

Glen Williams Estates

URBAN DESIGN STUDY

THE TOWN OF HALTON HILLS

JUNE 2020

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Figure 1.0 - Aerial view facing north of Main Street crossing the Credit River in Glen Williams (Photo source: canada.247.info)

1.0 Introduction

1.1 Scope and Intent

The intent of the Urban Design Study (UDS) is to provide the basis to develop the Glen Williams Estates site, supporting the guidelines established in the Halton Hills Official Plan and the Glen Williams Secondary Plan, by describing the integral elements specific to this development. It is an initial step in the development process for Glen Williams Estates along with the preparation of various background studies in support of the Plan of Subdivision. The UDS focuses on the physical design of the community, providing urban design guidelines that are reflective of the policies established for protecting this unique historic hamlet, while allowing some flexibility for delivering a range of design expressions, architectural form and styles that provide interest in the streetscape. This study will be supplemented by Architectural Design Guidelines (ADG), providing an expanded level of detail specific to built form.

The Urban Design Study is structured under the following major sections:

- 1.0 Introduction
- 2.0 Neighbourhood Vision
- 3.0 Community Streetscape Design Requirements
- 4.0 Landscape Requirements

1.2 Site Context

Glen Williams is located within the northeast portion of Halton Hills in the Halton Regional Municipality. Situated along the Credit River, approximately 2km north of Georgetown, Glen Williams is a primarily low density residential hamlet with a compact, historic urban core centred around Main Street, and an extensive open space system linked to a regional recreation trail network. Known for its rich history dating back to the 1830's, the hamlet is largely defined by its heritage buildings that have been preserved and repurposed over the last century, while maintaining the community's intimate rural and village characteristics.

The proposed Glen Williams Estates community is located along the northwestern edge of the Hamlet of Glen Williams, north of Wildwood Road, and west of Confederation Street. It is bounded by Confederation Street to the east, a Natural Heritage System (NHS) to the south, Open Space and NHS to the west. The subject land's north property line is the northern extent of the Glen Williams boundary, and the neighbouring property is designated as 'Protected Countryside Area' and NHS in the Halton Hills Official Plan (*Schedule A2 Greenlands*).

Access to the property is located between 100 & 104 Confederation Street, with the proposed development nestled behind an established low density residential area along Confederation Street. Existing single detached dwellings on lots of varying sizes are located on properties to the north and south of the access road into the subject lands (refer to Fig. 1.2a and 1.2b). Typical of the houses that characterize Glen Williams, neighbouring dwellings on Confederation Street consist of a variety of architectural styles, built form, lot configurations and setbacks, set in a rural landscape.



Figure 1.2a - South east view from Confederation Street and single detached house adjacent to the subject lands



Figure 1.2b - View from 100 Confederation Street facing north east



Figure 1.2c - Aerial of Glen Williams showing an overlay of the proposed Glen Williams Estates location

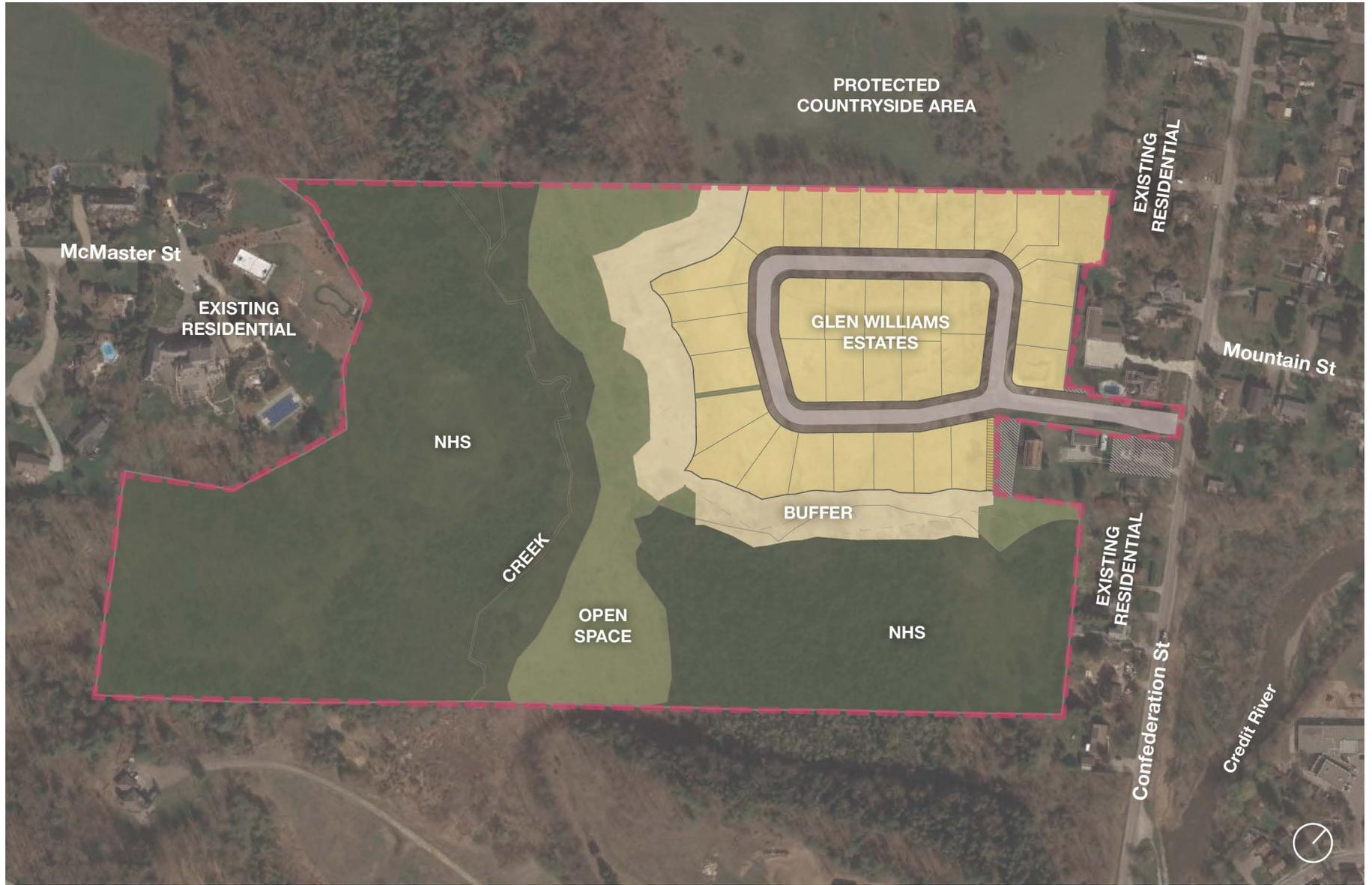


Figure 1.2d - Aerial overlay of the Glen Williams Estates subject lands and the surrounding context

1.3 Community Design Vision

The built form and land use vision for Glen Williams is established in the Town of Halton Hills Official Plan, and Hamlet of Glen Williams Secondary Plan.

