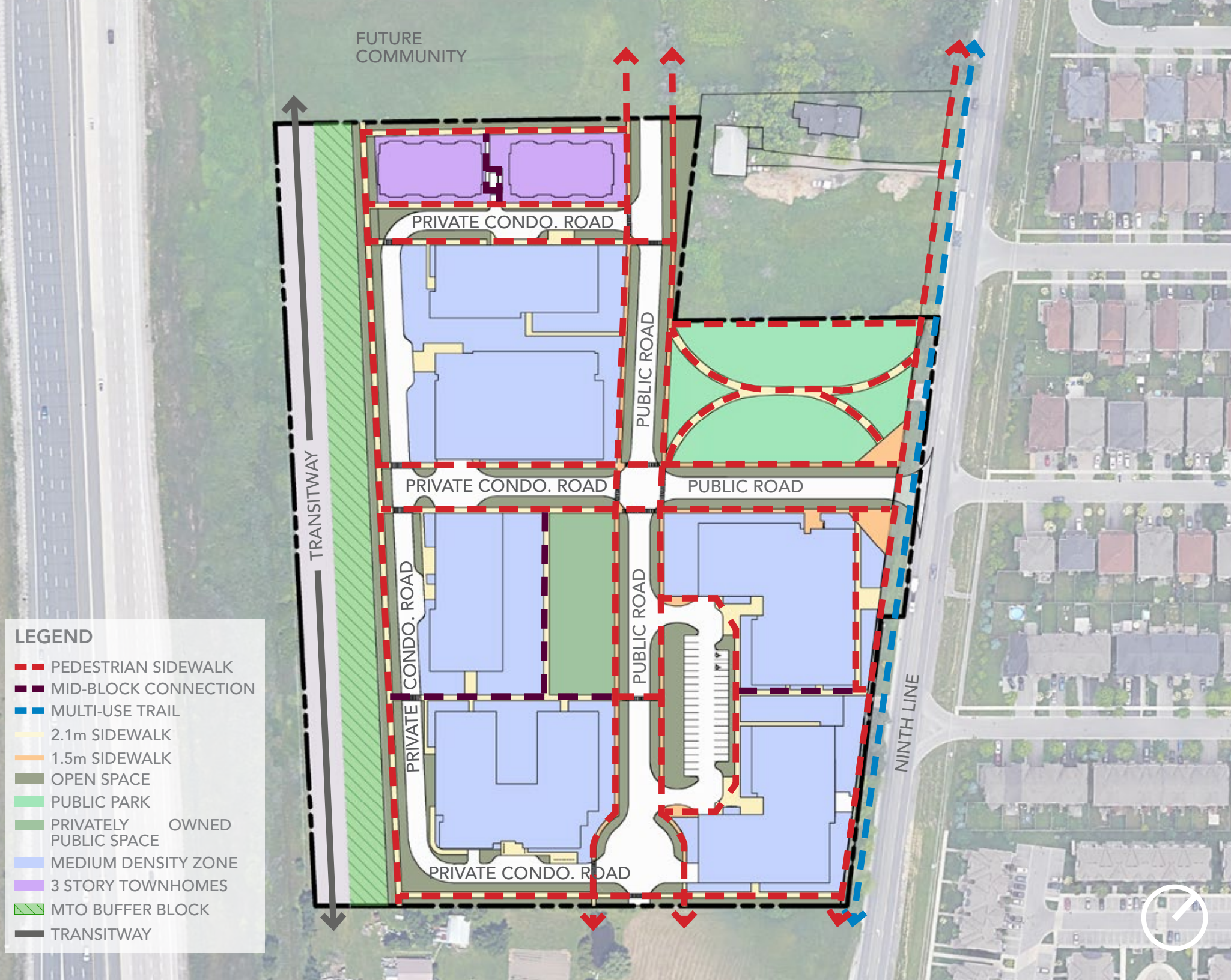
Figure 19:
Section A - Mid rise
Building E interface
with heritage home on
adjacent property



Figure 20:
Section B - 3 Storey
Back-to-Back
Townhouse interface
with mid-rise Building D, C
and B



