



MARKHAM ROAD MOUNT JOY

SECONDARY PLAN STUDY

Interim Report
April 2021

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Submitted to: City of Markham

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Executive Summary

Study Purpose and Overview

SvN Architects and Planners (SvN) was retained by the City of Markham to lead a team of multi-disciplinary consultants, comprising of HDR Inc., Counterpoint Engineering, and Jonathan Tinney, to undertake a Study that will inform the development of a vision and comprehensive planning framework for the Markham Road - Mount Joy Secondary Plan (MRMJSP) Area. The purpose of the Study is to prepare a Demonstration Plan and Policy Guidance that will inform the development of a Secondary Plan for the MRMJSP Area.

The Secondary Plan Area is currently dominated by large tracts of single-use lands. This pattern of development is not sustainable, nor will it serve a growing, transit and pedestrian-supportive community. The MRMJSP presents a significant opportunity to leverage existing assets, including but not limited to the existing Mount Joy GO Station, the Greenway System and Mount Joy Creek, the Mount Joy Business Park, the Markham Museum, surrounding neighbourhoods, parks and open spaces, and the adjacent Markham Village main street.

As a City-led policy initiative, the Secondary Plan Study makes reference to Metrolinx's 'Market Driven Strategy to Delivery Transit Infrastructure' (2018). This strategy establishes the planning and spatial conditions necessary to drive local real estate market conditions in order to spur public and private investment and promote collaboration to maximize opportunities for transit investment. This is necessary in order to ensure the creation of a sustainable, resilient, vibrant and

complete transit-oriented community. This approach aligns with Provincial policy, which directs population and employment growth to Major Transit Station Areas (MTSAs).

Potential exists to transform Markham Road from a car-dominated, generic arterial road into an attractive, tree-lined street that will encourage active transportation. This transformation will be bolstered by the establishment of a new street and block framework, which will introduce a new network of connector and local streets, as well as active transportation connections and infrastructure. This will be provided in tandem with new land use policies, which set the stage for mixed-use development, a series of new parks and open spaces, and new community facilities and infrastructure.

The main considerations of the Study are land use & urban design, transportation and municipal servicing. Policy guidance will be developed based on these considerations, with multiple opportunities for stakeholder and community consultation integrated at key milestones. The Study process will include engagement with City officials, reviewing agencies, area landowners, and the public with the ultimate goal of developing a Vision and Guiding Principles for how the MRMJSP Area will evolve and mature from a car-dominated, arterial corridor to a more dynamic and pedestrian oriented environment.

The Study will culminate in recommendations for structuring growth in a manner that will be transformative for the Secondary Plan Area as a whole, with a focus primarily related to the existing Mount Joy GO Station Area and Markham Road corridor. As well, the Study will investigate the opportunity for siting a second GO Station at Major Mackenzie Drive East.

The Study is being conducted over six phases, as follows:

- » **Phase 1:** Project Kick-Off and the Establishment of a Project Management Plan;
- » **Phase 2:** Background Review, Data Collection and Assessment;
- » **Phase 3:** Development of Vision, Guiding Principles, Demonstration Plans, Policy Guidance, and a series of Design Charrette events with the public;
- » **Phase 4:** Presentation to Development Services Committee and Community Consultation, including the refinement of the Demonstration Plans;
- » **Phase 5:** Transportation and Municipal Services Analysis and Recommendation; and,
- » **Phase 6:** Final Study Report.

This report is the culmination of the third phase of the study. It provides an assessment of the existing conditions, as well as an overview of the key opportunities and constraints within the MRMJSP Area. The report also presents the Vision and Guiding Principles that have driven the Study, and summarizes the public consultation events which have taken place to date. Lastly, the report introduces the recommended draft Demonstration Plan which forms the basis for policy guidance and recommendations for the Secondary Plan. Refer to **Section 1.1** for more information.

Study Area

The MRMJSP Area is situated in the northeast portion of the City, south of the northeastern limit of Markham's Urban Area. Cumulatively, the Secondary Plan Area is 92.2 HA in size. It is comprised of the lands along Markham Road between 16th Avenue and Major Mackenzie Drive East. The westerly limit is generally defined by the extent of the commercial properties on the west side of Markham Road. The easterly limit of the Secondary Plan Area is generally defined by the Stouffville GO rail corridor. Through the evolution and review of this work, the Metrolinx-owned parking lot east of the Stouffville GO rail corridor, on the south side of Bur Oak Avenue was deemed appropriate for inclusion within the future MRMJSP Area as well, due its potential for redevelopment.

Existing Land Use & Urban Design Assessment

Recent and ongoing development activity within the future MRMJSP Area has shown that in relation to the stable residential areas to the east and west, the Secondary Plan Area has seen an increasing interest in proposals for intensification, especially in proximity to the Mount Joy GO Station at Bur Oak Avenue. A mix of residential, commercial and employment uses currently characterize the Secondary Plan Area, and a growing demand for residential and mixed-used redevelopment has been gaining momentum. Proposals have included residential uses in more compact, denser forms, and an employment land conversion request is currently being considered to facilitate additional residential uses in proximity to the Mount Joy GO Station. A new Secondary Plan is needed to direct growth comprehensively and in line with the City's intensification strategy. This is also relevant as two existing Secondary Plans flank the MRMJSP Area on its east and west.

The report summarizes key findings associated with the assessment of natural heritage features, land use and built form, community infrastructure and facilities, cultural heritage, public realm, economic activity, and affordable housing. The prevalence of physical barriers, by way of the Stouffville GO Rail corridor, prevent the ease of east-west movement of pedestrians between the Secondary Plan Area and community amenities that exist to the east of the railway. In its current format, Markham Road detracts from the pedestrian experience given the great distances between signalized intersections, relative vehicular speed, and high traffic volumes. Gaps along the streetscape as well as the prevalence of extensive surface parking lots mean little frontage “activation”, and in general a sparse public realm. Flood-impacted, vacant properties impede site functionality and add challenges to redevelopment.

Markham Road has the potential to be transformed into a main street that would define and reinforce a hierarchy of distinct places in its transition from the Markham Village Heritage Conservation District (HCD) to the south, to existing and future destinations within the Secondary Plan Area and to the north. The potential also exists to tie existing and future development together, along with activity nodes and open spaces. Opportunities exist to tie together community facilities to the east of the Secondary Plan Area by way of pedestrian crossings over the rail line, and/or diversifying uses associated with the nearby Markham Museum and the Mount Joy Community Centre. There is significant potential to leverage Mount Joy Creek as a green link throughout the Secondary Plan Area. In the exploration of options for reconfiguring the Creek, there are also opportunities to investigate options for extending the local recreational trail network, ultimately tying together a network of open spaces. Refer **Section 3.2** for more information

Existing Transportation Assessment

The MRMJSP Study Area is supported by a network of Regional Roads, major collector roads, minor collector roads, and local roads. Markham Road is a major collector road which traverses the entire Study Area, in a North-South direction. It provides local access and a connection between Main Street to the south and Highway 48 to the north. At Major Mackenzie Drive East, Markham Road becomes Highway 48, which is a Provincial Highway that provides connections to northern York Region, including the Town of Whitchurch-Stouffville, Town of East Gwillimbury, and the Town of Georgina. Major Mackenzie Drive East and 16th Avenue are the two major east-west Regional Roads within the Study Area and provide connections to the City of Richmond Hill and Highway 404 in the west, and the Region of Durham to the east. The MRMJSP Study Area is served by two GO Transit Bus Routes, Rail service connecting to Union Station in Toronto, and by 8 different York Region Transit (YRT) routes. The Stouffville GO Rail Line crosses the Study Area and limits east-west connectivity between the MRMJSP Area and the communities to the east. As a result, east-west connectivity primarily relies on Major Mackenzie Drive East, Bur Oak Avenue, and 16th Avenue.

The existing Mount Joy GO station lands are surrounded by commercial and retail developments that are scaled to a low-density context and are therefore underutilized. The prevalence of large blocks, expansive surface parking lots and a low proportion of signalized intersections optimizes travel for the private automobile along Markham Road. An absence of a supporting street network has resulted in vehicular traffic being concentrated along Markham Road, which has resulted in traffic congestion at the 16th Avenue intersection, as the road narrows into the southern Markham Village HCD.

An assessment of the shift in mode share over time has shown that the prevailing travel mode in the Study Area is auto-oriented. However, there has been a steady decrease in the auto mode share over the last ten years, and an increase in transit and active transportation mode shares. Despite this gradual shift in mode share, currently there is a lack of connectivity for active travel modes, which along with a lack of safe crossing opportunities provides for a barrier to walkability. Opportunities exist to increase active transportation connectivity throughout the Secondary Plan Area by way of adding protected facilities to existing streets, by improving existing facilities by way of separation from vehicular traffic, and introducing new multi-use pathways. As redevelopment advances, there is an opportunity to introduce a fine-grain street network into the Secondary Plan Area, to break up the large blocks that currently exist. Markham Road can be re-imagined as a complete street that would accommodate all travel modes. In turn, this can create a travel environment which appropriately transitions to, and is compatible with, the main street character of the Markham Village HCD to the south. An opportunity exists to create a new Transit Oriented Community (TOC), anchored by Mount Joy GO Station, and supported by a system of complete streets.

An opportunity exists to locate an additional transit and mobility hub, with the addition of a GO station at Major Mackenzie Drive East. The location has been identified as a potential transit hub by the York Region Transportation Master Plan 2016 . The station will connect GO riders with the planned Viva BRT expansion along Major Mackenzie Drive East, as well as local YRT transportation routes. A preliminary assessment indicates sufficient projected ridership needs based on regional growth projections, and an additional station will also offload “park and ride” commuters that would be diverted from the Mount Joy GO Station MTSA as Metrolinx’s surface parking lot redevelops.

While there are several options possible for the siting of the infrastructure related to the station, it is recommended that the north side of Major Mackenzie continue to be protected for, as a potential location for a station and/or its related infrastructure. Furthermore, it is noted that on March 18, 2021 York Region released a report on its land needs to 2051, as part of its ongoing MCR. All of Markham's white belt lands, which include some of the lands north of Major Mackenzie Drive East at Markham Road, are proposed for urban expansion. Refer to **Section 3.3** for more information.

Existing Municipal Servicing Assessment

The report summarizes key findings associated with the existing water distribution system, sanitary sewer system, and stormwater management system. The current floodplain modelling for the Rouge River Watershed anticipates that Mount Joy Creek will flood during Regional Storm events in certain sections, which currently impacts the development potential of adjacent properties. Further to this, some of the commercial properties adjacent to the railway lands currently drain uncontrolled and untreated runoff into Mount Joy Creek, which results in localized erosion impacts and pollution. With regards to the existing sanitary sewer system, preliminary assessments have shown that the downstream sanitary capacity is constrained in wet weather flow conditions for the east drainage area, though this is not expected to impact redevelopment in the future.

Opportunities exist to upgrade the sanitary system capacity, realign and reconfigure Mount Joy Creek, and introduce Low Impact Development (LID) strategies to address stormwater management needs in more sustainable ways. Refer to **Section 3.4** for more information.

Consultation and Engagement

A fulsome engagement program at key milestones was devised to take place throughout the Study process. The goals of the engagement program were to generate broad awareness of the Secondary Plan Study, and obtain feedback to inform the preparation of the vision, guiding principles and draft Demonstration Plan. Refer to **Section 4.0** for more information.

Vision

"The Markham Road – Mount Joy Secondary Plan Area will evolve into a walkable, compact, and vibrant mixed-use community. It will also function as a gateway, main street, workplace, and social and cultural hub serving this community and the surrounding communities of Berczy Village, Wismer Commons, Greensborough, Swan Lake, and Markham Village.

To do so, a range and mix of housing, including affordable and rental housing, employment, shopping and recreation opportunities will be integrated and provided at transit-supportive densities that are compatible with the established low-rise residential neighborhoods. The greatest intensity of development and activity will be near rapid transit stations, complemented by animated parks, schools, community and recreation facilities, and other amenities. All these elements are tied together and enriched with a vibrant public realm that drive the appeal, livability, resilience and distinct sense of place of the Markham Road – Mount Joy Area."

Refer to **Section 5.0** for more information.

Guiding Principles

Building upon the Vision, the following principles will provide a framework for the development of a vibrant mixed-use community woven into the transportation system.

1. Protecting and Enhancing the Natural Environment
2. Building Compact and Complete, Rail-Integrated Communities
3. Increasing Mobility Options
4. Maintaining a Vibrant and Competitive Economy
5. Adopting Green Infrastructure and Development Standards
6. Facilitating Public Input and Long-Range Planning and Implementation

Refer to **Section 5.0** for more information.

Draft Demonstration Plan

The report presents the draft Demonstration Plan, and forms the basis for policy direction and recommendations to inform the Secondary Plan Area. The draft Demonstration Plan is in keeping with, and augments, the Vision and associated Guiding Principles for the Secondary Plan. It has been informed by the findings of the baseline conditions assessment, as well as consultation with City of Markham, stakeholders and the public. It has emerged out of an iterative process of review and evaluation with City and Agency Staff, is based on a set of land use and built form assumptions, and introduces a set of preliminary development yields, which are subject to revision. Finally, it is built on a set of framework elements, inclusive of natural heritage, public realm and open space, street hierarchy, precincts, gateways and placemaking opportunities, land use and built form, and phasing. Finally, the draft Demonstration

Plan contemplates the expansion of the Secondary Plan Area to incorporate the existing surface parking lot, located east of Mount Joy GO Station, on the south side of Bur Oak Avenue, and east of the Stouffville GO Rail Corridor.

The key elements of this framework include, but are not limited to, the following:

- » Transformation of the Markham Road Corridor into a pedestrian-oriented boulevard and mixed-use main street destination;
- » Addressing overall connectivity between the Secondary Plan Area and neighbouring communities;
- » Expansion of the existing collector road network through the extension of Anderson Avenue and Edward Jeffreys Avenue, and the introduction of additional Minor Collector Streets and local roads;
- » Prioritization of at-grade retail frontages along the length of Markham Road, between Castlemore Avenue to the north and 16th Avenue to the south;
- » Establishment of active at-grade frontages along the length of Markham Road, Castlemore Avenue, Bur Oak Avenue, and Anderson Avenue;
- » Establishment of three distinct precincts inclusive of the North, Central and South Precincts;
- » Establishment of a Mixed Use Node comprising the Mount Joy GO Station lands, which spans the Central and South Precincts;
- » Transition in height and density to the Markham Village south of 16th Avenue;
- » Incorporation of a Mixed Use Employment Hub within the southeastern-most portion of the Central Precinct, overlapping with the GO Station Mixed Use Node overlay;

- » Creation of an integrated network of parks and open spaces;
- » Restoration and enhancement of the Greenway System, and re-alignment of Mount Joy Creek;
- » Clustering of community services, infrastructure and facilities;
- » Clustering and mixing of commercial, employment and residential uses;
- » Establishment of an active transportation network, inclusive of protected cycling facilities, multi-use pathway, Green Streets and Pedestrian Connections, and pedestrian bridges; and,
- » Connection to a potential GO Station at Major Mackenzie Drive East.

The draft Demonstration Plan contemplates the build-out of the Secondary Plan Area and includes a connection to a potential GO station, which is recommended for protection on the north side of Major Mackenzie Drive East. Furthermore, the report provides an overview of other planning and design considerations, which informed the preparation of the draft Demonstration Plan. These include the existing and potential GO stations, Markham Road, and the Mount Joy Creek Alignment.

The draft Demonstration Plan anticipates that development within the Secondary Plan Area will occur in multiple phases, to full build-out. Refer to **Section 6.0** for more information.

Key Policy Guidance & Recommendations

Building upon the Vision, Guiding Principles, and draft Demonstration Plan, the report establishes preliminary policy guidance and recommendations pertaining to land use, urban design, transportation, municipal servicing and implementation, to inform the preparation of the Markham Road – Mount Joy Secondary Plan.

Land use and urban design direction is provided with respect to natural heritage, land use and built form, precincts, community infrastructure and facilities, cultural heritage, public realm, market and real estate, affordable housing, sustainability and resiliency. Transportation direction is provided with respect to the transportation network, mobility services, curbside management, the potential GO station at Major Mackenzie Drive East, and the multi-modal transportation demand forecasting framework and assumptions. Municipal servicing direction is provided with respect to water, wastewater and stormwater management. Finally, phasing and implementation direction is provided with respect to the coordination of development, existing lawful uses, conveyance of lands, landowner agreements, development phasing plans, implementation tools, and implementation processes. Refer to **Section 7.0** for more information.

Next Steps

The report will be considered by Markham's Development Services Committee (DSC). Stakeholder and community consultation on the draft Demonstration Plan will take place in Spring 2021. Feedback obtained through the consultations will be used to inform final refinements to the preferred Demonstration Plan and policy recommendations to be provided within the Final Study Report. Refer to **Section 8.0** for more information.

1.0 Introduction

1.1 Study Purpose and Overview

SvN Architects and Planners (SvN) was retained by the City of Markham to lead a team of multi-disciplinary consultants, comprising of HDR Inc., Counterpoint Engineering, and Jonathan Tinney, to undertake a Study that will inform the development of a vision and comprehensive planning framework for the Markham Road - Mount Joy Secondary Plan (MRMJSP) Area. The City of Markham Official Plan 2014 identifies the need for a new Secondary Plan to be prepared for this area based on a land use objective to:

“provide for a mixed-use corridor that functions as a main street integrating a range of housing, employment, shopping and recreation opportunities, at transit supportive densities adjacent to the GO station, to serve the adjacent communities of Berzcy Village, Wismer Commons, Greensborough and Swan Lake”.

The purpose of the Study is to prepare a Demonstration Plan and Policy Guidance that will inform the development of the Secondary Plan for the MRMJSP Area. The Study integrates land use & urban design, transportation and municipal servicing considerations, to comprehensively plan for a sustainable and complete community. Multiple opportunities for stakeholder and community consultation are integrated at key milestones.

The Secondary Plan Area is currently dominated by large tracts of single-use lands. This pattern of development is not sustainable, nor will it serve a growing, transit and pedestrian-supportive community. The MRMJSP presents a significant opportunity to leverage existing assets, including but not limited to the existing Mount Joy GO Station, the Greenway System and Mount Joy Creek, the Mount Joy Business Park, the Markham Museum, surrounding neighbourhoods, parks and open spaces, and the adjacent Markham Village main street.

As a City-led policy initiative, the Secondary Plan Study makes reference to Metrolinx’s ‘Market Driven Strategy to Delivery Transit Infrastructure’ (2018). This strategy establishes the planning and spatial conditions necessary to drive local real estate market conditions in order to spur public and private investment and promote collaboration to maximize opportunities for transit investment. This is necessary in order to ensure the creation of a sustainable, resilient, vibrant and complete transit-oriented community. This approach aligns with Provincial policy, which directs population and employment growth to Major Transit Station Areas (MTSAs).

Additional potential exists to transform Markham Road from a car-dominated, generic arterial road into an attractive, tree-lined street that will encourage active transportation. This transformation will be bolstered by the establishment of a new street and block framework,

which will introduce a new network of connector and local streets, as well as active transportation connections and infrastructure. This will be provided in tandem with new land use policies, which set the stage for mixed-use development, a series of new parks and open spaces, and new community facilities and infrastructure.

The main considerations of the Study are land use & urban design, transportation and municipal servicing. Policy guidance will be developed based on these considerations, with multiple opportunities for stakeholder and community consultation integrated at key milestones. The Study process will include an engagement with City officials, reviewing agencies, area landowners, and the public with the ultimate goal of developing a Vision and Guiding Principles for how the MRMJSP Area will evolve and mature from a car-dominated, arterial corridor to a more dynamic and pedestrian oriented environment.

The Study will culminate in recommendations for structuring growth in a manner that will be transformative for the Secondary Plan Area as a whole, with a focus primarily related to the existing Mount Joy GO Station Area and Markham Road corridor. As well, the Study will investigate the opportunity for siting a second GO Station at Major Mackenzie Drive East.

1.2 Study Process

The Study will be conducted over multiple phases as follows:

- » **Phase 1:** Project Kick-off and the establishment of a Project Management Plan; involving the preparation of a project schedule, work plan and a Stakeholder and Community Consultation Approach.
- » **Phase 2:** Background Review, Data Collection and Assessment; involving the development of an understanding of the existing conditions of the Secondary Plan Area and its surrounding context based on three main components: land use and urban design, transportation, and municipal servicing.
- » **Phase 3:** Development of Vision, Guiding Principles, Demonstration Plan, Policy Guidance, and a series of virtual Design Charrette and Community Information Session with stakeholders, agencies and the public. This phase will culminate in the preparation of this interim report, which is intended to provide a summary of all technical analysis and consultation undertaken in Phases 2 and 3.
- » **Phase 4:** Presentation to Development Services Committee and Community Consultation, including the refinement of the Demonstration Plan.
- » **Phase 5:** Transportation and Municipal Services Analysis and Recommendation, including the development of final transportation and servicing reports which provide final analysis and recommendations to support the final demonstration concepts and policy guidance.
- » **Phase 6:** Final Study Report that summarizes all work undertaken in Phases 2 through 5. The Report will include summaries of the existing conditions assessment from all disciplines, the preparation of the final Vision, Guiding Principles, Demonstration Plan, and the supporting Policy Recommendations with regard to land use, urban design, transportation and servicing. These will form the basis of the Secondary Plan.

The Study endeavours to provide recommendations that will structure growth in a manner that will be transformative for the Secondary Plan Area as a whole, with a focus primarily related to the existing Mount Joy GO Station Area and Markham Road corridor. This transformative potential can be realized by capitalizing on the corridor's existing and emerging attributes and retrofitting these structuring elements to support policy objectives within the Provincial, Regional and Local planning frameworks. In turn, this will further spur private investment to achieve a vision for a renewed, urbanized corridor and GO station area, which will be appropriately scaled to match its position within the City's intensification area hierarchy. As well, the Study will investigate the opportunity for siting a second GO station at the northern boundary of the Secondary Plan Area, at Major Mackenzie Drive East.

1.3 Study Area

The approximate boundary of the MRMJSP Area is identified within Chapter 9 of the Markham Official Plan 2014 (**Figure 1**). The Secondary Plan Area is situated in the northeast portion of the City, just south of the northeastern limit of Markham's Urban Area. Cumulatively, the Secondary Plan Area is 92.2 HA in size. It is comprised of the lands along Markham Road between 16th Avenue and Major Mackenzie Drive East. The westerly limit is generally defined by the extent of the commercial properties on the west side of Markham Road. The easterly limit of the Secondary Plan Area is generally defined by the Stouffville GO rail corridor.

The Secondary Plan boundary referenced within the Official Plan was referred to throughout the baseline conditions assessment work. Through the evolution and review of this work, the Metrolinx-owned parking lot east of the Stouffville GO rail corridor, on the south side of Bur Oak Avenue was deemed appropriate for inclusion within the future MRMJSP Area due its potential for redevelopment. As such, this report will discuss and graphically depict this parking lot in Sections 6.0 and 7.0, when the Draft Demonstration Plan and Key Policy Guidance are presented.

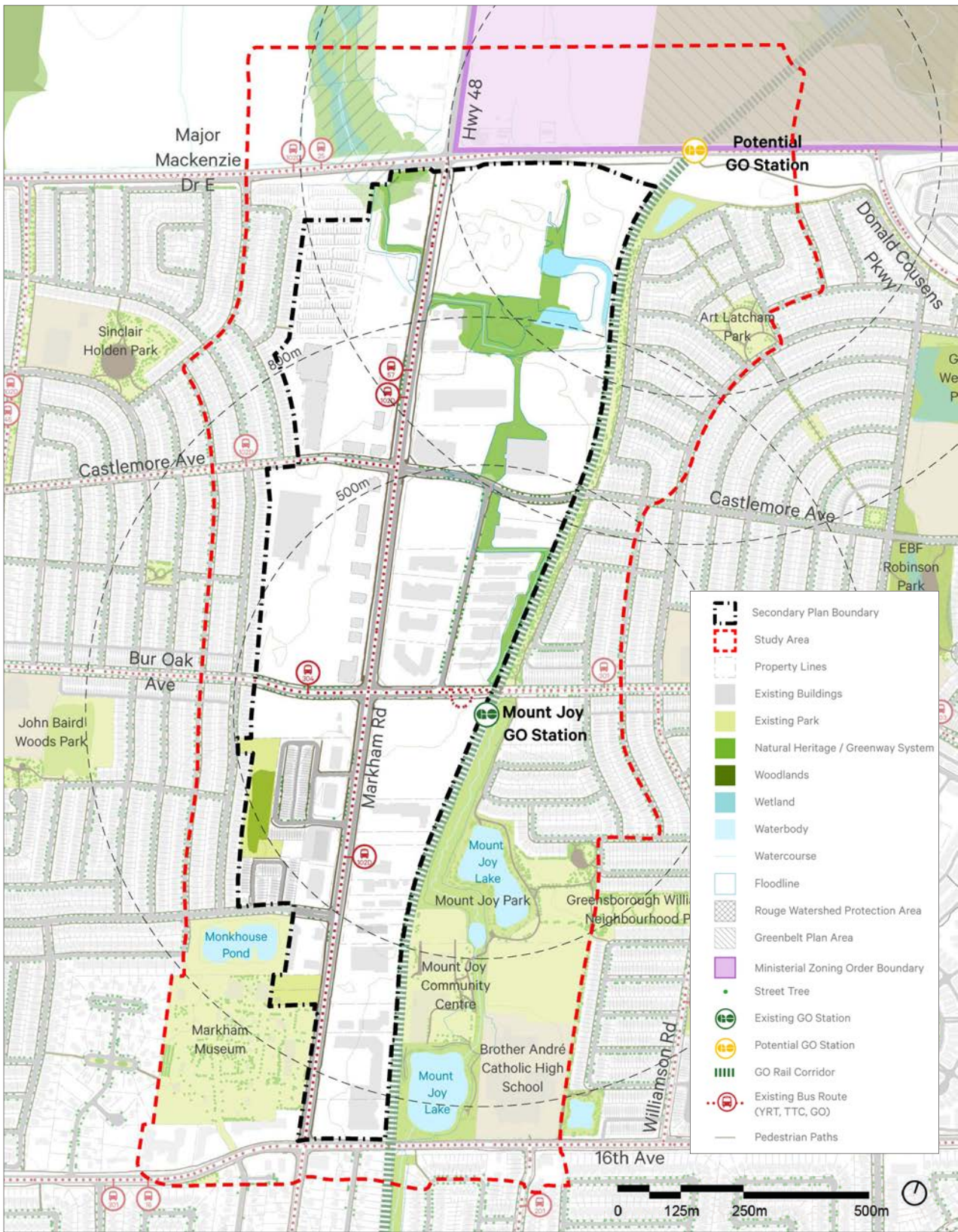


Figure 1: Study Area and Secondary Plan Boundary per Section 9.3.7 of Official Plan 2014

The Secondary Plan Area currently contains a mix of residential, employment and retail land uses at a range of densities; a tributary of the Rouge River, Mount Joy Creek; and, the Mount Joy GO Station at Bur Oak Avenue and Markham Road (see **Figure 2**). The Secondary Plan Area had a population of approximately 2,770 people and 2,380 jobs as of 2019.

For the purposes of the assessment of baseline conditions, the Study Area included lands beyond the defined Secondary Plan Area. The easterly limit of the Study Area extends beyond the Stouffville GO rail corridor, into the westerly end of the Greensborough community. The Study Area extends southward and includes the Mount Joy Community Centre, Mount Joy Lake, Brother Andre Catholic Secondary School, and the northern limit of the Markham Village Heritage Conservation District (HCD). The westerly boundary of the Study Area is generally defined by the easterly end of the Wismer Commons community, as well as the Markham Museum lands that anchor the southern entry into the MRMJSP Area. Although the lands north of Major Mackenzie Drive East are not within the urban boundary, they are included in the Study Area for the purpose of assessing the feasibility of an additional GO station at Major Mackenzie Drive East.

As noted earlier, the Markham Village HCD abuts the MRMJSP Area to the south, and is a key community amenity and destination. The transition between the MRMJSP Area and the HCD presents a key placemaking opportunity, requiring thoughtful consideration in terms of land use, built form and massing, public realm and streetscape design.

1.4 Report Purpose and Structure

The purpose of this report is to provide a summary of all technical analysis and consultation undertaken to date, as well as present the draft Demonstration Plan and policy guidance that will inform the preparation of the Secondary Plan.

The Report includes the following sections:

- » **Section 1:** Introduces the Study, the Study Area and the report purpose;
- » **Section 2:** Provides an overview of the existing policy framework, a description of previous and current studies, as well as policy updates which informed the development of recommendations;
- » **Section 3:** Provides an assessment of the existing conditions, including land use and urban design, transportation and municipal servicing;
- » **Section 4:** Provides a summary of consultation and engagement efforts undertaken to date;
- » **Section 5:** Presents the Vision and Guiding Principles for the Secondary Plan Area;
- » **Section 6:** Reviews the draft Demonstration Plan and outlines the assumptions applied;
- » **Section 7:** Provides policy guidance and recommendations for the Secondary Plan; and
- » **Section 8:** Identifies the next steps within the Study process including an analysis of the findings.

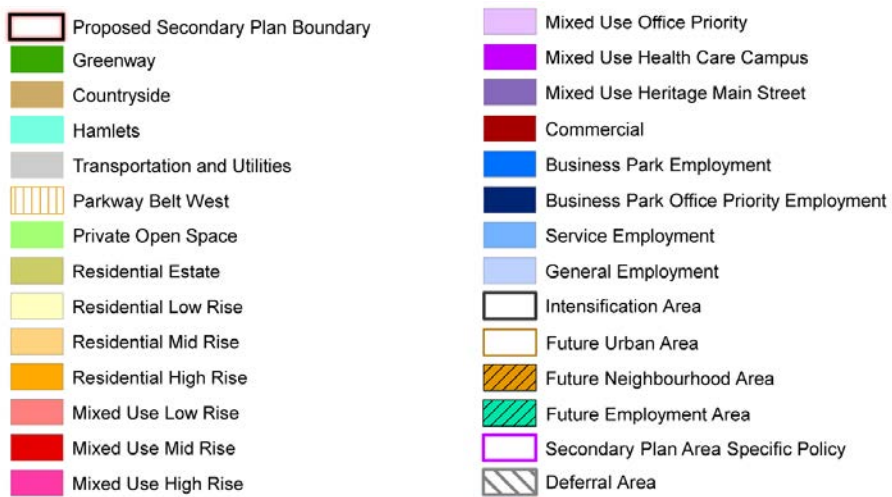
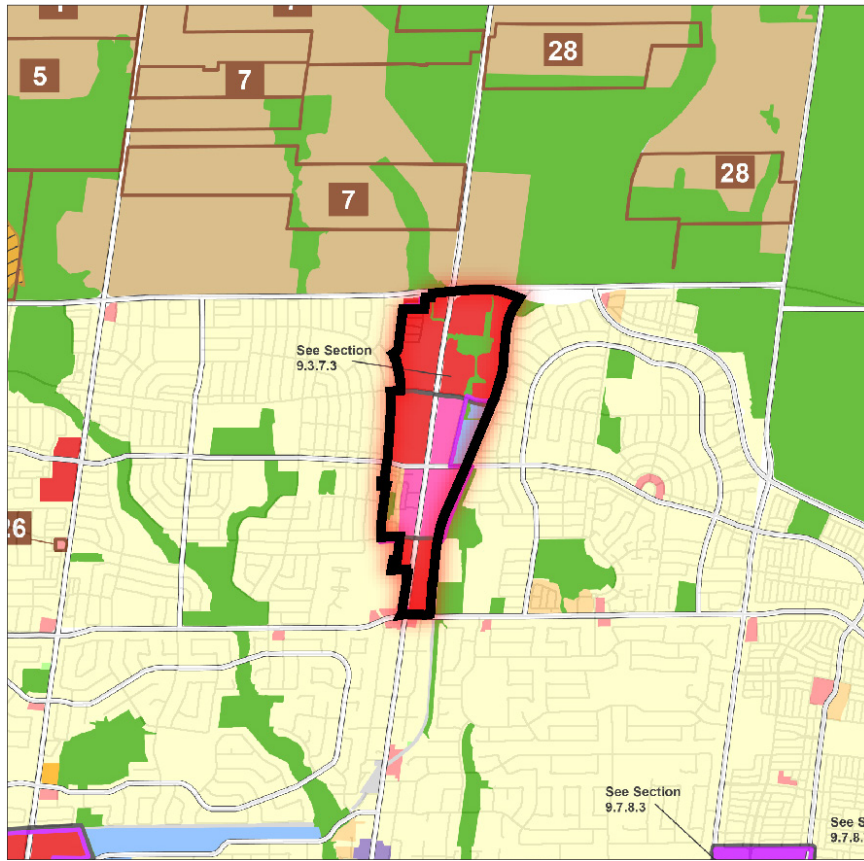


Figure 2: MRMJSP Area in relation to the City of Markham's Land Use Map (OP Map 3)

2.0 Policy Context

2.1 Provincial Policy Statement, 2020

The Provincial Policy Statement (PPS) provides Provincial direction on matters related to land use planning. Section 3 of the Planning Act requires that decisions affecting planning matters “shall be consistent with” the Provincial Policy Statement. The PPS includes direction on building strong communities through efficient development and land use patterns that incorporate densities that minimize land consumption and infrastructure requirements. The PPS encourages an appropriate mix and range of employment and housing and promotes healthy and active communities through the planning of public spaces, recreation, parks, trails and open space. The PPS directs that land uses within settlement areas are to be transit-supportive where transit is planned, currently exists, or in areas where transit may be developed in the future. The PPS encourages the direction of intensification within settlement areas in order to make efficient use of existing resources and servicing capacity, to minimize environmental impacts, and to support active transportation and transit use.