The overall goal of the Glen Williams Secondary Plan is to ensure the retention and enhancement of the natural, cultural and heritage resources of the Hamlet and to guide change so that it contributes to and does not detract from the compact character of the Hamlet, in an environmentally protective and cost effective manner.

Town of Halton Hills Official Plan,
H4 - Hamlet of Glen Williams Secondary Plan, H4.1

While recognizing Glen Williams' overall variety in architectural styles and built form as a result of organic growth over the last century, the Secondary Plan vision is based on a context-sensitive approach to community development. The community design goal is to ensure that new streetscape and built form complements the heritage architecture and character that helps to define the unique hamlet. To implement the goals of the Secondary Plan, the Town of Halton Hill's Design Review process shall ensure that new development proposals align with the following principles:

- *Preservation and promotion of the character of Glen Williams' built form;*
- *Protection and enhancement of Glen Williams' open space network and natural environment;*
- *Improvement of pedestrian connections to the commercial and community facilities of the hamlet core and to Glen William's open space system; and,*
- *Preservation of the balance between development in the hamlet and adjacent natural lands.*



Figure 1.3a-f - Examples of heritage residential architecture in Glen Williams

The specific Secondary Plan objectives for the community that apply to the proposed Glen Williams Estates are as follows (refer to H4.2 Objectives for complete list):

- *To preserve and build upon the unique heritage character of Glen Williams as a distinct hamlet within the Town of Halton Hills;*
- *To preserve the delicate balance between hamlet development and the protection of environmental features such as landforms, vegetation, water and associated features and groundwater recharge;*
- *To ensure subdivision design that incorporates a wide variety of lot sizes consistent with the hamlet character and the method of water and waste water servicing;*
- *To encourage architectural styles that are consistent with the hamlet character and meet a broad range of housing needs;*
- *To provide for growth only where it can be shown not to create any negative impacts on the Town of Halton Hills.*

As identified in the Secondary Plan Area (see Fig. 1.3j), Glen Williams Estates is designated within the Hamlet Residential Area that permits low density residential development. The Secondary Plan also identifies that the proposed development is situated east of the designated Greenlands and a potential Trail and On-Road linkage. As indicated in an overlay of the Environmental Areas plan for Glen Williams (see Fig. 1.3k), the site is located in an area of potentially higher recharge, and is therefore an appropriate location for a low density residential development, as proposed in the Glen Williams Estates plan.



