Ninth Line South

URBAN DESIGN STUDY (PHASE 2)

CITY OF MISSISSAUGA AUGUST 2022

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NAK design strategies

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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 subject lands described in this study are 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 1.0a - Ninth Line will be an active, diverse, and healthy community, reflecting contemporary best practices in urban design.

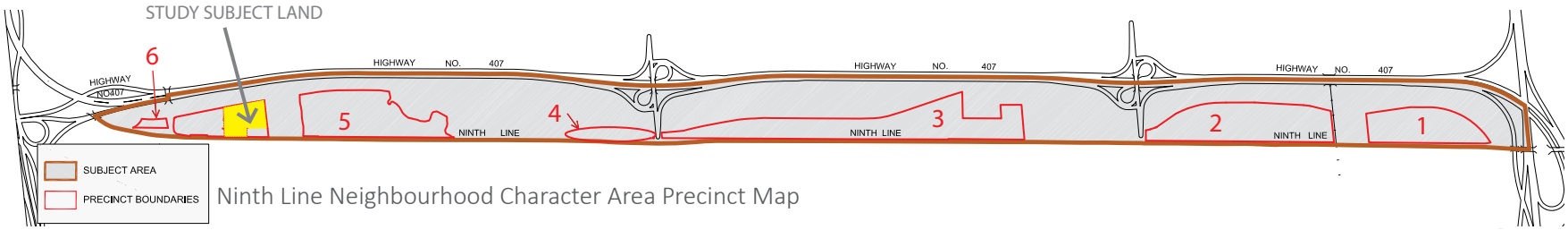

Figure 1.0b - Ninth Line Neighbourhood Character Precinct Map (Source: Ninth Line Urban Design Guidelines) and Location of Subject Land

Study Purpose & Document Structure

The purpose of the Ninth Line South 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. While this Study has been prepared in support of the Phase 2 submission, the entire Ninth Line South parcel (Phase 1 and Phase 2) has been designed as a whole, and will therefore be analyzed and presented in its entirety throughout this document.

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

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.

2.0 Analysis of the Proposed Development - Provides details on site design, built form and uses, access, circulation, and sustainable design strategies.

3.0 Summary and Conclusions - Provides a summary of the main points of the Urban Design Study for consideration.

> The area will be planned to support transit and the natural environment to create a healthy and complete community. Existing and future Ninth Line, Lisgar and Churchill Meadows residents will have access to a well-connected and sustainable natural heritage system, multi-use paths, parks and open spaces, higher- order transit, community uses and facilities. A variety of housing choices and employment opportunities to meet their needs will also be accommodated.
>
> Mississauga Official Plan – Part 3, 16.20.2.1 Vision

Figure 1.0c - Shaping Ninth Line Urban Design Guidelines

1.1 Goals and Objectives

The vision for the overall Ninth Line lands is based upon a corridor that protects the natural heritage system and the stable neighbourhoods to the east, and directs compact development where it will be transit supportive. The natural heritage system is interwoven, with parks and open spaces, into a linked greenway system that connects the entire Ninth Line corridor together, including open spaces, trails, and future transit stops in the neighbourhoods to the east. These safe, healthy, and vibrant parks, trails, and streets enhance the range of sustainable mobility for pedestrians, bicyclists, and transit riders. A street and public space framework directs the location of a diverse series of distinct, well designed neighbourhoods. The massing and scale of the built form in each location is oriented to appropriately transition with existing neighbourhoods, frame open spaces, and connect the entire community together and to the interregional transit network.

In line with the Guidelines' broader goals, the following key objectives will be fundamental to developing Ninth Line South:

BUILT FORM

- Provides appropriate transitions to the neighbourhoods to the east
- Recognizes the significance of cultural heritage sites and landscapes

CONNECTIONS

- Integrates a network of trails that link open spaces and key destinations

PARKS, OPEN SPACES AND NATURAL HERITAGE

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

Figure 1.1a - Image example of medium density residential development with units fronting onto an amenity area.

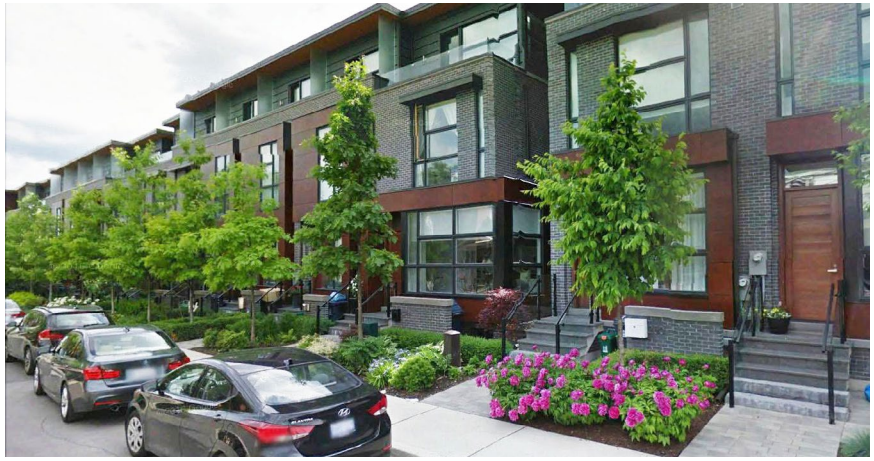

Figure 1.1b - Image example of well articulated architecture with an urban interface to the street.

Guiding Principles

The following summary of the Guiding Principles for the overall development of the Ninth Line lands as an interconnected whole provides a framework for shaping the proposed development for Ninth Line South.

A network of sidewalks and/or multi-use paths will link open spaces and key destinations, providing for direct connections to existing networks outside the Ninth Line Lands.

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 woodlot on the north side of the proposed development will be maintained and protected, with views and visual connections from open spaces 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 concept will promote development that provides a mix of housing 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

1.2 Analysis of the Existing Site and Neighbourhood

Site Context

Located on the western limits of the City of Mississauga, the Ninth Line lands are bounded by Highway 401 to the north, Ninth Line to the east, the Highway 407 / Ninth Line crossover to the south, and Highway 407 to the west. The area comprises a total of approximately 370 hectares (914 acres). To the east of Ninth Line, the Lisgar neighbourhood (north of Britannia Road) is an established residential community. This low density residential neighbourhood is an important consideration in the planning of new land uses, built form, connections, and open space linkages.

Within the broader Ninth Line development area, the subject lands (Ninth Line South) are located in the southern portion of this development, south of Erin Centre Boulevard and north of Eglinton Avenue West, encompassing approx. 9.4 ac (3.8 ha). Ninth Line South is bordered by Ninth Line to the east, and the future Transitway to the west, with Greenlands situated on the west side of the Transitway. In the immediate surrounding context, an existing woodlot is situated north of the site, with future community centre lands further north. These surrounding natural features and open spaces provide an opportunity to integrate a network open spaces and trail connections as distinctive features of the proposed development and to the benefit of the overall community area. Southeast of the subject lands, a heritage home and property will be preserved and a landscape buffer shall be provided to ensure an appropriate transition between this historical feature and the future community.

Figure 1.2a - Aerial of Ninth Line Character Area and location of the Subject Lands

Figure 1.2b - Northeast view of existing woodlot from Ninth Line

Figure 1.2c - Southwest view of existing conditions on subject lands

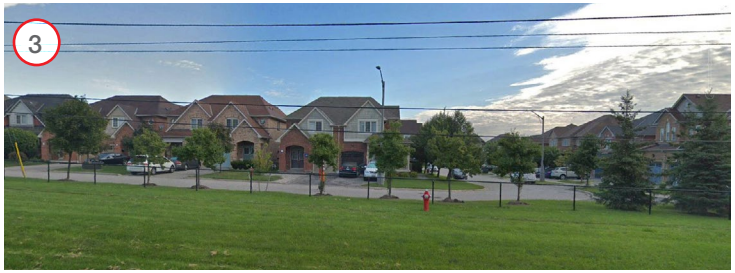

Figure 1.2d - East view of window street along Ninth Line

Figure 1.2e - Northwest view of the heritage house from Ninth Line

Figure 1.2f - Aerial of Subject Lands and Local Surrounding Context

Surrounding Public & Private Open Spaces

As part of the Official Plan policy, the open space system in Ninth Line, as well as its links to the surrounding community, provides a network of recreational amenities that will encourage walking and cycling connections. Surrounding open spaces to the north and east of Ninth Line include a network of parks, natural open spaces, stormwater ponds, and schools, and shall be well-linked with the proposed development. The proposed amenity area at the south end of the subject lands shall complement the Ninth Line Community's overall parks and open space system providing a passive and active open space that is immediately accessible to residents in Ninth Line South.