Policies within the PPS encourage the colocation of higher densities with transit infrastructure and services, in order to reduce the length and number of vehicular trips. Generally, the PPS is supportive of the improvement of transit and active transportation facilities. The MRMJSP is envisioned to provide higher densities in proximity to the Mount Joy GO Station in order to meet these objectives. The MRMJSP will have regard for Major Mackenzie Drive as a rapid transit corridor as well. A focus will be made on the integration of land use, density and built form decisions where higher order transit is in proximity, so as to provide the most efficient and supportive land use strategy.

2.2 Growth Plan for the Greater Golden Horseshoe, 2019

The Growth Plan for the Greater Golden Horseshoe (Growth Plan) establishes a framework for the development of the Greater Toronto and Hamilton Area, also known as the Greater Golden Horseshoe (GGH).

The Growth Plan recognizes transit as a first priority for major transportation investments. It sets out a regional vision for transit, and seeks to align transit with growth and development by directing growth to Major Transit Station Areas (MTSAs), along priority transit corridors, and other strategic growth areas. The Growth Plan requires municipalities to complete detailed plans for MTSAs along priority transit corridors to support planned transit service improvements. Municipalities may also identify additional MTSAs beyond the priority transit corridors in the Growth Plan.

The Growth Plan also requires single and upper-tier municipalities (in consultation with lower-tier municipalities), to map employment areas in their official plans. The Growth Plan stipulates that employment areas may be incorporated into official plans by amendment at any time, and it mandates that single and upper tier municipalities have authority over employment land conversion requests, to non-employment uses.

2.3 Greenbelt Plan, 2017

The Greenbelt Plan, together with the Growth Plan, the Niagara Escarpment Plan, and the Oak Ridges Moraine Conservation Plan, establishes a land use planning framework for the GGH that supports a thriving economy, a clean and healthy environment and social equity. The Greenbelt Plan identifies areas to be protected from urbanization for the long-term, including agricultural lands and lands containing ecological and hydrological features.

The lands on the north side of Major Mackenzie Drive East, surrounding the Stouffville GO rail corridor, are designated Protected Countryside under the Greenbelt Plan, and are within the Natural Heritage System overlay. The Greenbelt Plan does not support intensification within lands designated Protected Countryside, or within the Natural Heritage System. These designations are particularly relevant in the preliminary assessment of the potential GO station at Major Mackenzie Drive East, as discussed in Section 3.3.2. Under the current policy framework, the Greenbelt Plan would permit the development of infrastructure such as a transit station, or associated parking lot, subject to criteria which include the completion of an Environmental Assessment. It is however noted that provincial policy does not permit a settlement area boundary expansion into the Greenbelt.

It is important to note that the lands northeast of Major Mackenzie Drive East and the Stouffville GO rail corridor are identified as being within the 600 metre wide Little Rouge Creek Corridor, as per Policy 3.2.7 of the Greenbelt Plan. This corridor has been identified as the main ecological link between Lake Ontario and the southerly boundary of the Oak Ridges Moraine. The Little Rouge Creek Corridor is designated as a Special Management Site in the Rouge North Management Plan (RNMP).

The policies within the RNMP stipulate that a continuous forested corridor of at least 400 metres in width must be maintained around Little Rouge Creek, and only compatible uses would be permitted in the outer 200 metres of the corridor. These include limited parking facilities associated directly with the open space uses related to the Rouge Park North. The Rouge North Management Plan specifically notes trail heads, interpretive or visitor centers and appropriate recreational uses. Overall, the adjacent uses must not result in an increase in isolation of vegetation units within the corridor, and the loss of interior forest conditions would not be supported.

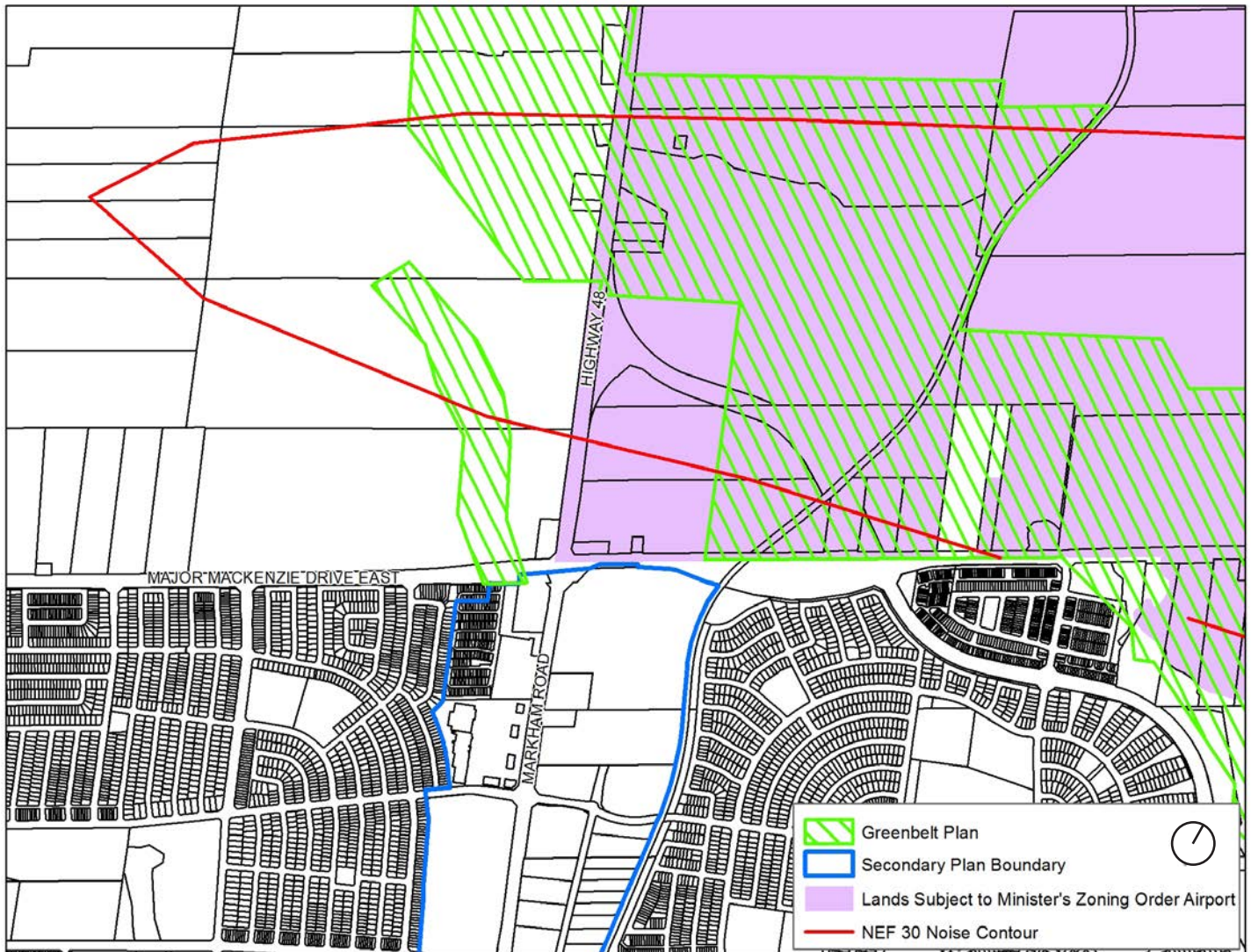


Figure 3: Location of Secondary Plan Area with relation to Greenbelt Plan Area and MZO (O.Reg 104/72)

These policies have particular relevance in the consideration of infrastructure siting in proximity to the Little Rouge Creek Corridor. The suitability and appropriateness of locating the potential GO station, its associated infrastructure, and accessory uses will require consideration on a site-specific basis.

In addition to the above, Mount Joy Creek is identified as an Urban River Valley in the Greenbelt Plan. It is noted that the majority of the Mount Joy Creek lands are currently in private ownership, and the policies of the Urban River Valley designation apply only to publicly owned lands along valley corridors. The intent of the Greenbelt Plan is to provide protection for river valleys that exist in an urban context, and to encourage

municipalities to protect and enhance the environmental functions that natural features provide. Furthermore, the Greenbelt Plan directs that the intent is for Urban River Valleys is to provide the setting for a network of recreational, cultural and tourist amenities and infrastructure, which are needed to support urban areas.

Through the development process, it is expected that valleylands will be conveyed into public ownership in order to facilitate this vision. **Figure 4** demonstrates the conceptual location of the valley corridor associated with Mount Joy Creek, which traverses the Study Area in a north-south direction. Site-specific assessments and confirmation with the appropriate approval authority are required to confirm the exact extent of the valley system.

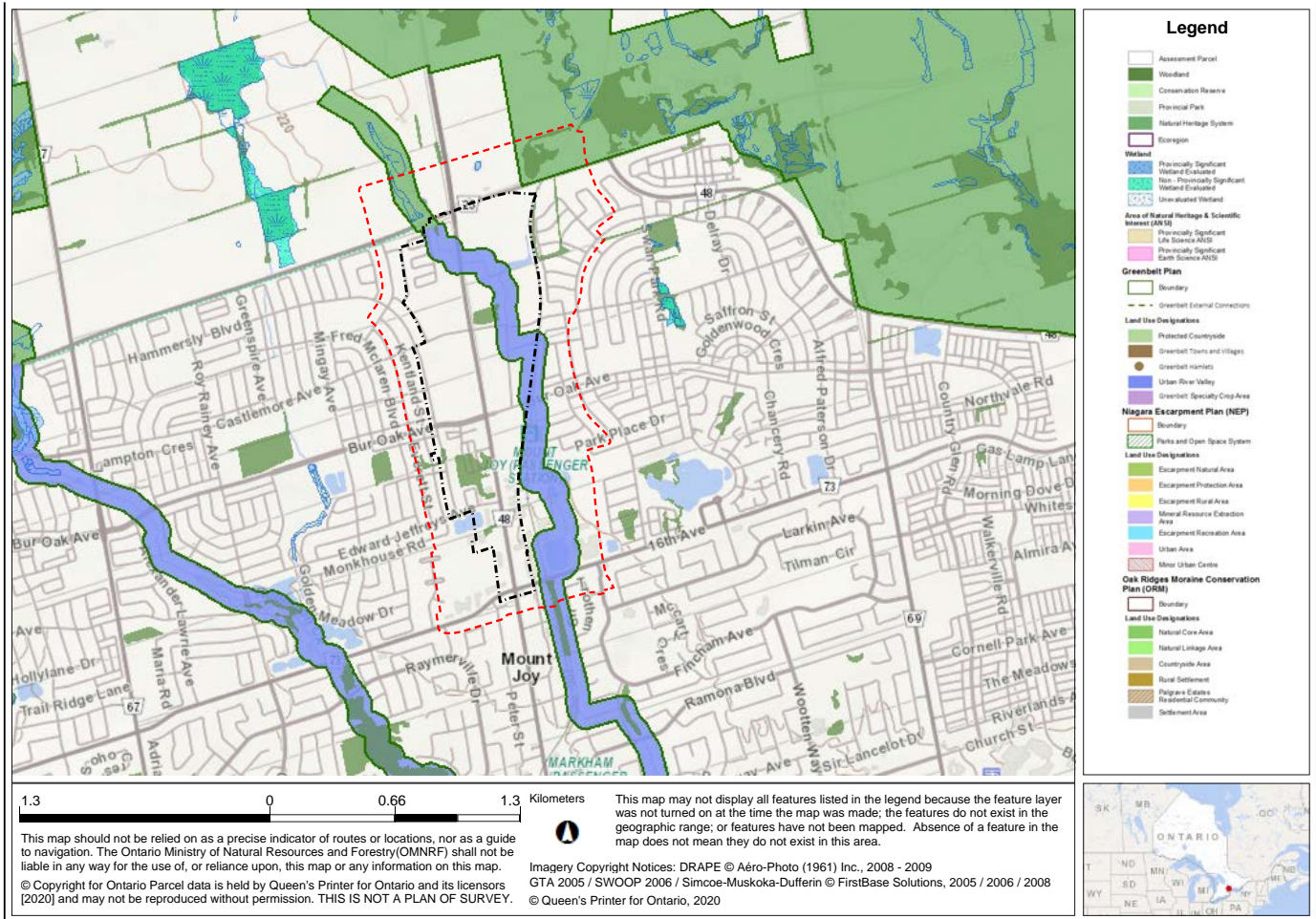


Figure 4: Mount Joy Creek Urban River Valley in relation to Secondary Plan Area

2.4 Ministerial Zoning Order (MZO) (O. Reg. 104/72)

A portion of the lands within the Study Area are subject to a Ministerial Zoning Order (MZO), which aims to protect and regulate lands pertaining to the proposed Pickering Airport. The lands subject to the Order are generally located to the northeast of Major Mackenzie Drive and Markham Road, and are therefore outside of the Secondary Plan Area itself. **Figure 3** depicts the location of the Secondary Plan Area in relation to the MZO boundary.

Provincial policy aims to protect airport lands from incompatible uses and new residential development by prohibiting such uses in the areas near existing/future airports. The Order limits permitted uses to agricultural

uses, existing single detached dwellings, and the continuation of the uses permitted as of the time of the issuance of the Order. An amendment to the Order will be required to support the introduction of new uses. It is noted that the Order does permit the introduction of new infrastructure, including transit expansion.

One of the drivers that will support an application to amend the Order will be the updating of the Noise Emission Factor/Noise Exposure Projection (NEF/NEP) contour mapping, and a confirmation of the noise levels surrounding the future station lands. New residential development would not be supported within areas that are subject to NEF/NEP levels above 30.

2.5 York Region Official Plan, 2010

The MRMJSP Area is located within York Region's Urban Area (see **Figure 5**). The York Region Official Plan 2010 (YROP) states that a significant portion of the Region's planned growth will be accommodated within the Urban Area. It sets out an intensification strategy, which directs intensification to a hierarchy of locations starting with Regional Centres, followed by Regional Corridors, GO Transit train stations/ bus terminals and subway stations, local centres and corridors, other major streets, local infill, and secondary suites. The intent of the strategy is to direct the highest levels of intensification to areas that are well-served by infrastructure, in order to make efficient use of existing resources and promote compact development.

The YROP includes specific direction regarding the development of secondary plans for lands within Local Corridors, including criteria that promote the consideration of historic corridor function and revitalization of main street areas; the establishment of a range of residential and commercial land uses; the siting of employment uses within 200 metres of transit stops; as well as specific urban design criteria that encourage a continuous building form adjacent to the street right-of-way (ROW), and pedestrian activity. These policies were considered in the development of the policy guidance and recommendations provided to inform the preparation of the future MRMJSP.

Major Mackenzie Drive East is identified as a Regional Rapid Transit Corridor by the YROP, and Markham Road is identified as a Local Corridor. The MRMJSP Area will be developed in a consistent fashion with the Region's intensification strategy. While it is acknowledged that the highest densities will be directed to the Regional

Centres, such as Markham Centre, development in the MRMJSP Area will be planned to accommodate growth as well, but at a smaller scale than Regional Centres or Corridors.

The YROP directs that Local Corridors located on existing or planned rapid transit corridors also consider its Regional Corridor policies. As Major Mackenzie Drive East is a Regional Rapid Transit Corridor, future secondary plan policies should acknowledge Major Mackenzie Drive East as an important spine for intensification. Regarding Natural Heritage, the YROP directs that secondary plans should incorporate the Regional Greenlands System, and include policies that will bolster and encourage the long term protection of natural heritage features, systematically. The MRMJSP will have regard for Mount Joy Creek and its valley corridor, and encourage connections between existing natural features to improve their ecological functions.

Similarly, the YROP contains policies encouraging that cultural heritage resources be identified within secondary plans, and any significant resources be conserved. The Demonstration Plan and associated policy guidance will identify the heritage resources inventoried to date, given their significance to the evolution of the MRMJSP Area, and direct for the continued preservation of cultural heritage resources.

With respect to housing and affordability, the YROP contains strong policies that require secondary plans to achieve a mix and range of housing types within each level of affordability. YROP Policy 3.5.6 states that a minimum 25 per cent of new housing units across the Region should be affordable, be distributed within each

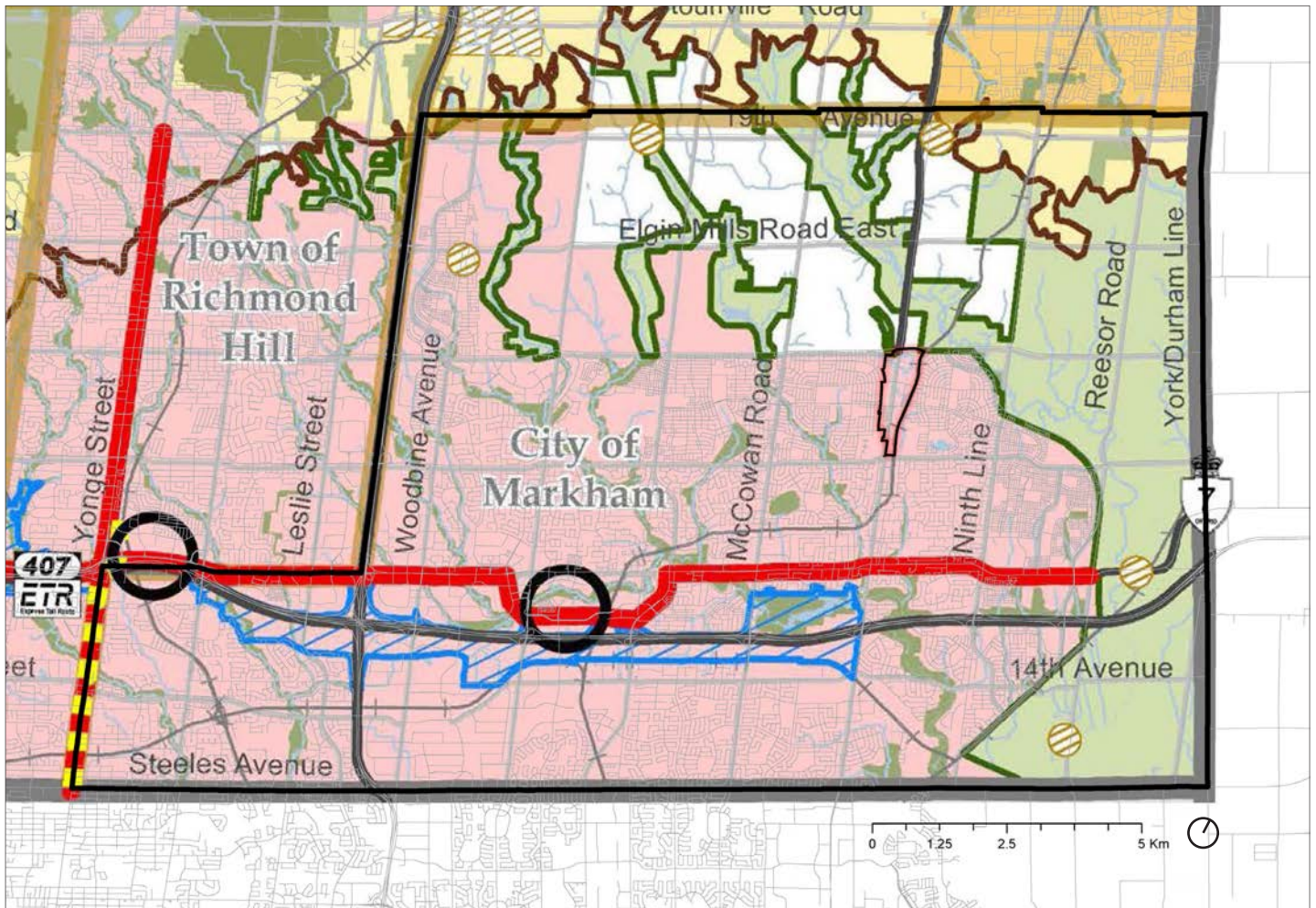


Figure 5: Secondary Plan Area location in relation to York Region's Urban Structure

local municipality, and should be coordinated across applicable local planning areas including secondary plan and block plan areas. A portion of these units should be accessible for people with disabilities. Affordable housing units should include a mix and range of types, lot sizes, unit sizes and tenures to provide opportunity for all household types, including larger families, seniors, and residents with special needs.

The YROP also includes policies directing local municipalities to identify employment areas, and protect them through employment land conversion policies that are consistent with the employment land conversion policies of the Province and the Region.

2.5.1 York Region's Municipal Comprehensive Review

The Region is currently undergoing an official plan review through a MCR to complete its conformity exercise to the Growth Plan 2019. Two areas within the MCR program are of particular relevance to the Secondary Plan Study:

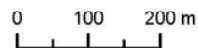
- 1. MTSA:** In September 2020, Regional Council endorsed 72 MTSA's for inclusion in the YROP. 23 of these are located in Markham, including one at Mount Joy GO Station. A large portion of the Secondary Plan Area is located within the proposed delineation of the Mount Joy GO Station MTSA (see **Figure 6**). The current density of the draft Mount Joy GO Station MTSA is 70 people and jobs per hectare, and the proposed preliminary density target identified by Markham and the Region is 200 people and jobs per hectare. Once approved in the updated YROP, the MTSA's will be reflected in the City of Markham's Official Plan. It is noted that the potential Major Mackenzie GO Station was not identified as an MTSA by the Region, however additional MTSA's can be identified outside a MCR as transit infrastructure improvements are made.
- 2. Planning for Employment:** As part of the MCR, Regional Council endorsed employment areas proposed for designation in the YROP as well as staff recommendations about site specific employment area conversion requests, with some exceptions, in October 2020. It is noted that the Mount Joy Business Park, which is located within the endorsed Mount Joy GO Station MTSA, is not included in the updated YROP Employment Area mapping. It is our understanding that the Business Park is not of regional significance due to its size and location. The Region has therefore deferred the decision to determine the appropriate level of protection for the Business Park, and an employment conversion request at 77 Anderson Avenue within the Business Park, to the City of Markham. It is noted that the new YROP will introduce policies to encourage lands identified as employment at the local level, but not in the Region's employment area mapping, to continue to be mapped and protected for in local official plans. In relation to this, in February 2020 Markham City Council endorsed evaluating the employment conversion request at 77 Anderson Avenue through this Secondary Plan Study. More information is provided in **Section 3.2.2.1**.



Legend

- ▲ Major Transit Station
- Other Transit Corridors
- GO Rail
- Proposed MTSA Boundary
- 500m Radius
- 800m Radius

Mount Joy GO Station MTSA
Gross Area:
53.82 ha



Density (People & Jobs per Hectare)



Figure 6: Mount Joy GO Station Major Transit Station Area

2.6 City of Markham Official Plan, 2014

The City of Markham's Official Plan 2014 (OP) identifies the MRMJSP Area in the Chapter 9 Area and Site Specific Policies (see **Figure 7**). Specifically, Policy 9.3.7.1 identifies the need for a new secondary plan for the corridor based on the following land use objective:

“to provide for a mixed-use corridor that functions as a main street integrating a range of housing, employment, shopping and recreation opportunities, at transit supportive densities adjacent to the GO station, to serve the adjacent communities of Berzcy Village, Wismer Commons, Greensborough and Swan Lake”.

OP Policy 10.1.2.2 outlines the requirements for the preparation of new secondary plans. It directs that new Secondary Plans include provisions for the following components, among others:

- » Housing Supply and Affordability
- » Natural & Cultural Heritage
- » Recreational & Open Space
- » Community Infrastructure & Services,
- » Sustainable Transportation Design
- » Urban Design Guidelines
- » Supply and Diversity of Employment Lands
- » Phasing of Development, etc.

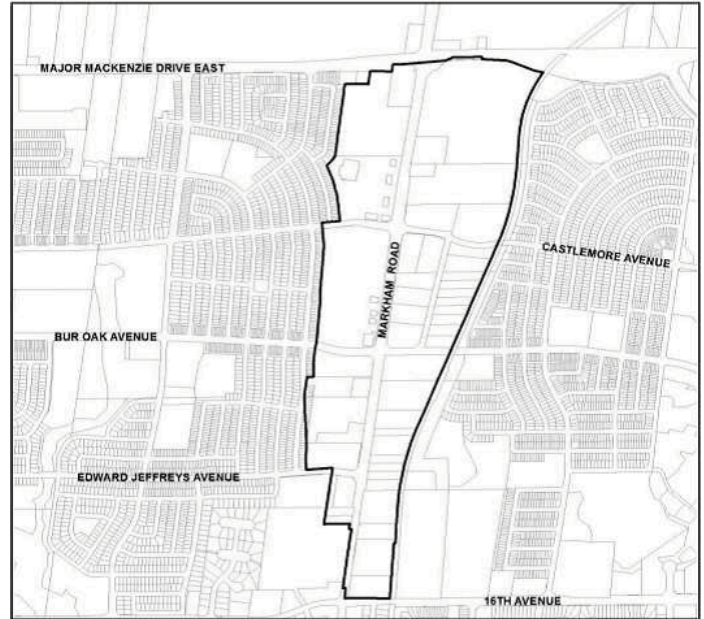


Figure 7: Secondary Plan Boundary per OP policy 9.3.7



In the broader municipal policy context, the lands within the Secondary Plan Area are currently identified as a Local Corridor and Intensification Area in the OP. Local Corridors are intended to accommodate growth at a smaller scale than Regional Centres or Corridors. The MRMJSP Area is also identified as a Mixed Use Neighbourhood Area in Map 1 – Markham Structure of the OP. These lands are envisioned to accommodate a portion of the forecasted population and employment growth to 2031, where the future planning of neighbourhood and employment areas and mixed-use neighbourhoods will focus on intensification of centres and corridors served by rapid transit. Based on the OP, Markham is forecasted to grow to 420,000 residents and 240,000 jobs by 2031. However, revised minimum population and employment targets have been released as part of the most recent Growth Plan, which now provides forecasts to the 2051 Planning Horizon. As the York Region MCR is underway, and a new planning horizon is now being considered, new growth targets for Markham are expected later in 2021.

The current land use designations within the MRMJSP Area complement the intent of the aforementioned policies. The Mixed Use High Rise and Mixed Use Mid Rise designations prevail throughout the Secondary Plan Area, followed by Residential Mid-Rise, Service Employment, and Greenway, which pertains to the Mount Joy Creek valleylands. Through the advancement of the Secondary Plan Study, strategic locations for density and mixed uses, as well as open space and institutional uses will be determined to complement existing objectives of the City's OP and develop a comprehensive land use framework for the MRMJSP Area.

With respect to natural heritage, the OP encourages secondary plans to incorporate the protection and enhancement of the Greenway System and Natural Heritage Network. Mount Joy Creek, its associated valleylands, and any contiguous vegetation, are significant natural features within the Secondary Plan Area. The MRMJSP will recognize Mount Joy Creek, as well as any additional features, and incorporate policies that will guide the improvement of natural heritage features and their long term protection. Further to this, the current floodplain modelling for the Rouge River Watershed anticipates that Mount Joy Creek will flood during Regional Storm events in certain sections. The OP contains policies that restrict development on lands subject to natural hazards such as flooding and erosion in accordance with provincial policies and Conservation Authority regulations.

The OP directs that stormwater management facilities be developed based on best practices, and that sufficient servicing capacity be available in the context of urban development. The Secondary Plan will incorporate policies that will ensure sufficient servicing capacity is available prior to undertaking significant intensification efforts, and that it is done so in a way that is sustainable, based on green building innovations (e.g., LID), and considers impacts on adjacent natural systems. As well, the development of municipal servicing policies will have regard for Source Water Protection, to mitigate any effects to nearby Wellheads, and to ensure that drinking water supplies are protected for the long-term.

The MRMJSP Study Area contains several community resources of cultural significance, including two places of worship and four individually designated heritage buildings. It is also noted that the Markham Museum is within the Study Area, and that the Markham Village HCD is located directly to the south of the Secondary Plan Area. The OP contains policies which support the protection of cultural heritage resources, and the identification of new cultural heritage resources. As the MRMJSP Area develops, the re-use of existing buildings will be encouraged in order to celebrate the evolution of the Secondary Plan Area. Cultural heritage resources will be regarded within the future Secondary Plan, ensuring their long term protection.

The OP contains additional policies regarding community facilities and services. As the Secondary Plan Area intensifies, existing facilities within its vicinity, such as the Mount Joy Community Centre, will likely see a growing user demand. As such, there will be a need for the integrated planning of community infrastructure and services, particularly to serve new dense mixed-use neighbourhoods. The Secondary Plan will identify existing community resources and direct that new recreational, cultural, and institutional facilities be facilitated to meet growing demands.

The redevelopment of the MRMJSP Area, with significant densities expected in close proximity to transit, presents an important opportunity to support the implementation of the OP's affordable housing goals. Furthermore, opportunities exist to implement the recommendations that have been identified in the draft update to the Affordable and Rental Housing Strategy, which includes new inclusionary zoning tools within MTSA's.

The OP designates the Mount Joy Business Park as 'Service Employment'. These lands are to be protected for current and future employment uses. Employment lands such as the Mount Joy Business Park can only be considered for conversion during a Municipal Comprehensive Review. This Study will inform the future uses in this area, taking into account the MTSA employment requirements, to support the development of a mixed-use, transit-oriented community.

The OP directs that progressive urban design and sustainable development standards be incorporated into new secondary plans as they are developed. This Study integrates the review of best practices within York Region and within similar jurisdictions, to ensure that policies are developed as to encourage the creation of vibrant and dense communities that are geared towards the enjoyment of pedestrians at the street level.

Overall, transit investments will drive the impetus of directing density to the MRMJSP Area, in line with OP directives. As it develops, the transportation system will include mobility options for all users, and encourage a modal split that emphasizes active transportation and public transportation use. The travel needs of pedestrians, cyclists and transit riders will be considered as well as those of motorists. This Study will identify improvements to the road network as well as opportunities for future improvements and connections.

2.7 Other Relevant Plans, Programs and Studies

2.7.1 Markham's Integrated Leisure Master Plan

Approved by Markham's Council on November 13, 2019, the Integrated Leisure Master Plan (ILMP) documents the City's parks, recreation, arts & culture and library facilities and services. It identifies current needs, service improvements and future facility provision strategies. As the City grows and intensifies, the intent of the ILMP is to ensure that facilities and services that address the needs of the public coincide with the pace of development.

2.7.2 City of Markham Affordable and Rental Housing Strategy

In September 2018, Markham City Council directed staff to prepare a new affordable and rental housing strategy, and bring forward options to implement inclusionary zoning (IZ). A multi-phased study was initiated to assess housing needs, develop a vision, objectives and policy directions to inform the preparation of the strategy. The draft strategy was presented to Markham City Council in February 2020. A community information meeting took place in February 2021. The draft Affordable and Rental Housing Strategy proposes to apply IZ in MTSAs, including at the Mount Joy GO Station MTSA, once they are incorporated in the YROP.