Figure 1.3g - Glen Williams Public School



Figure 1.3h-i - Heritage architecture of commercial buildings on Main Street

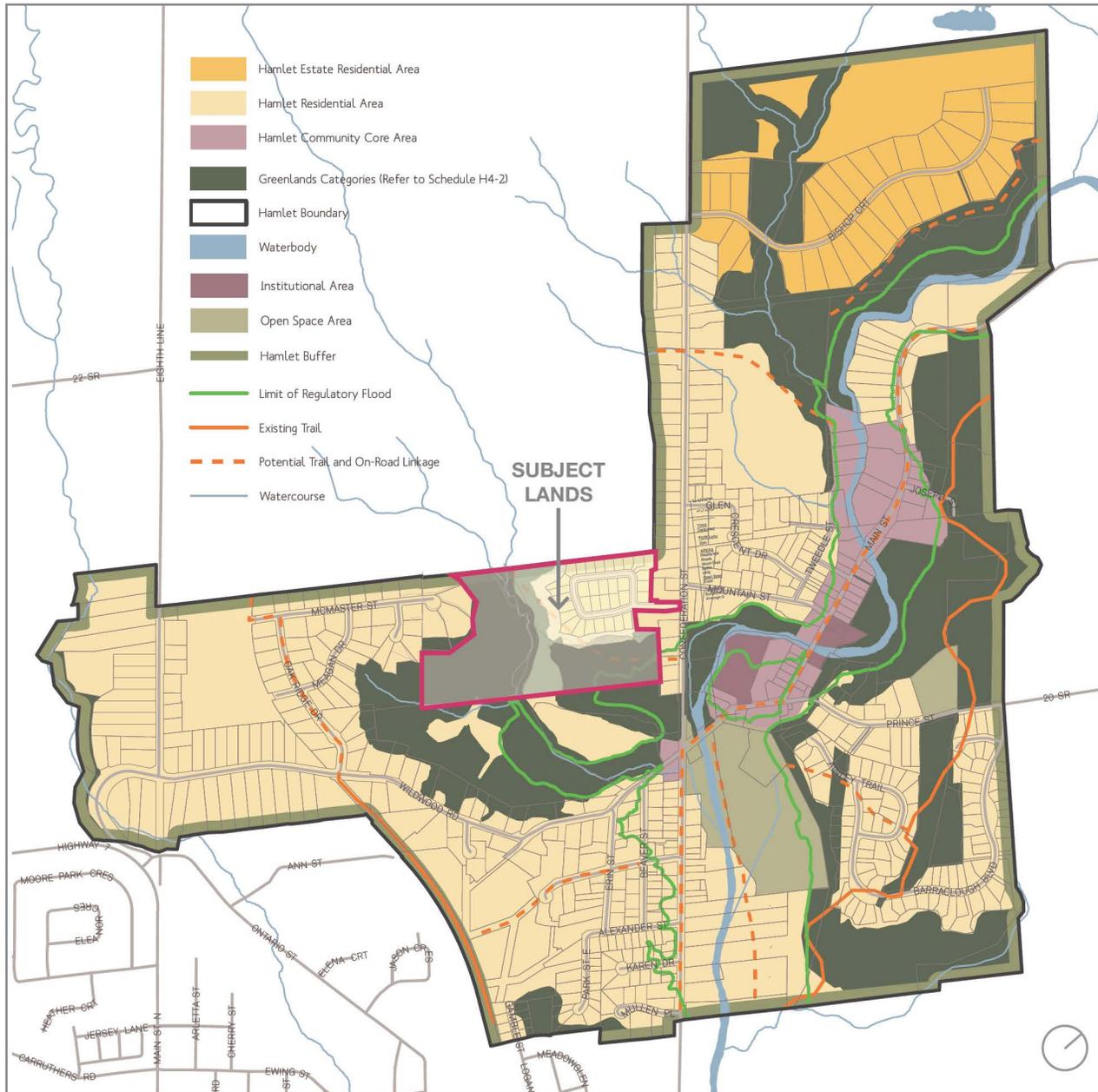


Figure 1.3j - Excerpt from the Secondary Plan - Glen Williams Land Use Plan (Town of Halton Hills Official Plan, Schedule H4-1) and an overlay of the Glen Williams Estates subject lands



Figure 1.3k - Excerpt from the Secondary Plan Area for Glen Williams (Town of Halton Hills Official Plan, Schedule H4-2 - Glen Williams Environmental Areas) and an overlay of the Glen Williams Estates subject lands

2.0 Neighbourhood Vision

2.1 Urban Design Vision

Reflecting the policies established for the wider community, the vision for Glen Williams Estates is to design a low impact development and honour the intention of the Secondary Plan:

STREET SYSTEM

- A street layout that responds to significant natural features and the topography of the site.

LOT CONFIGURATION

- Site design that provides a variation of lot sizes, consistent with the hamlet character.
- Proposed built form that will address special design considerations for houses at corner lots and those facing open spaces.

ARCHITECTURE

- Architectural design that complements the rural and heritage character of Glen Williams.

LANDSCAPE

- A site plan that preserves and protects the NHS and Open Space System within the subject lands.
- Landscape treatment that shall complement the built form, reinforcing a consistent theme and identity for the community.

2.2 The Development Proposal

Glen Williams Estates comprises a total land area of 18.64 ha, with 6.26 ha of developable area, including the buffer. Single detached dwellings will encompass all of the residential lands within the new community. The concept plan proposes 34 detached residential units on a 20m right-of-way.

The following summarizes the proposed development land uses and concept (refer Figure 2.2 Concept Plan):

- Low density residential dwellings - 3.65 ha
- Local road - 1.20 ha
- Storm Drainage Block - 0.02 ha
- Walkway - 0.01 ha
- Buffer - 1.36 ha
- Natural Heritage System (NHS) - 10.29 ha
- Open Space - 2.11 ha