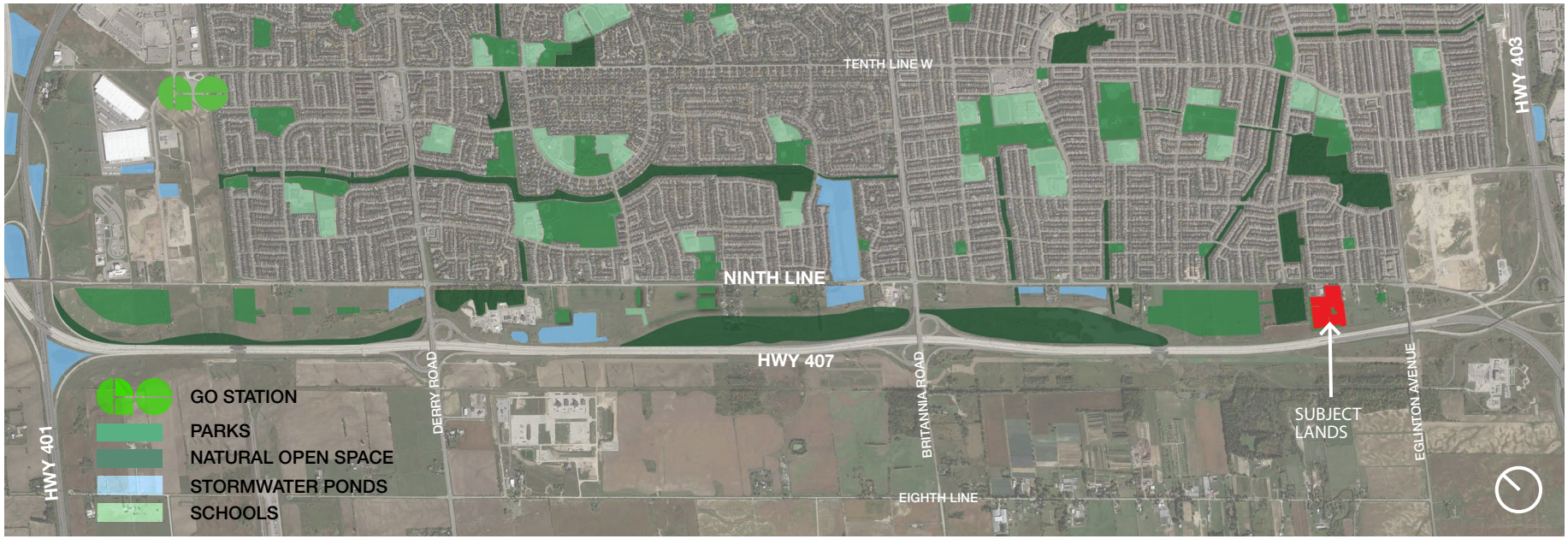

Figure 1.2g - Surrounding Public and Private Open Spaces

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 paths in the adjacent neighbourhoods to the east (refer to figure 1.2h 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.

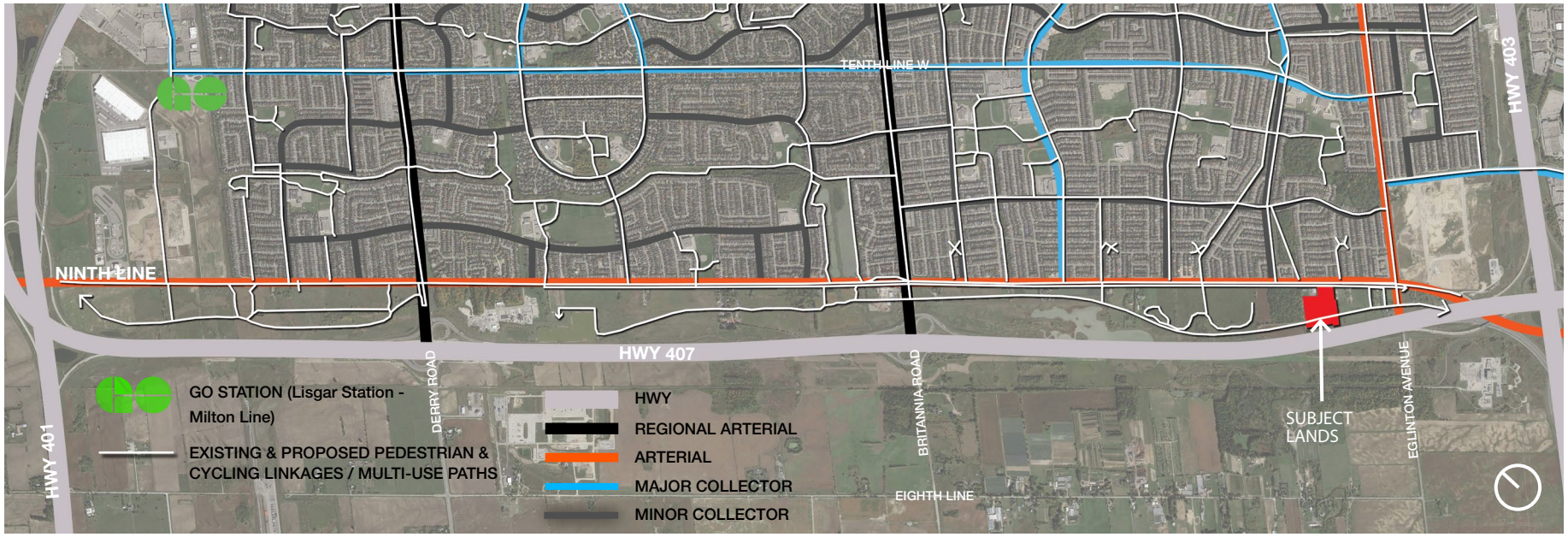

Figure 1.2h - Existing and Proposed Transportation and Pedestrian / Cycling Network

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.

Figure 2.0a - Image example of street townhouses in a contemporary style.

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.

Figure 2.0b - Rendering example showing the proposed sidewalk and multi-use path along Ninth Line with townhouse massing that frames the street and provides an urban front door relationship that increases 'eyes on the street.'

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;
- An urban front door relationship with Ninth Line engages the street and provides a more interesting and attractive streetscape environment that will better encourage pedestrian and cycling use ;
- 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 2.1l);
- The arrangement of land uses along Ninth Line, including a range of townhouse dwellings in the subject lands, provide an interesting balance of fronting 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 east side of Ninth Line is somewhat disengaged from the street as it is characterized by suburban conditions that include flankage lotting and window streets. 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 front doors along Ninth Line will help alleviate this perception as noted above.

> "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

2.1 Site Design

Within the subject lands, the Ninth Line South community 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 Ninth Line South Phase 2 development aligns with Sections 3.1.3 and 3.2.1 of the Guidelines, with specific reference to the following:

- Trails should link to core activity areas, such as community centres, and they should create strong links between neighbourhoods, open spaces, and natural heritage features.
- New streets reinforce a well-connected grid system, including direct connections to the east side of Ninth Line, to provide convenient connections and promote permeability throughout the Ninth Line lands and the broader community.
- To facilitate a well-connected grid network, mid-block connections are frequent and the site design does not include any 180m blocks without connections.

In accordance with Section 3.1.2 of the Guidelines (Public Open Space), the parks and open spaces in the proposed development have been located and designed to ensure safe and active use, walkable distance, and to reinforce a connected network of open spaces.

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 Ninth Line South lands.