Figure 21:
Section C - Mid rise
interface along 20.0m
Public ROW and Ninth Line



2.4.2 Pedestrian Circulation

The proposed pedestrian and vehicular circulation network will form a contiguous system with the existing City network and shall be designed in accordance with all applicable accessibility standards. Safe, direct, and logical pedestrian connections will create a continuous internal pedestrian network that will connect to a proposed multi-use trail system adjacent to the future Transitway and along Ninth Line. Within the development, direct links will be provided from the adjacent sidewalk and walkway areas to the front steps of each home. Convenient and effective pedestrian connections to Ninth Line will further establish ease of access to surrounding amenities, including:

- Safe and logical connections will be provided to the future sidewalks / multi-use trails along Ninth Line, to the existing communities to the south as well as the Churchill Meadows Community Centre, west of the development;
- The proposed multi-use path connections at the north-west end of the development will provide a connection to the proposed community centre and park.
- Active transportation connections with the Future Transitway Station along Britannia Road and Ninth Line and Future MiWay bus hub at Churchill Meadows Community Centre along Ninth Line; and
- Active transportation connection with the potential Future Transitway connection to the south at Eglinton Ave W and Ninth Line (pending confirmation in the MTO Transitway EA).



Figure 22: Pedestrian Circulation Plan for the 5034, 5054, 5080 Ninth Line development



Figure 23: Image example of a multi-use trail adjacent to a private road with a strong built form relationship.



Figure 24: Image example of multi-use trail integrated with a naturalized buffer

Multi-Use Trail

The proposed trail system for the Ninth Line South Block reflects Section 3.1.3 of the Guidelines (Multi-Use Trail), which proposes that the new multi-use trails and other new trails should connect to each other, and to existing trails, streets, and open spaces. This linked trail network provides pedestrians and cyclists with connections to the wider community.

Along the eastern boundary of the subject lands, the proposed future multi-use trail on Ninth Line continues in the right-of-way, providing an important active transportation link between neighbourhoods. Internal linkages to the future multi-use trail network at the northwest of the site, provides pedestrians and cyclists with connections to recreation opportunities such as the community centre lands to the north.

Mid-Block Connections

As recommended in Section 3.2 of the Guidelines, mid-block connections are encouraged within the development to break up long expanses of low density built form and promote permeability in site design. Three (3) mid-block connections have been provided in the proposed development, located within the townhouse block at the north-west corner of the 5034, 5054, 5080 Ninth Line development as well as among the mid rise buildings (refer to Figure 18). These mid-block connection provide a breaks in the building massing, allow for multi-use connections between the internal private street, provide increased accessibility and permeability, and enhance the overall walkability of the community.

These mid-block connection will consist of the following, where appropriate:

- A walkway / multi-use path;
- Edge planting appropriate to the built form interface and providing the appropriate safety setback considerations.
- Reinforcing CPTED principles, the mid-block connection will closely align through two (2) blocks and connecting to the multi-use trail, maximizing pedestrian connection, site lines and natural surveillance.

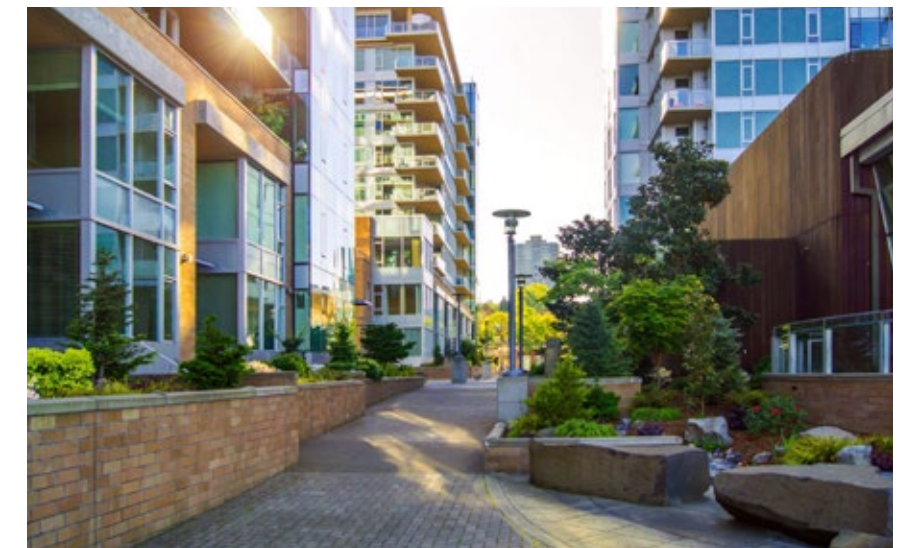


Figure 25: Image example of mid-block connection between townhouses



Figure 26: Image example of compact built form with minimum setbacks from the street that create a pedestrian-friendly environment