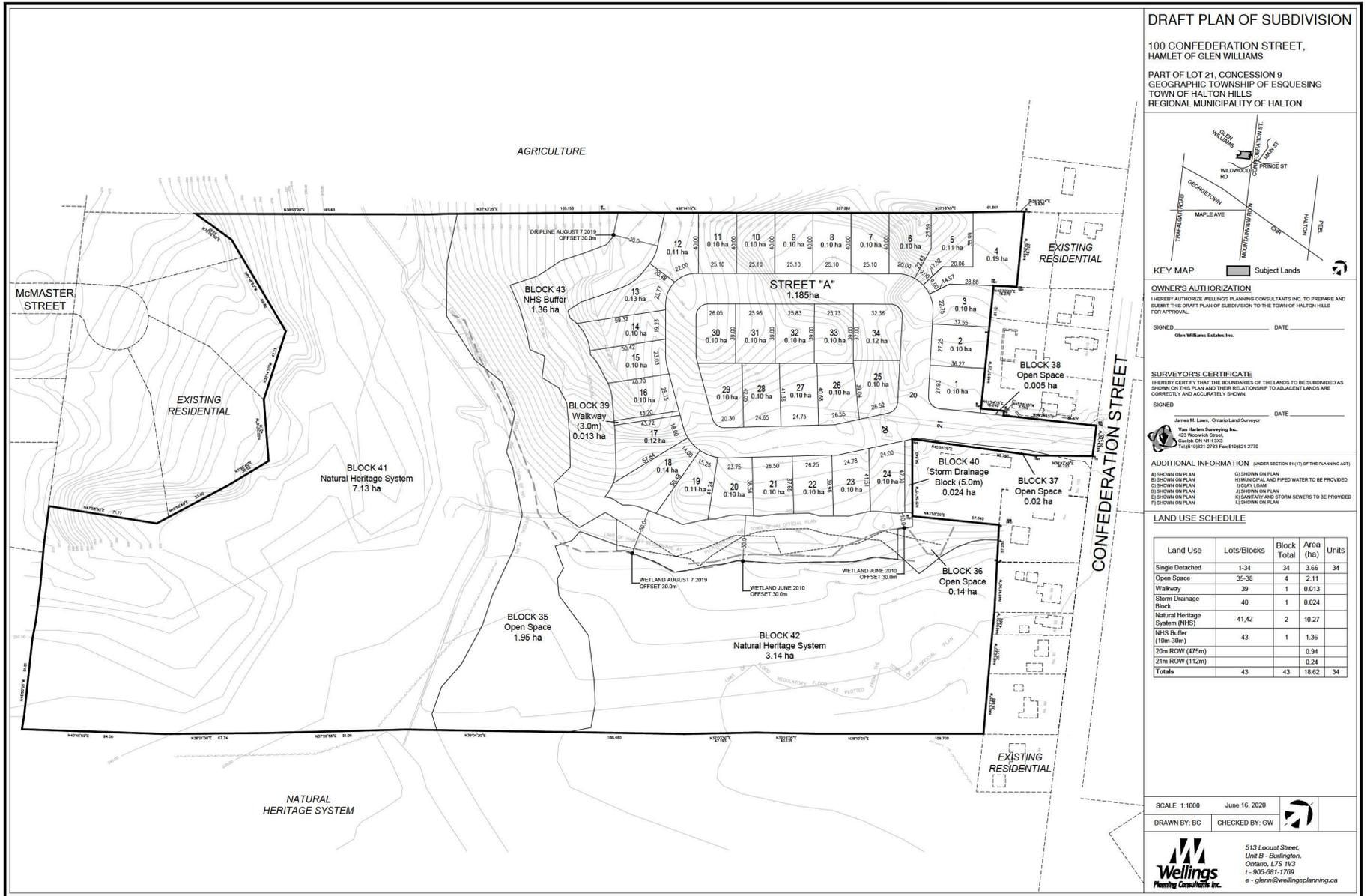


Figure 2.2a - Glen Williams Estates Draft Plan of Subdivision



Figure 2.2b - Glen Williams Estates Conceptual Lot Configuration and Building Placement

2.3 Street Layout and Pedestrian Connections

As noted in the Secondary Plan, the street pattern and safe pedestrian environment of Glen Williams contributes to the hamlet's strong sense of 'community supervision'. Preserving the varied character of the hamlet street system, Glen Williams Estates proposes a local road (20m right-of-way) in a 'P-loop' layout, with one (1) access entry from Confederation Street. Reflecting the Secondary Plan guidelines, the following design is proposed:

- Block lengths are under 175m, in keeping with the smaller block lengths of the hamlet centre.
- The P-loop road creates a winding street with terminating views, consistent with the irregular blocks and rural street types in Glen Williams, where the road pattern responds to the area's topography.
- Pedestrian connections are provided along the north side of the vehicular entry road into the development, and continue on a single side along the inside of the P-loop.
- A 3m walkway is proposed on the west side of Glen Williams Estates, providing a pedestrian connection from the local road to the surrounding open space.



Figure 2.3 - Street layout and pedestrian connections



2.4 Architectural Design Vision & Objectives

The residential design of Glen Williams Estates shall reflect the following architectural design vision as indicated in the Secondary Plan (X6.6 *Architectural Design Principles for New Development*):

"Create buildings and streets that contribute to the quality of intimate, random and individual qualities of streetscapes that can be found in the heritage district and that could foster the kind of atmosphere that can be defined by "hamlet character".

A high quality built form character shall be identified and established for Glen Williams Estates, utilizing an architectural style and treatment that has visual interest and helps foster a distinct identity that is rooted in the spirit of Glen Williams. Reflecting elements of the area's historic vernacular, the architecture will reflect rooflines, high quality materials and detailing that will fit within the context of the community while bringing an updated and clean approach to design. Refer to the *Glen Williams Estates Architectural Design Guidelines (ADG)* for a more extensive description and guidelines for the development's architectural design criteria, including guidance on the following:

- Building Projections;
- Enhanced Architectural Detailing;
- Consistency of Detail on all Elevations;
- Main Porch, Entry and Detailing;
- Exterior Building Materials, Rooflines, Fenestrations;
- Utilities and Mechanical Equipment;
- Adverse Grading, Rear Walk outs and Decks.



Figures 2.4a- 2.4d - Image examples of heritage architecture re-interpreted in a contemporary style