2.7.3 16th Avenue to Major Mackenzie Drive Urban Design Study 2005

Completed in 2005, this study by Brook McIlroy contains detailed urban design and policy guidance for the MRMJSP Area. It recognizes that coordinated development efforts by landowners in combination with the City of Markham's investment into a well-designed public realm and multimodal transportation network are needed to produce the vibrant mixed use corridor

intended for Markham Road. While the urban design recommendations in this report are widely varied as they respond to distinct character areas, they contain common key themes that are consistent with the findings and key takeaways in this report. The recommendations were based on the assumption that Mount Joy GO Station will act as the catalyst for transformation within the area, with the key themes summarized through directions to:

- » Ensure complementary and attractive transition strategies to surrounding environments, particularly to the heritage assets at the south and adjacent neighbourhoods to the west and east;
- » Balance the service needs of roads while simultaneously encouraging alternative modes of transportation;
- » Introduce innovative and sensitive mixed use development;
- » Incorporate general built form principles of a strong street edge along Markham Road, Bur Oak Avenue, and Castlemore Avenue, incorporating a sense of place at key locations, and providing high quality public amenities; and,
- » Foster connectivity between the MRMJSP Area and surrounding environments.

The report also notes the Stouffville GO rail corridor as a major barrier between residential neighbourhoods to the east and the MRMJSP Area. This strategy encourages the longer term evolution of the Markham Road corridor into a 'main street', though the inclusion of recommendations for pedestrian-friendly placemaking. This includes lining Markham Road with street oriented shop fronts, and the facilitation of a multi-way boulevard, which is ideal for reconciling the inherent conflicts between the vehicular functions of an arterial road and the placemaking qualities of a main street. This Study has been reviewed to inform policy recommendations for the MRMJSP.

2.7.4 Metrolinx's Market Driven Transit Oriented Development Strategy, 2018

As noted earlier, the portion of the Secondary Plan Area centred on the Mount Joy GO Station lands is delineated as an intensification area in the Markham OP, and was also identified as an MTSA by York Region. Therefore, the Mount Joy GO Station will act as a key driver of change and a locus for a new Transit Oriented Community (TOC). These are higher density, mixed-use developments that are connected, next to or within a short walk of transit stations and transit stops.

TOCs aim to increase transit ridership and reduce traffic congestion, increase housing supply and jobs with access to transit; catalyze complete communities based on good planning principles; and allow for positive value capture by allowing the Province to maximize transit investment while reducing tax payer burden. By definition, these communities are strategically located as to optimize investment in transit infrastructure, which in turn will make long range transit investments viable.

In order to realize TOCs in line with provincial directives, Metrolinx adopted a new Market Driven Strategy in December 2018 for the implementation of transit infrastructure. The strategy leverages the value of Metrolinx's transit network, service and real estate portfolio, and opens up the possibility of public and private collaboration for funding and developing transit infrastructure in response to local real estate market conditions and/or the local need for additional transit.

The process is typically initiated by third parties including municipalities, private developers, and landowners. As part of this process, Metrolinx will commit to engaging with proponents, with a single point of contact. Metrolinx will conduct high-level screenings of proposals, and if sufficient potential for a TOC can be demonstrated, the decision will be made to proceed. When a third party funds and delivers Metrolinx infrastructure, the agency secures a full capital offset to the delivery of New Stations or Station Reallocations.

Metrolinx Asset Protection Packages (MAPP) are used to share Metrolinx's requirements for developers in designing and delivering market-driven strategy station projects. The MAPP outlines Metrolinx's principles, governance, rules of engagement and standards that will apply to a particular project. Implementing a Market Driven Strategy will provide opportunities to drive the development of station infrastructure, allow integrated access, create investment opportunities, and increase transit ridership.

This strategy in itself is a significant driver of change, and provides an opportunity to achieve a TOC on lands currently owned by Metrolinx which are directly adjacent to the Mount Joy GO Station. These lands are currently underutilized, and due to their size and extensive frontage along Markham Road, provide for a significant redevelopment opportunity.

The strategy also will be considered in the assessment of the potential second station at Major Mackenzie Drive East.

3.0 Existing Conditions Assessment

3.1 Overview

The following section provides an overview of the existing conditions within the Study Area from a land use and urban design, transportation, and municipal servicing context. Insights on the evolution of the Study Area and its current characteristics informed the formulation of the Vision and Guiding Principles that guided the Study, as well as the draft Demonstration Plan and Policy Guidance recommendations provided within the latter sections of this report.

3.2 Land Use and Urban Design

3.2.1 Natural Heritage

Mount Joy Creek is a significant natural heritage resource within the Secondary Plan Area.

The MRMJSP Area is located at the northern limit of York Region's urban boundary and is bordered to the north by agricultural and open space lands. Mount Joy Creek, a tributary to the Rouge River flows through the MRMJSP Area, and is a significant natural heritage feature particularly north of Castlemore Avenue.

In its current condition, the creek flows through a combination of open channel and piped systems from north of Major Mackenzie Drive East, to Mount Joy Lake, and ultimately joins with the Rouge River south of Highway 7. It enters the north limit of the Study Area, crossing Major Mackenzie Drive East via a culvert located west of Markham Road. It continues south as an open channel before entering another piped section

to cross to the east side of Markham Road. From here, the Creek is conveyed through alternating open channel and piped sections eastward, eventually turning south and piped under Castlemore Avenue. The piped Creek continues south under Anderson Avenue through the north portion of the Mount Joy Business Park, and then turns east in an open channel toward the rail corridor, flowing south from there along the eastern boundary of the MRMJSP Area to Mount Joy Lake.



Figure 8: Mount Joy Creek alignment and current floodplain based on OP 2014



Legend

- - - Enclosed Section of Watercourse
- Floodplain

Based on the creek's current alignment, it is evident that the natural configuration of the watercourse has been heavily altered, and that no part of the creek flows in its original configuration. Interference with the watercourse by way of fill placement, piping and realignment has resulted in a displacement in the natural flow of surface water. This, coupled with undersized culverts has resulted in localized modelled flood spilling. Of relevant concern is the advent of climate change, which overtime can cause more frequent and more intense flooding events, which in turn may exacerbate the flooding conditions of the creek and result in bank erosion.

The Toronto and Region Conservation Authority (TRCA) regulates lands subject to flooding and erosion related to watercourses within its jurisdiction, which includes the Rouge River Watershed. Over time, some portions of Mount Joy Creek have been re-naturalized through ongoing development activity, as supported by the TRCA and the City of Markham. An opportunity exists to further re-naturalize the creek and its valley corridor, particularly the piped sections. The benefits of this are multifold, including the bolstering of aquatic and terrestrial habitat; decreased downstream flooding through the elimination of choke points and the increase in floodwater storage capacity; removal of pollution; reduced maintenance costs; and general aesthetics and placemaking opportunities. **Section 6.4.3** provides information about the evaluation of five (5) options to realign the Creek in order to enhance its environmental functions and alleviate existing flooding on surrounding lands. It is expected that any re-naturalized portions of Mount Joy Creek will be conveyed into public ownership for their long-term protection, to comprehensively bolster the natural system within the MRMJSP Area, and to protect private lands from flooding and erosion.

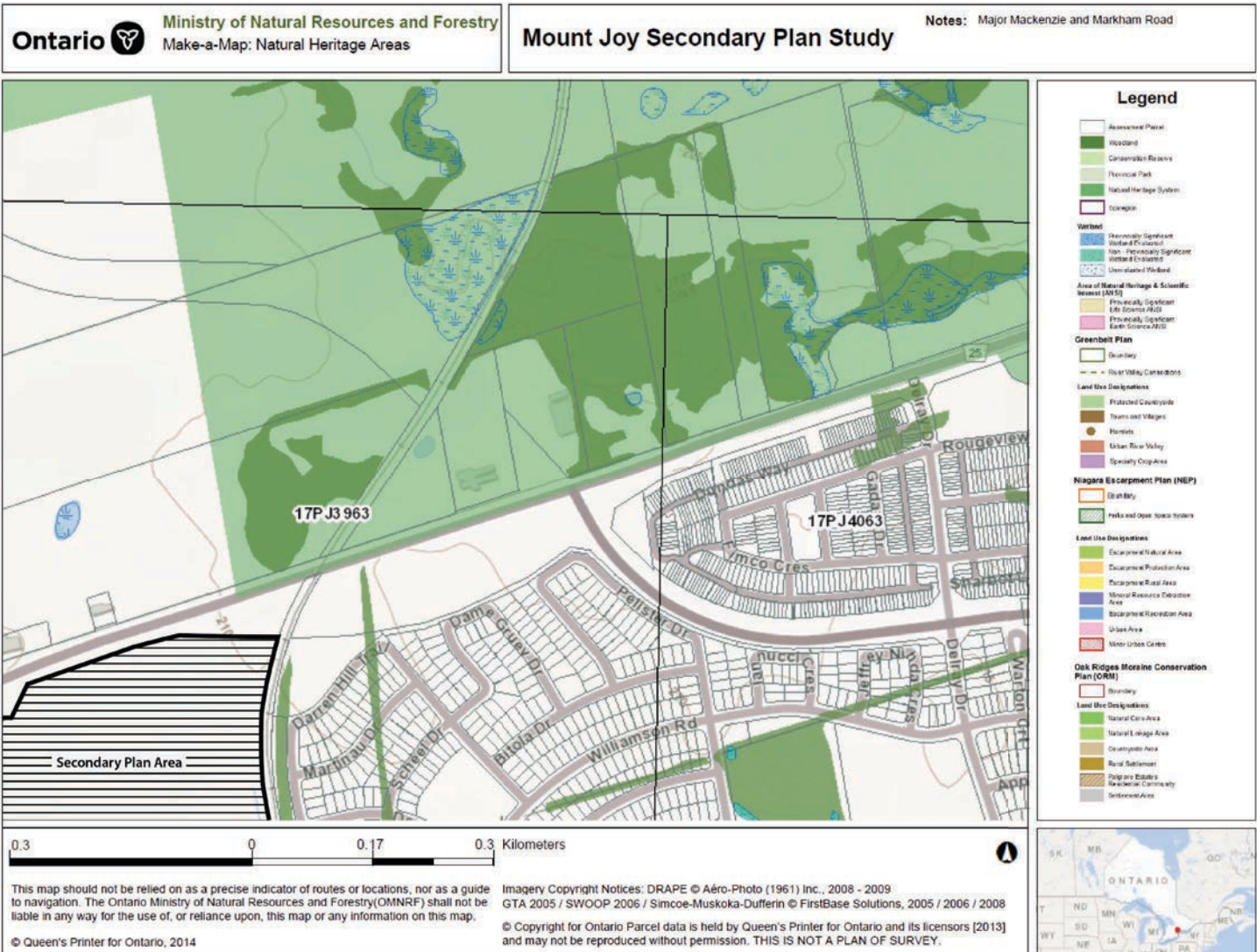


Figure 9: Mapped Natural Heritage Features to the Northeast of the Secondary Plan Area

In addition to Mount Joy Creek, the Study Area contains several woodlands, which are disjointed from each other and thus provide minimal opportunity for wildlife movement. A preliminary review of Ministry of Natural Resources & Forestry screening mapping (**Figure 9**) has shown the presence of some natural heritage features to the north of the Secondary Plan Area; several wetlands

and some woodlands are present within the Greenbelt lands north of Major Mackenzie Drive East. Based on this mapping, the Study Area does not contain any Areas of Natural and Scientific Interest (ANSI). It is anticipated that the presence of natural features will be confirmed through site-specific assessments, as required through the development process.

3.2.2 Land Use

The Secondary Plan Area is characterized by a range of commercial, residential, and employment uses in low density built forms, as well as large vacant parcels. The variety of retail and other serviced-based businesses located throughout the corridor serve a large portion of east Markham's population. The Secondary Plan Area is however evolving through infill development and redevelopment at significantly higher densities.

Distribution and Repair (PDR) functions. These offer direct to consumer or business-to-business services (e.g., automotive supply, small engine repair and small-scale manufacturing). A number of retail and personal service-focused activities are also present, such as several gyms, home renovations suppliers, and veterinarian services.

The remaining ~1720 jobs are distributed across the Secondary Plan Area.

3.2.2.1 Employment Uses

Employment Lands

As of 2019, the City of Markham was home to approximately 179,000 jobs, including approximately 2,380 within the Secondary Plan Area. Within this area, the Mount Joy Business Park contains approximately 5 ha of land, which are designated 'Service Employment' in the City of Markham Official Plan. These lands encompass the blocks bounded by Castlemore Avenue to the North, the Stouffville GO Rail Corridor to the east, Bur Oak Avenue to the south, and Anderson Avenue to the west. The area is situated within a five-minute walking radius of Mount Joy GO Station, and is the primary focus of industrial and service commercial activity within the Secondary Plan Area.

Based on Employment Survey data obtained in 2019, the Mount Joy Business Park contains approximately 19 businesses and 160 jobs. An additional 67 businesses and 494 jobs are located on adjacent and surrounding lands currently zoned for industrial and service commercial activities, similar to those found in the Mount Joy Business Park. This broader 10 ha area contains employment uses broadly defined as Production,

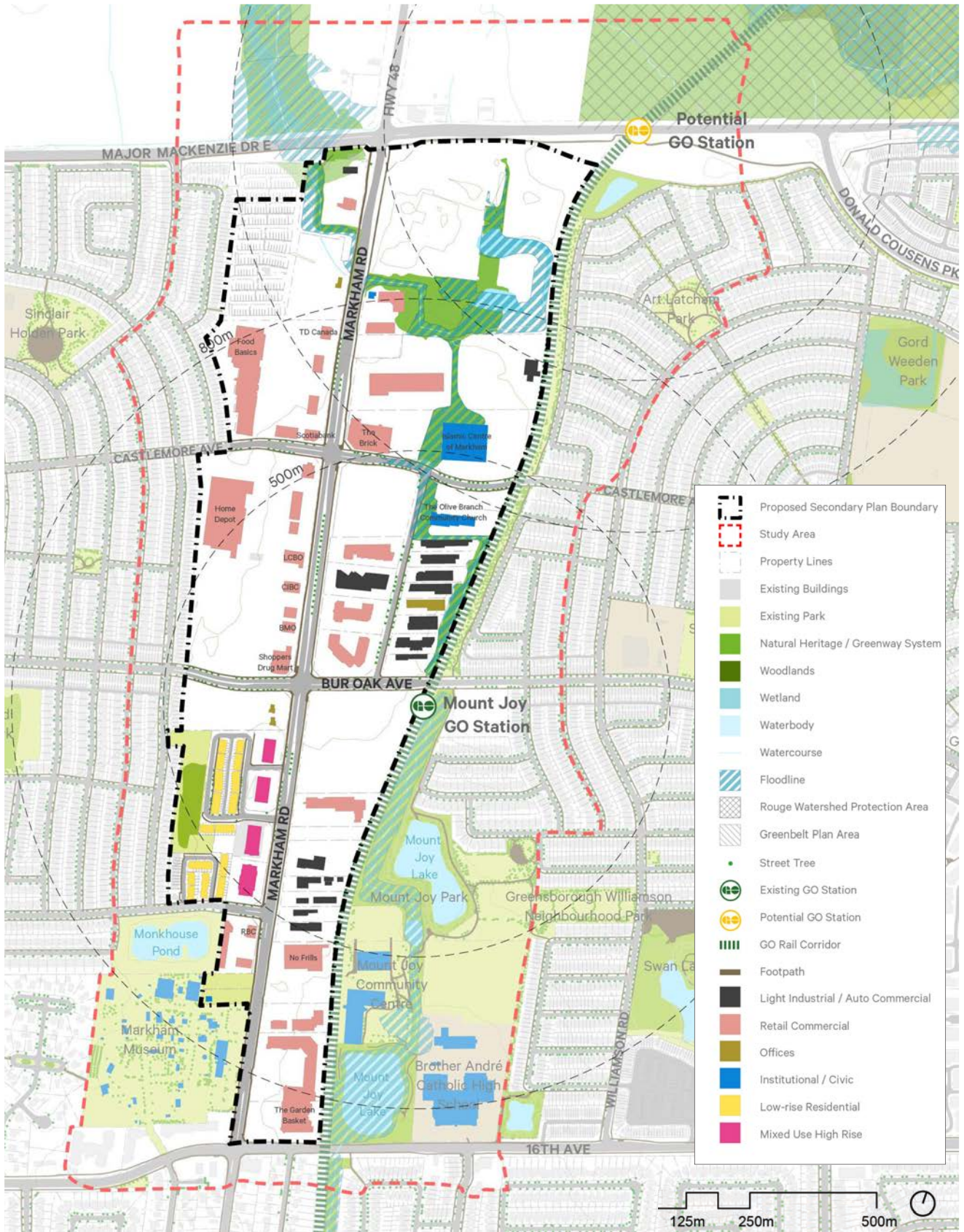


Figure 10: Existing land uses



Figure 11: Mount Joy Business Park and 77 Anderson Avenue

Employment Lands Conversion Request

A request was submitted to York Region to re-designate the employment lands at 77 Anderson Avenue within the Mount Joy Business Park from 'Service Employment' to allow for a high-density, mixed-use (residential above retail) development. The parcel is 0.45 hectares in size, which constitutes about 10% of the Business Park's area. The Region did not identify the Business Park in its updated Employment Area mapping, which was endorsed by Regional Council in October 2020. As such, the Region has left the re-designation of this parcel to the discretion of the City of Markham.

The Markham OP includes a number of policies and objectives aimed at preserving employment lands to ensure they,

"...are protected from other uses that may jeopardize the continued viability of the intended employment uses and their expansion in the future, and the ability to achieve the employment forecasts for Markham."

While the conversion and loss of these employment lands are unlikely to represent a substantial setback to the overall employment growth goals for the City of Markham, the conversion of 77 Anderson Avenue could set a precedent for the rest of the Business Park and may have an influence on future conversion requests within the remaining employment lands.

The Mount Joy Business Park is currently one of only a few business parks within the City that continue to focus on smaller-scale industrial and service commercial (PDR) activities. As such, the Business Park has some value in supporting the overall business ecosystem. To that end, the loss of these lands as an employment area may have some impact on the ability for businesses in these sectors to be maintained in the City.

At the same time, the modest scale of the Mount Joy Business Park, including the lands at 77 Anderson Avenue, represent an opportunity to test case a more flexible approach to industrial development in Markham. Emulating policies being explored and tested in other comparable jurisdictions (e.g., the Powell Street Industrial Area, Vancouver), and building on the Mount Joy Business Park's location adjacent to the Mount Joy GO Station, there is an opportunity to support revitalization and intensification of the employment uses in the park through the addition of other uses, such as a broader range of complementary employment uses and potentially residential uses, in a structured way. See **Sections 6.3.5** and **7.1.4** for more information about the recommended designation and uses that apply to the entire Business Park.

Retail Floor Space

A wide range of population-serving uses and jobs (e.g., grocery, banking, pharmacy, home improvement, restaurants, health care, veterinary care, automotive repair, etc.) are found in commercial establishments throughout the Secondary Plan Area, which cater to the needs of the local population, as well as residents from the surrounding Berzcy Village, Wismer Commons, Greensborough, and Markham Village communities. A key objective of the Study is to plan for a complete community with mix and intensity of uses, including retail and service uses, as these uses will continue to be needed over the long-term, particularly as the area intensifies.

The most significant concentration of retail floor space is provided within three large-format retail centres located along Markham Road, proximate to the Castlemore Avenue and Bur Oak Avenue intersections. These centres are anchored by major local and national chain retailers such as Home Depot, Food Basics, Pet Smart, The Brick, Long and McQuade and the LCBO.

Further south, retail space is concentrated in a number of strip retail plazas featuring smaller retail units with a strong focus on convenience food and beverage, and personal service uses. These centres tend to be located further south closer to Markham Road’s intersection with 16th Avenue. Interspersed amongst the larger centres are a number of smaller, stand-alone retail structures focused to a large degree on automotive activities. A number of businesses also occupy space within newly developed mixed-use projects occupying street-facing podium space in newer condominium and apartment developments. Much of this space is home to a range of medical and peri-medical services.

A number of retail businesses within the Secondary Plan Area also occupy space within and adjacent to the Mount Joy Business Park. Businesses within this area tend more toward automotive and personal service business types.

Table 1 provides a summary of retail floor space by major retail category within the Secondary Plan Area.

Merchandise Type	Existing Floor Space (in square metres)
General Merchandise	5,240
Automotive Goods	2,980
Home Improvement Goods	6,320
Grocery and Convenience	15,305
Personal Services	7,916
Restaurant and Liquor	3,890
Total	41,651

Table 1: Current Secondary Plan Area Retail Floor Space Inventory

Approximately 41,650 sq.m. of retail floor space currently provides for a significant share of the existing retail spending within the primary and secondary trade areas within which the Secondary Plan Area is located. These trade areas are illustrated in **Figure 12**.

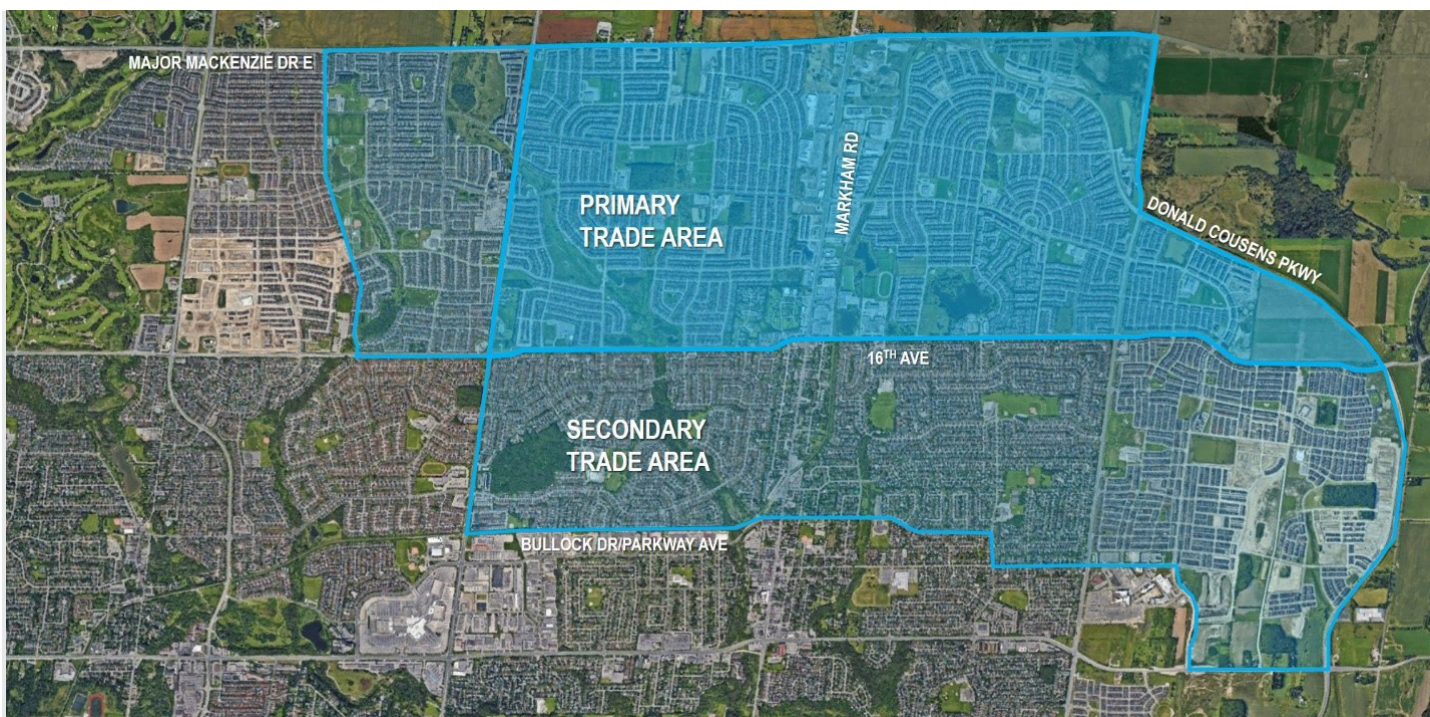


Figure 12: Primary and Secondary Trade Area Map



Competing Retail Centres

While the Secondary Plan Area currently includes a large supply of retail floor space, several other nearby locations provide more significant concentrations and act as more regionally-focused retail anchors. These include:

- » Markham Main Street 1.5 km to the south;
- » Markville 4.0 km to the southwest (which comprises a 100,000 sq.m. shopping centre, and approximately 40,000 sq.m. of ancillary retail in the surrounding area);
- » Boxgrove 3 km to the southeast (which comprises a 36,000 sq.m. Smart Centres development anchored by Wal-Mart); and
- » A community-scale shopping centre at the corner of McCowan and Bur Oak Avenue.

Given the scale, number and proximity of these competing retail concentrations, it is expected that these centres will accommodate a significant share of future retail spending by new residents in the Secondary Plan Area. Retail spending within the Secondary Plan is anticipated to come primarily from the future residents of the Secondary Plan Area itself as well as the neighbourhoods surrounding it - an area roughly defined by Major Mackenzie Drive East to the north, 16th Avenue to the south, McCowan Road to the west and Donald Cousens Parkway to the east. Some spending on retail services within the Secondary Plan Area is anticipated to also come from neighbourhoods extending further west toward Bridle Walk and south to the Bullock Drive/Parkway Avenue. A recommendation for an appropriate amount of retail space within the Secondary Plan Area will ultimately be informed through the preparation of revised population and employment yields.

3.2.2.2 Residential Uses and Recent Development Activity

Markham's estimated population in 2019 was 347,800 people, of which approximately 2,770 lived in the MRMJSP Area. In comparison to the established low rise communities to the east and west, the residential buildings in the Secondary Plan Area are more recent developments, compact and higher in density. These residential buildings are concentrated on the west side of Markham Road between Bur Oak Avenue and Edward Jeffreys Avenue. They comprise four mixed-use high rise residential towers ranging from 14 to 20 storeys that front onto Markham Road, as well as a townhouse development west of the towers, which provides a transition in density towards Wismer Commons to the west.

The location of these relatively recent and dense developments in proximity to the Mount Joy GO Station, west of Markham Road, realize the policy goal of transit-supportive development in proximity to existing transit infrastructure.

Even more high-density development is anticipated throughout the Secondary Plan Area based on several recently approved applications for townhomes, some of which are under construction, and high rise buildings, as well as applications contemplating even more high rise developments that are currently under review. These applications are a testimony to the area's potential to redevelop at transit support densities, and to the growing market interest in the Secondary Plan Area.

3.2.2.3 Notable Locations within the Study Area

As stated earlier in the report, the lands north of Major Mackenzie Drive East within the Study Area are located within the Greenbelt Plan Area and the Rouge Watershed Protection Area, and are also subject to a Minister's Zoning Order (O. Reg. 104/72) to protect the proposed Pickering Airport lands. A portion of these lands are also agricultural lands outside of the Greenbelt Plan Area and built boundary, known informally as the 'whitebelt'. As such, the north end of the Study Area maintains a predominantly rural character which includes farmland and sporadic commercial uses. As well, this area is characterized by the presence of several wetlands and natural heritage features, which have been identified within available mapping from the Ministry of Natural Resources and Forestry. Of relevance is the anticipated extension of Donald Cousens Parkway to Highway 48 (Markham Road becomes Highway 48 north of Major Mackenzie Drive East). The extension further west of Highway 48 remains under study by the Region and the City. It is also noted at this time that the feasibility of an additional GO station is being explored on the Stouffville GO Rail corridor at Major Mackenzie Drive East, as discussed in **Section 3.3.2**.

The area south of 16th Avenue takes on a very different form and character than that of the Secondary Plan Area as well. The Markham Road and 16th Avenue intersection marks the northern end of the Markham Village HCD. As Markham Road progresses south of the Secondary Plan Area, the area's historic past becomes evident in the 1-2 storey residential homes built in the Ontario Vernacular, High Victorian, and Queen Anne styles, and in the well-maintained commercial buildings primarily in the two storey Ontario Vernacular style. The block and lot sizes south of the Secondary Plan Area, within the Markham Village HCD are significantly smaller and rectilinear. A strong pedestrian realm is formed by shallow setbacks, mature tree canopies, and continuous frontage along the majority of Markham Road in this area.

3.2.3 Built Form

3.2.3.1 Block Patterns

The MRMJSP Study Area is characterized by large blocks, some in excess of 500.0 m lengths with depths of over 200.0 m. Ideally, blocks should be no greater than 150.0 m in either dimension to be considered walkable. Consequently, the large block configuration creates an environment that is not conducive to alternative travel modes to the automobile. To depict the scale of these blocks, **Figure 13** illustrates how they compare to the blocks within the adjacent Markham Village HCD and the Cornell Community to the southeast. Both communities were designed to be walkable, and while one pre-dates the automobile, the other was designed deliberately to lessen the reliance on the automobile and encourage walkability.



Mount Joy Secondary Plan
Current Site

Markham Village HCD
MJSP Boundary overlaid in red

Cornell Secondary Plan
MJSP Boundary overlaid in red

Figure 13: Block Size Comparison of Secondary Plan Area vs. Cornell and Markham Village HCD

3.2.3.2 Built Form Configuration

Development along the Markham Road corridor is characterized by inconsistent setbacks, large gaps between buildings, expansive surface parking areas, and varying forms of low-rise commercial buildings. A cohesive urban design vision for the Markham Road and Major Mackenzie Drive East corridors is therefore needed within the Secondary Plan policy framework.

The four mixed-use high rise towers on the west side of Markham Road, south of Bur Oak Avenue, are not integrated well with the public realm. While these buildings are appropriate in their overall scale and density, they fall short of providing for a walkable, pedestrian experience at the street level. For the development of future design guidelines, the following observations were noted regarding this initial example of TOC in the Secondary Plan Area:

- » Poorly designed retail space further hindered by a disconnect from the streetscape, lack of enclosure, and an inactive ground plane;
- » Lack of inviting pedestrian amenity such as weather protective awnings; adequate and clearly delineated pathways between buildings and to the street; seating; wayfinding; and, street trees and landscaping; and
- » The front yard surface parking, its configuration and vehicular access points, in concert with the fence lines, excessive gaps between buildings, and overall massing reinforce the current vehicular-oriented and fragmented retail pattern along Markham Road.

To create a vibrant and inviting main street experience from the current context, far greater attention will need to be paid to both the art and science of placemaking. At minimum, considerations include:

- » Prioritizing transit and the pedestrian with respect to convenience, safety, comfort, and visual interest;
- » A human-scaled experience with attention to proportion, design, details and material qualities perceivable at the speed of walking;
- » Reinforcing the sense of a contiguous place through visual continuity and consistency, perceivable edges to the area and proportional street enclosure; and
- » Ensuring a critical mass of people and activity, appeal for a diversity of interests and in all seasons.

3.2.4 Community Infrastructure & Facilities

Although the Secondary Plan Area is adjacent to several community amenities including Markham Museum, Mount Joy Lake Park, and Mount Joy Community Centre, existing connections and access to them are limited. Additional community amenities (e.g., schools) will be needed to accommodate population growth in the Secondary Plan Area.

Several community amenities are located in the southern half of the Study Area. The intersection of 16th Avenue and Markham Road contains a strong civic and heritage presence, with a concentration of key landmarks. Most significant are the historic site of the Markham Museum, the Mount Joy Community Centre, and several educational institutions all of which serve as important destinations immediately outside the Secondary Plan Area. Mount Joy Lake Park and the Mount Joy Community Centre are co-located with Brother Andre Catholic High School, east of the rail corridor. Together, these features form part of a larger 'campus' of community oriented functions which also link the Greensborough Williamson Neighbourhood Park to Swan Lake Park further to the east.

Additionally, there are two significant places of worship located on either side of Castlemore Avenue, just west of the rail corridor.

Though the Study Area contains a number of amenities, the vast block sizes accompanied with large tracts of surface parking make them difficult to access by non-vehicular travel modes. As well, the large assembly of amenities and open spaces north of 16th Avenue and east of the rail corridor about nearly half of the length of the entire Secondary Plan Area, however access to these amenity areas is limited to 16th Avenue due to a lack of pedestrian crossings over the rail corridor.

These elements hinder the quality of the pedestrian experience, discouraging users to walk to their destinations and linger in the neighbourhood. Many of the amenities concentrated in the south of the Study Area are blocked by physical and visual barriers, such as fencing and the landscaped berm around the rail corridor. While these design features provide safety benefits as well as noise and visual attenuation for the residential neighbourhoods to the east of the Secondary Plan Area, they also limit connectivity to local community assets

Although a diverse range of amenities is present within and in proximity to the Secondary Plan Area, and the key challenge rests on improving connectivity and accessibility to them, additional community amenities will be needed to keep pace with population growth. There are currently no elementary schools within the Secondary Plan Area, and the schools in the neighbouring Wismer Commons and Greensborough communities are at capacity.