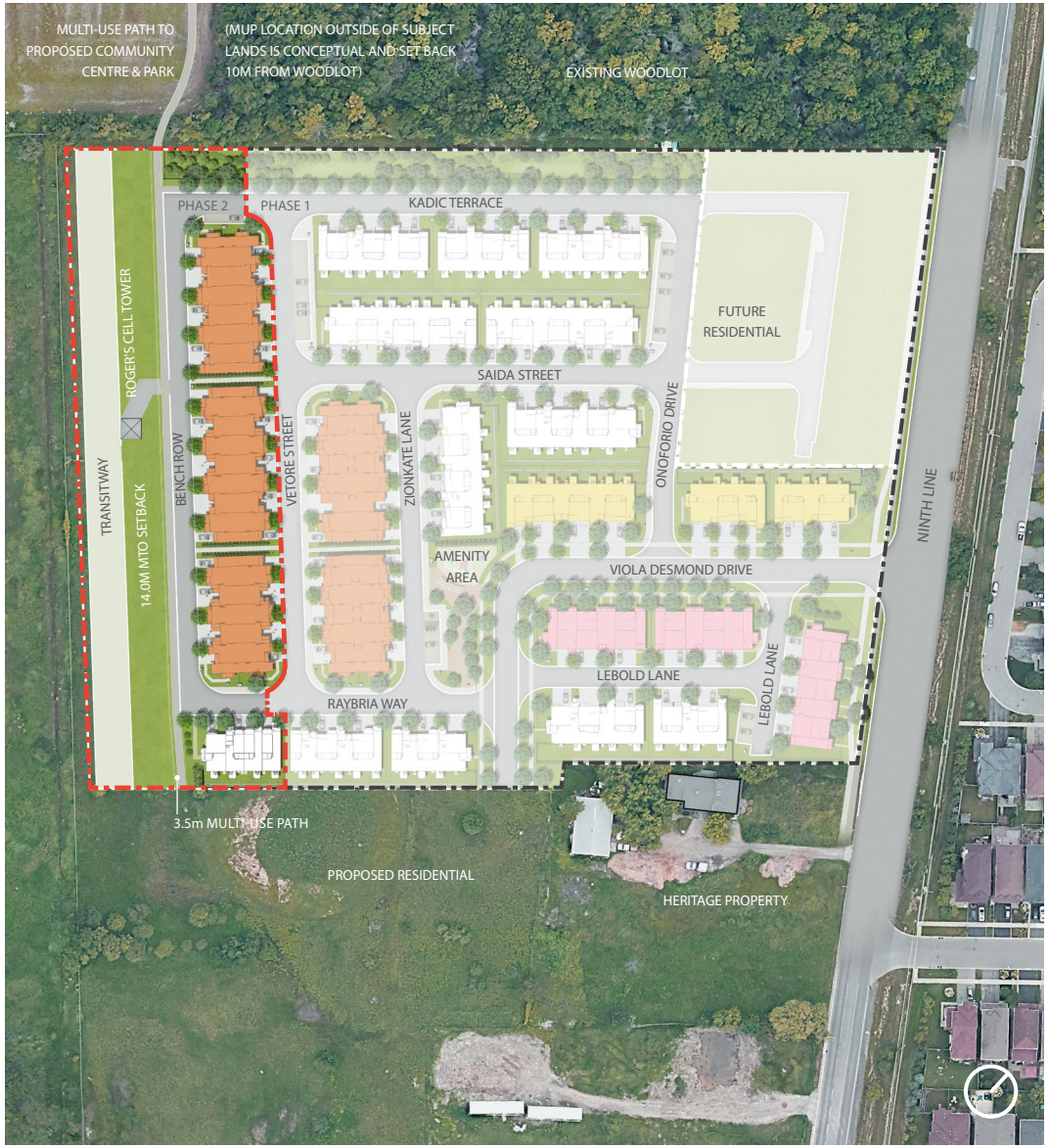

Figure 2.1a - Ninth Line South Community Conceptual Site Plan

Land Uses

The proposed community is planned as a medium density residential development with a range of 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 Ninth Line.

The Ninth Line South plan consists of:

- Blocks with various styles of medium density residential units (street townhouses, dual front townhouses, back-to-back townhouses) following a modified grid street pattern with varied block lengths.
- Compact, walkable private roads and blocks.
- A minor collector that provides entry into the community from Ninth Line and connects to the future community to the south.
- A publicly-accessible privately owned amenity area for residents, integrated within the land use fabric.

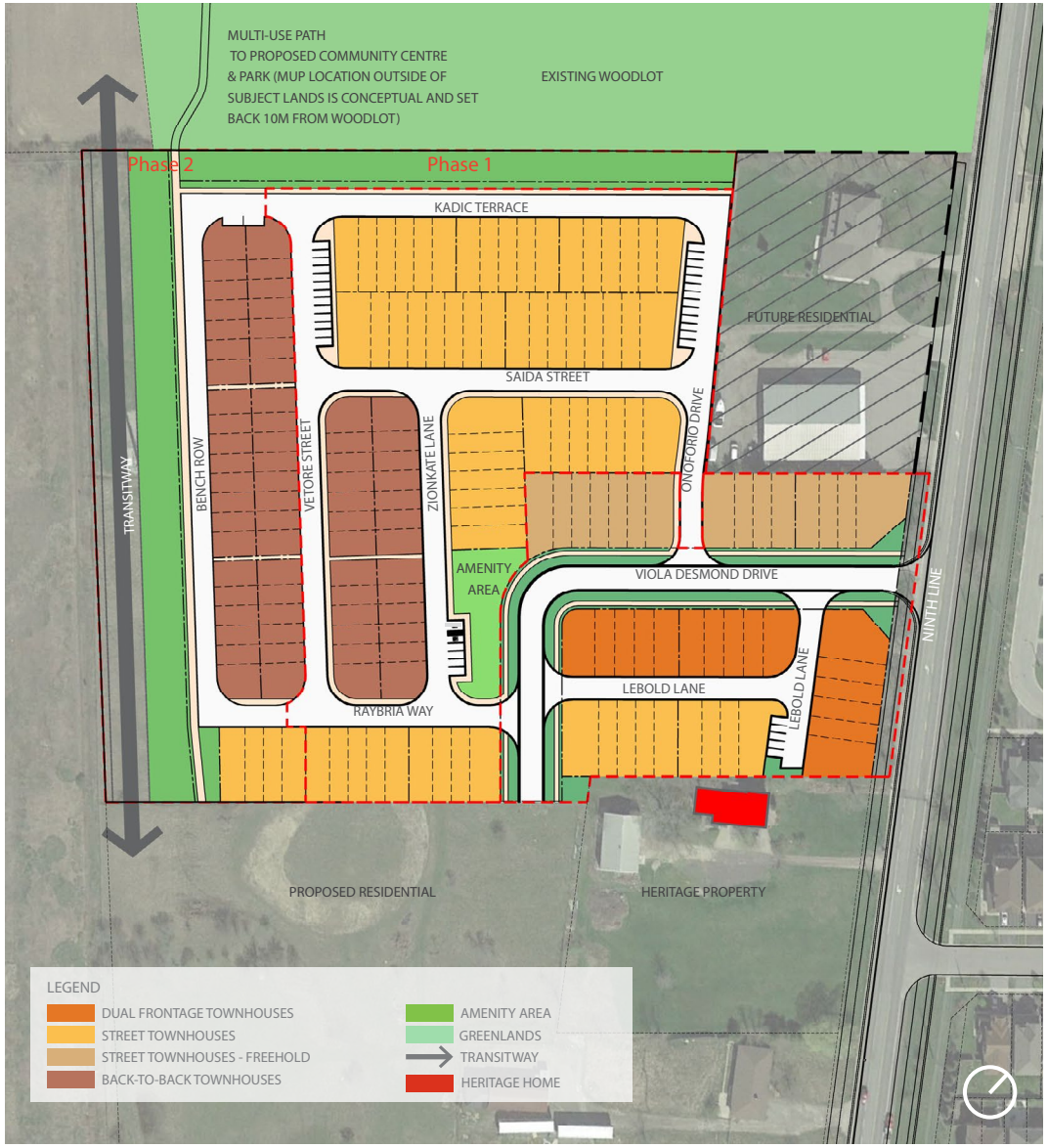

Figure 2.1b - Ninth Line South Community Land Use Plan

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 east side, and the built form should provide a street facing condition that aligns with the Guidelines and other City policies.
- Proposed Local Road - Provides the vehicular and pedestrian connection to Ninth Line and the adjacent future community to the south.
- Proposed Internal Private Roads - Provide the key internal connections within the community.
- Open Space & Park Features - Includes the amenity area and public walkways, which largely define community interfaces and views.
- Proposed Multi-Use Trail - Incorporates a north-south multi-use path in Phase 2, which connects the adjacent development to the south to the subject lands and the proposed community centre and park to the north.
- Heritage Property - Abutting the southeastern corner of the subject lands.
- Neighbourhood Gateway - Located at the public access road that forms the primary entry into the site.