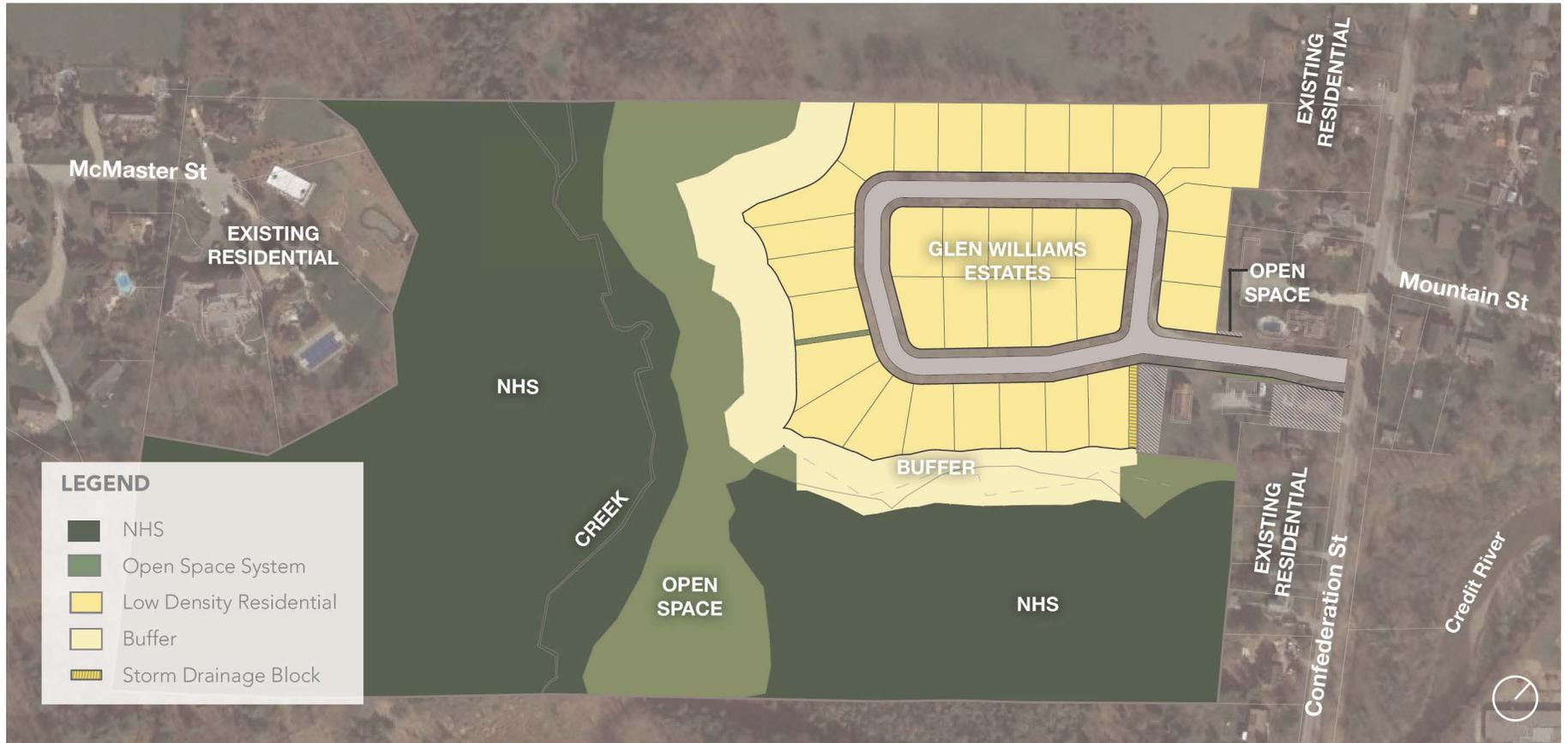


Figure 2.5 - Aerial overlay of the open space system and NHS within the Glen Williams Estates Subject Lands

2.5 Open Space & Natural Environment

The extensive open space system within Glen Williams is an essential component of the community's character and the Region's ecological system. The Town of Halton Hills Official Plan contains ecosystem planning and management policies with the fundamental objective of ensuring that the integrity of the Region's ecosystems is protected and maintained.

The proposed land use fabric and road layout within Glen Williams Estates, responds to the NHS and Open Space to west and south portions of the subject lands, and ensures an appropriate buffer between the residential lots.

Refer to *Section 4.0 Landscape Requirements* for details regarding the potential landscape treatments for the open space areas.

2.6 Entrance to the Community

Gateways are important identifiers that provide the opportunity to communicate the character and theme of the community, and contribute to placemaking by the nature and quality of the landscape treatment. They also serve as landmarks that facilitate orientation and wayfinding. Aligning with the recommendations in the Secondary Plan (X6.8 Gateways), the following general guidelines for the gateway shall apply to Glen Williams Estates:

- Gateway features shall be established at the key entry point into the development from Confederation Street, framing the entry into the community.
- The gateway shall be of high-quality design, with a palette of materials and design style that is consistent with the theme and identity of the built form in Glen Williams Estates.
- Features may include taller architectural elements such as decorative columns and customized lighting fixtures.

2.7 Integration into the Community

A sensitive approach for appropriately integrating the new residential community at the interface with the existing low density residential land uses shall be an important design consideration.

The proposed pedestrian network will consist of sidewalks in the public right-of-way that promote access and connectivity to and from the community. This resulting sidewalk network will enable convenient connections to the existing pedestrian connections through Glen Williams and to the Regional trail system.



Figure 2.6 - Image example of decorative column as a gateway feature into a community.

3.0 Community Streetscape Design Requirements

The streetscape of Glen Williams Estates will play a key role in promoting and enhancing the identity of the community. An appropriate street type and pattern, along with a carefully considered combination of elements within the right-of-way can create an inviting public realm experience for residents, complementing the rural character of the hamlet.

3.1 Street Type & Pattern

Forming the structure of the community, the road pattern established for Glen Williams Estates provides for the safe and convenient movement of pedestrians, vehicles and cyclists, and establishes the initial visible impression of the community. It responds to the site's topography and open space system, and the proposed low density residential land uses.

As outlined in Section 2.3 *Street Layout and Pedestrian Connections*, a 20m right-of-way is proposed for the street . Typical cross-sections for this local road shall include:

- Sidewalks on one side of the street;
- Rolled curbs, typical of streets in the hamlet;
- Two (2) vehicular travel lanes;
- Street trees in a grass boulevard.