At minimum, one elementary school site should be planned for within the Secondary Plan Area. In addition, the closest public library, the Markham Village Library, is located about 2 kilometres away from the southern end of the Secondary Plan Area at Markham Road and Highway 7. While Mount Joy Community Centre offers an arena and indoor and outdoor soccer fields and is located within the Study Area, the closest community centres with a broader range of recreational programming are located at the Centennial Community Centre at McCowan Road and Bullock Drive to the southwest and the Cornell Community Centre at Bur Oak Avenue and Highway 7 to the southeast. The need for these community amenities will be determined based on the number of residents that will be anticipated in the Secondary Plan Area.

It is also noted, there is an opportunity to locate community amenities within the immediate blocks surrounding the Mount Joy GO Station, to serve as a catalyst for development/redevelopment.

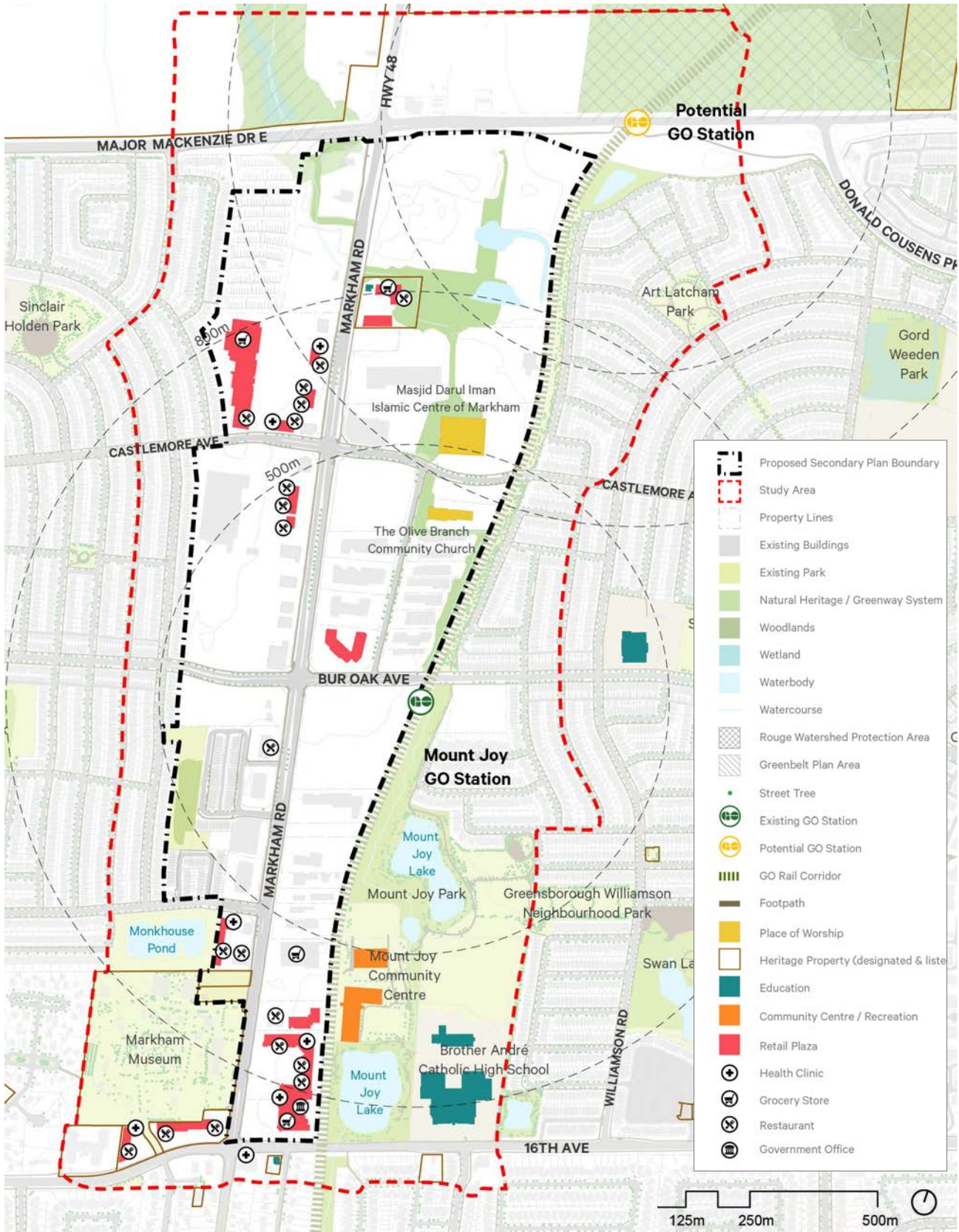


Figure 14: Community Amenities within the Secondary Plan Area and Study Area

3.2.5 Cultural Heritage

Few cultural heritage resources remain within the Secondary Plan Area.

The Secondary Plan Area contains a number of cultural heritage resources, specifically the following buildings designated under Part IV (Individual) of the Ontario Heritage Act:

- » **The Raymer-Wambold House (9404 Markham Road)** – This house was built in 1915 and is one of a series of heritage buildings that once formed a cluster at the north end of the Mount Joy Village community. It was relocated to the nearby Markham Heritage Estates in 1991 and is owned by the City.
- » **The Albert Wideman House (226 Edward Jeffreys Avenue)** – This house dates back to 1899 and was relocated from its original address at 9462 Highway 48.
- » **The William Read House (9899 Markham Road)** – Built in 1840, this house remains within its original context. It was restored and incorporated into a commercial redevelopment on the property, and acts as an important reminder of the community's historic roots.
- » **The William Clarry House (9900 Markham Road/ 12 Imperial College Lane)** – This house was built in 1855 and is situated on land that is currently undergoing redevelopment. A request by the new landowner to demolish the heritage property due to its poor physical condition resulting from years of neglect was approved by Council, subject to conditions, in January 2021. The conditions include financial compensation, an interpretative plaque, and the construction of a parkette on the lot at the owner's expense.

As mentioned earlier, Markham's OP contains policies which support the protection of cultural heritage resources, as well as the identification of new cultural heritage resources. However, it is understood that under exceptional circumstances where it is not feasible to retain heritage resources in their original context due to competing development constraints and infrastructure needs, and where it is less preferable to retain the façade of a building or only a portion of it, there are options available to allow for the relocation of heritage resources, for their preservation in other locations within the City.

3.2.6 Parks and Open Space

The existing parks and open spaces within and adjacent to the Secondary Plan Area are mostly passive and inaccessible.

The Secondary Plan Area currently has two parks. Pottery Park, located to the north of the Markham Museum along Markham Road, is 0.5 ha (5,000 sq.m.) in size and meets the definition of a Neighbourhood Park under **Section 4.3.2.2** of the OP. A second 0.33 ha (3300 sq.m.) park is located by Battista Perri Drive, south of Bur Oak Avenue. It was recently constructed and has not yet been named. This park also meets the definition of a Neighbourhood Park.

Based on the Secondary Plan Area's existing population of 2,770, both of these parks constitute a current parkland distribution of 0.0003 ha (3 sq.m.) of parkland per resident. Section 4.3.5 of the OP sets out a minimum target of 1.2 hectares (12,000 sq.m.) of City Parks per 1000 persons, or 12 sq.m. per person. Therefore, it can be concluded that the Secondary Plan Area is currently deficient in parkland. It is also noted that with the forthcoming intensification target to achieve 200 people and jobs per hectare within the MTSA area alone, the need for parkland in this area will also grow and should be regarded in line with OP targets.

While the Secondary Plan Area itself does not contain many parks and open spaces, there are amenities in and around the Study Area that are associated with open spaces, parkland, and recreational uses. These amenities were assessed to demonstrate the existing pedestrian access from the Secondary Plan Area, to nearby open spaces and recreational opportunities. A cursory review of the available parks and open spaces has shown that three Neighbourhood Parks exist within the Study Area; Mount Joy Park (2.2 ha); Greensborough Williamson Neighbourhood Park (1.5 ha); and Art Latcham Park (1.0 ha). Official Plan Policy 4.3.2.2 iii) indicates that Neighbourhood Parks such as these intend to serve users within a 5-minute walk, or a 400 metre radius, therefore this radius was applied to all nearby parks with consideration of existing pedestrian amenities such as trails and sidewalks. **Figure 15** demonstrates that while these parks appear to be walkable to the Secondary Plan Area, the Stouffville GO Rail corridor provides a significant barrier to connectivity and walkability. This effectively prevents convenient and direct foot-access to existing significant open space and recreational opportunities in the vicinity of the Secondary Plan Area such as Mount Joy Community Centre, Mount Joy Lake, and the various Neighbourhood Parks located to the east.

Figure 15 demonstrates that with the utilization of existing connections such as trails and sidewalks, the south-west portion of the Secondary Plan Area has the most walkable access to existing amenities, including the Markham Museum, which contains a historic village on a 25-acre site and Monkhouse Pond which is just north of the Museum. Lands in the southeast of the Secondary Plan Area also benefit from foot access to Mount Joy Lake Park, which includes various outdoor sports fields (i.e., the Mount Joy Turf Field), and the Mount Joy Community Centre.

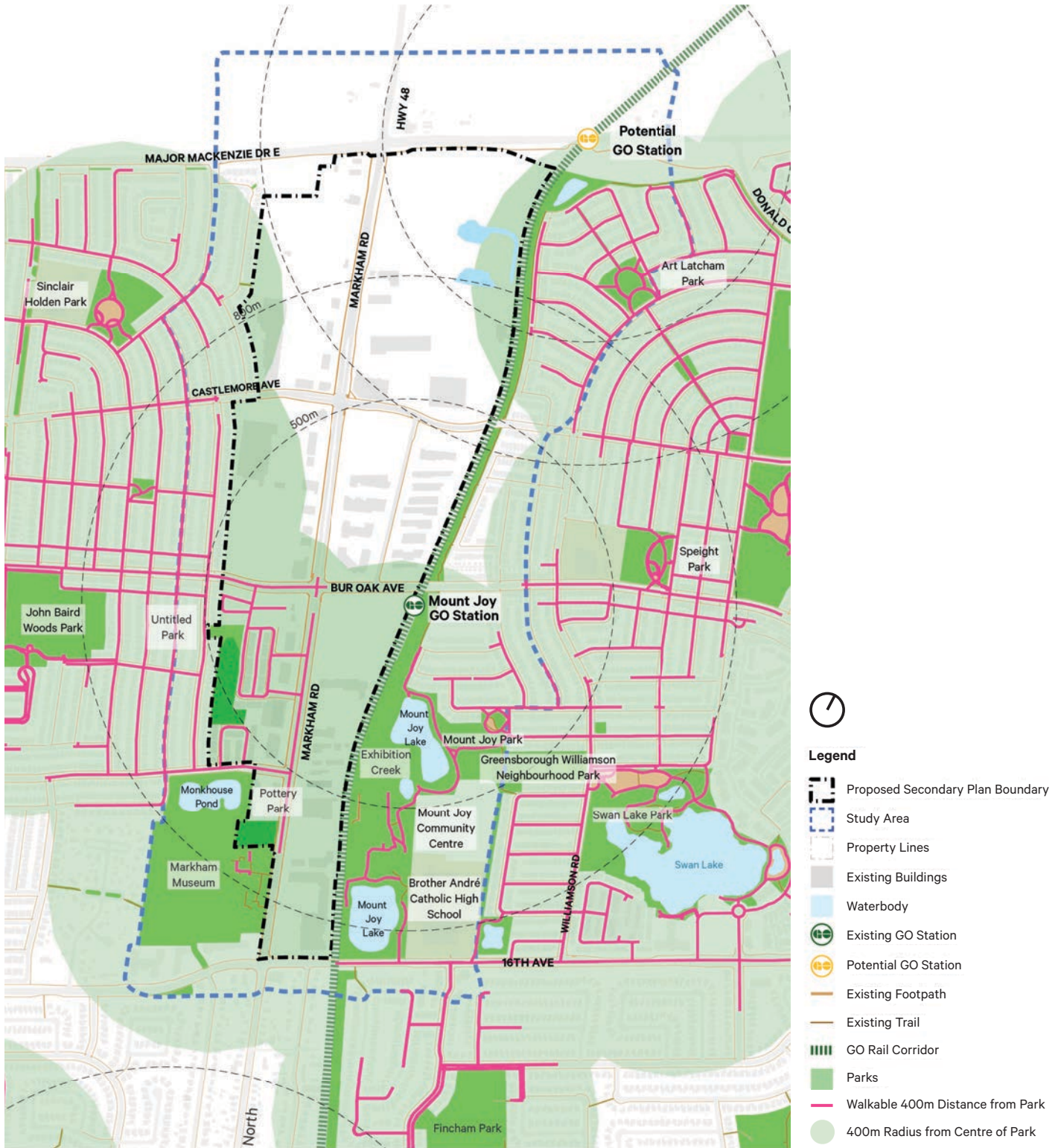


Figure 15: Existing Walkable Neighbourhood Parks within Secondary Plan Area and Study Area

Overall, the natural and open space amenities within and adjacent to the Study Area remain mostly passive and inaccessible. While a significant portion of open space amenities are located at the southeast end of the Study Area, the Stouffville GO Rail corridor and its landscaped buffer limit direct and convenient access to and from the Secondary Plan Area.

3.2.7 Affordable Housing

There are no purpose-built rental or affordable housing units within or proximate to the Secondary Plan Area.

Currently, the housing stock within the MRMJSP Area and the census tracts that make up the adjacent Berczy Village, Wismer Commons, Greensborough and Swan Lake areas is dominated by market ownership housing units. The vast majority of existing households (93%) owned their home based on 2016 census data. The 7% of households that did rent, did so in the secondary rental market as CMHC’s inventory showed no purpose-built rental units within the four census tracts that make up the Study Area. There are also no non-market or subsidized units currently within the Study Area.

The OP (Policy 4.1.3.2 and Definitions 11.2) defines affordable housing as:

In the case of ownership housing, the least expensive of:

- » Housing for which the purchase price results in annual accommodation costs not exceeding 30% of gross annual household income for low- and moderate-income households; or
- » Housing for which the purchase price is at least 10% below the average purchase price for a resale unit in the regional market area;

In the case of rental housing, the least expensive of:

- » A unit for which the rent does not exceed 30% of gross annual household income for low- and moderate-income households; or
- » A unit for which the rent is at or below the average market rent of a unit in the regional market area.

As shown in **Table 2**, a sizable share of current Study Area households report housing costs that exceed 30% of household income. Approximately 34% of owner households and 51% of renter households spend more than this threshold on housing. As seen elsewhere in the GTA, home ownership costs in Markham have been increasing and trend higher than many other areas of the GTA; Markham’s median home price in October 2020 was \$1.01 million compared to a median for the GTA of \$890,000. Overall, there is a need as well as opportunities to plan for and diversify the housing stock and tenure types across the Secondary Plan Area.

Total Owner Households	9,845
Total Renter Households	725
Total Households in Subsidized Housing	0
Owners Spending More than 30% in Shelter	33.50%
Renters Spending More than 30% in Shelter	50.50%

Table 2: Household Type and Shelter Costs (MRMJSP Area and Surrounding Neighbourhoods of Berczy Village, Wismer Commons, Greensborough and Swan Lake, 2016) Source: StatsCan

3.2.8 Summary of Challenges and Opportunities

Recent and ongoing development activity within the future MRMJSP Area has shown that in relation to the stable residential areas to the east and west, the Secondary Plan Area been the focus of proposals for intensification. Commercial and employment uses currently prevail throughout the Secondary Plan Area, but a demand for residential and mixed-used redevelopment has been gaining momentum. Proposals have included residential uses in more compact, denser forms, and an employment land conversion request is currently being considered to facilitate additional residential uses in proximity to the Mount Joy GO Station.

Given low existing rental housing availability, and no affordable housing stock within the Secondary Plan Area, there is an opportunity to introduce more diverse housing via both new types and tenures to broaden the range of options for future residents. At the same time, the development of the Secondary Plan provides an opportunity to implement policies that work to achieve the affordable housing targets in the OP through the use of Inclusionary Zoning, as identified in Section 2.0.

Based on its current function and form, Markham Road has the potential to be transformed into a main street that would define and reinforce a hierarchy of distinct places in its transition from the Markham Village HCD to the south, to existing and future destinations within the Secondary Plan Area and to the north. Markham Road has the potential to tie together existing and future developments, along with activity nodes and open spaces. As well, given the proximity of significant community infrastructure, there are opportunities to leverage them in the endeavour of placemaking. For example, there are opportunities to connect community facilities to the

east of the Secondary Plan Area by way of pedestrian crossings over the rail line, or diversifying uses associated with the nearby Markham Museum. As the future of Mount Joy Creek is considered, there is also significant potential in leveraging it as a significant green link throughout the Secondary Plan Area. In the exploration of daylighting and realignment options for the Creek, there are also opportunities to investigate options for extending the local recreational trail network, ultimately tying together a network of open spaces.

Some of the challenges include the prevalence of physical barriers, by way of the Stouffville GO Rail corridor, which prevents the ease of east-west movement of pedestrians between the Secondary Plan Area and the community amenities that exist to the east of the rail corridor, such as the Mount Joy Community Centre and Mount Joy Lake Park. In its current format, Markham Road detracts from the pedestrian experience given the great distances between signalized intersections, relative vehicular speed, and high traffic volumes. Gaps along the streetscape as well as the prevalence of extensive surface parking lots mean little frontage “activation”, and in general a sparse public realm. In relation to the current condition of Mount Joy Creek, it does not bring any value as a placemaking feature and instead has left private flood-encumbered lands vacant. Furthermore, a challenge for consideration is the potential for overburdening existing community amenities surrounding the Secondary Plan Area. As such, redevelopment will need to consider the introduction of additional amenities for equitable distribution across existing and future area residents.

3.3 Transportation

3.3.1 Existing Transportation System

Car travel remains the dominant mode-share within the Secondary Plan Area

HDR prepared an assessment of the existing Transportation Conditions within the Study Area. The assessment included a review of the policy context, background studies, land use patterns, travel trends, street network, transit network, cycling and pedestrian networks, and identified gaps and opportunities to inform the development of land use and transportation network scenarios.

3.3.1.1 Travel Trends

An assessment of the existing travel trends to the Study Area was undertaken, based on 2016 statistics gathered through the Transportation Tomorrow Survey, which is typically conducted by the University of Toronto every 5 years. The survey asks respondents what the travel patterns and modes used are on a typical fall weekday, for themselves and members of their households. The results are depicted in **Figure 16**.

Given the commercial nature of the Secondary Plan Area and the residential nature of surrounding communities within the Study Area, the majority of trips were made in order to return back home, or to a residential area. In 2016, 82% of trips made were auto-oriented.

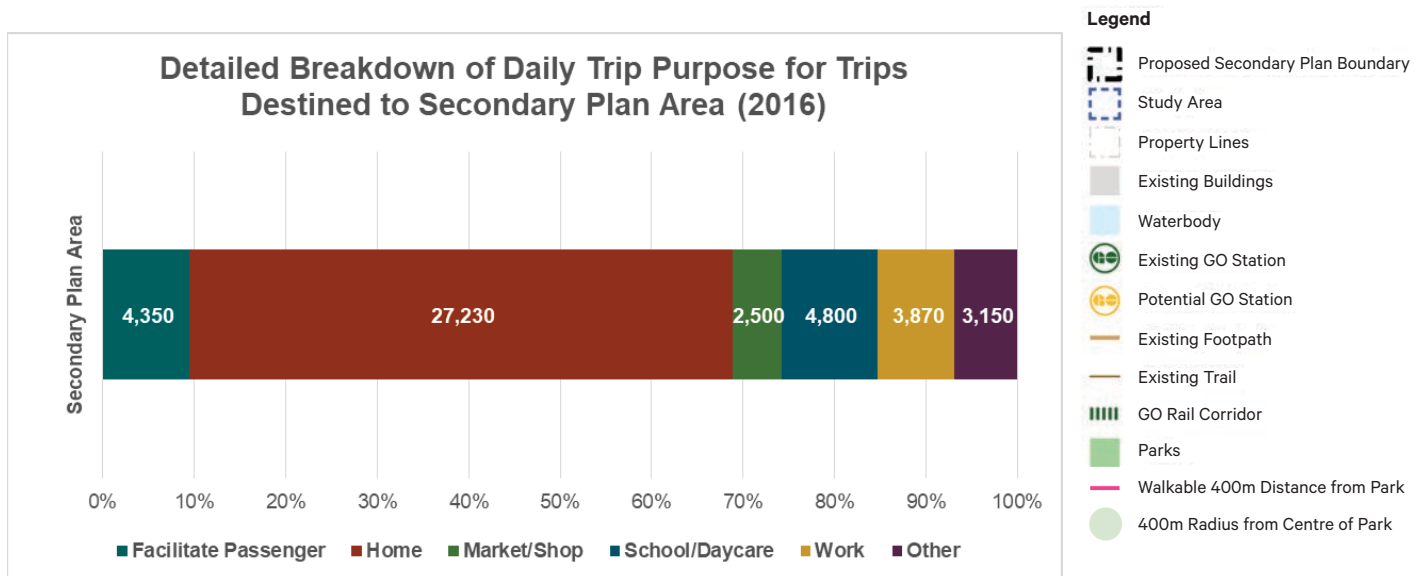


Figure 16: Purpose of Daily Trips Destined to Study Area (2016)

Figure 17 illustrates the historical mode share for daily trips destined to the Study Area. The mode share shows that the Study Area is auto-oriented as the majority of trips are made by the automobile. However, there has been a steady decrease in the auto mode share over the last ten years. The combined auto share, including drivers and passengers, was nearly 90% in 2006. In 2016, this combined auto share was 82%, reflecting an 8% decrease. This has resulted in an increase in both transit and active modes. Walking and cycling mode share doubled between 2006 and 2016, while the transit modal split has increased by 50% in the same time period.

3.3.1.2 Road Network Patterns

An assessment of the existing Street Network, within and surrounding the Study Area was undertaken. The MRMJSP Study Area is supported by a network of Regional Roads, major collector roads, minor collector roads, and local roads. Markham Road is a major collector road which traverses the entire Study Area, in a North-South direction. It provides local access and a connection between Main Street to the south and Highway 48 to the north. At Major Mackenzie Drive East Markham Road becomes Highway 48, which is

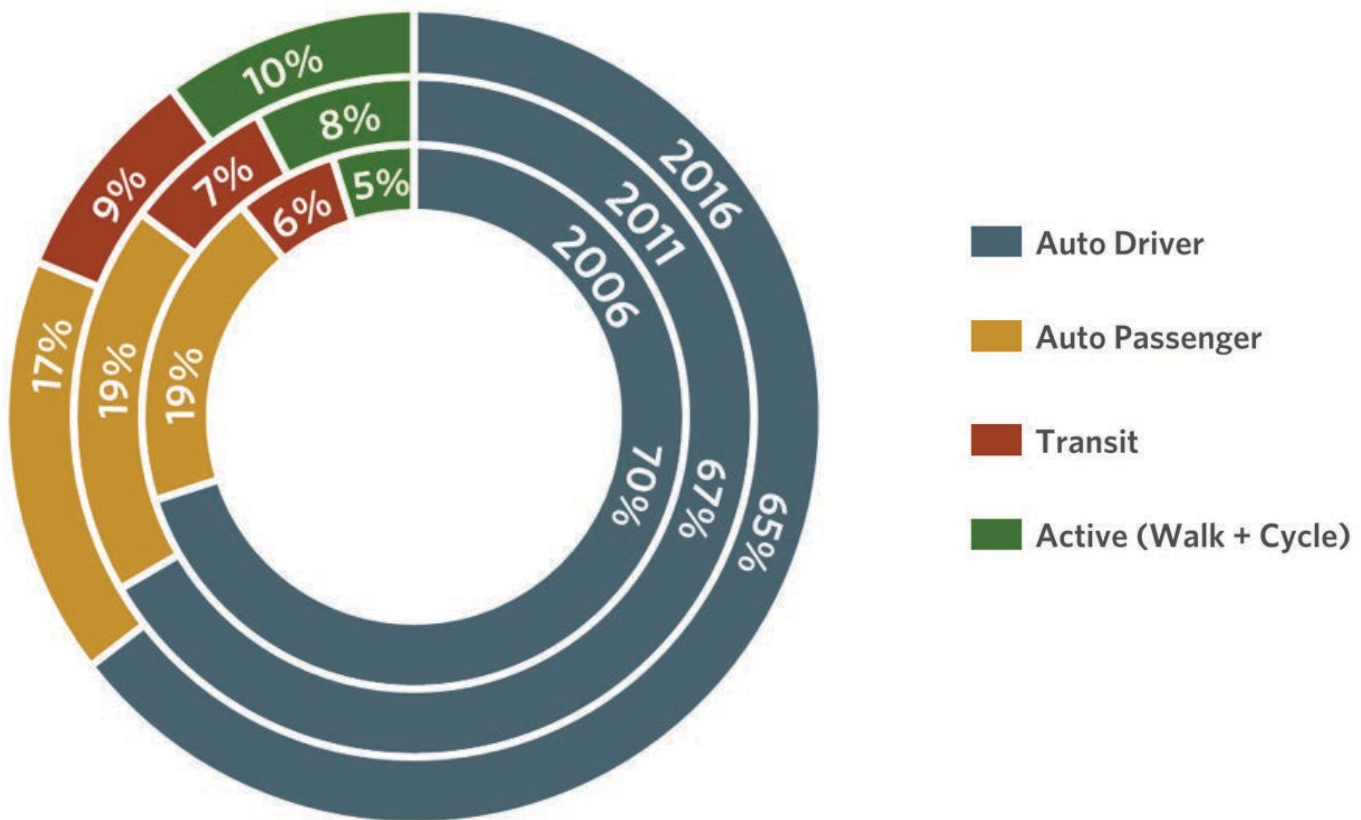


Figure 17: Historical Mode Share of Daily Trips Destined to the Study Area

a Provincial Highway that provides connections to northern York Region, including the Town of Whitchurch-Stouffville, Town of East Gwillimbury, and the Town of Georgina. Major Mackenzie Drive East and 16th Avenue are the two major east-west Regional Roads within the Study Area and provide connections to the City of Richmond Hill and Highway 404 in the west and the Region of Durham to the east.

3.3.1.3 Active Transportation

In consideration of the broader Study Area, it can be concluded that lands outside of the Secondary Plan Area are generally well served by pedestrian infrastructure. Within the Secondary Plan Area, collector roads and major arterials have sidewalks on both sides and local residential streets have a sidewalk on one side. Gaps within the Secondary Plan Area are attributed to the large commercial blocks and undeveloped lots located along Markham Road, which lead to limited continuous north-south and east-west streets, as well as the Stouffville GO Rail corridor, which provides for a physical barrier to connectivity, between the Secondary Plan Area and the residential communities to the east.

From a street connectivity perspective, it has been found that the Study Area has a total of 29 intersections over approximately 185 hectares, resulting in an intersection density of 0.15. This score is less than the desired threshold noted in the Growth Plan, and can be attributed to the lack of east-west connections as a result of the rail corridor and large commercial blocks along Markham Road.

Regarding road safety, it is noted that in 2019 Markham's Development Services Committee reviewed opportunities to adopt "Vision Zero" principles with the goal of completing a road safety plan from 2021-2022. The intent of the principles is to eliminate traffic fatalities and severe injuries to vulnerable users, including pedestrians and cyclists. It was determined that a fundamental shift in attitude was

needed regarding how the safety of all road users was considered, and that vulnerable road users should be prioritized over the efficient movement of motorized vehicles. The Study will seek opportunities to integrate Vision Zero principles, where appropriate.

The existing cycling network within and surrounding the Study Area was found to be discontinuous, offering limited east-west connectivity. Major Mackenzie Drive East currently provides the only continuous east-west cycling route within the Study Area. For the north-south routes, there are two continuous options, including Markham Road and the multi-use path to the east of the rail corridor. Within the Secondary Plan Area, there are no designated cycling facilities within the commercial areas. As a result, cyclists were observed to cut through the privately-owned surface parking areas, where there is limited visibility.

In general, east-west movement through the Study Area may be limited by a lack of at-grade railway crossings east of Markham Road and grade separations would improve the level of service and safety for all modes of travel.

3.3.1.4 Transit

The transit network servicing the Secondary Plan Area was reviewed as part of HDR's transportation conditions assessment. Two major transit providers serve the Secondary Plan Area: GO Transit, and York Region Transit (YRT), which provides 8 separate bus routes within the Secondary Plan Area. GO Transit operates two routes that serve the Mount Joy GO Station: Route 54 (407 East) and Route 70-71 (Stouffville).

Mount Joy GO Station, as per Metrolinx's 2016 Station Access Plan (SAP), served approximately 1,425 daily riders where 61% of users drove and parked. Its associated parking facilities have 1,333 spaces at 81-90% utilization. It is noted that based on more recent data, the Mount Joy GO Station served over 2,100 daily riders in 2019.

The following rail service is provided to and from the station:

- » 14 trains per weekday southbound to Union station every 30 minutes peak service, every 60 minutes 9:30am to 3:30pm. Hourly 9:30pm–11:30pm.
- » 13 trains per weekday northbound to Mount Joy Station from Union Station hourly 11:08am to 4:05pm. 30 minute or better on-peak service from 5:15pm to 7:30pm, final train at 8:11pm.

The transport mode of access for passengers accessing Mount Joy GO Station is provided in **Table 3**.

Transport Mode of Access	2015 Mode Share	2015 Ridership (Daily)	2017 Mode Share	2017 Ridership ² (Daily)	2019 Mode Share ³	2019 Ridership (Daily)
Walk	15%	210	23%	420	23%	512
Local Transit	5%	71	4%	71	4%	86
Pick up/drop off	15%	210	20%	360	20%	483
Drive and Park	61%	862	48%	854	48%	1040
Carpool Passengers	5%	71	5%	84	5%	102
Total	100%	1,425	100%	1,790	100%	2,180

Notes: (1) Daily rider estimate from 2016 SAP - Planned GO rail service, station access and infrastructure implementation will have an impact on: the rate and timing of ridership growth to reach 2031 forecast, and the rate and timing of recommended parking growth beyond 2021. (2) Daily rider estimate, 2017 Origin-Destination Survey. (3) Daily rider estimate, 2019 Presto Data. Mode share based on 2017 data. (4) Micro-transit / flexible / on-demand services are not available at Mount Joy Station to date.

Table 3: Historic Daily Ridership at Mount Joy GO Station by Access Mode

3.3.2 Potential GO Station at Major Mackenzie Drive East

An additional GO Station at Major Mackenzie Drive East may assist with phased TOC within the Mount Joy GO Station Area.

3.3.2.1 York Region Transportation Master Plan 2016

The 2016 York Region Transportation Master Plan (TMP) identifies eleven new potential GO stations, which will be needed in the long-term to support increased GO ridership forecasts. Regional growth is anticipated to influence Ridership forecasts, which will necessitate additional stations. A new station at the junction of Major Mackenzie Drive East and the Stouffville GO Rail corridor was included within the TMP, which recognized the potential for this station to act as a key transit hub in east Markham, connecting GO Transit rail and bus services, the future Major Mackenzie Viva BRT extension which is planned to connect to Jane Street in the City of Vaughan, and local YRT bus services.

In addition to the Viva extension, Frequent Transit Network (FTN) corridors are identified along multiple routes, which also connect to the potential Major Mackenzie GO Station. The FTN adjacent to the area includes the Donald Cousens Parkway which would connect the MRMJSP Area to the Cornell community. The FTN is planned to provide service every 15 minutes or better throughout the day. The grid network also provides for easy transfers and direct service throughout York Region.