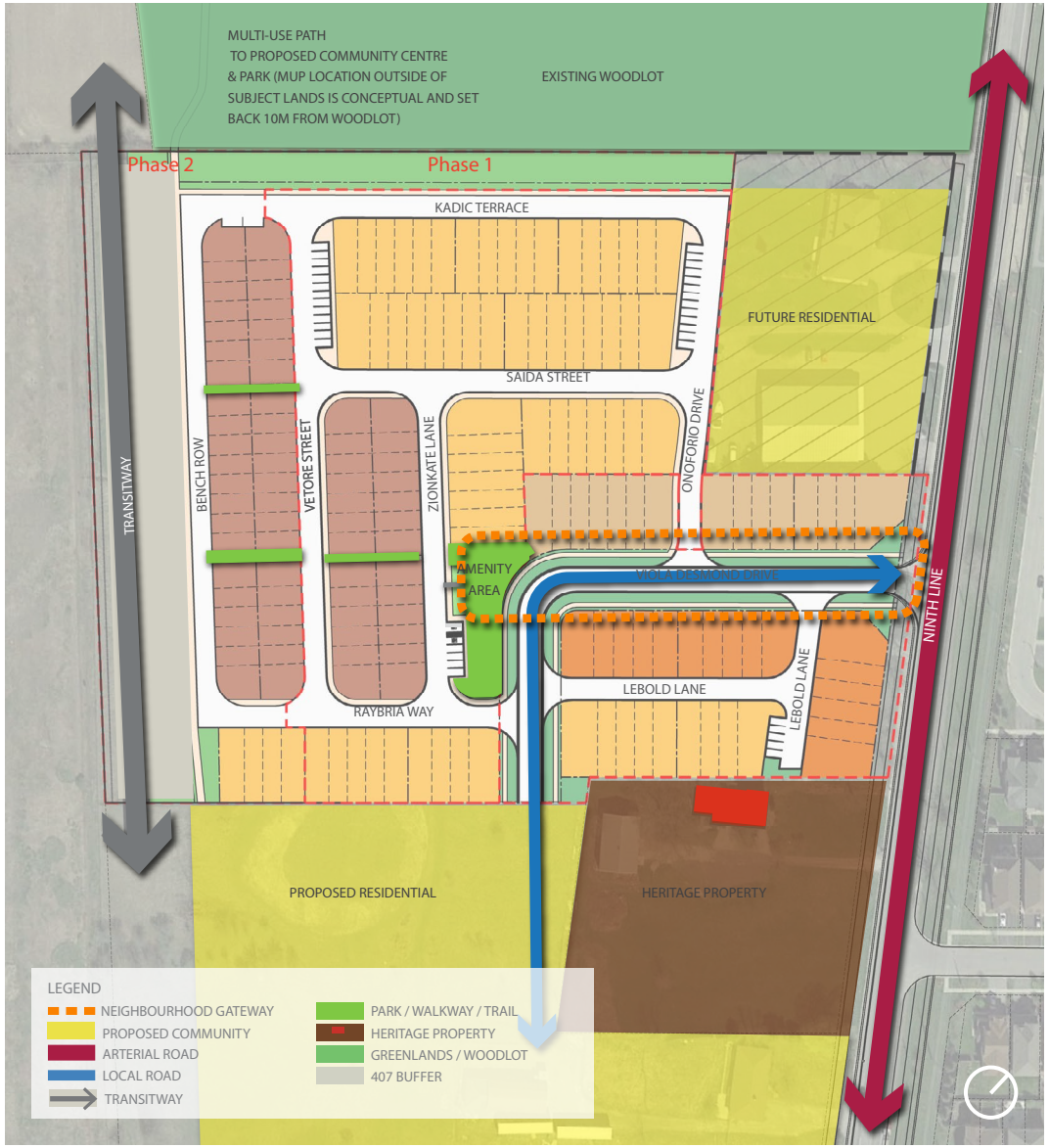

Figure 2.1c - Ninth Line South Community Structuring Elements Plan

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 public 20m R.O.W. local road that connects to Ninth Line, as well as the future community to the south.

Internal private roads (7m asphalt surface) 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:

- Arterial Street - Ninth Line (35m R.O.W.)
- 20m Local Road - frontages on both sides
- 7m Private Road - frontages on both sides
- 6.6m Private Road - frontage on one side

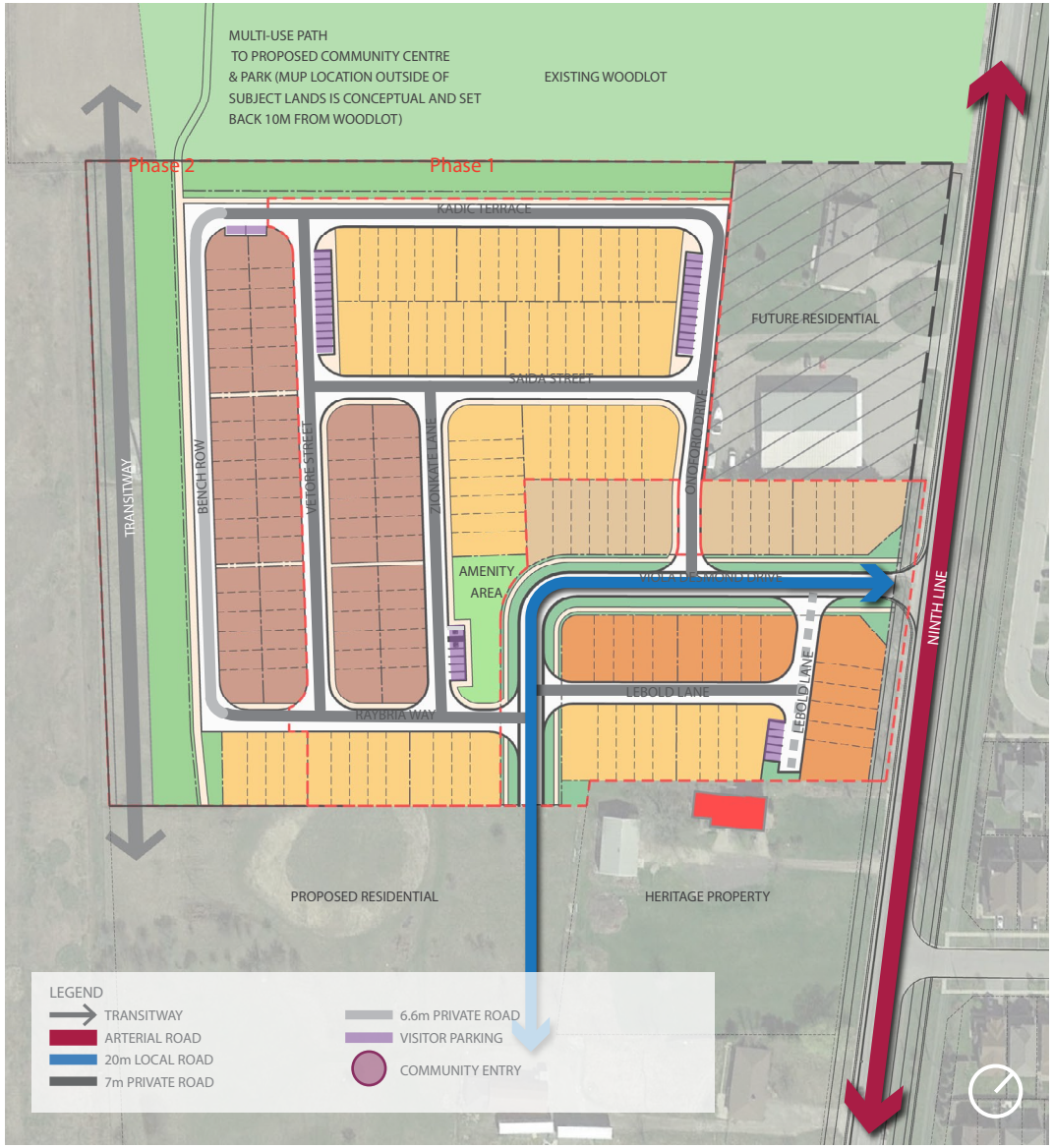

Figure 2.1d - Ninth Line South Community Road Network, Vehicular Access and Circulation Plan

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 path 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.

- Safe and logical connections will be provided to the future sidewalks / multi-use paths, to the future community to the south, and to the proposed community centre and park to the north.
- Active transportation with the future Transitway station is achieved through the internal pedestrian connections to the north and south multi-use path network.