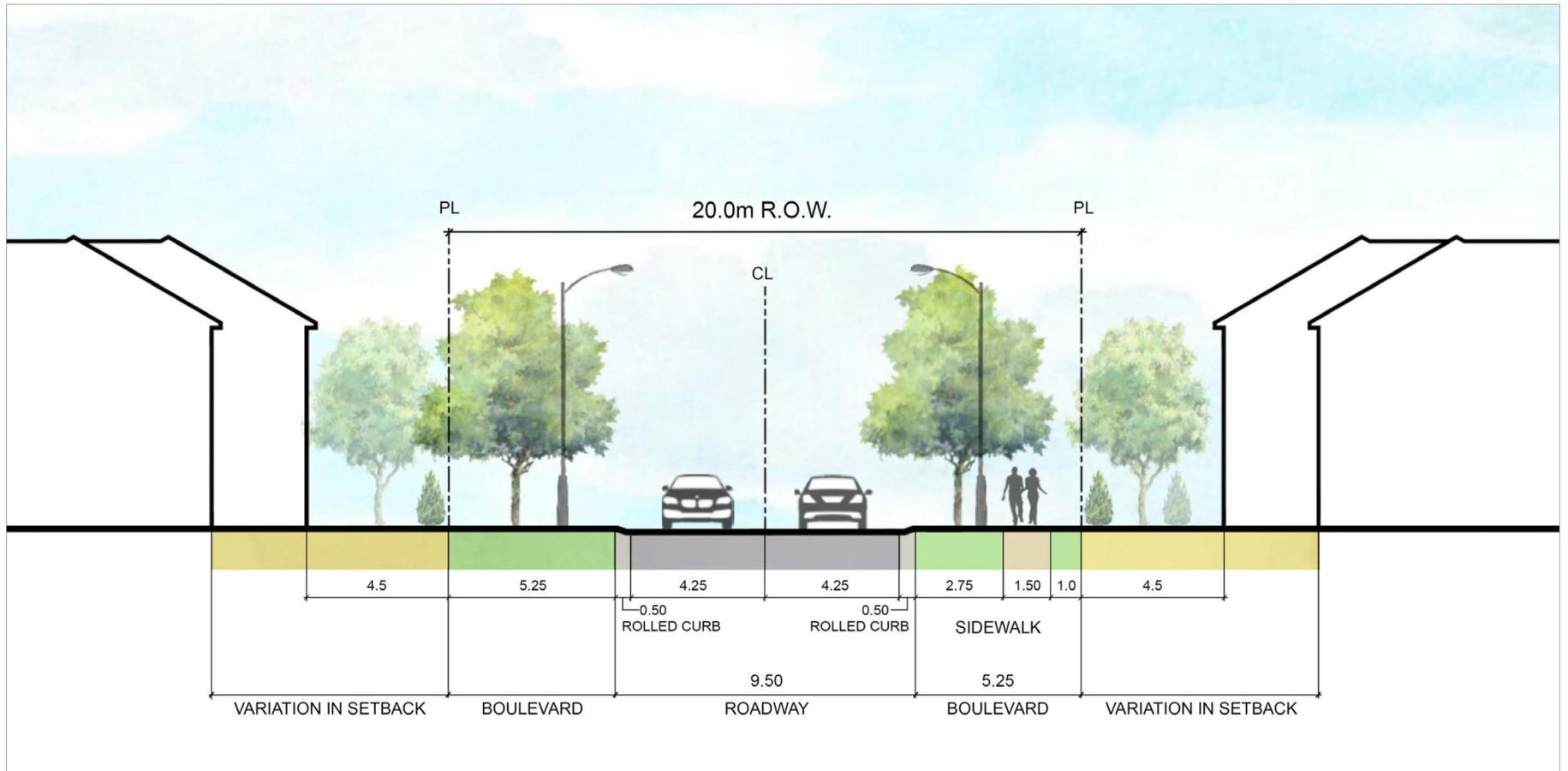


Figure 3.1 - Glen Williams Estates Conceptual Cross Section - 20.0m right-of-way / 2 travel lanes / sidewalk on one side / 5.25m boulevard

3.2 Lot Configuration

Emulating the hamlet's varying lot sizes lot pattern, the 34 proposed lots in Glen Williams Estates shall provide the following:

- A range of lot sizes, configurations and depths, up to 34m wide.
- Variation in front yard setback, and some staggered siting of the building mass, reflecting the hamlet's streetscapes.
- As recommended in the Secondary Plan, no more than four consecutive lots shall have the same front yard setback.
- To maintain privacy of rear yards, the front wall of dwellings shall not be set further back than half the length of the adjacent house.
- Setbacks will reflect the guidelines in the Secondary Plan, encouraging a minimum of 30% of the front wall of houses to be located at the minimum setback to provide a sense of enclosure to the street and a pedestrian oriented environment.

3.3 Building Location & Orientation

A well-defined street edge will contribute to the pedestrian-oriented focus of the community. Attractive streetscapes typically include a defined edge of private front yards and carefully-placed, well-defined dwellings.

- The front facade of the dwelling shall directly relate to the street by generally being oriented towards it.
- Street-facing garages shall be subordinate to the habitable portion of the dwelling.
- Primary building entrances shall be clearly visible and identifiable from the street.
- Main entries for corner dwellings are encouraged to be oriented to the flanking lot line.
- Corner buildings shall be designed to address both street frontages, where the flankage side elevation shall be given a similar level of architectural detailing as the front elevation.

3.4 Houses at Focal Locations

Dwellings that are located at focal locations are priority lots that require special design consideration to ensure attractive built form. Their visual significance within the streetscape requires that the siting, architectural design and landscape treatment of houses on these lots be of an exemplary quality to serve as landmarks within the community. The following priority lot plan for Glen Williams Estates demonstrates the lot locations requiring special design considerations, which include:

- Gateway dwellings
- Corner dwellings
- View terminus dwellings
- Upgraded rear and side architecture



Figure 3.4 - Prominent Location / Priority Lot Plan

LEGEND

- ◻ Gateway Lot
- Corner Lot
- T View Terminus Lot
- ▬▬▬▬ Upgraded Rear or Side Elevation

CORNER LOTS

Corner units typically have the highest 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 street frontages.

- Both street frontages for corner units shall reflect similar levels of architectural design and detail with respect to massing, roofline character, fenestration, materials, details, etc.
- Enhanced and/or taller massing should be considered for corner lots, where appropriate.
- 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 corner dwelling is preferred on the long elevation facing the flanking street. Alternatively, the shorter (front facing) side of the lot may still integrate the main entry for the dwelling.
- A privacy fence shall enclose the rear yard portion of the corner lot dwelling. In order to minimize the length of the fence facing the flanking street, it shall begin as close as possible to the rear corner of the dwelling.

GATEWAY LOTS

Similar to corner dwellings, gateway lots are characterized by a very high profile location within the community that results in a significant impact on the perception of the image, character, and quality of the community from the outside.

- Built form massing, orientation, and detailing shall be the principle component for defining the gateway.
- Associated landscape features, both hardscape and softscape, may be integrated with built form massing to emphasize the gateway function.

VIEW TERMINUS LOTS

View terminus units are situated at T-intersections or street elbows, where one road terminates at a right angle to the other. These units play an important role in defining a terminating view corridor.

- A prominent architectural element, massing, or material arrangement should be provided to terminate the view, such as a porch or portico.
- Driveways should be located to the outside of the dwelling lot or unit, rather than in-line with the view corridor, to reduce the impact of the garage on the terminus view and allow for front yard landscaping to become the focus, along with the architectural treatment.

UPGRADED REAR AND SIDE ARCHITECTURE

Upgraded rear and side architecture is required where elevations are exposed to a public view, such as lots which back or flank onto public open space areas. With an extensive NHS and open space system to the west, south, and north of the subject lands, a large portion of dwellings may require upgraded architecture on rear elevations.

- The exposed side and/or rear elevations of dwellings in these locations shall be designed with similar architectural emphasis with respect to details, materials, roofline character, fenestration, wall articulation, etc.
- The level of upgrading should be consistent with the level of public exposure.

3.4 Elevation Variety

A diversity of architectural expressions is necessary to provide visual interest along the streetscape. The single detached dwellings should be designed to contribute individually, and collectively, to the character of the community.

- Building designs should be visually attractive with articulated facades, ample fenestration, plane variations, interesting rooflines, and prominent entrances.
- Designs shall include a variety of roof forms appropriate to the scale and architecture of the built form.
- Identical building elevations within the streetscape shall not be sited side-by-side or directly opposite one another.
- For corner lots, flanking elevations shall be different from those flanking elevations on lots abutting or directly opposite.
- As referenced in the Secondary Plan (*X6.6.6 Construction Materials*), to promote the character of the hamlet, building designs may include materials found in the hamlet's heritage buildings, such as brick, stone and wood.
- Garages and outbuildings should be designed with materials similar to those used for the main dwelling.