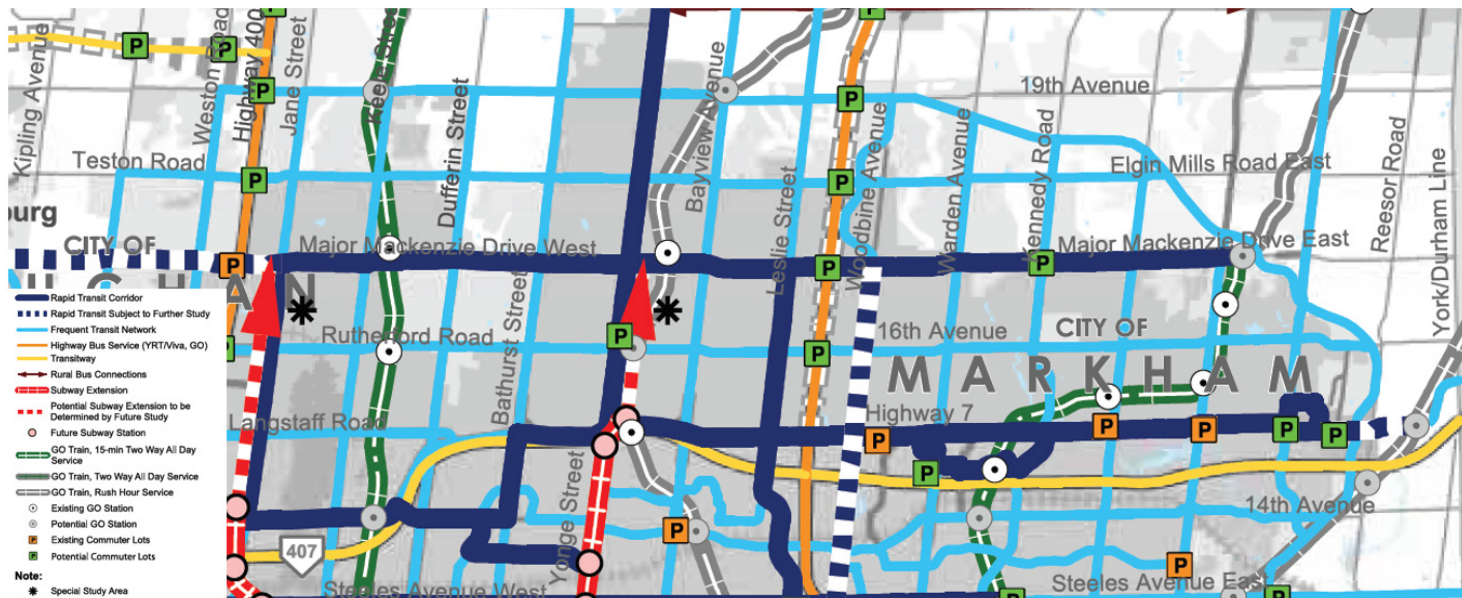


Figure 18: 2041 York Region Proposed Transit Network

3.3.2.2 Ridership Estimates

The Mount Joy GO Station currently serves over 2,100 daily riders, based on 2019 data from Presto card usage. Metrolinx’s 2016 SAP estimates that, by 2031, the Mount Joy GO Station may serve 4,000-8000 passengers per day.

In order to determine preliminary ridership estimates for the potential station, recently approved GO stations were reviewed, which were sited in similar rural settings at the fringe of urban areas. The stations included two in York Region - Bloomington at the northern boundary of the City of Richmond Hill and Kirby at the northern boundary of the City of Vaughan. The third station is in Grimsby located in Niagara Region and just outside of the City of Hamilton. Ridership forecasts per day for opening year and 2031 were approximately 1,000-3,000 for the three stations. HDR reviewed a range of outcomes for ridership estimates, which considered two drivers of demand; the Mount Joy GO Station parking capacity, and the diversion of existing and projected future Mount Joy GO Station ridership demand. In the more conservative

scenario, it was assumed that parking facilities were to be retained by the Mount Joy GO Station, allowing riders to continue to park at the station. In the second scenario, it was assumed that the existing parking facilities were to redevelop, which would then divert “park and ride” trips to the potential GO station. In the former scenario, 600 trips were generated, and in the latter, 1,547 trips; a number within the same range of the three recently approved stations that were assessed for comparison. It is noted that these projections were conservative, as they did not include estimates of trips generated by a potential future urban area expansion, nor did they consider increased density within the existing Secondary Plan Area.

HDR’s analysis noted that the station has potential to serve existing nearby neighbourhoods, as well as future residents. For example, the North Markham Future Urban Area to the northwest, which is planning for 45,000 people and 16,000-18,000 jobs, as well as the residents of nearby future developments such as 9999 Markham Road. It is noted that as of the issuance of this report,

York Region is completing its Land Needs Assessment as part of its Municipal Comprehensive Review, which may further drive growth and influence the relevance of the potential GO station at Major Mackenzie Drive East.

3.3.2.3 Policy Framework

While the existing land use policy framework would permit the development of a transit station, subject to criteria, on the north side of Major Mackenzie Drive East, it prohibits settlement area boundary expansions into the Greenbelt. There is also an MZO that applies to the lands east of Highway 48 and north of Major Mackenzie Drive East that restricts urban uses to protect for the future Pickering Airport. There is some opportunity for potentially siting transit infrastructure west of the Greenbelt lands, though consideration will need to be made for the impacts to the Little Rouge Corridor lands. While it is recommended that the lands north of Major Mackenzie Drive East continue to be protected for a potential GO station, a station platform on the south side of Major Mackenzie Drive East cannot be ruled out at this time, particularly if a public-private partnership can be implemented to assist in funding the improvements.

Pending review by City staff, it may be feasible to partner with a landowner to facilitate TOC adjacent to the rail corridor and thus leverage Metrolinx's Market-Driven Strategy for TOD to facilitate a new GO station, or a part of the related infrastructure, in this location. Siting the station partly on the south side would ensure that the station is within the Secondary Plan boundary, and provide the opportunity to locate some of the station amenities closer to existing and planned development. Parking for the GO station and development could be realized below grade, subject to assessments by the relevant review bodies, or to the north of Major Mackenzie Drive East, subject to the completion of an Environmental Assessment. The provision of parking in this location will allow for the phased TOC of the Mount Joy GO Station to the south.

3.3.3 Summary of Challenges and Opportunities

From a transportation perspective, the Mount Joy GO Station is currently surrounded by commercial/retail developments and all are scaled to a low-density context and are therefore underutilized. The prevalence of large blocks, expansive surface parking lots and a low proportion of signalized intersections continues to optimize travel for the private automobile along Markham Road. An absence of a supporting street network has resulted in vehicular traffic being concentrated along Markham Road, which has resulted in traffic congestion at 16th Avenue, as the road narrows into the southern Markham Village HCD. Preliminary assessments have concluded that there is a lack of connectivity for active travel modes, which along with a lack of safe crossing points provides for a barrier to walkability.

However, as the vision for the Secondary Plan Area is developed, and as the low-rise building stock within the Secondary Plan Area ages, significant opportunities exist to provide for future improvements that will address the noted challenges. For example, there are opportunities to increase active transportation connectivity throughout the Secondary Plan Area by way of adding cycling facilities to existing streets, by improving existing facilities by way of separation from vehicular traffic, and introducing new protected bike lanes and multi-use pathways. As redevelopment advances, there is an opportunity to introduce a fine-grain street network into the Secondary Plan Area, to break up the large blocks that currently exist. Markham Road itself can be re-imagined as a complete street that would accommodate all travel modes. As relating to the Mount Joy GO Station, a significant opportunity exists to create a new TOC anchored around the station itself.

In addition to this, the opportunity exists to locate an additional transit and mobility hub through a potential additional GO station at Major Mackenzie Drive East. The location has been identified as a potential transit

hub which will connect GO riders with the planned Viva BRT expansion along Major Mackenzie Drive East and local YRT transportation routes. An additional station may meet projected ridership needs as related to Regional growth projections, and offload “park and ride” commuters that be diverted from the future Mount Joy GO Station MTSA. Furthermore, this location may also support an EcoMobility Hub- a concept whereby multiple shared mobility modes are provided in order to provide “first and last mile” connections. The concept integrates more sustainable mobility options, such as an on-street carshare station, or an integrated bike share and bus stop.

While there are several options possible for the siting of the infrastructure related to the station, it is recommended that the north side of Major Mackenzie continue to be protected for a potential future location of the station and/or its related infrastructure. Furthermore, it is noted that on March 18, 2021 York Region released a report on its land needs to 2051 as part of its ongoing MCR. All of Markham's white belt lands, which include some of the lands north of Major Mackenzie Drive East at Markham Road, are proposed for urban expansion.

The recommended next steps to guide the City, Region and Metrolinx in their assessment of an additional station include continuing to protect for a potential GO station on the north side of Major Mackenzie Drive East, and undertaking required studies per Metrolinx’s market-driven strategy. These will include the preparation of detailed Ridership Modelling and an Initial Business Case (to be completed by Metrolinx and funded by other parties). Inputs from the City of Markham will be required for these studies, and will be refined through the Secondary Plan Study process as well as the ongoing York Region MCR.

3.4 Municipal Servicing

3.4.1 Water Distribution System

Under existing conditions, the water main pressure nodes all generally fall within the acceptable ranges as outlined by the City’s criteria.

The Secondary Plan Area is serviced through a network of City of Markham watermain infrastructure that was installed over time as the area developed. The system is interconnected and services the existing developments along Markham Road, the Wismer Commons neighbourhood to the west, Mount Joy Business Park, and the Greensborough neighbourhood to the east.

The City of Markham’s watermain model was updated to include recent development applications that are under review within the Secondary Plan Area, in order to determine whether any constraints exist. Based on the results of the model, all the pressure nodes in the Secondary Plan Area generally fall within the acceptable range as outlined by the City’s criteria, with a few exceptions that exceed the maximum pressures of 650 kPa. It is anticipated that through redevelopment, these pressure exceedances can be mitigated through the use of pressure reducing valves, and this will not have bearing on redevelopment potential.

The existing infrastructure within the Study Area is well connected to the external residential areas to the east and west, as well as the existing large transmission watermain along Markham Road. The interconnections between these systems, and the external developments appear to provide adequate redundancy in the system to allow for unforeseen and/or operational isolations

periods. It is noted that the model as provided by the City of Markham is an operational water model, and will need to be transitioned to a planning model for the Study Area in subsequent phases of this Study.

3.4.2 Sanitary Sewer System

Preliminary assessments have shown that the downstream sanitary capacity is constrained in wet weather flow conditions for the east drainage area.

The Secondary Plan Area is comprised of two separate sanitary drainage catchments. Each catchment is a tributary to the York Durham Sanitary Sewer (YDSS) and connects to the YDSS trunk sewer in separate locations south of the Study Area. The east drainage area conveys flows from properties along the east side of Markham Road from 16th Avenue to just north of Edward Jefferys Drive, from a section on the west side of Markham Road immediately north of 16th Avenue consisting of the Markham Museum property, and the commercial developments fronting 16th Avenue and Markham Road. This east drainage area was recently reduced following the construction of a 525mm to 375mm sanitary sewer along the east limit of Markham Road that has diverted existing flows from the east side of Markham Road to the western drainage area. Based on the baseline analysis, it was determined that in wet weather conditions the existing east drainage system experiences some surcharging based on the City of Markham's criteria for both the 25-year and 100-year design storm events. However, this surcharging occurs within valleylands, thus likely will not impact existing or proposed development. To this end, further analysis and discussions with the City will be required to determine the implications for intensification/ redevelopment in this area.

The existing west drainage area conveys flows from both the east and west sides of Markham Road, and a portion of the Wismer Commons community to the west. Properties on the west side of Markham Road from Major Mackenzie Drive East to the north limit of the Markham Museum property are conveyed south through a 300mm to 525mm sanitary system which conveys flows west along Edward Jeffery Avenue and ultimately connects to the York Durham Sanitary Sewer at 16th Avenue west of Markham Road. The properties on the east side of Markham Road from just north of Edward Jeffery Avenue to Major Mackenzie Drive East, including the Mount Joy Business Park, are conveyed through the recently constructed 350mm sanitary system which crosses Markham Road north of Edward Jeffery Avenue and connects to the 525mm sanitary sewer on Edward Jefferys Avenue. Based on a preliminary assessment, it appears that the western sanitary drainage system is operating without constraints, in both the dry and wet weather conditions.

3.4.3 Stormwater Management System

Mount Joy Creek currently floods adjacent properties, limiting their development potential.

The Secondary Plan Study Area is serviced through three separate stormwater management (SWM) ponds, Pond #11 Mount Joy Pond and Pond #69 on the east side of Markham Road, Pond #93 on the west side of Markham Road. A Storm Trunk Sewer along the west limit of Markham Road conveys 100-year flows to Pond #93 and Mount Joy Creek conveys flows to Mount Joy Pond (Pond #11). Counterpoint's assessment of the current SWM servicing system found that the enclosed portion of Mount Joy Creek north of the Anderson Avenue outlet is undersized and a source of flooding

impacting properties north of Castlemore Avenue and east of Markham Road due to backwater impacts. Based on the available floodplain mapping, properties between Castlemore Avenue and Bur Oak Avenue within the Mount Joy Business Park are also impacted by flooding. The runoff from these properties also drain uncontrolled and untreated into Mount Joy Creek. This has resulted in some localized erosion impacts over time. Counterpoint's assessment also concluded that some of the commercial lands adjacent to Markham Road currently have no stormwater management controls.

Through ongoing development applications in the area, restoration work has been completed and/or approved for the northern segment of the Creek (i.e., south of Major Mackenzie Drive on the 9900 Markham Road lands to just east of Markham Road on the 9999 Markham Road lands). It is noted that as individual properties redevelop they will need to work with the TRCA to establish an appropriate limit of development. Through this process the TRCA will ensure that future development protected from flooding, consistent with their policies and Ontario Regulation 166/06 (Toronto and Region Conservation Authority: Regulation of Development, Interference with wetlands and Alterations to Shorelines and Watercourses).

The TRCA has indicated that there is currently no approved floodplain model available for the section of Mount Joy Creek through the Study Area. An Environmental Assessment is currently being undertaken for the extension of Anderson Avenue between Castlemore Avenue and Major Mackenzie Drive East, which includes an assessment of the existing floodplain conditions. This work is being undertaken by Masongsong Associates Engineering Limited. As part of future study phases, Counterpoint will coordinate with Masongsong Associates Engineering Limited, the TRCA, and the City of Markham to incorporate the updated floodplain model into its assessment work, once approval has been issued by the relevant authorities.

3.4.4 Summary of Challenges and Opportunities

Servicing challenges within the Secondary Plan Area are primarily related to the existing condition of Mount Joy Creek, as during major storm events the Creek will be prone to flooding which will impact the development potential of adjacent properties. As well, some of the commercial properties within the Mount Joy Business Park and adjacent to the rail corridor currently drain uncontrolled and untreated runoff into Mount Joy Creek, which results in erosion impacts and pollution. With regards to the existing sanitary sewer system, preliminary assessments have shown that the downstream sanitary capacity is constrained in wet weather flow conditions for the east drainage area, though this will likely will not impact existing or proposed development.

Opportunities are available to upgrade the existing sanitary system capacity, realign and reconfigure Mount Joy Creek, and introduce new LID measures to address stormwater management needs in more sustainable ways. As such, there are significant opportunities to reduce flooding impacts to existing and future developments north of Castlemore Avenue.

4.0 Consultation and Engagement

4.1 Overview

A consultation and engagement plan was developed to generate broad awareness and participation in the Study process among stakeholders and the public, and to obtain feedback to inform the development of the demonstration plan and policy guidance.

A multi-day Design Charrette took place in the summer of 2020. This included three Markham Sub-Committee meetings held on July 29, August 5, and August 24, 2020, in addition to two Community Information Sessions which took place on July 29 and September 26, 2020. Due to physical distancing requirements in response to the COVID-19 pandemic, the meetings were all held online, via Zoom. The meetings were also live-streamed on the City's website or YouTube. An overview of each session is provided in the following table.

Date	Topic	Format	Attendees
Virtual Design Charrette/Markham Sub-Committee			
Day 01 July 29, 2020	Bus Tour and Overview of Baseline Conditions	<ul style="list-style-type: none"> » Virtual “bus tour” through the Study Area » Technical presentation on the baseline conditions, with multiple opportunities for feedback and discussion 	85
Day 02 August 5, 2020	Workshop of Vision, Guiding Principles and Framework Plans	<ul style="list-style-type: none"> » Technical presentation on the draft Vision and Guiding Principles, as well as the emerging Mobility, Parks & Open space, Land Use, & Placemaking frameworks plans » Live-edit of the draft Vision, followed by a live-draw exercise to visually depict comments to the emerging framework plans 	90
Day 03 August 24, 2020	Continuation of Workshop of Vision, Guiding Principles and Framework Plans	<ul style="list-style-type: none"> » Third session added to continue discussion from Day 02 	65
Community Information Sessions			
Session 1 July 29, 2020	Bus Tour and Overview of Baseline Conditions	<ul style="list-style-type: none"> » Mirrored Day 01 of the Design Charrette 	65
Session 2 September 26, 2020	Workshop of Vision, Guiding Principles and Framework Plans	<ul style="list-style-type: none"> » Mirrored Days 02 and 03 of the Design Charrette 	45
Total			350

Table 4: Summary of Phase 3 Consultation Activities

Participants included members of the Markham Sub-Committee, staff from York Region, public agencies (e.g., Metrolinx and the TRCA), landowners and their representatives, and interested members of the public. City of Markham staff from planning, transportation and engineering were also present. In total, approximately 350 people attended the Phase 3 consultation events.

Written submissions were also received throughout the engagement process via Your Voice Markham and emails to Markham staff.

4.2 What We Heard - Key Themes

The Design Charrette provided the consultant team with a significant amount of feedback with respect to the Vision, Guiding Principles, and emerging frameworks elements.

The feedback received was divided into several key themes described below.

Transportation and Mobility

- » Members of the Markham Sub-Committee made inquiries regarding the realignment of Major Mackenzie Drive East and the Major Mackenzie potential GO Station assessment;
- » From all stakeholder groups there were a range of opinions expressed with respect to the provision of on-street parking along Markham Road;
- » General support was expressed that some on-street parking should be provided for retail uses, though the form (parallel vs. diagonal), location and amount was to be subject to further review;
- » Support was expressed from residents, landowners and members of the Sub-Committee for the creation of a pedestrian friendly Main Street atmosphere with patios and cycling facilities;
- » Members of the public supported the provision of protected cycling facilities on Markham Road, while landowners suggested the consultant team explore the opportunity to move cycling facilities to parallel streets;
- » Members of the Markham Sub-Committee highlighted the importance of a station at Major Mackenzie Drive East, and the need to limit surface parking at transit stations;
- » There was interest from members of the Markham Sub-Committee and the public around the notion of treating the GO line as a subway line with more frequent service and connectivity through Markham and to consider first and last mile connections;
- » From all stakeholder groups there were concerns expressed with respect to safety, crossing, separation of travel modes, and intersections with frequent collisions. Suggestions were made to explore traffic calming measures;
- » Members of the Markham Sub-Committee expressed concerns with the Markham Road cross-section. Considerations were requested with respect to the road width, parking provisions, number of travel lanes, High Occupancy Vehicle lanes, dedicated transit lanes, closeness of the buildings to the street, etc.;
- » Members of the Markham Sub-Committee were interested in knowing the modal-split of existing condominium residents in the vicinity of the Mount Joy GO Station, in order to determine the mode-shift from vehicle use to transit use;
- » Members of the Markham Sub-Committee expressed concern regarding the potential impact of southbound traffic on the Markham Village, south of 16th Avenue; and,
- » There were a range of opinions regarding the creation of a finer grain local road network.

Mount Joy Creek, Parks and Open Space

- » Members of the Markham Sub-Committee inquired about maintenance costs related to an open channel option for re-configuring Mount Joy Creek;
- » There were a range of opinions regarding the preferred alignment and configuration of Mount Joy Creek. Some support was expressed for daylighting Mount Joy Creek, with the recognition that a piped option also provides flexibility, however more technical information on the feasibility of each option was deemed to be required;
- » Members of the public and landowners expressed support for making the lands immediately west of the rail corridor attractive and an opportunity to connect with existing green space system;

- » Landowners expressed a preference for parks to be illustrated conceptually, support for parkettes, and requested that consideration be made to strata parks or that alternative parkland provisions apply within the Secondary Plan Area; and,
- » Members of the public supported the provision of parkland and highlighted the need for more parkland particularly given the ongoing pandemic.

Environment

- » Members of the public expressed an interest in knowing what environmental considerations will be included in the Secondary Plan and stressed the importance of limiting the fragmentation of natural space. Emphasis was made on the protection of wildlife.

Infrastructure and Community Services

- » Members of the Markham Sub-Committee expressed concern regarding the need to address flooding in the Secondary Plan Area, with particular consideration for the lands at 1300 Castlemore Avenue;
- » Members of the Markham Sub-Committee and landowners expressed interest in the idea of co-locating schools within the podium of buildings and the location of community services near GO Stations in order to create rail integrated communities;
- » Interest was expressed regarding the co-location of community services, and questions were raised whether community partners were consulted; and,
- » Landowners suggested that infrastructure phasing be considered as part of the vision for the Secondary Plan area. There were also inquiries about current servicing capacities that would affect the timing of development.

Employment

- » Members of the Markham Sub-Committee inquired how the Mount Joy Business Park could be incorporated into mixed use areas;
- » Members of the Markham Sub-Committee requested greater statistical analysis of the Mount Joy Business Park and expressed that the Secondary Plan should be setting a goal for the number of jobs; and,
- » Members of the public noted that the area should provide higher-paying employment options, not just retail-based jobs.

Retail

- » Members of the Markham Sub-Committee stressed the importance of experiential retail and to carefully consider the types of retail uses needed to animate the street;
- » Members of the Markham Sub-Committee expressed the need for improvements along retail frontages and the opportunity presented within the servicing easement along the west side of Markham Road; and,
- » Members of the public inquired regarding the balance of varying scales of retail.

Housing

- » Landowners expressed that deeper consideration should be made for development projects in “the pipeline”, to consider different treatments for different districts, and to ensure the sufficient provision of both housing and jobs; and,
- » Members of the public suggested that consideration should be made for the provision of affordable housing for seniors, disabled and low-income households, and balance affordability with the provision of permanent housing options.

5.0 Vision and Guiding Principles

5.1 Overview

The land use objective for the Markham Road – Mount Joy Secondary Plan Area as outlined in Policy 9.3.7.1 of the Official Plan 2014 is to provide for:

“a mixed-use local corridor that functions as a main street integrating a range of housing, employment, shopping and recreation opportunities, at transit-supportive densities adjacent to the GO station, to serve the adjacent communities of Berczy Village, Wismer Commons, Greensborough and Swan Lake.”

In order to achieve this objective the consultant team, with the support of City Staff, delved into a robust background review, data collection and assessment of the existing conditions of the Secondary Plan Area and its surrounding context. This review also included a detailed look at the policy framework, and best practices and precedents for sustaining transit-supportive communities. It is this process that led to the draft Vision, which in turn informed the development of Guiding Principles for the Secondary Plan Area. The Vision and Guiding Principles were further refined based on feedback received throughout the consultation process.

5.2 Vision

A refined Vision based on the work completed to date through the MRMJSP Study has been prepared to set the stage for a complete Markham Road – Mount Joy community, and inform the planning parameters needed to ensure growth can be realized, commensurate with mobility, housing and community amenities.

The refined Vision is as follows:

The Markham Road – Mount Joy Secondary Plan Area will evolve into a walkable, compact, and vibrant mixed-use community. It will also function as a gateway, main street, workplace, and social and cultural hub serving this community and the surrounding communities of Berczy Village, Wismer Commons, Greensborough, Swan Lake, and Markham Village.

To do so, a range and mix of housing, including affordable and rental housing, employment, shopping and recreation opportunities will be integrated and provided at transit-supportive densities that are compatible with the established low-rise residential neighborhoods. The greatest intensity of development and activity will be near rapid transit stations, complemented by animated parks, schools, community and recreation facilities, and other amenities. All these elements are tied together and enriched with a vibrant public realm that drive the appeal, livability, resilience and distinct sense of place of the Markham Road – Mount Joy Area.

5.3 Guiding Principles

Informed by the baseline analysis, Vision and comments received, we have prepared six Guiding Principles for the MRMJSP. These principles will provide a framework for the development of a vibrant mixed-use community woven into the transportation system.

1. Protecting and Enhancing the Natural Environment;
2. Building Compact and Complete, Rail-Integrated Communities;
3. Increasing Mobility Options;
4. Maintaining a Vibrant and Competitive Economy;
5. Adopting Green Infrastructure and Development Standards; and,
6. Facilitating Public Input and Long-Range Planning and Implementation.

Protecting and Enhancing the Natural Environment

- a. To delineate an effective Greenway System associated with Mount Joy Creek as one of the main organizing elements of the community, with the objective of protecting and enhancing the features, functions and water resources associated with the natural heritage network;
- b. To integrate the Greenway System and associated natural heritage features into planned communities in a manner that protects and bolsters natural features through design; and,
- c. To develop new communities to be safe from flooding and to be resilient from the effects of climate change.



Figure 20: Protecting and Enhancing the Natural Environment



Figure 21: Productive Landscape, Ecological Park, France



Figure 22: Urban Bioswales, Portland

Building Compact and Complete, Rail-Integrated Communities

- a. To redefine Markham Road from 16th Avenue to Major Mackenzie Drive East as a main street that provides for the daily needs of residents, businesses and visitors;
- b. To protect for the provision of an appropriate range and diversity of community infrastructure and facilities, within walking distance of existing and future residents and visitors;
- c. To promote the health and wellbeing of residents and visitors, through active living, access to the natural environment, local food and connection to a vibrant, inclusive and caring community;
- d. To encourage an efficient use of land at transit-supportive densities and with good urban form that reinforces a coherent urban structure through coordinated and appropriately scaled infill development;
- e. To provide for a range of housing types and tenures, including affordable and rental housing options, and shared housing, and to provide opportunities to age in place; and,
- f. To create a sense of community identity through the establishment of a high quality public realm, placemaking and a high standard of urban design (distinctive built form, streetscapes, parks and open space, landmarks and views, public art, etc.), ensuring the community is designed to be accessible by all, regardless of age or physical ability.



Figure 23: Building Compact and Complete Rail Integrated Communities



Figure 24: Shoppers World Redevelopment, Brampton



Figure 25: Mount Pleasant Community Centre, Vancouver

Increasing Mobility Options

- a. To enhance the existing transportation network to emphasize walking, cycling and transit as increasingly viable and attractive alternatives to the automobile;
- b. To improve access and circulation, as well as parking amenities that will allow people to easily visit the Markham Road – Mount Joy area;
- c. To plan for transit improvements to connect to, and enhance, existing transit infrastructure and amenities; and,
- d. To balance public rights-of-way for multi-modal use, with adequate allocation of space and functional design that ensure the safety of all users.



Figure 26: Increasing Mobility Options



Figure 27: Micro-Mobility Station

Maintaining a Vibrant and Competitive Economy

- a. To plan for employment opportunities that serve the community and that are accessible by transit and active transportation, including live/work opportunities;
- b. To plan for appropriate scale of retail and community-serving uses to support an active, locally-serving retail area;
- c. To maintain employment uses within the Mount Joy Business Park, by enhancing the competitiveness of existing employment lands by providing opportunities for new and innovative business types to grow and flourish; and,
- d. To provide flexibility in built form and land uses to foster economic growth and versatility in land use policy to support a range of employment uses within mixed-use areas.



Figure 28: Maintaining a Vibrant and Competitive Economy

Adopting Green Infrastructure and Development Standards

- a. To identify best management practices and approaches to stormwater management systems/ facilities, floodplain management, water and wastewater systems, and the transportation network to maximize water and energy conservation and climate change resilience at the community level;
- b. To identify best management practices for green buildings to reduce demands on energy, water and waste systems; and,
- c. To incorporate infrastructure for transportation powered by renewable energy (i.e., electric vehicle plug-in stations).



Figure 29: Adopting Green Infrastructure and Development Standards



Figure 30: Wellesley Reikai Centre for Long-Term Care, Toronto

Facilitating Public Input and Long-Range Planning and Implementation

- a. To promote public engagement through various stages of the planning and development of the Markham Road – Mount Joy community and encourage involvement of all stakeholders; and,
- b. To identify key criteria and thresholds to proceed with a business case for the potential GO Station at Major Mackenzie Drive East.



Figure 31: Facilitating Public Input and Long-Range Planning and Implementation

6.0 Draft Demonstration Plan

6.1 Overview

This report presents the draft Demonstration Plan, which forms the basis for policy directions and recommendations that will inform the preparation of the Secondary Plan. The draft Demonstration Plan is in keeping with, and augments, the Vision and associated Guiding Principles for the Secondary Plan. It has been informed by the findings of the baseline conditions assessment, as well as consultation with City of Markham, stakeholders and the public. It has emerged out of an interactive process of review and evaluation with City and Agency Staff, is based on a set of land use and built form assumptions, and introduces a set of preliminary development yields, which are subject to revision. It is built on a set of framework elements, inclusive of natural heritage, public realm and open space, street hierarchy, precincts, gateways and placemaking opportunities, land use and built form, and phasing. Finally, it contemplates the expansion of the Secondary Plan Area to incorporate the existing surface parking lot, located east of Mount Joy GO Station, on the south side of Bur Oak Avenue, and east of the Stouffville GO Rail Corridor.

The key structuring elements of the draft demonstration plan include, but are not limited to:

- » Transformation of the Markham Road Corridor into a pedestrian-oriented boulevard and mixed-use main street destination;
- » Addressing overall connectivity between the Secondary Plan Area and neighbouring communities;
- » Expansion of the existing collector road network through the extension of Anderson Avenue and Edward Jeffreys Avenue, and the introduction of additional Minor Collector Streets and local roads;
- » Prioritization of at-grade retail frontages along the length of Markham Road, between Castlemore Avenue to the north and 16th Avenue to the south;
- » Establishment of active at-grade frontages along the length of Markham Road, Castlemore Avenue, Bur Oak Avenue, and Anderson Avenue;
- » Establishment of three distinct precincts inclusive of the North, Central and South Precincts;
- » Establishment of a Mixed Use Node comprising the Mount Joy GO Station lands, which spans the Central and South Precincts;
- » Transition in height and density to the Markham Village south of 16th Avenue;
- » Incorporation of a Mixed Use Employment Hub within the southeastern-most portion of the Central Precinct, overlapping with the GO Station Mixed Use Node overlay;
- » Creation of an integrated network of parks and open spaces;
- » Restoration and enhancement of the Greenway System, and re-alignment of Mount Joy Creek;
- » Clustering of community services, infrastructure and facilities;
- » Clustering and mixing of commercial, employment and residential uses;
- » Establishment of an active transportation network, inclusive of protected cycling facilities, multi-use pathway, Green Streets and Pedestrian Connections, and pedestrian bridges; and,
- » Connection to a potential GO Station at Major Mackenzie Drive East.

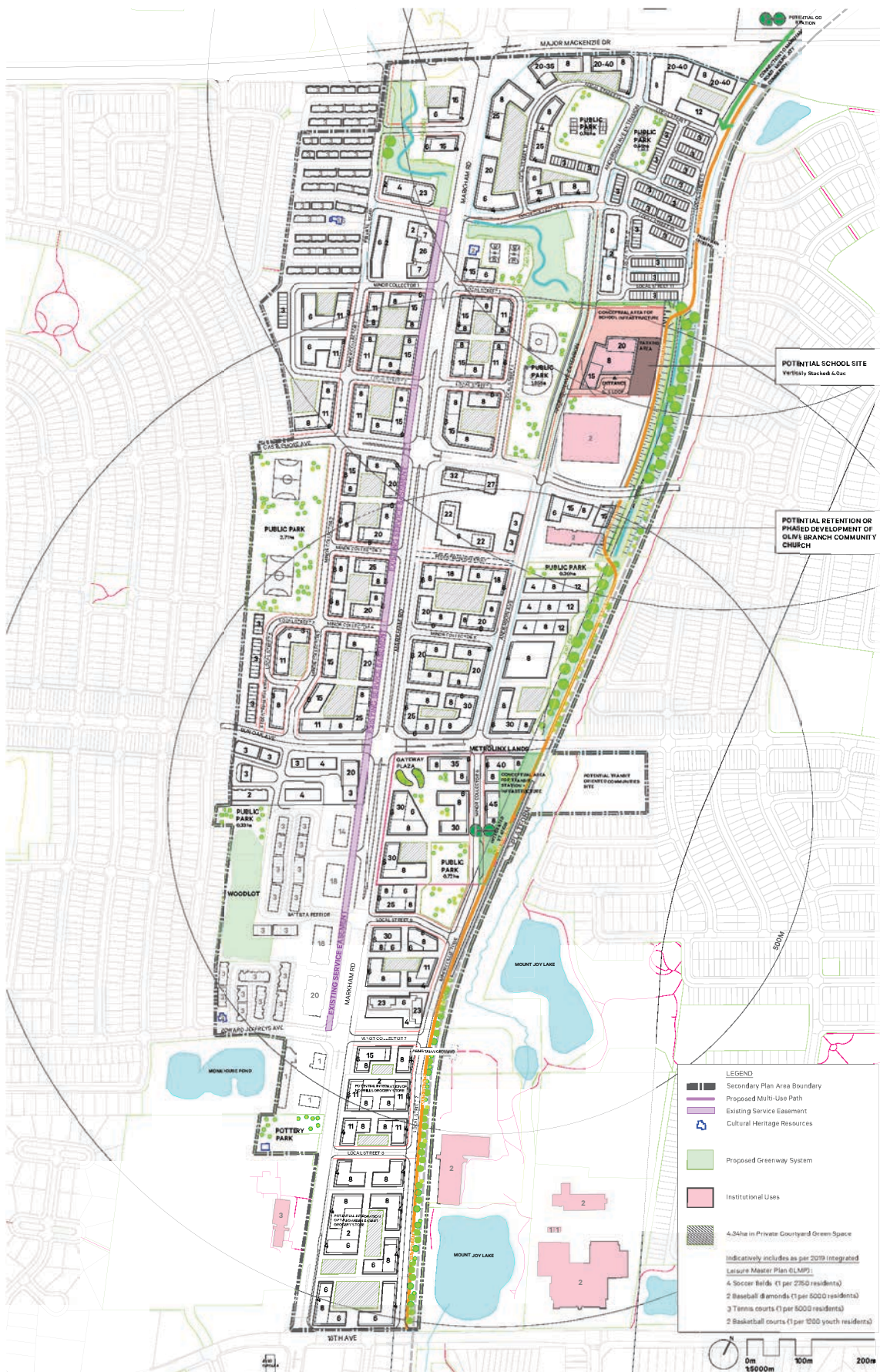


Figure 32: Draft Demonstration Plan

6.2 Population and Employment

6.2.1 Land Use and Built Form Assumptions and Standards

The draft Demonstration Plan is informed by a set of land use and built form assumptions and standards, governing building and block dimensions, tower floor plate dimensions, and tower separation distances. Specifically, the Plan incorporates maximum building dimensions of 22m (depth) by 60m (frontage), maximum tower floor plate dimensions of 800m², minimum tower separation distances of 30m, and maximum block dimensions of 80m (depth) by 100m (length).