3.0 STREETSCAPE DESIGN

Streetscapes support the functional role of the street network by balancing technical requirements with aesthetic and urban design objectives. Along Ninth Line the character of the public realm will be largely influenced by streetscape treatments and planting schemes, which shall correspond with the policies in the Guidelines. Coordinated, consistent, and attractive streetscapes are key to fulfilling the design vision for Ninth Line.

Consistent with City standards, four (4) streetscape conditions are planned within the community, including Ninth Line, the local street (20.0m ROW) and private streets (7.0m ROW). Design objectives should consider the combination of elements within the street right-of-way and the adjacent built form relationships, including:

- Enhancing the community's image and quality;
- Reinforcing a comfortable pedestrian street environment as the main social gathering space for neighbourhoods; and
- Assisting in way-finding, placemaking, and orientation.

These elements and associated guidelines are discussed in the following sections.

3.1 Streetscape Elements

The streetscape plays a key role in promoting and enhancing the identity of a community. A carefully considered combination of elements within the right-of-way can create an inviting and unique public realm experience for residents and visitors. To reinforce the character and identity of 5034, 5054, 5080 Ninth Line development and ensure the safety, comfort and accessibility of pedestrians, cyclists and motorists, the design of streetscape elements shall be coordinated and consistent with the vision established for the whole Ninth Line Corridor.

3.1.1 Street Lighting

Street lighting is an essential element of streetscape design, and the choice of light standards in the 5034, 5054, 5080 Ninth Line development will play a key role in reinforcing the character of Ninth Line's public realm. Private street light standards shall reinforce safe, attractive pedestrian connections.

3.1.2 Planting

Healthy street trees reduce air pollution, provide shade and cooling, furnish habitat for wildlife, increase property values, enhance community aesthetics and pride of place, make streets safer and more walkable, and contribute to quality of life. An effective planting strategy can help establish the character of a community and should relate to the street type and adjacent land use.

Private Roads

On the private roads, small canopy trees or small stature shrubs may be provided on flankages and in between rows of units where space permits.

- Where applicable, tree planting shall comprise hardy species tolerant of urban conditions (pollution/salt/drought tolerant, compacted soils).
- Soil volumes for each deciduous and coniferous tree shall be maximized to encourage long term tree growth and survival.
- Soil shall be of good quality, suitable to the growth of specified trees and vegetation
- Trees shall be planted an appropriate distance from hard surface treatments (driveways, sidewalks, curbs, planter walls) to allow for adequate root growth and buffering from snow piling (salt), compact soils, and impermeable surfaces.

Ninth Line and Public Roads

In compliance with the City's Guidelines, the following guidelines shall be considered when selecting and planting street trees for 5034, 5054, 5080 Ninth Line development along the Ninth Line and the public roads:

- Street tree species shall be selected from the City's approved list of street trees and planted as per City Standards.
- Streetscape treatment shall be typified by trees within a grass boulevard between the sidewalk / multi-use trail and curb.
- The connection between both sides of the street shall be reinforced by pairing species types on both sides to create a consistent canopy and cohesive streetscape appearance.
- Large canopy, coarse-leaved deciduous trees shall be specified in the boulevard for all streets.
- Trees shall be planted at regular intervals at a distance that allows for continuous canopy and appropriate rooting potential.
- Street trees shall be coordinated with lighting, driveways, and below/above-ground utilities to ensure tree planting opportunities are maximized and trees are grown in optimum conditions.