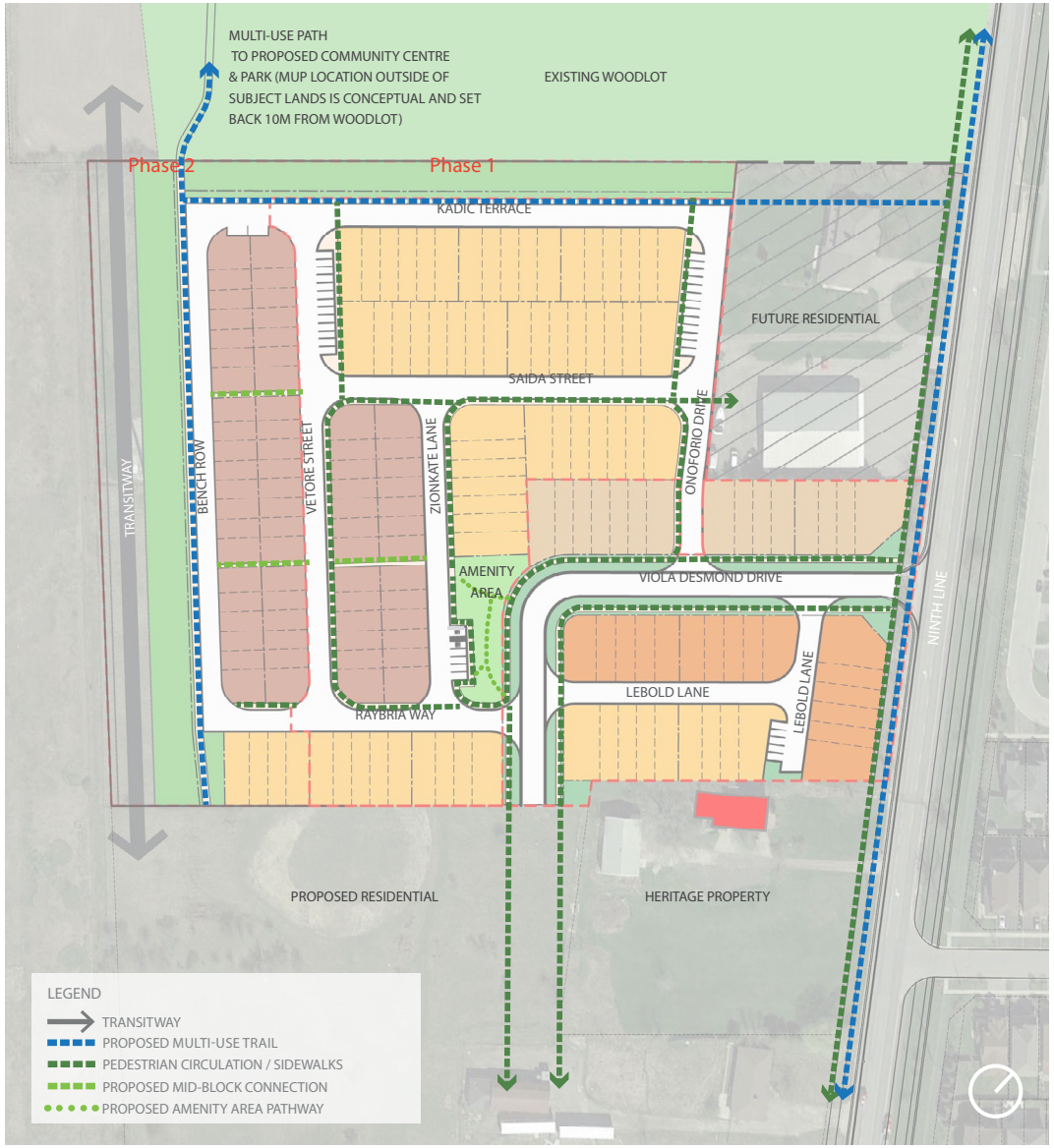

Figure 2.1e - Ninth Line South Community Pedestrian Circulation Plan

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 paths 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 path on Ninth Line continues in the right-of-way, with a portion included within the Transitway setback, providing an important active transportation link between neighbourhoods. This primary trail network offers regional connectivity, complemented by internal pedestrian and cyclist linkages to the future multi-use path networks.

The proposed multi-use path along the western development limit, running parallel to the 6.6m private road and the Transitway, provides a connection from the future community to the south to the proposed community centre and park to the north. This multi-use path is proposed at a total width of 3.5m (with 2.5m within the right-of-way and 1.0m within the Transitway setback), which is sufficient considering its function as a secondary trail network, primarily utilized by residents within the community, and its proximity to the substantial multi-use path along Ninth Line.

Figure 2.1f - Image example of multi-use path integrated within a buffer.

Figure 2.1g - Rendering example of a multi-use path adjacent to an arterial road with a strong built form relationship.

Mid-Block Connections

As recommended in Section 3.2 of Guidelines, mid-block connections are frequent and the site design does not include any 180m blocks without pedestrian connections. Three (3) mid-block connections are provided in the proposed community, and are located in the back-to-back blocks from the private roads. These mid-block connections provide breaks in the townhouse massing, allow for multi-use connections between the internal local streets, providing increased accessibility and permeability, and enhancing overall walkability of the community.

Mid-block connections 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 connections are closely aligned through two (2) blocks at the north end of the amenity area, maximizing site lines and natural surveillance.

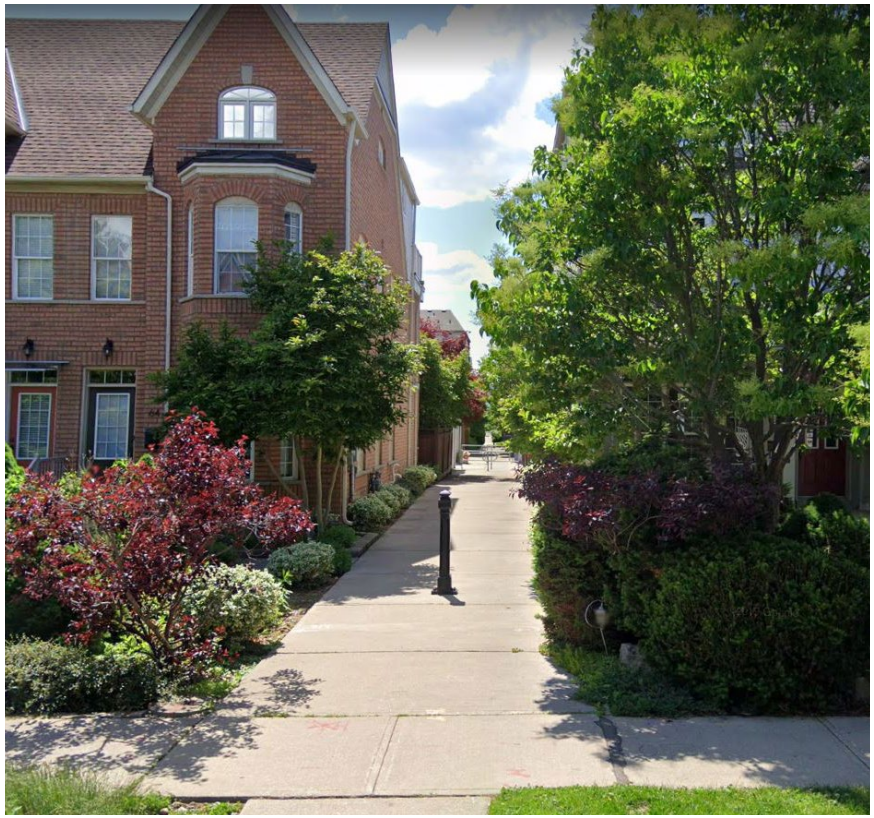

Figure 2.1h - Image example of mid-block connection between townhouses.

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 (20m R.O.W.), and private streets (6.6m & 7m).

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 section.

Figure 2.1i - Image example of compact built form with minimum setbacks from the street that create a pedestrian-friendly environment.

Streetscape Elements

Ninth Line and Public Road

In compliance with the City's Guidelines, the following guidelines shall be considered when selecting and planting street trees for Ninth Line and the local road:

- 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 path 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.

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.

Street Lighting

Street lighting is an essential element of streetscape design, and the choice of light standards in the community 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.

Figure 2.1j - Conceptual Plan of Block 23 showing the proposed back-to-back townhouses and opportunities for small canopy trees or small stature shrubs on flankages and in front of units, where space permits.

Concept Street Sections

The streetscape sections on the following pages illustrate the relationship between built form and the key street typologies, the future Transitway corridor, the existing woodlot, and the heritage home to the south.

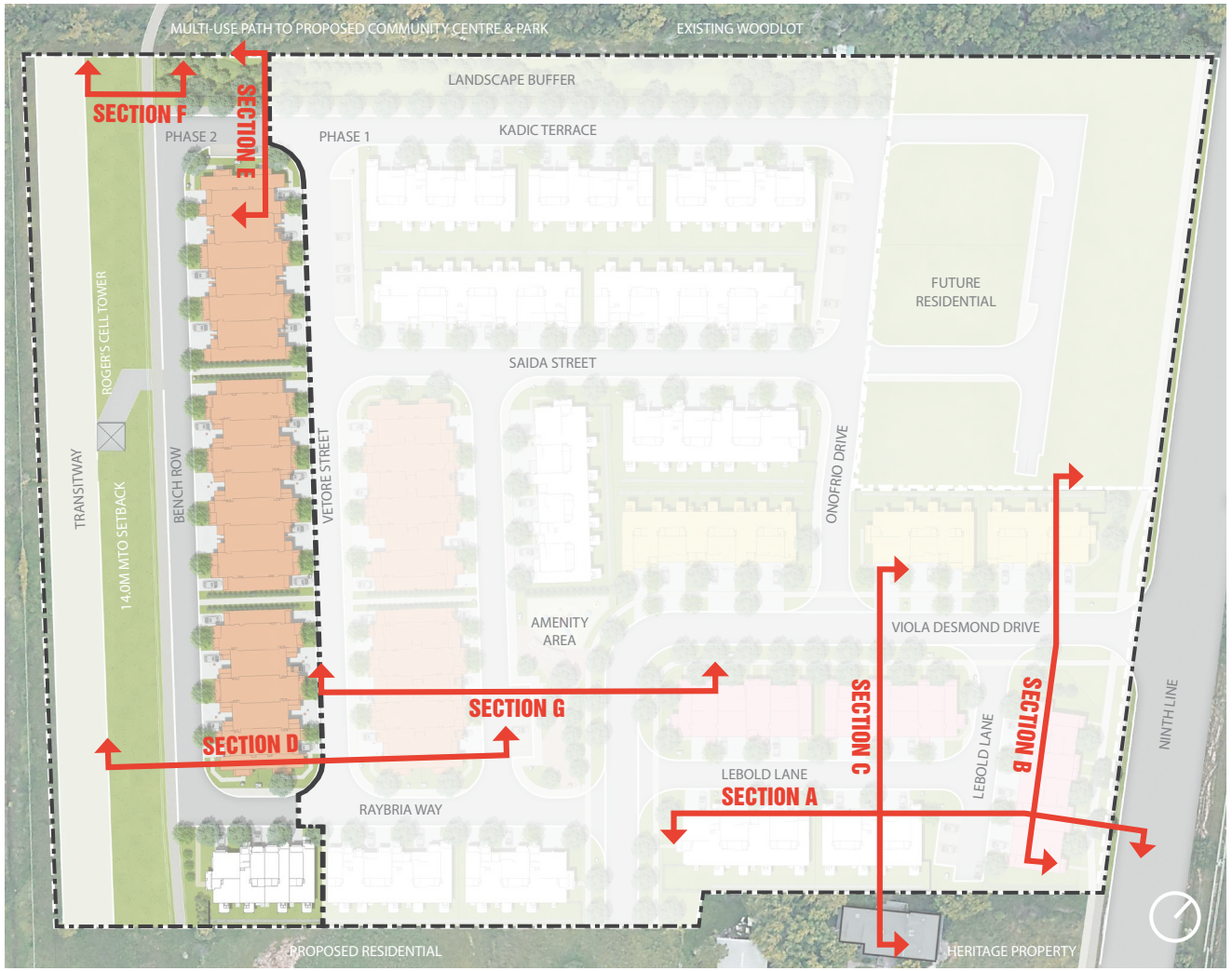

Figure 2.1k - Key plan indicating the location of sections (refer to figures 2.1l - 2.1R)