6.1.2 Preliminary Development Yields

The draft Demonstration Plan incorporates a preliminary estimate of the people and jobs resulting from the full build-out of the Secondary Plan Area. In order to calculate this estimate, a set of assumptions was used, consistent with those utilized for the purposes of preparing the City of Markham Development Charges Study (2018), as follows:

Population Assumptions

Population growth assumptions were estimated by applying an average of:

- » 3.84 people per single and semi-detached unit;
 - » 2.94 people per townhouse or multiplex unit; and,
 - » 2.00 people per apartment unit.
-

Employment Assumptions

Employment growth assumptions were estimated by applying an average of:

- » **Retail** - 40.0m² per employee;
- » **Mixed-Use Retail** - 30.0m² per employee (up to a maximum of 60,000–75,000m² of total floor space);
- » **Institutional** - 66.7m² per employee;
- » **Industrial Employment Land** - 50.0m² per employee; and,
- » **Office** - 25.0 m² per employee.

Based on these assumptions, the draft Demonstration Plan is anticipated to yield ~13,500 residents and ~14,500 jobs. In the next phase of the Study process, as the draft Demonstration Plan is refined, the preliminary people and job yields will be updated and serve as inputs to transportation and servicing modelling and analysis.

6.3 Framework Elements

The following section incorporates an overview and description of six key framework elements, which emerged through the assessment of baseline conditions and visioning exercise:

- » Natural Heritage;
- » Public Realm and Open Space;
- » Street Hierarchy and Development Blocks;
- » Precincts, Gateways and Placemaking Opportunities;
- » Land Uses; and,
- » Phasing.

Each subsection includes a summation of key components and statistics, as well as supporting plans, annotations and precedent images.



Figure 33: Scarborough Highland Creek Valley, Toronto

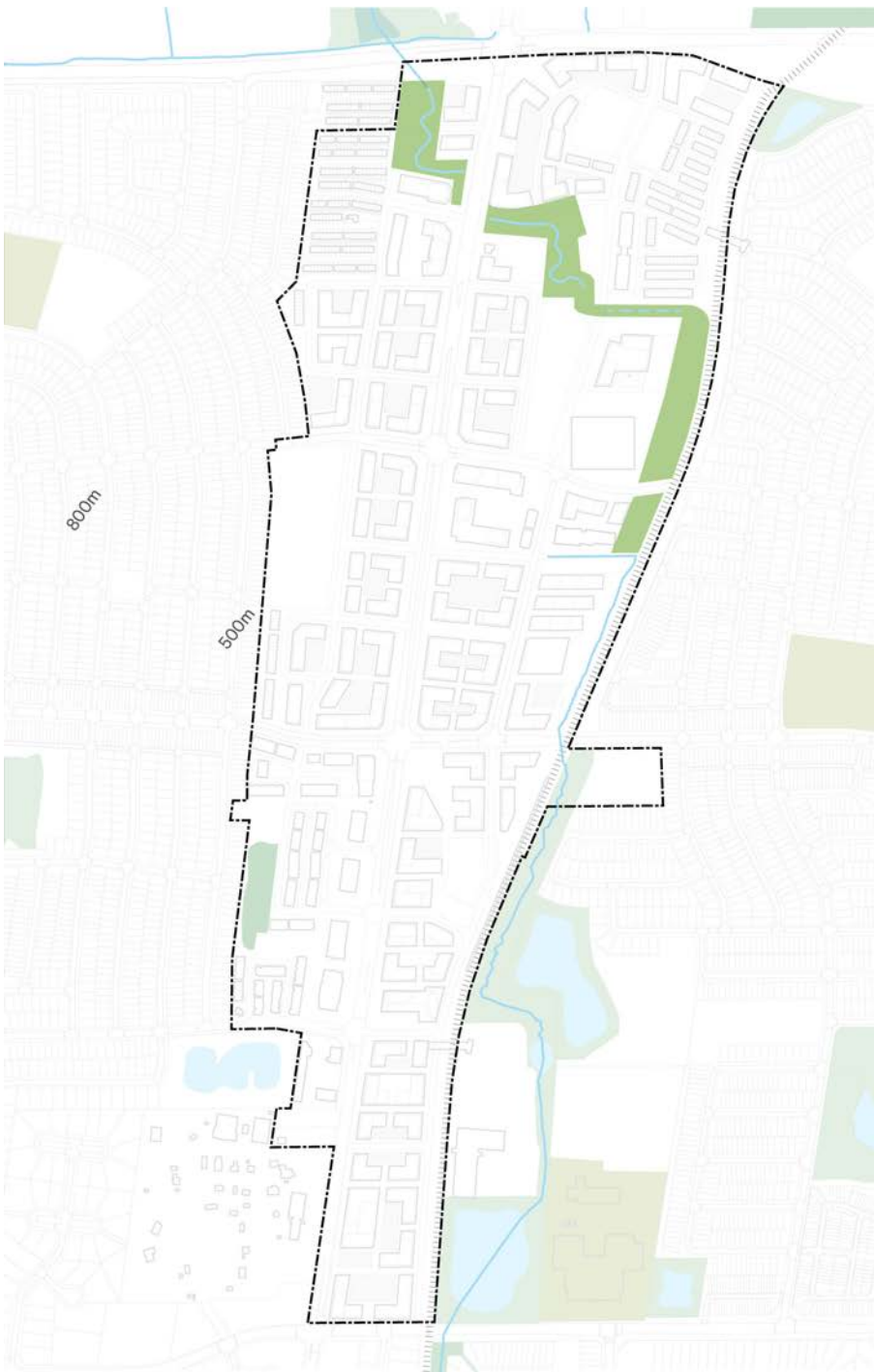
6.3.1 Natural Heritage

The draft Demonstration Plan incorporates a connected Natural Heritage system, based on a recommended alignment to re-configure Mount Joy Creek. The lands designated 'Greenway' will occupy an area of ~5.8 hectares of the Secondary Plan Area. The designation will follow the alignment of Mount Joy Creek and its associated valley corridor. In addition to the existing open and daylight channel configuration west of Anderson Avenue and Markham Road, this is envisioned to traverse east of Anderson Avenue, in a piped configuration, before continuing south adjacent to the Stouffville GO Rail Corridor, in an open and daylight channel configuration. Other retained natural heritage features include the existing Hammersely Woodland by Battista Perri Drive.











Refer **Section 6.5.2** for more information on the recommended Mount Joy Creek alignment, and **Section 7.1.1** for policy directions pertaining to Natural Heritage.



Figure 34: Mount Joy Creek, Markham



Legend

-  Secondary Plan Area Boundary
-  Greenway/Exhibition Creek
-  Natural Heritage
-  Trail
-  Wetland
-  Woodlot
-  Waterbody
-  Piped Watercourse
-  Watercourse
-  GO Rail Corridor



**Not to scale*

Figure 35: Framework Plan - Natural Heritage

6.3.2 Public Realm and Open Space

The draft Demonstration Plan incorporates a hierarchy of public realm and open space features. A total of seven (7) new public parks will be distributed throughout the Secondary Plan Area, providing for a variety of active and passive recreational uses. A system of privately-owned publicly accessible spaces, including courtyards, pocket parks, plazas and flexible spaces will augment the public park system, providing amenity to residents and site visitors alike.

A network of six (6) Green Streets and Pedestrian Connections are proposed along existing and new streets within the Secondary Plan Area, including Markham Road, Anderson Avenue / Minor Collector Street 6, Castlemore Avenue, Bur Oak Avenue, Edward Jeffreys Avenue, and Minor Collector Street 2. Green Streets and Pedestrian Connections include generous boulevard widths, inclusive of wide sidewalks and continuous tree planting and landscape zones. In addition to fulfilling the City of Markham's 30% canopy

coverage target as articulated in the City of Markham Trees for Tomorrow Program, the Green Streets and Pedestrian Connections will provide an environmental and connectivity function. They will incorporate generous landscaping, either within the (redesigned, in the case of existing streets) right-of-way and/or in enhanced landscape on private setbacks, with the intent to establish contiguous opportunities to provide shade canopy, stormwater runoff mitigation, filtration and absorption, as well as pedestrian focused linkages between parks, open spaces, natural heritage features, community infrastructure, and key destinations.

A network of mid-block connections, combined with two (2) new pedestrian bridges, new protected cycling facilities and a ~2.5 km multi-use pathway will provide the fine-grain connectivity and promotion of active transportation critical for the sustained growth of the Secondary Plan Area. Refer to **Section 7.1.5** for policy directions pertaining to Public Realm and Open Spaces.



Figure 36: Segre River Active Transportation Bridge, Spain



Figure 37: Fulton Street, San Francisco



Figure 38: Framework Plan - Public Realm and Open Space

6.3.3 Street Hierarchy

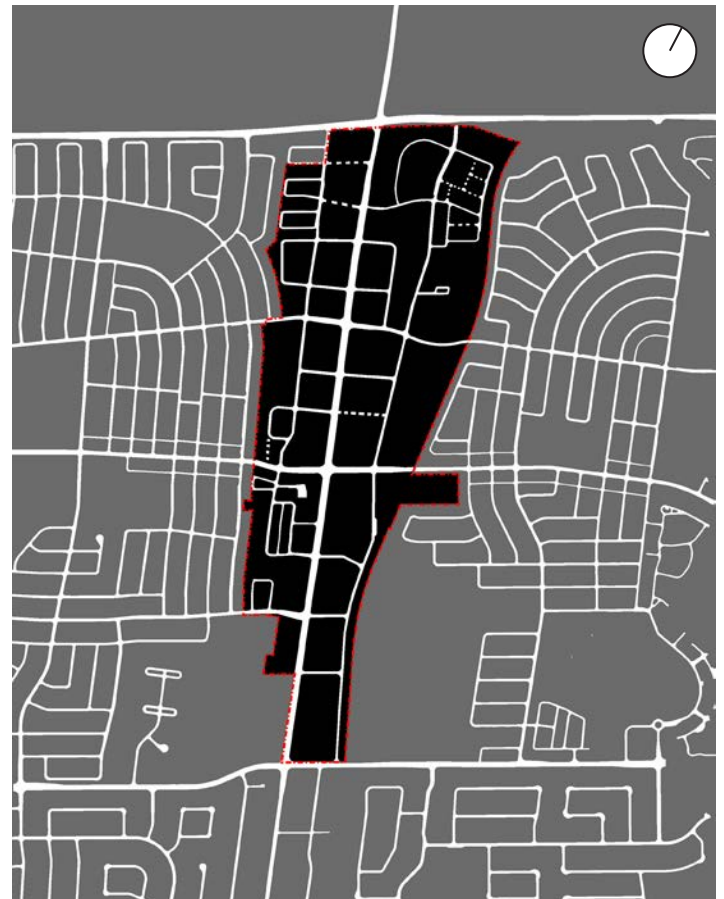
The draft Demonstration Plan incorporates a fine grain network of Arterial, Collector and Local Streets, which provide options for vehicular movement to be re-directed away from Markham Road. This will allow the corridor to transition into a beautiful, vibrant and mixed-use main street. The draft Demonstration Plan indicates how new streets and a series of connections should be introduced to provide options for multi-modal movement, as well as create the framework to support new frontage opportunities, and facilitate site access.

This, combined with the introduction of protected cycling facilities, multi-use pathways and mid-block connections, encourages greater opportunities for active transportation, and logical and direct connections between adjacent blocks. In total, the draft Demonstration Plan contemplates 8 new Collector Streets, 13 new Local Streets, and 11 new signalized intersections (subject to further analysis). Refer to **Section 7.1.6** for policy directions pertaining to Street Hierarchy and Development Blocks.



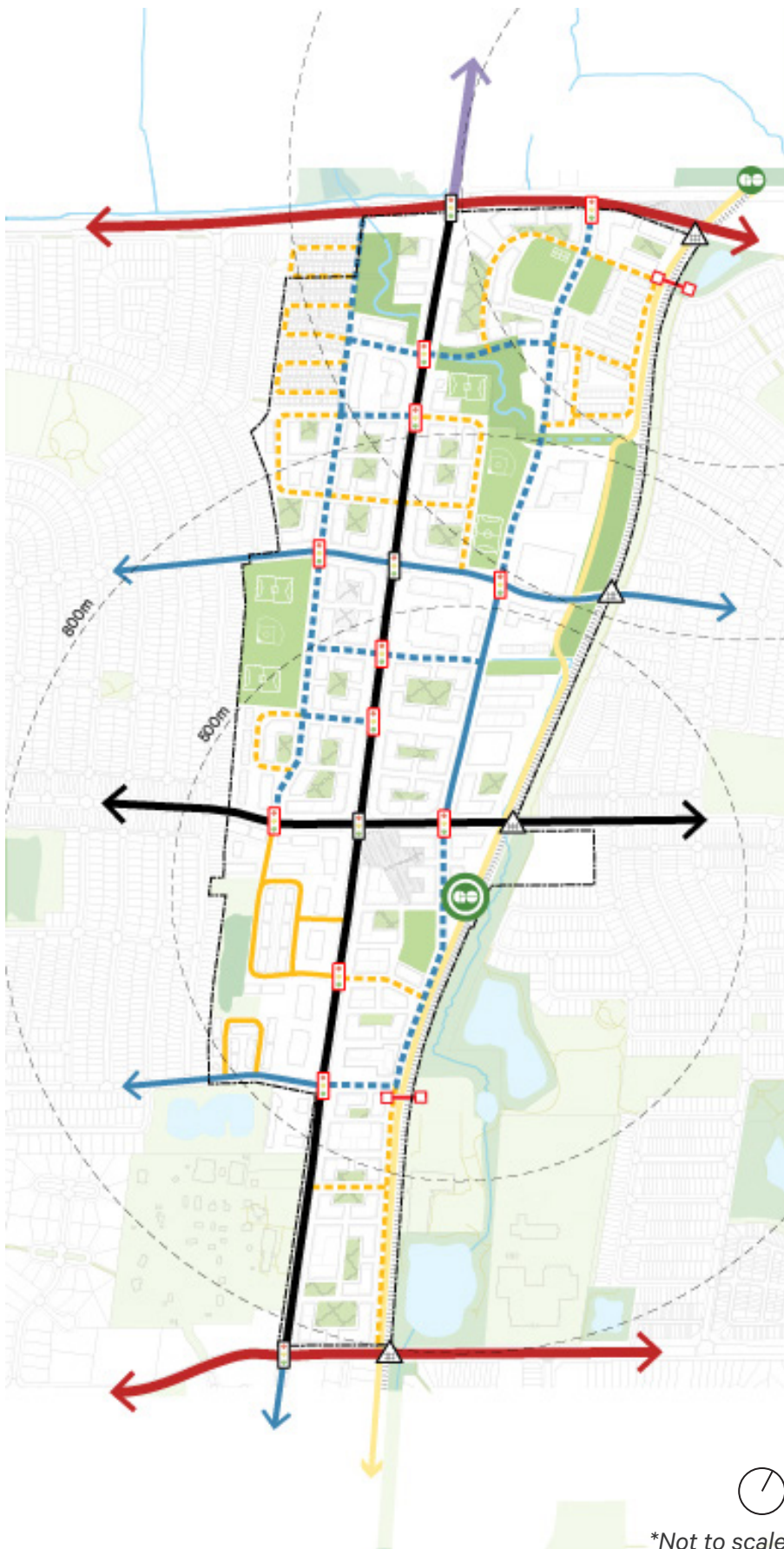
**Not to scale*

Figure 39: Figure Ground (Existing)



**Not to scale*

Figure 40: Figure Ground (Potential)



Legend

- Proposed Secondary Plan Boundary
- Existing GO Station
- Potential GO Station
- Existing Provincial Highway
- Existing Arterial Road
- Existing Major Collector Road
- Existing Minor Collector Road
- Existing Local Road
- Existing Signal
- Existing At-Grade Rail Crossing
- Proposed Minor Collector Road
- Proposed Local Roads (Including Private Roads)
- Proposed Signal
- Proposed Foot Bridge
- Multi-Use Path
- Green Connection
- Proposed Public Park
- Proposed Private Park
- Existing Park
- Existing Trail
- Wetland
- Woodlot
- Waterbody
- Watercourse
- Watercourse
- GO Rail Corridor

*Not to scale

Figure 41: Framework Plan - Street Hierarchy

6.3.4 Precincts, Gateways and Placemaking Opportunities

The draft Demonstration Plan establishes three (3) neighbourhood precincts, which respond to their unique context, built form considerations and land use mix, while maintaining a sense of cohesion and shared identity throughout the Secondary Plan Area. Each Precinct incorporates new public parks and open spaces, new streets, as well as segments of the new multi-use pathway.

North Precinct

The North Precinct will include a direct connection to the potential GO Station site from the lands immediately south of Major Mackenzie Drive East. As noted earlier, it is recommended that lands located immediately north of Major Mackenzie Drive East, as well as lands spanning the width of the right-of-way, be subject to protection for the potential GO Station and associated infrastructure. The North Precinct also includes the re-aligned and reconfigured Greenway and Mount Joy Creek, a pedestrian bridge, and a new school site with the potential to integrate the school within the base of a larger mixed-use development. The specific siting of the pedestrian bridge will be the subject of further study, and will be determined based on the availability of land on the east side of the rail corridor to establish a bridge footing and landing.

Central Precinct

The Central and South Precincts share portions of the GO Station Mixed Use Node at the Mount Joy GO Station. The Mixed Use Node includes a gateway plaza framed by active podiums, as well as a linear pedestrian mews that leads to a new park and transit plaza, and associated transit infrastructure including a new station that may be integrated into the podium of a mixed-use building. The Central Precinct also includes a Mixed Use Employment Hub, which will incorporate

a range of clean and technology-based light industrial, manufacturing and distribution facilities which can co-exist harmoniously alongside commercial, office and residential uses on upper storeys of vertically-integrated mixed-use buildings, as well as in adjacent and separate buildings. The Mixed Use Employment Hub will augment and integrate with adjacent and surrounding mixed use developments along Markham Road and within the GO Station Mixed Use Node.

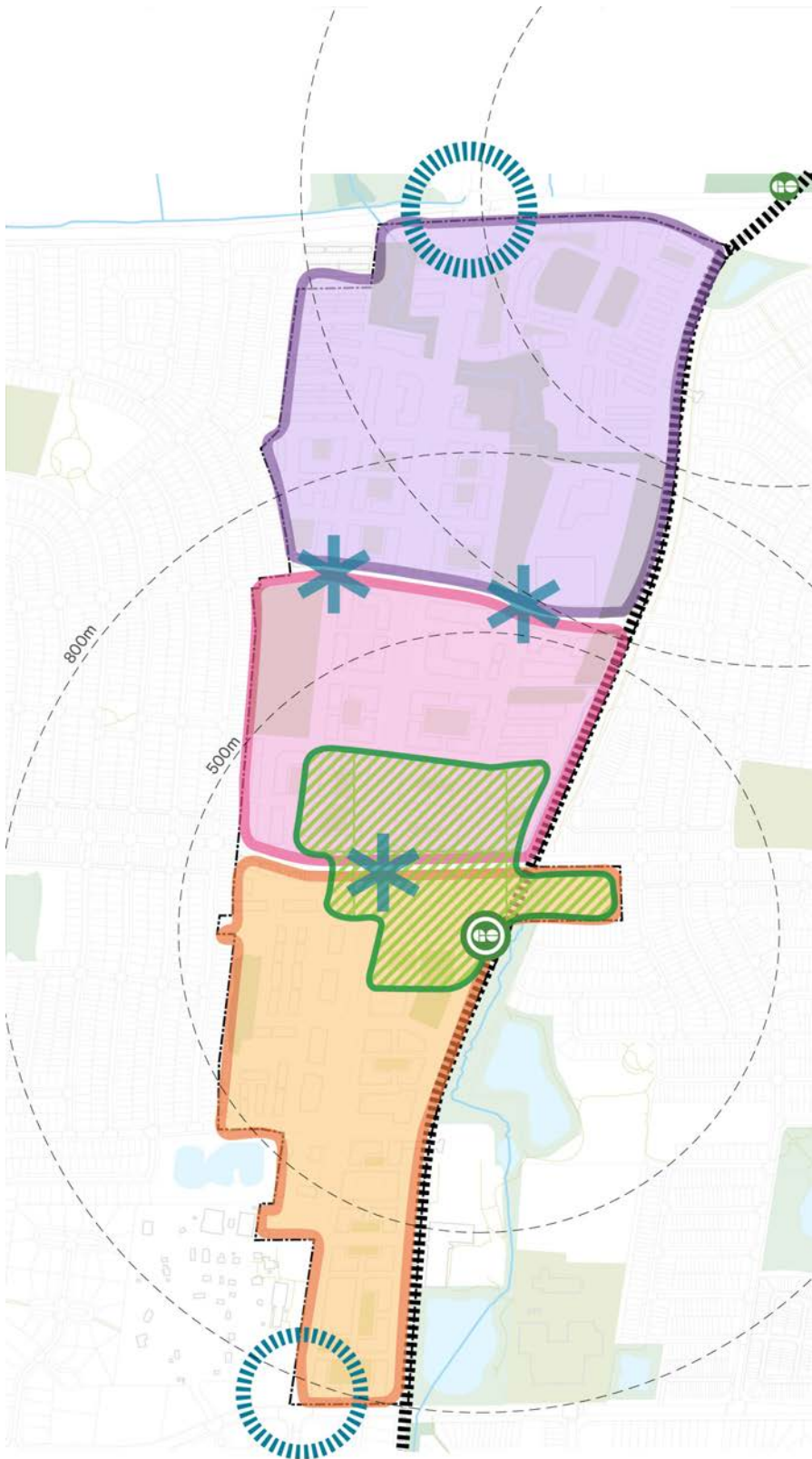
South Precinct

The South Precinct includes a fine-grain retail environment inclusive of community-based retail uses that serve residents inside and outside the Secondary Plan Area. A pedestrian bridge with the potential to connect the Secondary Plan Area to Mount Joy Community Centre and Park is also proposed. The specific siting of the pedestrian bridge will need to be the subject of a future study.

Gateways and Placemaking Opportunities

The draft Demonstration Plan incorporates two gateways, which bookend the northern and southern extents of the Secondary Plan Area. They represent major points of entry and exit along Markham Road, at Major Mackenzie Drive East and 16th Avenue, respectively, as well as significant opportunities for landmark developments, open space treatments, public art, wayfinding and other placemaking initiatives. They signify transitions between the Secondary Plan Area and Rouge National Urban Park and the Greenbelt to the north, as well as the Markham Village to the south.

Finally, the draft Demonstration Plan identifies other significant placemaking opportunities at key intersections along Castlemore Avenue, Bur Oak Avenue, and Markham Road. Refer to **Section 7.1.3** for policy directions pertaining to Precincts, and **Section 7.1.6** for policy directions pertaining to Gateways and Placemaking Opportunities.



Legend

- Proposed Secondary Plan Boundary
- Existing GO Station
- Potential GO Station
- Gateway
- Placemaking Opportunity
- GO Station Mixed Use Node
- North Precinct
- Central Precinct
- South Precinct
- Green Connection
- Proposed Public Park
- Proposed Private Open Space
- Existing Park
- Existing Trail
- Wetland
- Woodlot
- Waterbody
- Watercourse
- Watercourse
- GO Rail Corridor

**Not to scale*

Figure 42: Framework Plan - Precincts, Gateways and Placemaking Opportunities

6.3.5 Land Use and Built Form

The draft Demonstration Plan anticipates that the Secondary Plan Area will develop into a destination comprised of a complete and transit-oriented mixed use community. Primary height and density peaks will surround the existing Mount Joy GO Station Area and potential Major Mackenzie GO Station Area. These will transition downward to secondary height and density peaks, which span the length of Markham Road, between Major Mackenzie Drive East to the north and Minor Collector Street 7 to the south. Downward transitions will occur between the primary and secondary height and density peaks, to adjacent and surrounding areas of the North, Central and South Precincts, as well as the Greensborough Neighbourhood to the east, Wismer Commons Neighbourhood to the west, and Markham Village to the south.

It is important to note that the building heights surrounding the potential Major Mackenzie GO Station will be commensurate with, and dependent upon, the integration of a new GO Station. Refer to **Section 7.1.3** for more information on the range of building heights envisioned adjacent to and surrounding the potential Major Mackenzie GO Station. Metrolinx's Market Driven Strategy applies to both the existing and potential GO Station Areas at Mount Joy and Major Mackenzie Drive East. Future study will be needed for each area, in accordance with Metrolinx's policy directions.

At-grade retail uses will be prioritized along portions of Markham Road and Minor Collector Road 6, as well as throughout the Mount Joy GO Station Mixed Use Node. Conversely, employment uses will be prioritized at-grade along portions of Anderson Avenue, within the Mixed Use Employment Hub. Above, grade, the Mixed Use Employment Hub is anticipated to maintain flexibility to accommodate a range and diversity of employment uses, in combination with residential uses, which can coexist harmoniously over the long-term.

The draft Demonstration Plan incorporates a general estimate of density and land area, attributed to each land use designation, resulting from the full build-out of the Secondary Plan Area. In order to determine these forecasts, a set of assumptions were used, consistent with those utilized for the purposes of preparing the City of Markham Development Charges Study (2018). Based on these assumptions, density and land area forecasts include:

- » **Mixed Use High Rise** – 3.0 FSI / 18,300m²;
- » **Mixed Use Mid Rise** – 2.5 FSI / 9,800m²;
- » **Residential Mid Rise** – 2.0 FSI / To Be Determined;
- » **Mixed Use Employment Priority** – 4.5 FSI / 18,500m² and,
- » **Community / Institutional** – 4.5 FSI / 18,900m².

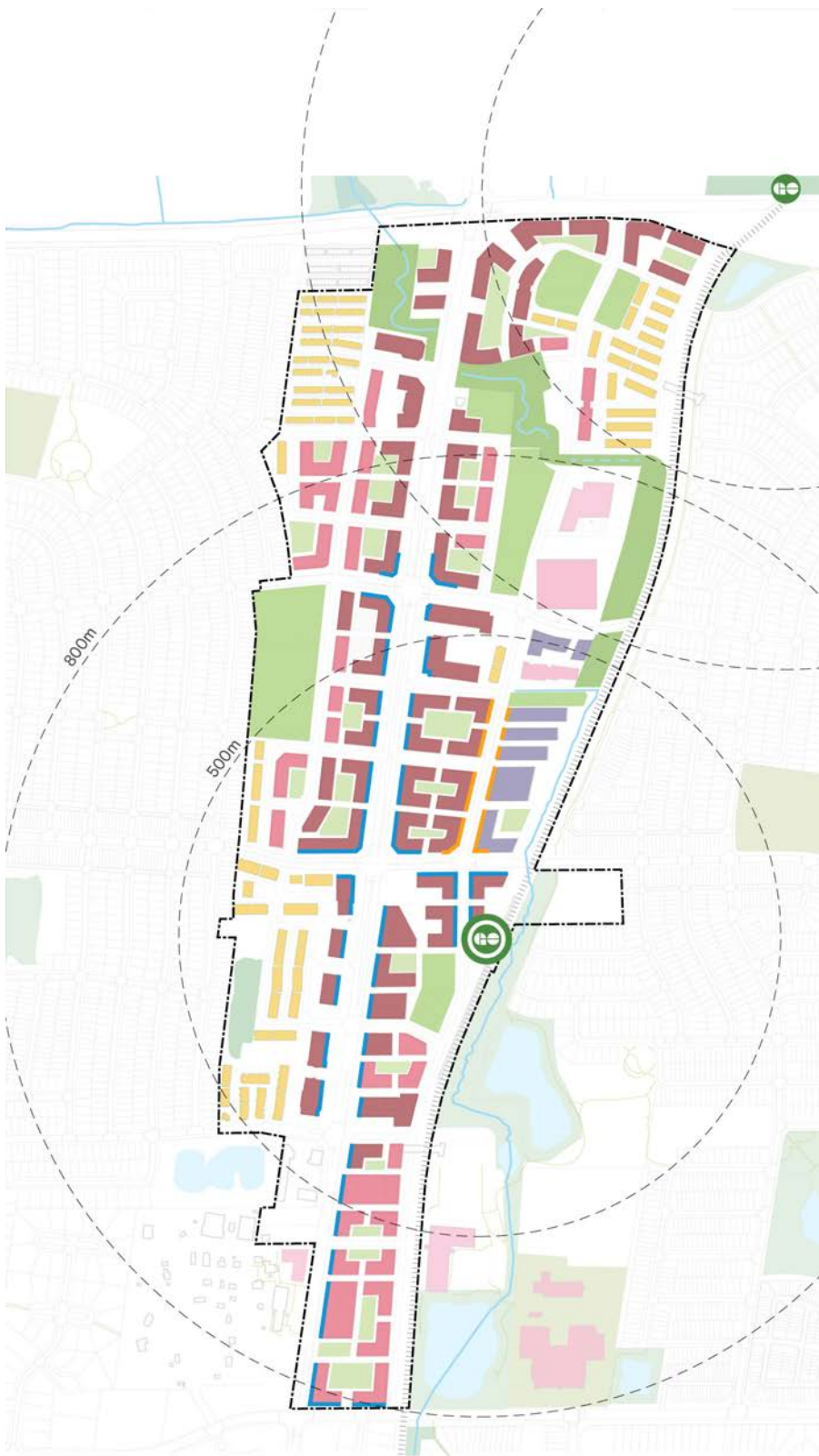
These densities are subject to revisions, in parallel with the transportation and municipal servicing modelling and analysis.

** Note, an estimate for density and land area requirements was provided for Community and Institutional Uses, as assumptions attributed with this use are not captured in the City of Markham Development Charges Study (2018).*
















Refer to **Section 7.1.2** for policy directions pertaining to land use and built form.



Figure 43: Mixed Use Employment Priority



Legend

-  Proposed Secondary Plan Boundary
-  Existing GO Station
-  Potential GO Station
-  Mixed Use High Rise
-  Mixed Use Mid Rise
-  Residential Mid Rise
-  Mixed Use Employment Priority
-  Community/Institutional
-  Primary Retail Frontage
-  Primary Employment Frontage
-  Green Connection
-  Proposed Public Park
-  Proposed Private Open Space
-  Existing Park
-  Existing Trail
-  Wetland
-  Woodlot
-  Waterbody
-  Watercourse
-  Watercourse
-  GO Rail Corridor



**Not to scale*

Figure 44: Framework Plan - Land Use and Built Form

6.3.6 Phasing


















The draft Demonstration Plan anticipates that development within the Secondary Plan Area will occur in multiple phases. In particular, it is anticipated that:

- » Recently approved projects and active planning applications will develop in the short term (3 to 5 years) to medium term (5 to 10 years);
- » The Mount Joy GO Station Area, and larger consolidated and underutilized properties, will redevelop over the short term (3 to 5 years) to medium term (5 to 10 years); and,
- » Smaller, fragmented and well-utilized properties or encumbered sites will redevelop and infill over the long term (15 to 25 years).