Figure 27: Conceptual Landscape Master Plan of 5034, 5054, 5080 Ninth Line showing the proposed opportunities for street trees along Public Road and Ninth Line

3.2 Built Form & Uses

The 5034, 5054, 5080 Ninth Line development's built form has been designed to comply with the City's Guidelines (Section 4.1 - Residential Building Guidelines / 4.11 Townhouses), City's Urban Design Handbook for Low-Rise Multiple Dwellings (2015) as well as Back to Back and Stacked Townhouses (2018).

3.2.1 Building Typologies

Within the 5034, 5054, 5080 Ninth Line development, the proposed built form includes medium density mid-rise buildings ranging from 6 to 12 storeys with at-grade commercial/retail component placed at key gateway locations, and 3-storey Back-to-Back townhouses. Similar to freehold townhouses, these condominium Back-to-Back townhouse units make efficient use of land, reduce energy consumption, increase the diversity of built form within a community, and provide strategic transit supportive density.

The two (2) typologies proposed for 5034, 5054, 5080 Ninth Line development include the following:

- Back to Back Townhouses (3-Storeys); and
- Mid-rise Condominium Buildings (6-12 Storeys).

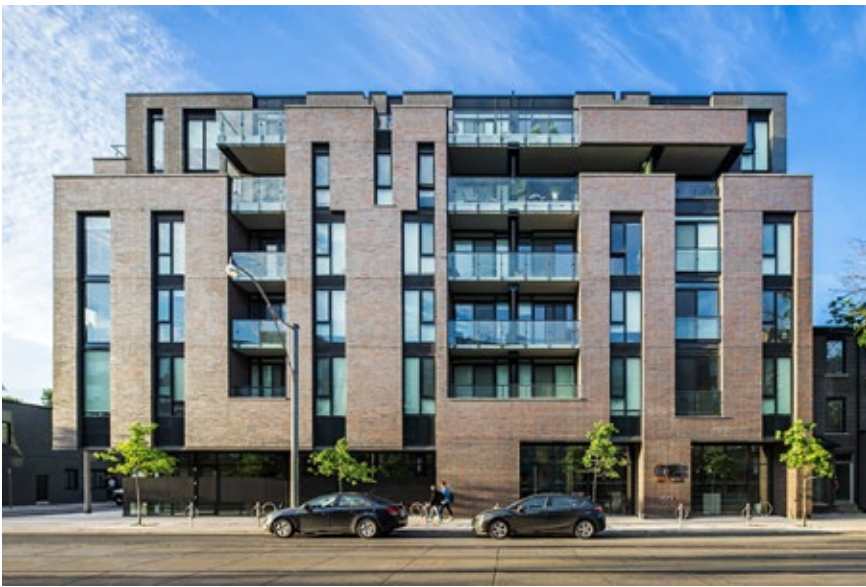


Figure 28: Image example of medium density mid-rise buildings, one of the built form types proposed in 5034, 5054, 5080 Ninth Line, that will contribute to the compact development

Back-to-Back Townhouses

Back-to-back townhouses will be 3-storey structures with parking provided underground and shared with Buildings C and D and vehicular access from within Building C (via Private Road B). A common demising wall is located along the rear of the units, in addition to the traditional interior side walls. The outdoor amenity space is typically provided in the form of a balcony or roof-top terrace. The following design guidelines should be applied in the design of the Back-to-Back townhouses:

- Façades should be designed to incorporate architectural elements found on lower density residential forms, such as peaked roofs, gables, porches, and roof overhangs unless deemed inappropriate to more modern architectural styles;

- The treatment of terraces and balconies facing the Private Road B is critical to the overall design quality of the facade. A well-articulated terrace, balcony and railing design shall be consistent with the architectural theme of the building and shall integrate high quality, durable, and low maintenance materials;
- Privacy screens, coordinated with the design treatment of the townhouse, shall be considered between neighbouring units to provide privacy; and
- Entrances to each unit shall be at-grade, where possible, and accessed with minimal to no stairs, subject to grading constraints.



Figure 29: Example of a front elevation of back-to-back townhouses.

Mid-rise Condominium Buildings

The main built form within the 5034, 5054, 5080 Ninth Line development includes medium density mid-rise condominium buildings. These higher density residential forms are appropriate in establishing an active urban character through an emphasis on building height and massing where intensity of use and a landmark form is desirable, such as is the case for the Ninth Line corridor.