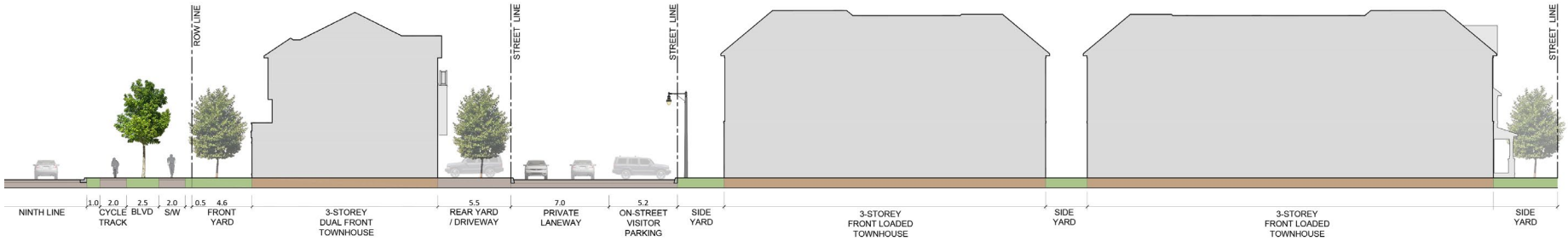

Figure 2.1l - Section A: Dual front townhouse interface with Ninth Line

Figure 2.1m - Section B: 20m local entry road from Ninth Line

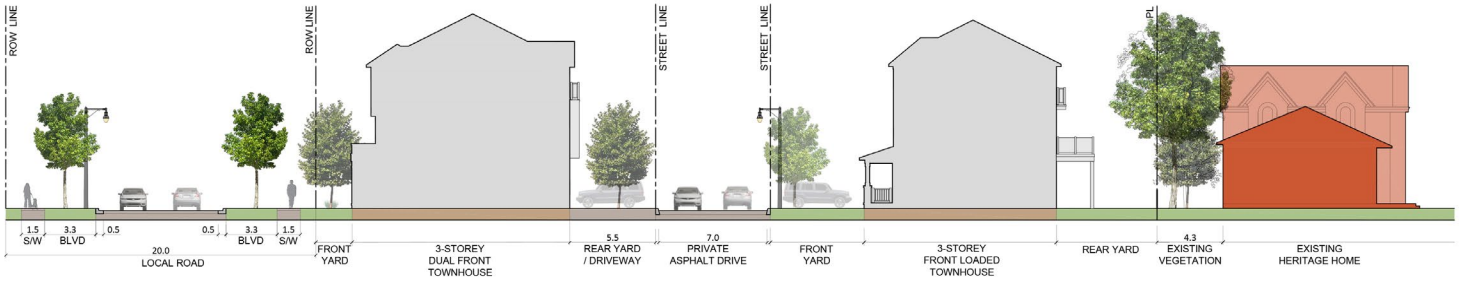

Figure 2.1n - Section C: Townhouse interface with heritage home on adjacent property

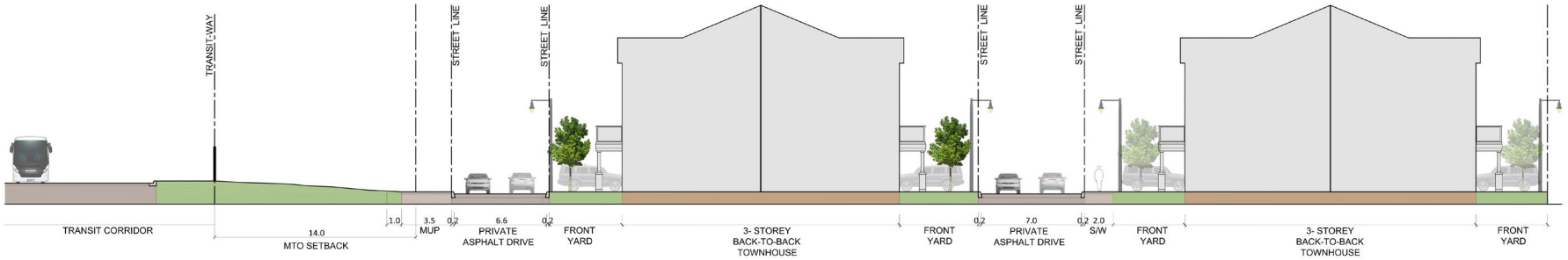

Figure 2.1o - Section D: 6.6m private road interface with buffer and Transitway corridor

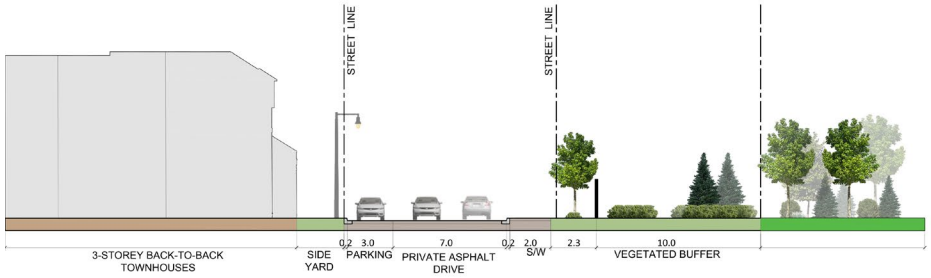

Figure 2.1p- Section E: 7m private road interface with existing woodlot and landscape buffer

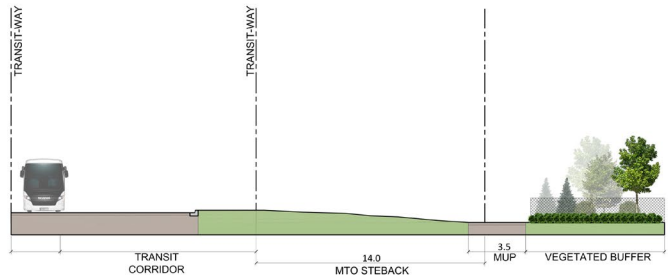

Figure 2.1q- Section F: 3.5m multi-use path through landscape buffer

Proposed Amenity Area

The proposed 688m^2 amenity area is provided in the community to offer accessible green space for all residents. It may consist of small gathering spaces and a formal seating area with shade structure, to stimulate social congregation, offer rest and shade, and provide visual landmarks that contribute to the streetscape. The proposed parkette is well situated with public street frontage and easy access for residents of the community. It has been situated at the terminus view from the local road that connects to Ninth Line and the future community to the south. The landscape design of the amenity area complements the streetscape on the adjacent local road with a harmonious planting strategy, and walkways connected to sidewalks on the east, west, and south side. (refer to Figure 2.1s).

The following design features shall be considered:

- Lawn(s) that provide unprogrammed, passive recreation opportunities;
- Junior playground;
- Shade structure, seating, bicycle parking and decorative paving;
- Safe multi-use paths and pedestrian/cyclist connections;
- Community mailboxes in a convenient, accessible location;
- Hard and soft landscape elements to identify areas of activity and circulation;
- Lighting provided for pathways and any shade structure, as required; and
- More formalized planting structure and/or ornamental planting beds.