Refer to **Sections 7.4.6, 7.4.7, 7.4.8** and **7.4.9** for policy directions pertaining to development phasing.



Legend

-  Proposed Secondary Plan Boundary
-  Existing GO Station
-  Potential GO Station
-  Short Term Infill and Redevelopment (3-5 years)
-  Medium Term Infill and Redevelopment (5-10 years)
-  Long Term Infill and Redevelopment (15-25 years)
-  Green Connection
-  Proposed Public Park
-  Proposed Private Open Space
-  Existing Park
-  Existing Trail
-  Wetland
-  Woodlot
-  Waterbody
-  Watercourse
-  Watercourse
-  GO Rail Corridor

*Not to scale

Figure 45: Framework Plan - Phasing

6.4 Other Planning and Design Considerations

The following section provides an overview of other planning and design considerations, which informed the preparation of the draft Demonstration Plan. Specifically, this section addresses planning and design considerations associated with the existing and potential GO Stations, the redesign of Markham Road, and the realignment and reconfiguration of the Greenway and Mount Joy Creek.

6.4.1 Existing and Potential GO Stations

Based on the findings of the baseline conditions assessment, it has been determined that a second GO Station at Major Mackenzie Drive East is not a requirement to facilitate the redevelopment of the existing Mount Joy GO Station. However, the Major Mackenzie GO Station would have several benefits to the MRMJSP Area including:

- » The potential to re-divert parking needs from the Mount Joy GO Station to the potential GO Station;
- » Improving access to future electrified and high frequency GO rail services;
- » Accommodating additional commuter-sheds to the west, north and east of the potential station; and,
- » and improving the overall transit service and network connectivity throughout York Region and the Greater Toronto Area through an additional interface between the GO rail and Viva transit services.

For these reasons, it is recommended that protections be put in place to accommodate the potential GO Station north of Major Mackenzie Drive East. Refer to **Table 5** for more information pertaining to the evaluation process associated with the feasibility of the potential GO Station.

Through the development of the Demonstration Plan, particular attention was paid to ensuring the establishment of a framework which better facilitates partnerships between Metrolinx and future development partners to respond to the Province's Market Driven TOD Strategy. This is necessary in order to realize:

- » densities consistent with achieving transit-oriented development objectives;
- » enhanced public realm features including special paving materials, furnishings, ornamental plantings, pedestrian-scale lighting, public art and wayfinding signage; and,
- » multi-modal connectivity in place of the existing expanse of surface parking that dominates the site today.

Protections should be in place to allow for the location of the potential GO Station platform to occur on the north side of Major Mackenzie Drive East, with connections south to the Secondary Plan Area. Locating the platform north of Major Mackenzie Drive East would be made possible through a partnership with private landowners and Metrolinx, as per the Metrolinx December 2018 strategy for public and private collaboration. However, the lands to the north of Major Mackenzie Drive East are currently subject to Greenway and Countryside land use designations. Therefore, consideration for a new GO Station, and associated transit-oriented development, will necessitate a broader analysis of the needs and implications for urban expansion and further engagement with York Region, Metrolinx, commenting agencies, and stakeholders to determine feasibility from a land economics, market and business perspective.

Through the introduction of transit-oriented development, the existing and potential GO Stations should incorporate transit plazas, generous public boulevards, and a combination of street-based and

Category	Objective	Criteria	Measure/Metric	Performance
Strategic/ Economic Planning	Connectivity and Ridership Drivers	How many trips will start and end at this station?	600-1,500+ daily riders projected by 2031 which aligns with other new, approved stations.	<input checked="" type="checkbox"/> Positive
		Does the station connect to other higher order transit modes and have potential to improve network and/or corridor service?	Multiple planned transit routes at this location including Major Mackenzie Viva service. Potential future transit hub at edge of urban boundary. Major Mackenzie Viva corridor.	<input checked="" type="checkbox"/> Positive
		Does the station connect to key destinations?	Improves connection to North Markham FUA, northern part of MRMJSP study area, northern part of Greensborough community and other communities along Major Mackenzie Drive.	<input checked="" type="checkbox"/> Positive
	Travel Time Savings	What are the time savings associated with the new station?	Improved access for new development balances out impacts to Stouffville customers.	<input type="checkbox"/> Neutral
	Potential for Surrounding Area Land Value Uplift	How well situated is the station in relationship to future market demand?	Market demand in Markham is strong – the station will uplift land value in the northern part of the MRMJSP area.	<input checked="" type="checkbox"/> Positive
Financial/ Technical	Affordability	What is the cost to construct the station?	Greenfield station should have relatively lower costs, but the following potential issues could increase costs: <ul style="list-style-type: none"> » Environmental mitigation requirements » Operational solutions » Trackwork depending on platform location 	<input type="checkbox"/> Neutral
	Ease of construction	Can the required facilities be constructed in this location?	» Limited site constraints today will allow for staging of construction required.	<input checked="" type="checkbox"/> Positive

Table 5: Potential GO Station Evaluation Matrix

lay-by passenger pick-up and drop-off (PPUDO) facilities, to minimize the impacts of station-based pedestrian and vehicular traffic. The stations should also incorporate micro-mobility hubs, which support first and last mile commuting needs and promote transit ridership by providing convenient and dedicated access to parking and charging infrastructure associated with a variety of small-scale mobility options including bicycles, e-bikes, and e-scooters in proximity to higher-order transit.

6.4.2 Markham Road

Markham Road is anticipated to transform into a vibrant mixed use main street. The detailed redesign and redevelopment of Markham Road, between Major Mackenzie Drive East to the north and 16th Avenue to the south, would be subject to a Municipal Class Environmental Assessment and/or Streetscape Design Study. Implementation would be achieved through development charges or capital investments, although streetscape improvements within the public boulevard could be realized on a site-specific basis, through the phasing of private development.

Markham Road is envisioned to maintain a minimum 36m right-of-way width, inclusive of the central roadway and adjacent boulevards, between Major Mackenzie Drive East to the north and Edward Jeffreys Avenue to the south. South of Edward Jeffreys Avenue, the right-of-way width is envisioned to taper, in order to establish a desirable and appropriate transition between the remainder of the Secondary Plan Area to the north, and the Markham Village HCD to the south. Within the municipal right-of-way, it is recommended that Markham Road incorporate the following boulevard elements, subject to further study and design through a Municipal

Class Environmental Assessment and/or Streetscape Design Study:

- » Protected cycling facilities;
- » Sidewalks; and,
- » Landscaping and street furnishings.

Within the roadway, it is recommended that Markham Road incorporate the following roadway elements, subject to further study and design through a Municipal Class Environmental Assessment and/or Streetscape Design Study:

- » A central median and turning lane;
- » A maximum of 2 central travel lanes (1 in each direction, subject to further analysis); and,
- » A maximum of 2 curbside travel lanes (1 in each direction, subject to further analysis).

Outside of the municipal right-of-way, it is recommended that developments fronting onto either side of Markham Road incorporate generous setbacks (max. 5.0m) to accommodate flexibility for spill-over uses, while balancing the need to frame the street proportionately with built form to create a desirable and appropriate sense of scale and enclosure. Where applicable, properties fronting onto the west side of Markham Road should utilize the existing easement (max. 10m) for these purposes.

Figures 46 to 47 on the following pages contain conceptual cross-sections of Markham Road as it exists today and how it could be transformed through the changes discussed above.

The cost of transforming and maintaining Markham Road, and considerations for the interim and ultimate design, will be addressed through a subsequent Environmental Assessment process.

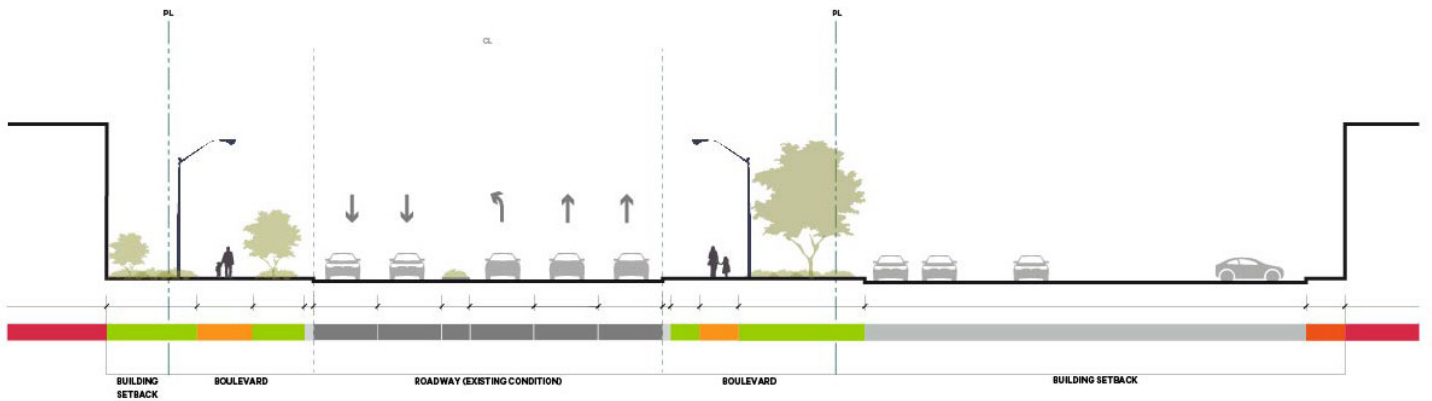


Figure 46: Existing Markham Road Cross-Section Typical Right-of-Way
 (Subject to Revision)

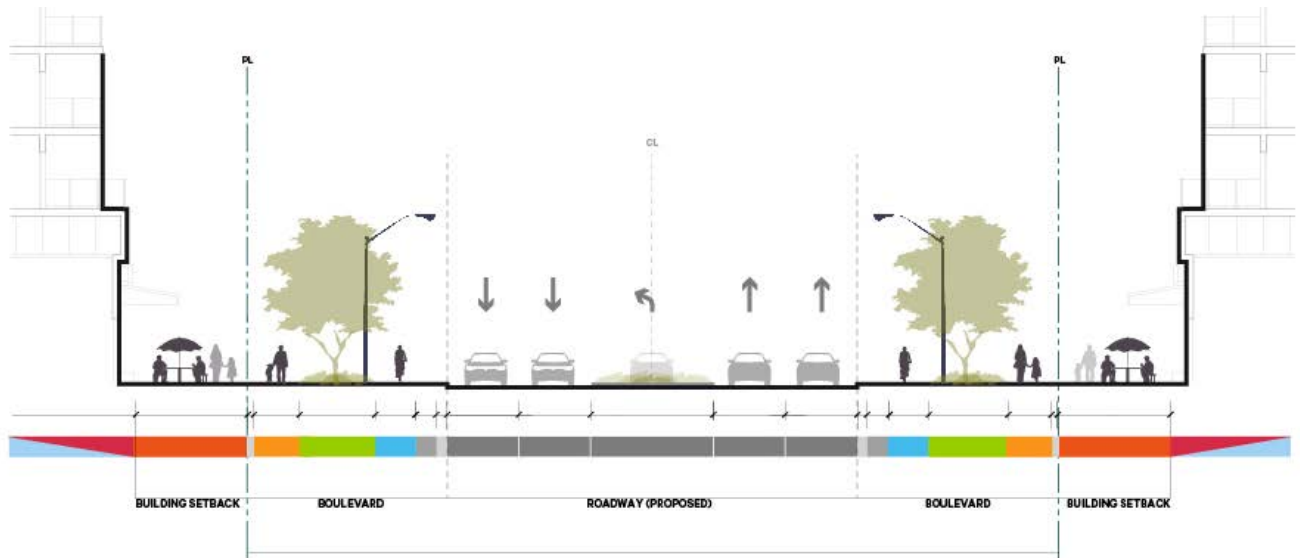


Figure 47: Potential Markham Road Cross-Section Typical Right-of-Way
 (Subject to Revision)

6.4.3 Mount Joy Creek Realignment

In order to address existing flooding concerns in the North Precinct, and to investigate options for bolstering the Greenway System, an assessment was undertaken of five options to reconfigure Mount Joy Creek. An evaluation matrix was developed in partnership with the City of Markham and the TRCA, which included four main considerations: Technical, Natural Environment, Social Environment, and Financial. The five options are described as follows:

- » **Option 1** – Enclosed System along the Proposed and Existing Anderson Avenue Alignment;
- » **Option 2** – Open Channel Adjacent the Proposed and Existing Anderson Avenue Alignment;
- » **Option 3** – Open Channel Along the Westernmost Limit of the Rail Corridor;
- » **Option 4** – Piped System Adjacent the Rail Corridor; and,
- » **Option 5** – Hybrid Enclosed / Open System Adjacent the Rail Corridor.

Overall, Option 5 was determined to perform the best across all categories, and is therefore recommended for inclusion in the draft Demonstration Plan. While all options are designed to convey the Regional Flood event, Option 5 is constructible, conveys the Regional Flood event, and benefits from existing grading conditions along the Rail ROW, which would allow for a deeper channel design when compared to the channel option along Anderson Avenue. This option will generally improve and/or restore terrestrial, fish, and riparian habitats in relation to the piped options, however a break in connectivity is present along the east-west piped portion. Overall this option still provides a net ecological gain as compared to the existing condition. From an urban design and placemaking perspective, the opportunity exists to co-locate a multi-use pathway

to the west of the channel, as the path and the channel would be within the 30 metre rail ROW, and would not be developable in any case. It is noted that impacts on the existing land uses, and an acquisition strategy for the channel lands is yet to be determined. From a cost perspective, this option presents moderate land acquisition impacts in relation to the piped options, and maintenance costs are expected to be lower overall in relation to the piped options. ⁰⁷

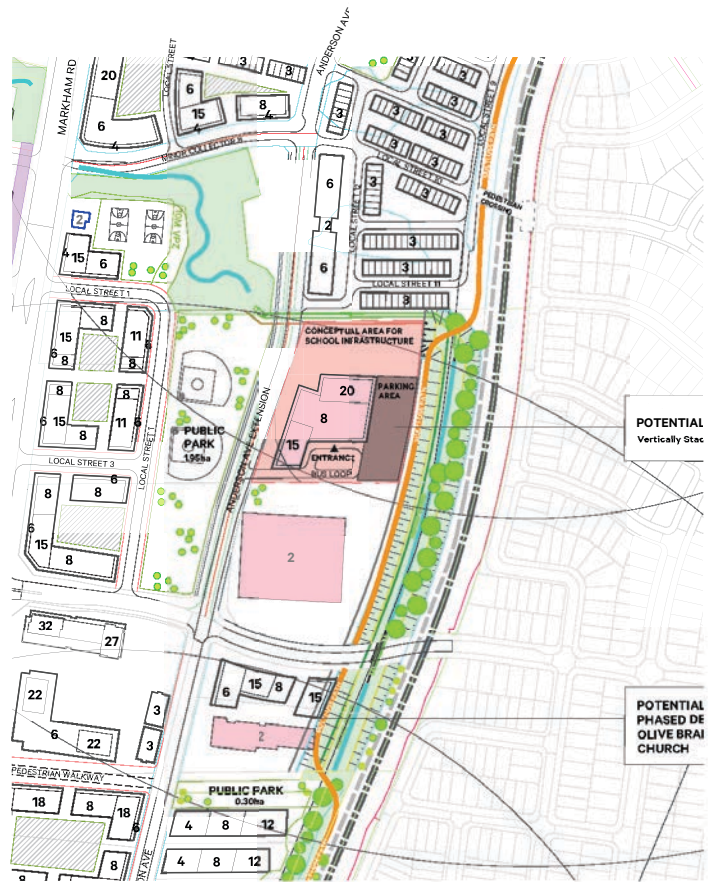


Figure 48: Option 5: Hybrid Enclosed / Open System Adjacent the Rail Corridor

The alternate options are depicted in **Figures 49** through **52** below. Cumulatively these options did not rate as well as the preferred alignment, and each had at least one subcategory which demonstrated a prohibitive element in relation to the preferred option. Refer to **Table 6** for more information pertaining to the evaluation process associated with the Mount Joy Creek Realignment.

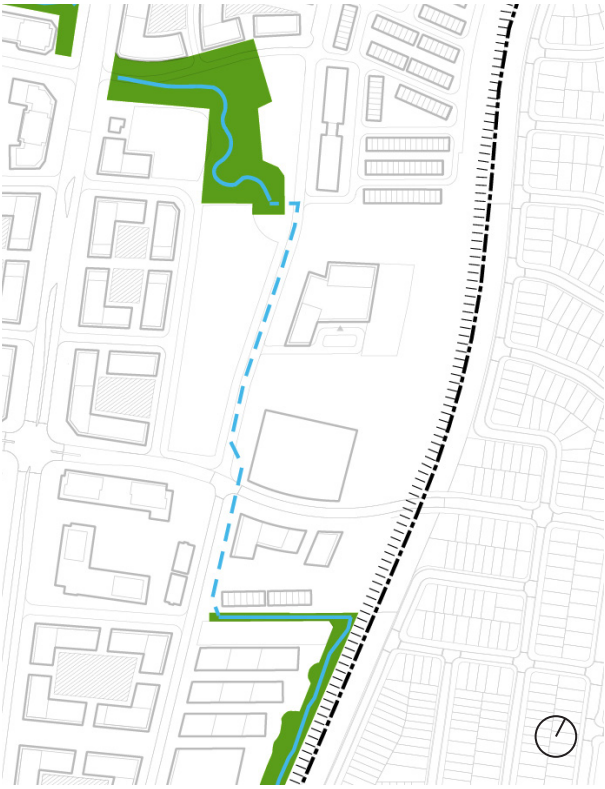


Figure 49: Option 1: Enclosed System along the Proposed and Existing Anderson Avenue Alignment.

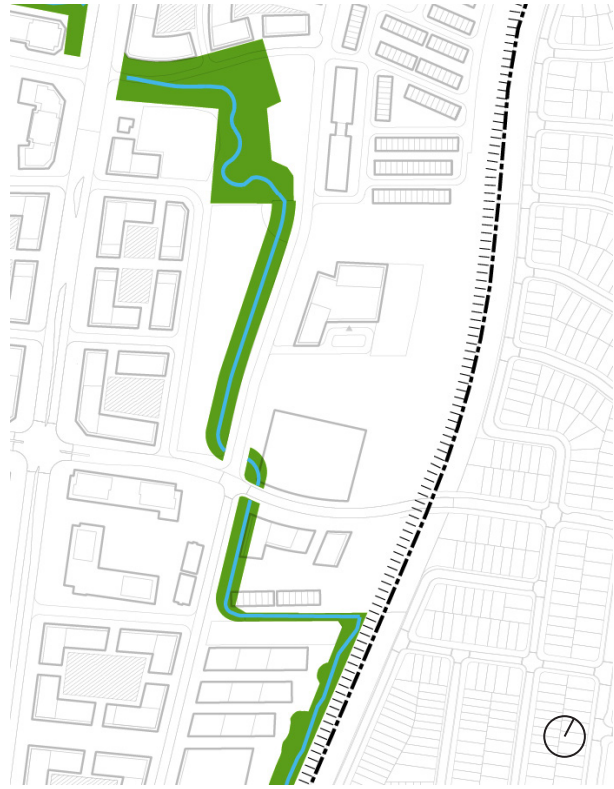


Figure 50: Option 2: Open Channel Adjacent the Proposed and Existing Anderson Avenue Alignment

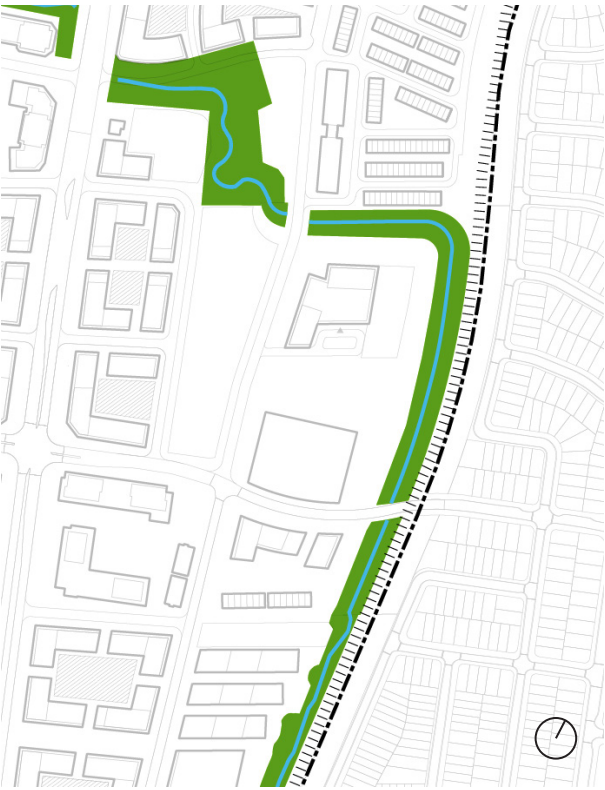


Figure 51: Option 3: Open Channel Along the Proposed and Existing Anderson Avenue Alignment

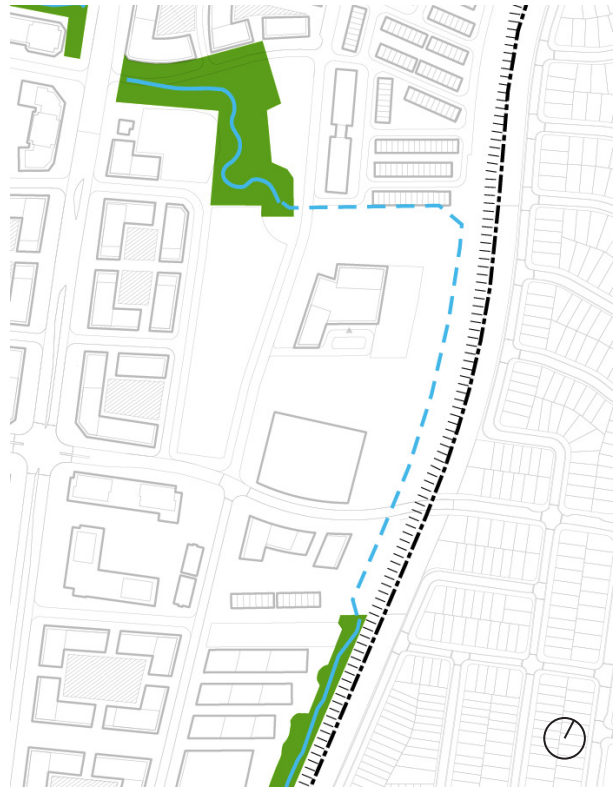




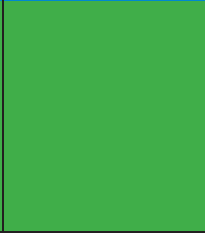
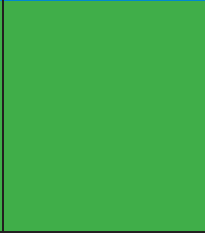
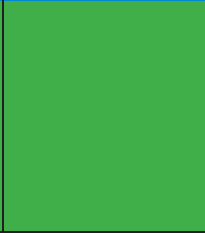
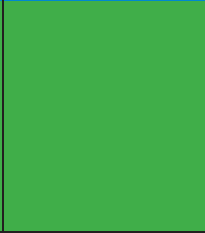

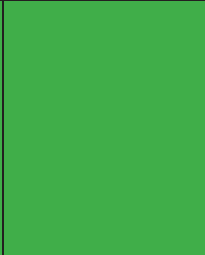
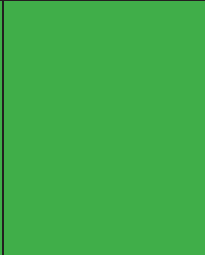
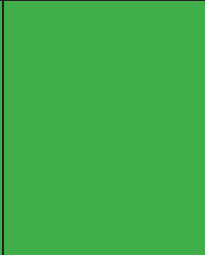
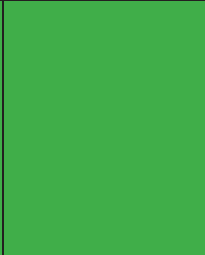
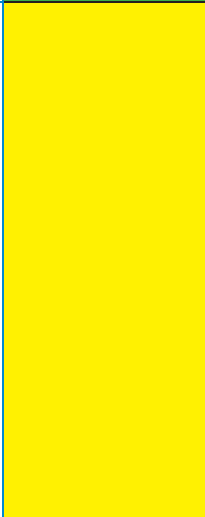

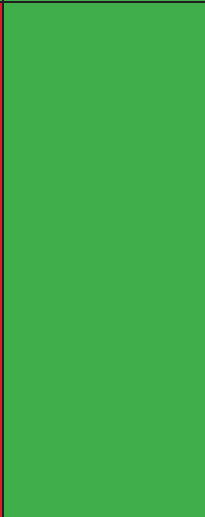
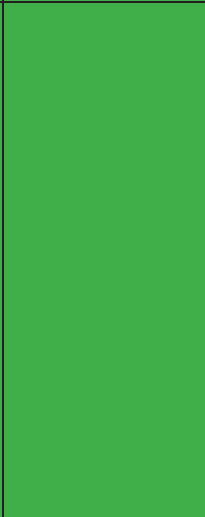
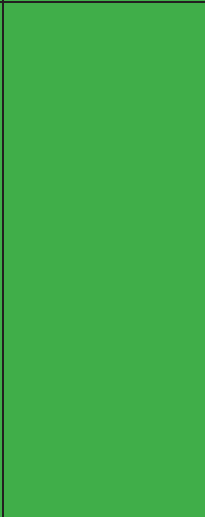


Figure 52: Option 4: Piped System Adjacent the Proposed and Existing Anderson Avenue Alignment

Markham Road - Mount Joy Secondary Plan Study
Evaluation Matrix for Mount Joy Creek Realignment Options

 Strongly Agree/improves existing condition
 Neutral/minimum or no improvement
 Strongly disagree/does not improve existing condition

Criteria (- Key Subcriteria)	Indicators	Option-1	Option-2	Option-3	Option-4	Option-5	Comments
		Enclosed system along the proposed and existing Anderson Avenue alignment	Open channel adjacent the proposed and existing Anderson Avenue alignment	Open channel along the west limit of the Rail Corridor	Piped Section Along Go Rail	Hybrid Enclosed / Open system adjacent the Rail Corridor	
Technical							
» Convey Regional flow & eliminate existing flooding	Can the option be designed to fully convey the Regional flow?						All options have been designed to convey the Regional event either inside the piped system or open channel
» Option can be designed	What are the challenges in terms of designing the option (i.e., grading channel width, embankment along the GO Rail, etc.)?						All options can be designed and will require City of Markham, TRCA, and DFO approvals.
» Option can be constructed	What are the challenges in terms of constructing the option (utilities, access/easement, disruption to traffic, etc.)?						Options along/ adjacent Anderson Avenue are more restricted for implementation based on current development uses and building locations. The rail corridor provides a less encumbered route and also provides less future servicing interference.

Criteria (- Key Subcriteria)		Indicators					Comments
		Option-1	Option-2	Option-3	Option-4	Option-5	
		Enclosed system along the proposed and existing Anderson Avenue alignment	Open channel adjacent the proposed and existing Anderson Avenue alignment	Open channel along the west limit of the Rail Corridor	Piped Section Along Go Rail	Hybrid Enclosed / Open system adjacent the Rail Corridor	
Natural Environmental							
» Impact on Wildlife Habitat	Does the option maintain (i.e., does not change), improve, or degrade significant terrestrial and aquatic wildlife habitat (e.g., impacts such as encroachment, reduction of area, fragmentation/connectivity of features, and on Species at Risk)?	No significant change, system remains enclosed.	Terrestrial and riparian habitat will be restored in relation to piped option	Terrestrial and riparian habitat will be restored in relation to piped option	No significant change, system remains enclosed.	Terrestrial and riparian habitat will be restored in relation to piped option	
» Impact on Fish Habitat	Does the option maintain (i.e., does not change), improve, or degrade significant fish habitat (e.g., impacts such as encroachment, reduction of area, fragmentation/connectivity of features, and on Species at Risk)?	No significant change, system remains enclosed.	Some fish habitat will be restored. Quality of habitat will be limited due to existing poor connectivity upstream and downstream of study area.	Some fish habitat will be restored. Quality of habitat will be limited due to existing poor connectivity upstream and downstream of study area.	No significant change, system remains enclosed.	Some fish habitat will be restored. Quality of habitat will be limited due to existing poor connectivity upstream and downstream of study area.	

Criteria (- Key Subcriteria)	Indicators	Option-1	Option-2	Option-3	Option-4	Option-5	Comments
		Enclosed system along the proposed and existing Anderson Avenue alignment	Open channel adjacent the proposed and existing Anderson Avenue alignment	Open channel along the west limit of the Rail Corridor	Piped Section Along Go Rail	Hybrid Enclosed / Open system adjacent the Rail Corridor	
» Impact on overall terrestrial system	Does the option maintain, improve, or degrade the terrestrial system? Does the option result in missed opportunities to develop ecological connectivity?	No significant change, system remains enclosed. Ecological connectivity not enhanced.	Terrestrial system and connectivity significantly improved	Terrestrial system and connectivity significantly improved	No significant change, system remains enclosed. Ecological connectivity not enhanced.	Terrestrial system and connectivity improved but 190m enclosed section at top of study area would be a break in connectivity	
» Impact on Surface Water / Ground Water Quantity and Quality	What is the degree of interference with water quality, thermal regime or baseflow caused by the option?	No significant change, system remains enclosed.	Water quality will be improved through filtration of surface water through vegetation and soils of watercourse. Understanding thermal impacts would require in depth study.	Water quality will be improved through filtration of surface water through vegetation and soils of watercourse. Understanding thermal impacts would require in depth study.	No significant change, system remains enclosed.	Water quality will be improved through filtration of surface water through vegetation and soils of watercourse. Understanding thermal impacts would require in depth study.	
Social Environment							
» Create resilient communities and infrastructure with consideration given to climate change	Does the option incorporate infrastructure that provides resiliency from the effects of climate change?	Provides less flexibility, greater cost in adjustments.	Provides greater flexibility, less cost in adjustments. Natural environment, wetlands, vegetation mitigate climate change, and support erosion control.	Provides greater flexibility, less cost in adjustments. Natural environment, wetlands, vegetation mitigate climate change, and support erosion control.	Provides less flexibility, greater cost in adjustments.	Provides greater flexibility, less cost in adjustments. Natural environment, wetlands, vegetation mitigate climate change, and support erosion control.	Piped infrastructure provides less flexibility, greater cost in adjustments. Natural environment, wetlands, vegetation mitigate climate change, and support erosion control.

Criteria (- Key Subcriteria)	Indicators	Option-1	Option-2	Option-3	Option-4	Option-5	
		Enclosed system along the proposed and existing Anderson Avenue alignment	Open channel adjacent the proposed and existing Anderson Avenue alignment	Open channel along the west limit of the Rail Corridor	Piped Section Along Go Rail	Hybrid Enclosed / Open system adjacent the Rail Corridor	Comments
» Impact on Land Use	Does the option impact the land use objective for the local corridor to become a complete community that integrates a range of uses (e.g., housing, employment, retail, etc.) at transit supportive densities?	<ul style="list-style-type: none"> » Optimizes the availability of developable land. » Removes flood restrictions from adjacent properties (buildings and surface parking). 	<ul style="list-style-type: none"> » Reduces the availability of developable land. » Impacts the viability of existing adjacent uses (buildings and surface parking). 	<ul style="list-style-type: none"> » Reduces the availability of developable land. » Impacts the viability of existing adjacent uses (surface parking). 	<ul style="list-style-type: none"> » Optimizes the availability of developable land. » Removes flood restrictions from adjacent properties. » Impacts the viability of existing adjacent uses (surface parking). 	<ul style="list-style-type: none"> » Reduces the availability of developable land. » Impacts the viability of existing adjacent uses (surface parking). 	All options remove flood restrictions from adjacent sites due to infrastructure sizing feasibility. Impacts on existing uses are currently unknown as land acquisition strategy is to be determined (ie conveyance vs. expropriation). There are existing uses and buildings in vicinity of proposed channel options which may be impacted, in relation to piped options.
» Impact on community active transportation connectivity	Does the option improve opportunities for active transportation in the community?	Need to provide safe pedestrian and cycling paths along Anderson Avenue	» Bridge is feasible over creek to facilitate pedestrian connection between co-located park and community infrastructure and facilities.	» Opportunity to provide multi-use path along alignment. Bridge is feasible over creek to facilitate continuity of multi-use path.	» Opportunity to provide multi-use path along alignment.	» Opportunity to provide multi-use path along alignment.	