3.5 Building Height

Appropriate to the built form character of Glen Williams, the maximum height of all dwellings in Glen Williams shall be 2-storeys. For further details regarding building heights and appropriate massing relationships, refer to the ADG.

3.6 Relationship of Houses to Grade

As noted on the Secondary Plan, the main floors of houses in the hamlet are typically at grade or close to grade (*X6.6.3 Relationship to Grade*). Building designs shall be adapted to suit the site, and high service floors or basement garages should be avoided in any new development in Glen Williams.

- Where sloping grade conditions occur, entrance levels should be related to grade through terracing.
- Care shall be taken to ensure foundation walls are not overexposed. Grading shall be coordinated with dwelling foundation design and constructed so that generally no more than ~300 mm of foundation wall above finished grade is exposed on all visible elevations of the dwelling.

3.7 Garages

As described in the Secondary Plan, many garages in the hamlet are detached and to the rear and/or side of the lot. In compliance with the vision for Glen Williams, the following design strategy shall be considered:

- Where garages are attached, they should be integrated into the main massing for the dwelling, with limitations to their projection into the front yard.
- Attached garages within the within the flankage yard and accessed from the street shall be of a similar architectural style and proportional scale to the adjoining dwellings, with limitations to their projection into the flankage yard.
- Where a double car garage is contemplated, 2 individual garage doors / bays separated by a divided column shall be preferred, where possible.
- To avoid garages that project forward from the front wall of the house, the following are considered acceptable design options for attached street facing garages:
 - Integrate the garage into the main massing of the dwelling, in line with the porch projection;
 - Integrate the garage into the main massing of the dwelling, in line with the main front wall;
 - Situate the garage to the side of the dwelling, set back from the front main wall.
- The use of alternative garage options (i.e. detached, rear yard, tandem) is permitted where feasible.
- A variety of garage door header treatments shall be utilized and shall be consistent with the architectural style of the dwelling.

3.8 Driveways

One of the prime objectives in creating a safe and attractive streetscape is to minimize the visual impact of garages and driveways, increasing the landscaped area in front yards and providing sufficient space for boulevard trees. The following general design criteria for the treatment of driveways shall apply:

- The width of the driveway shall not exceed the exterior width of the garage to reduce its presence on the streetscape.
- Where a driveway leads to a rear or turned garage, it shall be tapered at the curb to accommodate the width of a single car or a maximum of 4.0 metres.
- In the case of a pair of view terminus dwellings, driveways shall be located to the outside of the pair, where feasible, to increase landscaping opportunities and reduce the visibility of the garage doors and parked vehicles.
- All driveways shall be finished with a hard surface paving material. Use of permeable paving materials (e.g. interlock pavers) is encouraged.

4.0 Landscape Requirements

Healthy street trees reduce air pollution, provide shade and cooling, furnish habitat for wildlife, increase property values, enhance community aesthetics, make streets safer and more walkable, and contribute to quality of life.

4.1 Street Tree & Planting Strategy

An effective landscape and planting strategy can help reinforce the rural character of the hamlet, and should be related to the local road street type and adjacent residential land use.

- Since the development is located adjacent to natural open spaces and NHS, the use of native, non-invasive tree species may be required for streets and buffers.
- Trees of the same species should be planting on both sides of the street and may extend the length of the block, with the objective of creative a uniform canopy.
- Street trees shall be located within the grass boulevard between the sidewalk and curb, with the intent of creating a prominent, continuous canopy on both sides of the street.
- Minimum distance separation between street trees and below above-ground utilities shall be in accordance with Town of Halton Hills standards.
- As described in the Secondary Plan (*X6.6.7 Landscaping*), a combination of fences and landscape elements to delineate between properties is encouraged.
- As a means to promote and preserve Glen Williams' natural setting, where possible, existing trees should be integrated into the landscape design.
- Paths to houses may be augmented with planted features, bringing natural elements to the street edge, and softening the hardscape treatments.



Figure 4.0 - Conceptual Landscape Plan

4.2 Streetscape Elements

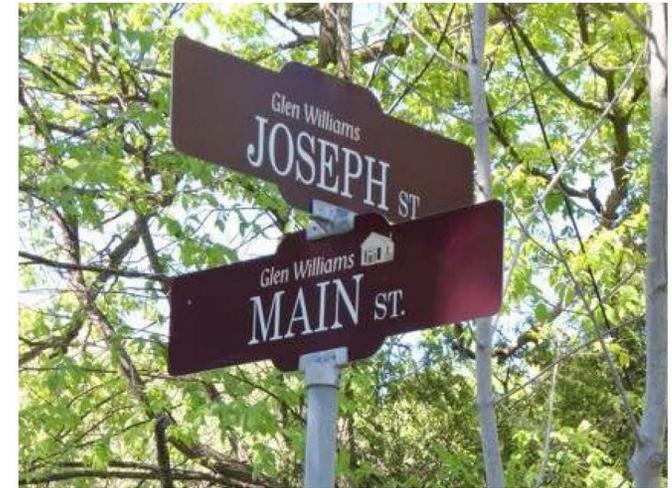
The design of streetscape elements shall be coordinated and consistent with the vision established for Glen Williams Estates. Key streetscape elements include street lighting, fencing, street signage, and street furniture.

4.6.1 Street Lighting

Street lighting is an integral component of streetscape design and the choice of lighting elements plays a key role in establishing the character of the public realm. Selection and placement of lighting fixtures in Glen Williams Estates shall be in compliance with Town of Halton Hills standards. Where there is some flexibility in selection, the following design guidelines should be considered:

- Lighting design (pole and luminaire) should be coordinated with the architectural design and other street furniture to promote a consistent and definable character for the community.
- Specialty lighting treatments such as pedestrian-scale light standards may be considered to create a unique streetscape character.
- Selection and placement of lighting fixtures shall ensure 'night sky' compliance as a component of sustainable design, with illumination directed downwards.
- Lighting utility boxes shall be located to minimize their visibility, in compliance with Town of Halton Hills standards.