The following design guidelines should be applied in the design of the mid-rise buildings:

- Building heights from 6 to 12 storeys will be permitted;
- Buildings shall be designed to mitigate any negative impact upon surrounding lower density residential development;
- Ground level floor heights are encouraged to be taller than upper floor heights in order to create a strong street presence and provide opportunities for flexible space;
- Building set-backs shall be minimized to relate well to the adjacent roadway and/or open space areas, while allowing sufficient space for a comfortable pedestrian zone and landscaping opportunities;
- Building façades shall provide visual interest through use of materials, colours, ample fenestration, wall articulation and style-appropriate architectural detailing. All façades exposed to public view shall be well articulated and detailed;
- Corner buildings shall provide façades which appropriately address both street frontages; Underground parking is encouraged to avoid unsightly large expanses of parking typically associated with medium density buildings;





Figure 30: Example of landscape treatment around underground parking ramp to mitigate visual impact of facility.

- Underground parking will enable a greater proportion of the site area to be utilized as outdoor amenity space for residents, which is particularly important for seniors-focused dwellings where residents benefit from a closer proximity to these outdoor features;
- Where surface parking is provided, it shall be done so in a non-obtrusive manner, away from areas of high visibility.
- Surface parking areas shall be screened from street views through the use of landscaping (including features such as metal fencing with masonry columns) or building siting to provide appropriate screening;
- Garbage facilities shall be incorporated into the overall design of the building and hidden from areas of high visibility;
- Mechanical equipment shall be screened from public view and integrated into the design of the building; and
- Where a common open space or internal courtyard area occurs, a play facility or seating area shall be integrated within the site to complement the community park amenities.

Commercial and/or Retail Uses

As the key development edge of 5034, 5054, 5080 Ninth Line, the Ninth Line street interface will contain a variety of building uses designed to generate a higher intensity of usage, support future public transit and encourage increased pedestrian traffic levels. This important character area shall be designed in a manner that respects its prominence as the primary gateway into the community, including:

- At street frontages, commercial buildings shall be located and designed to have a positive relationship to the adjacent road, with façades designed to appropriately address, define and relate to these street frontages;
- Display windows and/or glazing shall comprise the majority of the ground/street level portion of the retail/commercial uses;
- Building entrances that strike a balance between direct access from the adjacent street;
- Parking areas that do not dominate street frontages, substantially screened from views by built form and landscape features; and
- Signage, lighting and site furniture shall support a high quality pedestrian-oriented character.



Figure 31: Example of a commercial and/or retail treatment that has a positive relationship to the street.



Figure 32: Example of front façade of the building that directly relates to the street by being sited and oriented towards it with a clearly defined front entry

3.2.2 Building Street Setbacks

A well-defined street edge contributes to the pedestrian-oriented objectives of the community. Attractive streetscapes typically consist of a landscaped (sodded and treed) boulevard with sidewalk adjacent to a defining edge and carefully placed, well-designed buildings. Generally, buildings proposed for the community shall have minimal setbacks to the fronting property line to achieve an urban interface and comfortable pedestrian scaled streetscape. The benefits of addressing Ninth Line through a strong built form relationship is a primary tenet of the Guidelines, and it's a principle that has been incorporated into the community in order to achieve an urban character that *“promotes the highest level of design, including attractive buildings that frame and address the street”*. Achieving a more urban condition translates into positive outcomes related to traffic speed and pedestrian and cycling usage.

- The front façade of the building shall directly relate to the street by generally being sited and oriented towards it;
- Primary building entrances shall be clearly visible and identifiable from the street;
- Building setbacks will define the street edge and shall help create a visually ordered streetscape;
- Minimizing the setback distances to the front property line will increase the interaction of buildings with the public realm and create active street frontages. Minimum setbacks will improve the sense of urban enclosure, reduce the perceived scale of the road and encourage the development of an urban street character, where desired; and
- Corner building conditions should be designed to address both street frontages in an equally enhanced manner.