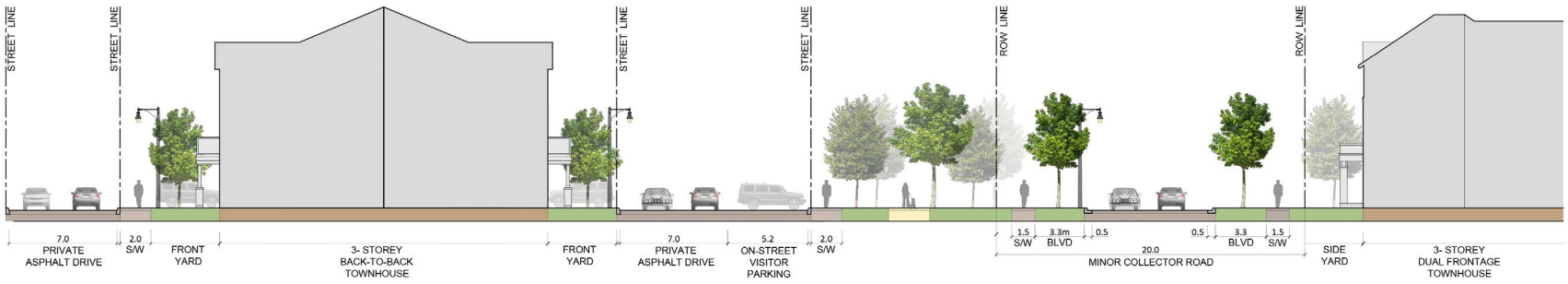

Figure 2.1r - Section G: The proposed amenity area and its relationship to the public street

Figure 2.1s - Conceptual Plan for the Ninth Line South Amenity Area

2.2 Built Form and Uses

The community's built form has been designed to comply with the City's Guidelines (Section 4.1 - Residential Building Guidelines / 4.11 Townhouses), as well as the City's Urban Design Handbook for Low-Rise Multiple Dwellings (2015) and the DRAFT Urban Design Guidelines for Back to Back and Stacked Townhouses (March 2017).

Building Typologies

Within the subject lands, the proposed built form includes a range of medium density 3-storey townhouses. Similar to freehold townhouses, these condominium 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 three (3) typologies proposed for Ninth Line South include the following:

- Back-to-back Townhouses
- Street Townhouses
- Dual Front Townhouses

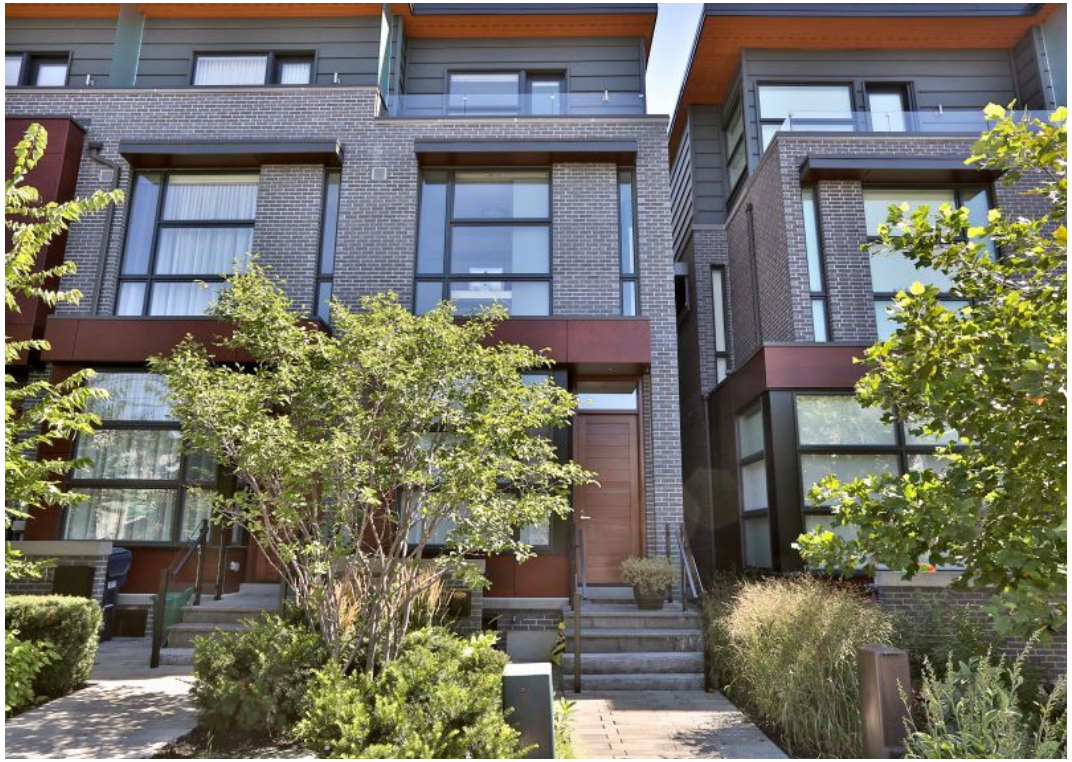

Figure 2.2a - Image example of dual front townhouses, one of the built form types proposed in Ninth Line South that will contribute to the compact development.

Back-to-Back Townhouses

Back-to-back townhouses will be 3-storey structures with single-car, front facing garages accessed from the private street. 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 located above the garage as a terrace or in the form of a balcony or roof-top terrace.

- 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.
- Garages shall not project beyond the front wall of the main building.
- The treatment of balconies facing the street is critical to the overall design quality of the facade. A well-articulated 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.
- Entrances to each unit shall be at-grade, where possible, and accessed with minimal to no stairs, subject to grading constraints.

Figure 2.2b – Example of a front elevation of back-to-back townhouses.

Street Townhouses

Street townhouses will be 3-storeys and have a single car, front-facing garage accessed from the street, accommodating 2 cars per unit (1 in garage and 1 on driveway).

- The maximum number of street townhouse units permitted in a row shall be 8, and the minimum number of units shall be 3. Mixing of townhouse block sizes within the street can help provide visual diversity in the streetscape.
- The minimum lot size for street townhouses is 6.6m.
- Townhouse block composition shall display massing and design continuity, while achieving adequate elevation variety, where appropriate to a given architectural style.
- Facade articulation is encouraged to avoid large unbroken expanses of roof or wall planes. For some architectural styles (such as Georgian) simple massing and roof articulation may be preferred.
- The main front entry will be oriented to the front lot line for interior units and to the flanking lot line for corner units.
- A mix of both raised front porches and grade-level entries provides variety and visual interest in the architecture and streetscape. The turned stairs provides an element of architectural symmetry and contributes to a well-balanced design of the block's built form.
- The raised front entrances with porches and stairs also encourages eyes on the street while allowing for an interior layout with more natural light and optimal circulation.
- Driveways and front yards are paired to allow for an attractive streetscape with ample space for street trees and soft landscaping along the frontage of the block.

Figure 2.2c – Example of street townhouse elevations with a variety of materials.

Dual Front Townhouses

Dual front townhouses contribute positively to the built form character and streetscape appearance by eliminating garages and driveways and providing a strong uninterrupted streetscape condition that is predominantly urban in character. Dual front townhouses will have 3-storeys and a single car, rear-facing garage accessed from the private street, accommodating a minimum of 2 cars per unit.

In addition to the design guidelines stated for street townhouses, the following will apply:

- The main dwelling facade should typically be sited no further than 3.0m from the front lot line to create a strong and active street edge.
- Garages will be accessed from a private street and will be attached to the dwelling.
- Garages shall be complementary to the main dwelling in terms of materials, massing, character, and quality. They shall be designed and arranged to provide an attractive visual environment within the rear private street.
- Front entrances shall be directly linked to the sidewalk with a walkway. Definition of the private front yard space may occur through the use of low fencing, garden walls, and/or edge planting.
- Outdoor amenity areas for dual front townhomes may take the form of a balcony.

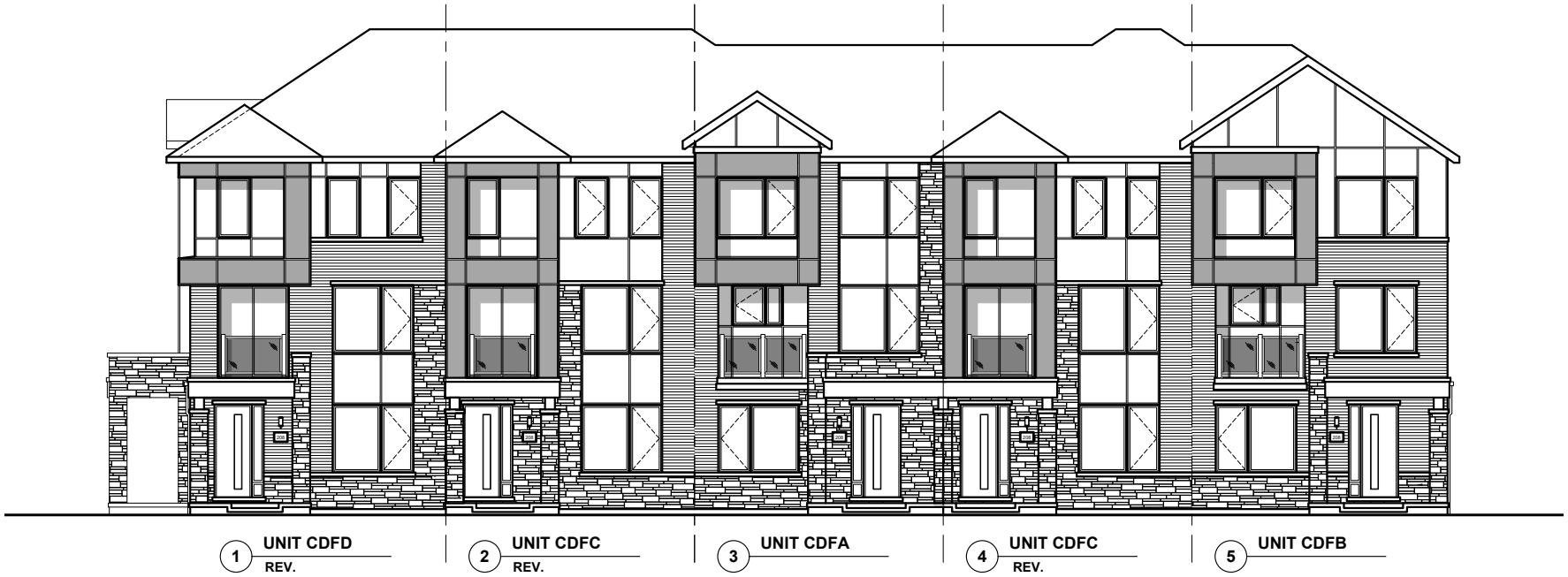

Figure 2.2d – Example of a front elevation of a dual front townhouse.