Figure 4.6.2 -
Glen Williams
street signage
(source:
glenwilliams.org)



4.6.2 Street Signage

Street signage shall be consistent with established signs in Glen Williams (refer to Figure 4.6.2).

4.6.5 Street Furniture

Attractive, sturdy and accessible site furniture can play an important role in defining the streetscape and reinforce the community identity. Within the site, there is an opportunity for a special landscape treatment in the Open Space located on the north side of the entry road, a location with a high level of visibility in the streetscape. The colour, material, form, and style of street furniture shall be consistent with, and complementary to, the established design theme for the community.

4.6.1 Fencing

Fencing of varying types and materials will be required throughout the community to address barrier and privacy requirements. In areas of high visibility, fencing shall be designed to enhance the streetscape appearance, with consideration for long-term maintenance requirements. General guidelines for fencing in Glen Williams Estates shall consider the following:

- Fencing design shall be coordinated and consistent throughout the development reinforcing or complementing the character and identity of the community.
- Fencing shall comprise only robust, sturdy components for long term durability.
- Intricate design work using smaller components should be avoided for wood fencing due to the effects of weather over the long term.

Locations for integrating fencing may include:

- Wood privacy fencing and/or wood acoustic fencing at residential flankage locations;
- Decorative metal fencing along the storm drainage block where it abuts the front yard of the adjacent home;
- Chainlink fencing at the rear of lots backing onto the NHS or Open Space;
- Decorative columns may be incorporated into the landscape treatment at the entrance to the community facing Confederation Street, as described in *Section 2.6 Entrance to the Community*.

4.3 Storm Water

Located in the south eastern portion of the subject lands, an 5m storm drainage block provides an important stormwater management function for the development. There will be no public access through this block, and the landscape treatment is intended to be mowed grass.

As part of the site's water conservation and management strategy, infiltration galleries will be provided at the rear of backyards, where feasible.



Figure 4.3 - Conceptual Landscape Plan of the 5m Stormwater Drainage Block

4.4 Grading Information / Sections

The cross section below illustrates the sensitive integration of the development into the adjacent NHS and Open Space system with a significant buffer. New native planting will be added in the buffer to enhance its ecological function and views to the NHS. This section also demonstrates how the architecture of the dwellings may respond to the site's topography where adverse grading conditions occur.



Figure 4.4a - Location of cross section shown in Figure 4.4b

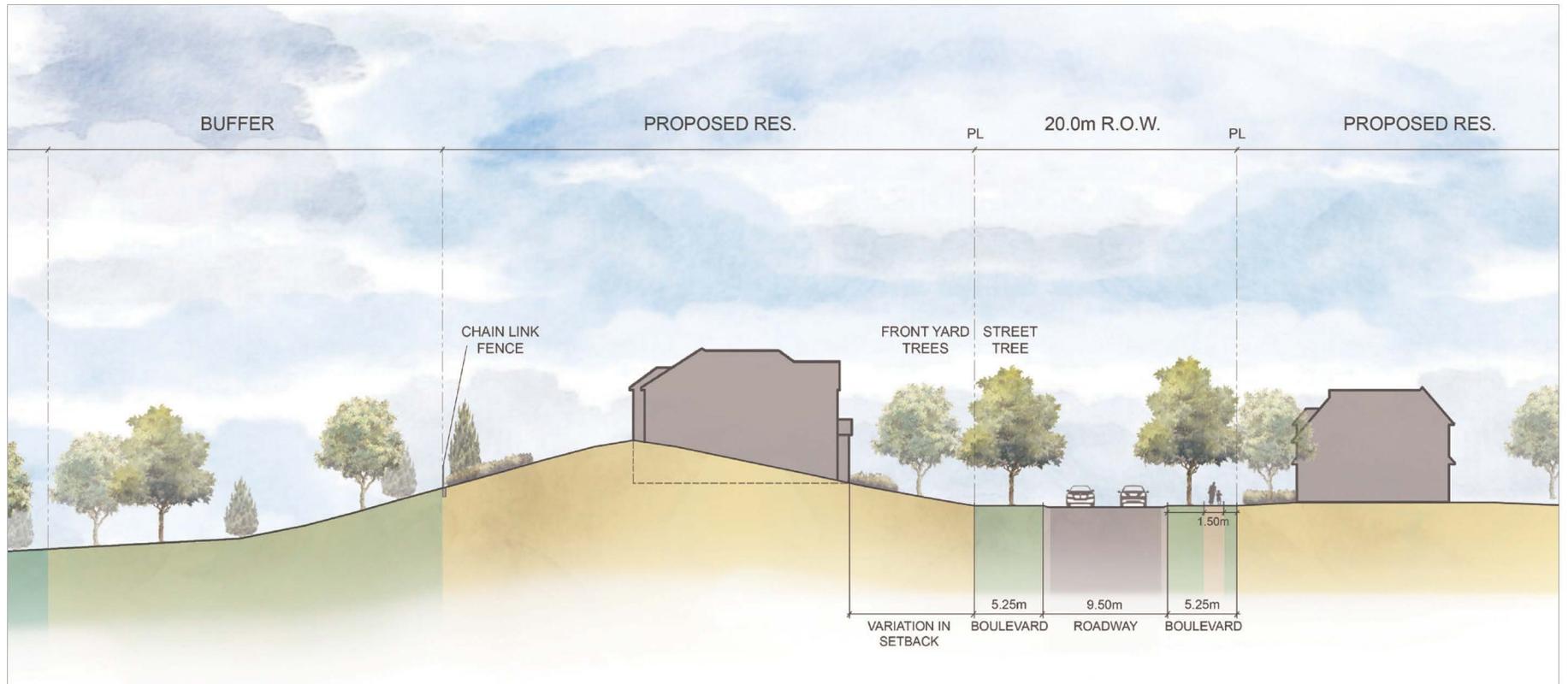


Figure 4.4b - Glen Williams Estates Conceptual Cross Section facing north (Lot 16) showing grading conditions and the buffer at the rear property line of residential lots