3.2.3 Height & Massing

Height and massing that is appropriate to the context of the street is key to achieving a pedestrian-friendly, comfortable scale environment. Building massing shall transition from the medium density areas to lower density areas by providing designs which result in a harmonious streetscape massing. Buildings adjacent or opposite one another should be compatible in massing and height. Extreme variation in massing should be avoided. Medium density residential forms planned for the majority of the development will help to establish an active urban character throughout the community and achieve a transit-supportive density. The building design and articulation will further provide architectural expression that relates to the character of its surroundings and includes elements and materials that support a safe and active pedestrian presence.

The façade of the mid-rise building types is composed of:

- Base: located at the podium level, and defined from the ground plane to a horizontal line on the lower façade such as a water table, window sill or the entire ground floor level.
- Middle: defined by a wall stepped back from top of building, extending to bottom of the building and articulated by fenestration, projections and recesses.
- Top: defined at the top of the building by a cornice line, articulated upper floors, parapets or an ornamental form.



Figure 33: Taller buildings will be designed to respond to their surrounding context, including gradual stepping of massing

BUILDING TOP (CAP)

BUILDING MIDDLE

BUILDING BASE (PODIUM)



Figure 34: Example of building designs located in close proximity to open spaces will provide a gradual and appropriate physical transition through generous facade staggering and varied massing so as to avoid overwhelming the skyline

Building Base (Podium)

Where no street wall has been established inside the development, the podiums will be set back at grade, to create wide boulevards that accommodate pedestrians, landscaping, and active at-grade uses. The use of clear glazing and the strategic arrangement of internal building uses will also facilitate visual connections between the public and private realm. The ground floors will therefore contain a mix of services which may include health and wellness services, multi-purpose rooms, administrative offices, concierge, lounge areas, and publicly accessible retail, office and commercial areas. The combination of clear views into the buildings and articulated entries are meant to facilitate a safe environment for building occupants and pedestrians and encourage activity in both the public and private realm.

Building Middle

As the most substantial and visually prominent component of a taller building, the building middle should be designed to enhance the skyline. This building element will be set-back further away from main street, parks and neighbouring residential properties to allow the podium element to become the defining element for the public realm. The height and massing of the building's middle element will provide a gradual and appropriate physical transition to help mitigate negative impacts of the redevelopment onto the adjacent established or planned land use conditions.

This design consideration will be especially prevalent along the northern edge of the development along Ninth Line and at the interface of the Public Park. This area of the development will utilize generous facade staggering to create a gradual skyline transitions and will also not result in adverse wind effects at the street level.

Building Top (Cap)

Most tall building act as an urban backdrop and frame existing landmarks or public open spaces. Under these circumstances, the design of the top of taller buildings can make a positive contribution to the character and quality of the skyline by supporting the overall architectural vision of the architectural design. To clearly distinguish the top of the building from the building's middle, and to further reduce the building profile, the design of the upper floors will include stepbacks, material variations and/or unique articulation. In addition, in order to protect and enhance the views from the surrounding area and the neighbouring buildings, rooftop mechanical equipment will be sized and located away from public view. By stepping the mechanical equipment no less than 3.0 metres from the edge of the floor below, will allow for proper built form integration and screening.

3.2.4 Transition to Adjacent Neighbourhoods

In accordance with the City's Guidelines, the development provides appropriate transitions to the existing neighbourhoods to the east by minimizing potential land use impacts, enhancing views from adjacent lands, and demonstrating distinct and suitable design for all buildings, streets, and open spaces. The podium massing that forms the base of the medium density buildings fronting onto Ninth Line is proposed to provide a smooth and complementary transition to the 3-storey low density residential anticipated in the development directly across from the 5034, 5054, 5080 Ninth Line development, along the eastern edge of Ninth Line.



Figure 35: Building tops provide an opportunity for creative expression. The surfaces at the top can therefore be different from the lower reaches of the building where more prominent lighting, colours and textures might be an issue.



Figure 36: Example of building transition located in close proximity to open spaces that provide a gradual and appropriate physical transition through generous facade staggering and varied massing so as to avoid overwhelming the skyline.



Figure 37: Examples of building designs that through the use of well articulated architectural elements such as exterior materials, canopies and building entrances create a positive and cohesive pedestrian-scaled streetscape

3.2.5 Exterior Materials, Colours & Detailing

The use of high quality wall cladding materials reflective of the architectural style of medium density built form will be required to contribute to the character of the development. Building design and articulation shall therefore provide architectural expression that relates to the character of the Ninth Line Corridor identified in the Guidelines and include elements and materials that support a safe and active pedestrian presence.