Building Setbacks

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.

Setbacks for dual-frontage townhouses along Ninth Line and Street 'A' shall be appropriately minimized to achieve a consistent urban front door relationship with the street, while avoiding an unsightly front yard appearance characterized by features more common to backyards (i.e. furniture, barbecues, trampolines, etc.). As indicated in Figure 2.1j, the dual front townhouses fronting Ninth Line have approximately 3m setbacks from the site boundary to the front porch, and 4.55m to the main building wall. The primary intent of the front yard design in these instances will be to achieve an attractive transition from public realm to the front door, rather than function as an activated amenity area more commonly seen in backyards and terraces.

The benefits of addressing Ninth Line through a strong built form relationship is a primary tenet of the Guidelines, and 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.

Height & Massing

Height and massing that is appropriate to the context of the street is key to achieving a pedestrian-friendly, comfortable scale environment. Medium density 3-storey residential forms planned for the majority of the development help to establish an active urban character throughout the community and achieve a transit-supportive density.

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 3-storey townhouse massing fronting Ninth Line is proposed to provide a smooth and complementary transition to the existing low density residential.

Flankage Units / Upgraded Elevations

Flankage units typically have a high degree of public visibility within the streetscape and are important in portraying the image, character, and quality of the community. Dwelling designs must be appropriate for corner locations, with elevations that address both private street frontages.

- Both street frontages for flankage units shall reflect similar levels of architectural design and detail with respect to massing, roofline character, fenestration, materials, details, etc.
- Distinctive architectural elements, such as wraparound porches, porticos, bay windows, ample fenestration, window treatment, wall articulation, brick arrangement and colour, etc. appropriate to the architectural style of the dwelling, are encouraged on the flankage side to create an interesting streetscape and emphasize the corner dwelling's landmark function.
- The main entry of the dwelling is preferred on the long elevation facing the flanking street.

Figure 2.2g - Example of flankage lots with the main entry of the dwelling located on the long elevation facing the flanking street.

Figure 2.2h - Example of an upgraded side elevation for unit facing the amenity area.

Figure 2.2i - Elevation example of the flankage unit fronting the south side of the Local Road at the corner of Ninth Line.

Figure 2.2j - Elevation example of the flankage unit fronting Ninth Line on the north side of the Local Road.

2.3 Sustainable Design Strategies

Sustainable, Compact & Low Impact Development

The proposed Ninth Line South 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, addition of extensive landscape open space, and integration of sustainable stormwater management practices.

As a critical component of a sustainable development, the Ninth Line South community has been designed as a transit- supportive, pedestrian friendly community that emphasizes cycling and walking, and supports the adjacent future Transitway and multi-use path system. This interconnected trail system runs along Ninth Line and the west side of the community with internal linkages throughout that provides easy access to the Transitway station located southeast of the development. These pedestrian and cycling connections and the interconnectivity of open spaces and amenities to the broader community scale are important features that help reduce car dependency and encourage active transportation. In addition to the interconnected active transportation network, establishing a compact urban structure and related higher 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 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.
- 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 subject lands, enhance groundwater recharge and reduce runoff peak flows and volumes from the site, the following measures are proposed (refer to Fig. 2.3 for schematic plan indicating all potential features):
  - Infiltration trenches in backyards of townhouses where feasible;
  - Underground storm water management tank in the amenity area;
  - Potential permeable pavement in the amenity area.

Low Impact Development Techniques - Potential Site Locations of Storm Water Retention Features

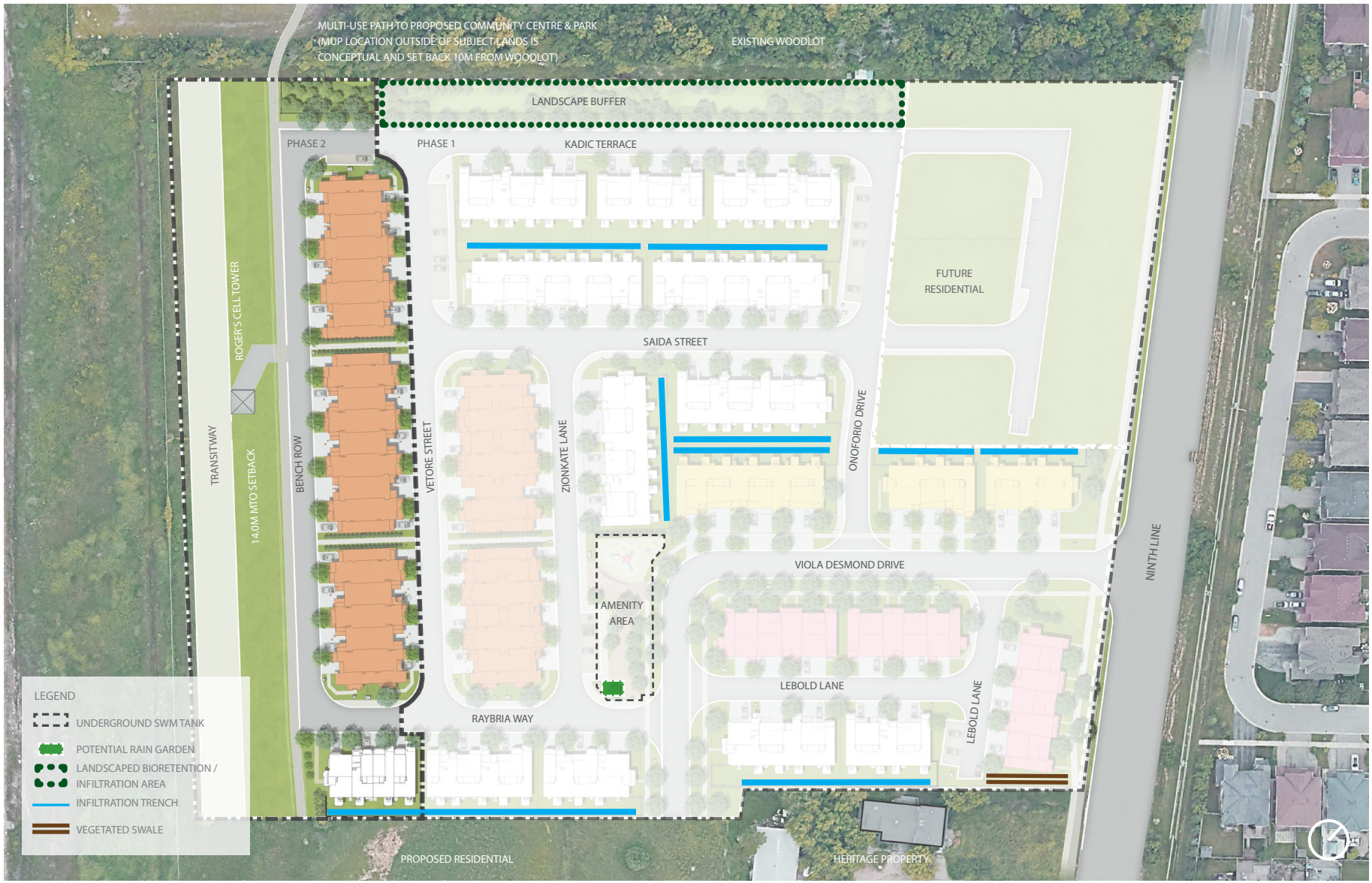

Figure 2.3 - Ninth Line South conceptual plan indicating schematic locations of storm water retention features

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3.0 Summary and 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 subject lands, 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 Ninth Line South community 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 an active, diverse, and healthy community that provides access to multi-use paths, parks and open spaces, and connections to higher-order transit, while protecting the surrounding natural heritage system.

Figure 3.0 - Ninth Line South 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.

Supporting the overall goals and guiding principles set out for the Ninth Line community, the proposed site plan includes a range of medium density townhouses that achieves transit supportive density. It also establishes a private street network with efficient connections to public streets and the multi-use paths, reinforcing sustainable mobility options and providing active transportation opportunities that will result in a more accessible and sustainable environment for all.

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