The use of clear glazing and the strategic arrangement of internal podium level building uses is intended to create a visual connection between the public and private realm. The combination of clear views into the buildings and articulated entries are meant to facilitate a safe environment for building occupants and pedestrians and encourage activity in both the public and private realm. Each building type should be articulated with high quality materials and design elements that contribute to a pedestrian scale. Elements like window bays, over-hangs, canopies, ample fenestration and exterior material patterns will also play a key role in articulating a relationship to the neighbouring structures. Any blank walls will be avoided and subject to the same design considerations as the more publicly visible building facades.

3.3 Sustainable Design Strategies

3.3.1 Sustainable, Compact & Low Impact Development

The proposed 5034, 5054, 5080 Ninth Line development supports and promotes sustainable design, low impact development (LID), and complies with the sustainability policies of the Guidelines, specifically 4.71 Site Design and 4.72 Neighbourhood Design. While the community design and built form will encourage energy efficiency to achieve sustainable living practices, the site plan will also address environmental sustainability principles such as the preservation of natural features, reduction of hard surfaces and addition of extensive landscape open spaces with focus on the community park.

As a critical component of a sustainable development, the 5034, 5054, 5080 Ninth Line development has been designed as a transit- supportive, pedestrian friendly community that emphasizes walking, and supports the adjacent future neighbourhoods along the Ninth Line Corridor. This interconnected trail system runs along Ninth Line and the east side of the development with internal linkages throughout. These pedestrian connections and the inter-connectivity of open spaces and amenities to the broader community scale are important features that help reduce car dependency and encourage alternative modes of circulation. In addition to establishing a compact urban structure, related medium densities will further reinforce transit supportive objectives for Ninth Line.

Some of the opportunities to implement key aspects of sustainability and low impact development features within the 5034, 5054, 5080 Ninth Line development are listed as follows:

- The community will promote the efficient use of land and develop in a compact efficient built form that promotes walkability and regional transit accessibility.
- Vegetative swales will be located along the north property border and at key sections along the MTO transitway corridor setback.
- Site circulation and parking configurations shall be efficiently designed to reduce excessive drive widths and hard surface areas, where possible.
- The community shall minimize the extent of hard surface areas in favour of (vegetated) landscaped areas.
- New buildings should use green building technologies for mechanical systems, energy needs, and construction materials.
- The built form shall be efficient through the use of environmentally responsible design and construction practices.
- Lighting levels should be reduced to minimum requirements to reduce impact on sensitive fauna.
- Bicycle racks shall be provided in the amenity area to encourage alternative modes of transport.
- Natural drainage networks should be maintained to support stormwater management infrastructure.
- To meet the City of Mississauga water balance targets for the development, enhance groundwater recharge and reduce runoff peak flows and volumes from the site, the following measures are proposed:
 - Potential permeable pavement in the amenity area.

4.0 SUMMARY & CONCLUSIONS

The purpose of this Urban Design Study was to demonstrate the compatibility of the development proposal with the surrounding context and to address the City's planning and urban design principles and objectives as outlined in relevant policy documents, including the City's Official Plan, the Ninth Line Neighbourhood Character Area Policies and Zoning, and the Shaping Ninth Line Urban Design Guidelines. In response to the City's Urban Design Study Terms of Reference and the site specific requirements for the 5034, 5054, 5080 Ninth Line development, this document was structured to provide an overview of the goals and objectives, followed by a detailed analysis of the proposed development, demonstrating how urban design principles and objectives will be achieved on Mississauga's last remaining greenfield site.

The 5034, 5054, 5080 Ninth Line development described in this study will be a transit-supportive, pedestrian-friendly, sustainable development with a compact urban structure that encourages walking and cycling through an interconnected active transportation network. Reflecting the municipal policy direction, and the built form and land use vision established in the City's Guidelines, the development plan proposes a development that supports an active, diverse, and healthy community.



Figure 38: 5034, 5054, 5080 Ninth Line development will provide a range of housing choices that achieve transit supportive density and a network of active transportation links and open spaces that will contribute to a healthy, sustainable community

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