Criteria (- Key Subcriteria)	Indicators	Option-1	Option-2	Option-3	Option-4	Option-5	Comments
» Impact on Urban Design	Does the option maintain, improve or reduce public infrastructure and amenities (e.g., parkland and open space)? Does the option maintain, improve or reduce access and visibility to Mount Joy Creek and maximize the value and benefit of recently completed upstream improvements and investment?	<p>Enclosed system along the proposed and existing Anderson Avenue alignment</p> <ul style="list-style-type: none"> » Maintains continuity of street and block design, as well as building orientation and siting. » Does not E27of existing Greenway System and Natural Heritage Network. » Conceals Mount Joy Creek, which precludes placemaking and co-location opportunities surrounding an opened channel (outside of Hazard lands + buffers). » Optimizes the size, functionalize and programming capability of the public park." 	<p>Open channel adjacent the proposed and existing Anderson Avenue alignment</p> <ul style="list-style-type: none"> » Establishes prominent public realm and open space feature which, combined with public park, serves as a central defining feature of a new mixed use community. » Limits the size, functionalize and programming capability of the public park. » Provides opportunities for active and passive recreation, respite, education, and placemaking. » TRCA has indicated support for siting parks/ open space by channel, (outside of hazard + buffer) to ensure private development is outside of Regulated Area. » Establishes co-location opportunities with park, community facilities and infrastructure. » Maintains integrity of existing Greenway System and Natural Heritage Network. » Establishes an interconnected system of parks and open spaces which, together with the Greenway System and other amenities, contributes to the connectivity of new mixed use communities (OP). 	<p>Open channel along the west limit of the Rail Corridor</p> <ul style="list-style-type: none"> » Establishes prominent public realm and open space feature which, combined with the Multi-Use Pathway, provides opportunities for active and passive recreation, respite, education, and placemaking. » Optimizes the size, functionalize and programming capability of the public park. » TRCA has indicated support for siting parks/ open space by channel, (outside of hazard + buffer) to ensure private development is outside of Regulated Area. » Establishes co-location opportunities with park, community facilities and infrastructure. » Maintains integrity of existing Greenway System and Natural Heritage Network. » Establishes an interconnected system of parks and open spaces which, together with the Greenway System and other amenities, contributes to the connectivity of new mixed use communities (OP). 	<p>Piped Section Along Go Rail</p> <ul style="list-style-type: none"> » Maintains continuity of street and block design, as well as building orientation and siting. » Does not maintain the integrity of existing Greenway System and Natural Heritage Network. » Conceals Mount Joy Creek, which precludes placemaking and co-location opportunities surrounding an opened channel (outside of Hazard lands + buffers). » Optimizes the size, functionalize and programming capability of the public park. 	<p>Hybrid Enclosed / Open system adjacent the Rail Corridor</p> <ul style="list-style-type: none"> » Establishes prominent public realm and open space feature which, combined with the Multi-Use Pathway, provides opportunities for active and passive recreation, respite, education, and placemaking. » Optimizes the size, functionalize and programming capability of the public park. » TRCA has indicated support for siting parks/ open space by channel, (outside of hazard + buffer) to ensure private development is outside of Regulated Area. » Establishes co-location opportunities with park, community facilities and infrastructure. » Maintains integrity of existing Greenway System and Natural Heritage Network. » Establishes an interconnected system of parks and open spaces which, together with the Greenway System and other amenities, contributes to the connectivity of new mixed use communities (OP). 	

Criteria (- Key Subcriteria)	Indicators	Option-1	Option-2	Option-3	Option-4	Option-5	Comments
		Enclosed system along the proposed and existing Anderson Avenue alignment	Open channel adjacent the proposed and existing Anderson Avenue alignment	Open channel along the west limit of the Rail Corridor	Piped Section Along Go Rail	Hybrid Enclosed / Open system adjacent the Rail Corridor	
Financial							
Lifecycle costs (replacement & O&M)	What is the estimated cost to maintain and replace components of each option (e.g., pipes, bridges, etc.)?						
Cost of Construction	What is the estimated total cost for each option?						
Cost of Land Acquisition	What is the estimated total cost for each option?						

Notes:

1. Use assumption to evaluate some criteria (e.g., land cost), and ensure the same assumption is used for all options to ensure consistency in the evaluation.
2. List all of the assumptions used in the evaluation for review.

Table 6: Markham Road - Mount Joy Secondary Plan Study Evaluation Matrix for Mount Joy Creek Realignment Options

7.0 Key Policy Guidance and Recommendations

Building upon the Vision, Guiding Principles, and draft Demonstration Plan, the following section establishes preliminary policy guidance and recommendations, pertaining to land use, urban design, transportation, municipal servicing, and implementation, to inform the preparation of the Markham Road – Mount Joy Secondary Plan.

7.1 Land Use and Urban Design

The following section summarizes key land use and urban design policy guidance, and preliminary policy recommendations, to inform the preparation of the Markham Road – Mount Joy Secondary Plan. Specifically, direction is provided with respect to sustainability and resiliency, natural heritage, land use and built form, precincts, community infrastructure and facilities, cultural heritage, public realm, market and real estate, and affordable housing.

7.1.1 Sustainability and Resiliency

- » It is recommended that the Secondary Plan be planned to:
 - » Incorporate strategies to evaluate, prepare, mitigate and adapt to climate change impacts, including consideration of public health and safety, infrastructure and food security, and emergency services;
 - » Achieve the goals and objectives of the City of Markham Community Energy Plan; and
 - » Apply a sustainability and resiliency-based lens to the enforcement of relevant policies pertaining to natural heritage, land use and built form, community infrastructure and facilities, cultural heritage, public realm, market and real estate, and affordable housing.

7.1.2 Natural Heritage

Greenway and Mount Joy Creek System

- » It is recommended that the Secondary Plan be planned to:
 - » Minimize risk to human health, safety and property associated with Flooding and Erosion;
 - » Incorporate appropriate buffers from hazard lands and Natural Heritage Features;
 - » Implement the recommended alignment (Option 5) to reconfigure Mount Joy Creek to remove the flood hazard;
 - » Protect and enhance a connected Greenway System, including the partial daylighting of Mount Joy Creek;
 - » Protect and improve existing aquatic and terrestrial habitat, and encourage the establishment of new habitat, where possible; and,
 - » Require a landowners group and agreements to share the cost of realigning Mount Joy Creek.



Figure 53: Ecological Flood Control, Houtan Park, Shanghai

Woodlands, Wetlands and Waterbodies

- » It is recommended that the Secondary Plan be planned to:
 - » Reinforce the role of woodlands and wetlands as a significant natural heritage resource for residents of, and visitors to, the Secondary Plan Area.

7.1.3 Land Use and Built Form

Land Use

- » It is recommended that the Secondary Plan be planned to:
 - » Ensure compatibility with the character and pattern of adjacent and surrounding development within the Secondary Plan Area;
 - » Contribute to a complete community with a full range of housing, including affordable and rental housing, employment, services and amenities to meet the daily needs of people of all ages, abilities and incomes;
 - » Establish a target of 25% affordable housing across the Secondary Plan Area in accordance with Policy 3.5.6 in the York Regional Official Plan;
 - » Encourage quick implementation of inclusionary zoning in MTSAs to require provisions for affordable housing;
 - » Plan for seniors and accessibility;
 - » Achieve an appropriate mix of commercial, employment, residential and institutional uses;
 - » Support the existing Mount Joy GO Station site and potential Major Mackenzie GO Station site as transit trip origins and destinations;
 - » Implement integrated, transit-oriented communities which support redevelopment through the establishment of partnerships between landowners, the City of Markham, and Metrolinx, as part of the Metrolinx Market Driven Transit-Oriented Community Strategy;
- » Encourage a high quality of urban design;
- » Promote the creation of 15 minute neighbourhoods, through the strategic location, integration and disposition of residential uses, neighbourhood and convenience-based commercial uses, employment uses, parks and open spaces, and community infrastructure and facilities;
- » Protect and incentivize for a broader range of employment uses in the Mount Joy Business Park;
- » Size retail uses appropriately in the Secondary Plan Area to support the needs of local residents;
- » Ensure that employment uses within mixed use areas:
 - » Support retail and office commercial employment-generating activities; and,
 - » Utilize upper storeys as flexible space, allowing for a range of office employment to support potential office development without specifically designating or preserving upper storey spaces solely for office uses.
- » Prioritize employment uses at-grade, with a continuous rhythm of active frontages designed with flexibility in mind to accommodate for changing needs, along either side of Anderson Avenue, between the pedestrian walkway and public park to the north, and Bur Oak Avenue to the south.

- » Prioritize a fine-grain of retail uses at-grade, with active frontages designed with flexibility in mind to accommodate for changing needs, in the following locations:
 - » Along either side of Markham Road, between properties fronting onto the north side of Castlemore Avenue to the north and 16th Avenue to the south;
 - » Along either side of Minor Collector Street 6, between Bur Oak Avenue to the north, and Local Street 6 to the south; and,
 - » Along either side of the Pedestrian Mews, between Markham Road to the northwest and the Mount Joy GO Station Site to the southeast.



Figure 54: Community and Institutional Uses



Figure 55: Height Transitions Achieved through stepbacks

Height, Massing and Density

- » It is recommended that the Secondary Plan be planned to:
 - » Achieve a minimum of 200 residents and jobs combined per hectare within the Mount Joy Major Transit Station Area;
 - » Achieve a targeted built-out of ~13,500 residents and ~14,500 jobs (Subject to Revisions);
 - » Achieve building heights that fit within the emerging context and that allow for new development to contribute to the overall population and employment targets;
 - » Establish appropriate height and density peaks and transitions throughout the Secondary Plan Area, including:
 - » primary height and density peaks surrounding the existing Mount Joy and potential Major Mackenzie GO Station Areas;

- » secondary height and density peaks along the length of Markham Road, between Major Mackenzie Drive East to the north and Minor Collector 7 Street to the south; and,
- » downward transitions between the primary and secondary height peaks to adjacent and surrounding areas of the North, Central and South Precincts, as well as the Greensborough Neighbourhood to the east, Wismer Commons Neighbourhood to the west, and Markham Village to the south.

- » Incorporate podiums, which are massed to define street edges, creating a consistent street wall, providing an appropriate presence at street level, and promoting the creation of private courtyards in the centre of development blocks;
- » Incorporate upper-storey stepbacks between podiums and towers;
- » Maintain maximum tower floorplates of 800m²;
- » Maintain minimum tower separation distances of 30 to 35m, offsetting the location of towers, where possible;
- » Maintain significant views and vistas, and reinforce the prominence of visual termini;
- » Ensure access to sky views and from the minimal shadow impacts on public and private streets, Public Parks, Open Spaces, Community Facilities, and adjacent neighbourhoods;
- » Ensure adequate buffers are provided between the Stouffville GO Rail Corridor, and adjacent residential and sensitive non-residential uses, such as commercial and office uses; and,
- » Consider implementing urban design guidelines for the Secondary Plan Area.

7.1.4 Precincts

General

- » It is recommended that the Secondary Plan be planned to:
 - » Incorporate three Precincts associated with the North, Central and South Neighbourhoods, and the Mount Joy GO Station Mixed Use Node overlay;
 - » Ensure that each Precinct responds to its unique context, built form considerations and land use mix, while maintaining a sense of cohesion and shared identity across the Secondary Plan Area; and,
 - » Contribute toward the establishment of a unique sense of place.

North Precinct

- » It is recommended that the Secondary Plan be planned to:
 - » Achieve maximum interim building heights of 20 storeys inside the potential Major Mackenzie GO Station Area, to be increased to 40 storeys, following approval of the GO Station;
 - » Provide a downward transition in height and density to:
 - » Greensborough neighbourhood to the east;
 - » Wismer Commons neighbourhood to the west; and,
 - » Lands containing the Public Park and Community Infrastructure and Facilities to the south.

Potential Major Mackenzie GO Station Area

- » It is recommended that the Major Mackenzie GO Station Area be planned to:
 - » Accommodate for the potential to locate the station platform along either the north or south sides of Major Mackenzie Drive East, as well as across the width of the right-of-way;
 - » Include north / south connections to the potential Major Mackenzie GO Station and associated transit plaza and multi-use pathway, under Major Mackenzie Drive East. Development on the south side of Major Mackenzie Drive East should be planned to support transit-oriented densities, infrastructure investments, and ridership;
 - » Promote three-dimensional placemaking, with a pedestrian realm occupying multiple levels above grade, establishing layers of program and activity within the Station Site;
 - » Incorporate a range of compatible neighbourhood and convenience-based commercial uses at-grade. These could include such uses as a grocery store, child care facility, postal service, medical clinic, dental clinic and pharmacy;
 - » Incorporate an appropriate range of residential and non-residential uses on upper storeys;
 - » Incorporate multiple tiers of occupancy, with a variety of tenures inclusive of age, ability and income;
 - » Be subject to landowner agreements, which facilitate private-sector funding associated with the design and construction of the Major Mackenzie GO Station and associated infrastructure;



Figure 56: North Precinct



Figure 57: Garrison Point Bridge, Toronto

- » Implement an integrated, transit-oriented community which support redevelopment through the establishment of partnerships between landowners, the City of Markham, and Metrolinx, as part of the Metrolinx Market Driven Transit-Oriented Community Strategy; and,
- » Consolidate parking in below-grade structures.

Central Precinct

- » It is recommended that the Central Precinct be planned to:
 - » Concentrate the greatest heights and densities within the GO Station Mixed-Use Node, on the lands bounded by:
 - » Minor Collector Street 4 and Local Street 5 to the north;
 - » Stouffville GO Rail Corridor to the east;
 - » Bur Oak Avenue to the south; and,
 - » Minor Collector Street 2 to the west.
 - » Provide a downward transition in height and density to:
 - » The North Precinct to the north, with particular emphasis given to the lands containing the Public Park, and Community Infrastructure and Facilities to the north;
 - » Greensborough neighbourhood to the east;
 - » Portions of the South Precinct, which fall outside of the GO Station Mixed-Use Node, to the south; and,
 - » Wismer Commons neighbourhood to the west.
 - » Achieve minimum building heights of 3 storeys;
 - » Achieve maximum building heights of 45 storeys inside of the GO Station Mixed-Use Node; and,
 - » Achieve maximum building heights of 30 storeys outside of the GO Station Mixed-Use Node.

Mixed Use Employment Hub

- » It is recommended that the Mixed Use Employment Hub be planned to:
 - » Establish an appropriate mix of active industrial and service commercial uses at-grade;
 - » Require at-grade building designs that accommodate appropriate industrial height ceilings, commercial loading docks and potential mezzanine space to support active productive activities on the ground floor;
 - » Encourage buildings which are specific by design, with the flexibility to accommodate for changes and adaptations in use over time;
 - » Incorporate incubator spaces, live-work spaces, small office and studio spaces, a variety of communal and co-working spaces and a range of small, moderate and large maker spaces to promote entrepreneurship, innovation and opportunity on upper levels;
 - » Provide for a range of clean and technology-based light industrial, manufacturing and distribution facilities which can co-exist harmoniously alongside commercial, office and residential uses on upper storeys of vertically-integrated mixed-use buildings, as well as in adjacent and separate buildings;
 - » Incorporate enhanced public realm treatments along the length of Anderson Avenue;
 - » Provide direct connections to the Greenway System, and associated multi-use pathway, located along the length of the Stouffville GO Rail Corridor; and,
 - » Prohibit standalone residential uses and residential uses at-grade.



Figure 58: Central Precinct



Figure 59: Signal Creative Community, Toronto

GO Station Mixed Use Node Overlay

- » It is recommended that the GO Station Mixed Use Node Overlay be planned to:
 - » Concentrate the greatest heights and densities on top of, and adjacent to, the GO Station site;
 - » Incorporate a Public Gateway Plaza at the southeast corner of Markham Road and Bur Oak Avenue, and a diagonal Pedestrian Mews extending from the Public Gateway Plaza to a Public Park and the Station Site and adjacent Transit Plaza;
 - » Establish a continuous mid-rise street wall condition along the length of the Pedestrian Mews, with taller building elements set back to create an appropriate and desirable scale of development;
 - » Ensure all buildings fronting onto the Pedestrian Mews incorporate pedestrian weather-protection elements at-grade, such as awnings or canopies;
 - » Incorporate enhanced public realm treatments along the length of Markham Road, Bur Oak Avenue, Minor Collector Street 6, and the Pedestrian Mews;
 - » Provide direct connections to the Transit Plaza, and associated multi-use pathway, located along the length of the Stouffville GO Rail Corridor;
 - » Promote three-dimensional placemaking, with a pedestrian realm occupying multiple levels above grade, establishing layers of program and activity within the Station Site;
 - » Incorporate a range of compatible neighbourhood and convenience-based commercial uses at-grade. These could include such uses as a grocery store, child care facility, postal service, medical clinic, dental clinic and pharmacy;
 - » Incorporate an appropriate range of residential and non-residential uses on upper storeys;

- » Incorporate multiple tiers of occupancy, with a variety of tenures inclusive of age, ability and income;
- » Implement an integrated, transit-oriented community which supports redevelopment through the establishment of partnerships between landowners, the City of Markham, and Metrolinx, as part of the Metrolinx Market Driven Transit-Oriented Community Strategy; and,
- » Consolidate parking in below-grade structures.

South Precinct

- » It is recommended that the South Precinct be planned to:
 - » Concentrate the greatest heights and densities within the Mount Joy GO Station Mixed-Use Node, on the lands bounded by:
 - » Bur Oak Avenue to the north;
 - » Stouffville GO Rail Corridor to the east;
 - » Local Street 6 to the south; and,
 - » Markham Road to the west.
 - » Provide a downward transition in height and density to:
 - » Greensborough neighbourhood to the east;
 - » Wismer Commons neighbourhood to the west; and,
 - » Markham Village HCD to the south.
 - » Achieve minimum building heights of 3 storeys;
 - » Achieve maximum building heights of 45 storeys inside of the GO Station Mixed-Use Node;
 - » Achieve maximum building heights of 30 storeys outside of the GO Station Mixed-Use Node;



Figure 60: South Precinct



Figure 61: Cross Roads Regional Shopping District, Vancouver

- » Incorporate a fine grain of development along the length of Markham Road;
- » Incorporate neighbourhood and convenience based commercial uses at-grade along Markham Road;
- » Explore opportunities to expand community infrastructure and facilities and programs at, and adjacent to, the Markham Museum Site and Mount Joy Community Centre;
- » Enhance connectivity and access to the Markham Museum site and Mount Joy Park and Community Centre;
- » Serve as a northward extension of the Markham Village main street; and,
- » Explore options to integrate the GO Station parking lot east of the railway corridor.



Figure 64: Park Lawn GO Station Redevelopment, Toronto

7.1.5 Community Infrastructure & Facilities

General

- » It is recommended that the Secondary Plan be planned to:
 - » Accommodate a variety of social, educational, cultural and recreational amenity spaces, and a variety of services, courses, programs and activities.

School

- » It is recommended that the Secondary Plan be planned to:
 - » Establish a 3.5 to 4.0 acre School site in the North Precinct, integrated within the podium of a mixed use development, to serve the needs of existing and future residents; and,
 - » Co-locate the School with a Public Park, and adjacent combined piped and open channel associated with the Greenway and Mount Joy Creek System.

7.1.6 Cultural Heritage

Cultural Heritage

- » It is recommended that the Secondary Plan be planned to:
 - » Conserve, respect and, enhance cultural heritage features, elements and landscapes where they exist within and adjacent to the Secondary Plan Area;
 - » Explore alternatives, including but not limited to the partial retention of cultural heritage resources, to retain as much of the cultural heritage resource in situ as possible, in circumstances where it is not feasible to maintain and conserve the cultural heritage resource in its entirety;
 - » Explore relocation of cultural heritage resources as a last resort option, only where all other alternatives have been deemed undesirable or not feasible;
 - » Ensure visual access to Designated Heritage Properties from adjacent Streets, Parks and Open Spaces;
 - » Integrate cultural heritage features within future development, where appropriate; and,
 - » Enhance cultural identity and opportunities for expression and interpretive learning through public art, informational plaques, and other initiatives.

7.1.7 Public Realm

Street Network

- » It is recommended that the Secondary Plan be planned to:
 - » Introduce a fine grain street network, inclusive of new Minor Collector Streets and Local Streets which are safe, comfortable and accessible, and which promote walking and cycling;
 - » Provide logical and direct connections between adjacent blocks, through a combination of signalized and non-signalized intersections, and on-demand mid-block pedestrian crossings;
 - » Introduce a network of mid-block pedestrian connections and crossings, which facilitate; and,
 - » Establish a seamless interface between ground floor uses and the adjacent boulevard, in order to enliven and animate the Secondary Plan Area, and promote casual surveillance.

Markham Road

- » It is recommended that Markham Road be planned to:
 - » Create a vibrant and animated main street condition, through the introduction of transit infrastructure, and the rebalancing of space dedicated to roadway and public realm elements;
 - » Establish a continuous mid-rise street wall condition, with taller building elements set back to create an appropriate and desirable scale of development;
 - » Introduce a unique streetscape and public realm design standard for Markham Road;
 - » Ensure all buildings incorporate pedestrian weather-protection elements at-grade, such as awnings or canopies;

- » Incorporate generous front yard setbacks, on either side of Markham Road, to facilitate the provision of a flexible spill-out zone associated with ground floor commercial uses, to be utilized as an extension of interior commercial space for the purposes of outdoor seating, presentation or sales space, which reads as an extension of the public sidewalk;
- » Within the easement, utilize the space on the west side of Markham Road, to facilitate the provision of an expanded flexible spill-out zone associated with ground-floor commercial space for the purposes of outdoor seating, presentation or sales space, which reads as an extension of the public sidewalk;
- » Provide for generous boulevards on either side of Markham Road, between the roadway and adjacent flexible spill-out zones, inclusive of generous landscaping, sidewalks, and protected cycling facilities; and,

Increase the number of signalized intersections, and provide signalized crossings at regular intervals, between Major Mackenzie Drive East to the north, and Edward Jeffreys Avenue to the south.

Green Streets and Pedestrian Connections

- » It is recommended that the Secondary Plan be planned to:
 - » Establish an inter-connected network of Green Streets and Pedestrian Connections, which include generous boulevard widths, wide sidewalks and continuous tree planting and landscape zones;
 - » Utilize Green Streets and Pedestrian Connections as a means of establishing linkages between Parks, Open Spaces, major streets, the Mount Joy GO Station Area, and the potential Major Mackenzie GO Station Area through a combination of on-street and off-street pathways, as well as pedestrian bridges; and,
 - » Subject to agreement from Metrolinx, incorporate two pedestrian bridges, including:
 - » One pedestrian bridge, situated at the eastern termination of Local Street 10, in the North Precinct; and,
 - » One pedestrian bridge, situated at the eastern termination of Minor Collector Road 7, in the South Precinct.

Gateways and Placemaking Opportunities

- » Gateways are situated at the intersection of Major Mackenzie Drive East and Markham Road, as well as the intersection of 16th Avenue and Markham Road;
- » Placemaking opportunities are situated throughout the Secondary Plan Area, and are characterized by major intersection and landmark features; and,
- » It is recommended that the Secondary Plan be planned to:
 - » Ensure that buildings and public realm features at Gateway locations make a significant architectural contribution to the character and identity of the Secondary Plan Area, while respecting the immediate context and creating a distinct built form, appearance or landmark feature;

- » Ensure that buildings and public realm features at Gateway locations respond to their prominent location, framing and orienting views toward adjacent streets, Public Parks and Open Spaces; and,
- » Promote the creation of micro-hubs of activity at Gateway and Placemaking opportunity locations, inclusive of an appropriate mix of uses, public art, wayfinding elements, open spaces, and other placemaking features.



Figure 65: Active Frontage, Richmond, Greater Vancouver

Parks, Open Spaces and Multi-Use Pathway

- » It is recommended that the Secondary Plan be planned to:
 - » Establish a 1.5 to 2.0 hectare public park in the North Precinct, situated on the west side of Anderson Avenue, between the Greenway and Mount Joy Creek to the north, Local Street 1 and Markham Road to the west, and Castlemore Avenue to the south. Integrate the Public park with the adjacent naturalized and piped watercourse associated with Mount Joy Creek. Provide a dedicated pedestrian crossing, across Anderson Avenue, between the Public Park and Potential School Site;

- » Establish a 0.5 to 1.0 hectare public park in the North Precinct, situated on the west side of Anderson Avenue, between Local Street 13 to the north and Minor Collector Street 8 to the south;
- » Establish a 0.5 to 1.0 hectare public park in the North Precinct, situated on the east side of Anderson Avenue, between Local Street 9 and Local Street 10;
- » Establish a 3.5 to 3.0 hectare Public Park in the Central Precinct, situated on the west side of Minor Collector Street 2, between Castlemore Avenue to the north and Local Street 5 to the south;
- » Establish a 0.5 to 1.0 hectare Public Park in the South Precinct, situated at the southeastern termination of the Pedestrian Mews, between Minor Collector Street 6 to the east and Local Street 6 to the south;
- » Establish a multi-use pathway, situated along the west side of the Stouffville GO Rail Corridor, between Major Mackenzie Drive East to 16th Avenue. Design the multi-use pathway to serve a range of users during all seasons, including but not limited to pedestrians, cyclists, and mobility devices;
- » Incorporate a Public Parks and Open Space network, comprised primarily of Community Parks, which provides for a variety of active and passive recreational uses, which are designed to optimize use of space, while meeting the needs of both existing and future residents, workers and visitors;
- » Incorporate a system of Privately-Owned Publicly Accessible Spaces (POPS), in the form of private courtyards, pocket parks, plazas, and flexible spaces to support the network of Public Parks and Open Spaces within the Secondary Plan Area, so as to provide an additional layer of accessible open space that is designed to a high quality and integrated with the public realm;
- » Encourage the provision of POPS where on-site parkland dedication is not feasible;
- » Incorporate protected cycling facilities within the Markham Road boulevards, between Major Mackenzie Drive East and 16th Avenue;
- » Establish direct and unobstructed active transportation connections between existing and planned protected cycling facilities and the multi-use pathway, where appropriate;
- » Contribute to a net increase in the City of Markham's tree canopy to support achieving the 30% in the City's Trees for Tomorrow Program; and,
- » Apply Crime Prevention Through Environmental Design (CPTED) principles, including natural surveillance, natural access control, territorial reinforcement, maintenance and target hardening into the design of all Parks, Open spaces and Multi-Use Pathways to promote safety and casual surveillance.



Figure 66: Bio-Retention Gardens, Linear Park, San Francisco

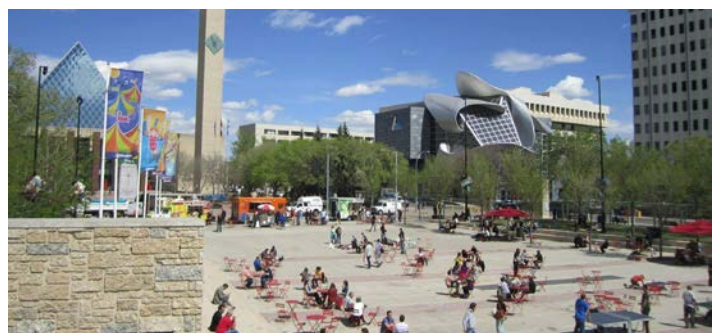


Figure 67: Flexible Programs, Churchill Square, Edmonton

7.1.8 Affordable and Rental Housing

- » Support the City of Markham’s Draft Affordable and Rental Housing Strategy, by encouraging a range of housing and tenure types within the Secondary Plan Area, including:
 - » A range of unit types, including apartments, townhouses and other housing forms;
 - » A diversity of unit sizes, including accommodations for singles, couples, families, and other housing arrangements;
 - » Encourage inclusion of 25% affordable housing across the Secondary Plan Area in accordance with Policy 3.5.6 in the York Regional Official Plan;
 - » Encourage the provision of purpose-built rental housing, including family sized units (2+ bedrooms);
- » Require affordable housing within the MTSA area in accordance with Regulation 232/18 of the Planning Act, following the adoption of Inclusionary Zoning policies within the YROP and MOP; and
- » Encourage quick implementation of inclusionary zoning in MTSA’s to require provisions for affordable housing.

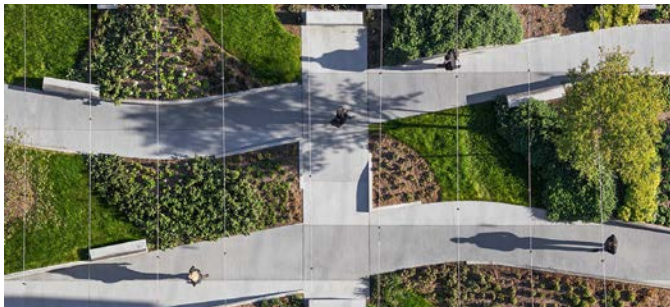


Figure 68: Multi-Use Pathways, North Point, Cambridge



Figure 69: Publicly Accessible Pocket Park, Migill Parkette, Toronto

7.2 Transportation

The following section summarizes key transportation policy guidance, and preliminary policy recommendations, to inform the preparation of the Markham Road – Mount Joy Secondary Plan. Specifically, direction is provided with respect to the transportation network, mobility services, curbside management, the potential GO Station at Major Mackenzie Drive East, and the multi-modal transportation demand forecasting framework and assumptions.

7.2.1 Transportation Network, Mobility Services and Curbside Management

Transportation Network

- » It is recommended that the Secondary Plan be planned to:
 - » Provide alternative north-south routes to Markham Road, and expand the transportation network along either side of Markham Road;
 - » Design Local Streets to maintain lower travel speeds;
 - » Incorporate an active transportation network that seamlessly connects destinations and communities, including:

- » The Mount Joy and potential Major Mackenzie GO Station Sites;
 - » The Greenway System;
 - » Parks and Open Spaces; and
 - » The future School site.
- » Incorporate an active transportation network that seamlessly connects the Secondary Plan Area to:
- » Future potential rail systems along Little Rouge Creek Valley Corridor to the north;
 - » Greensborough neighbourhood to the east;
 - » Markham Village HCD to the south; and
 - » Wismer Commons neighbourhood to the west.
- » Promote the separation of transportation modes to enhance safety and accessibility; and,
- » Incorporate transit plazas, generous public boulevards, and a combination of street-based and lay-by passenger pick-up and drop-off (PPUDO) facilities, to distribute and minimize the impacts of station-based pedestrian and vehicular traffic;
- » Incorporate micro-mobility hubs, which provide convenient and dedicated access to parking and charging infrastructure associated with a variety of small-scale mobility options including bicycles, e-bikes, and e-scooters in proximity to higher-order transit; and,
- » Incorporate Vision Zero principles, which apply an ethical, responsible, and safety-based lens to the design and implementation of streetscapes and the public realm, in order to prevent collisions and minimize the risk of resulting injuries and death to vulnerable users, including pedestrians and cyclists.



Figure 70: Photovoltaic Panel Array

Parking

- » It is recommended that the Secondary Plan be planned to:
- » Provide electric vehicle charging stations in parking lots;
 - » Integrate progressive parking standards which accommodate car-sharing and compact vehicle formats; and,
 - » Provide underground parking facilities which are designed for planned obsolescence, adaptive re-use and repurposing.

7.2.2 Potential GO Station at Major Mackenzie Drive East

- » It is recommended that:
- » An Initial Business Case, per Metrolinx's Market Drive Strategy, be initiated to support a station in this location;
 - » The City seek partners to develop the new station;
 - » Support and require transit supportive densities on the south side of Major Mackenzie Drive in the Secondary Plan Area;

- » If a new station is approved by Metrolinx, that it be identified as an additional MTSA by York Region for inclusion in the YROP and MOP; and,
- » Until such a time that the GO Station at Major Mackenzie Drive East is approved and the associated MTSA boundaries are established, density be focused within the Mount Joy GO Station MTSA.



Figure 71: EV Charging Station, Arlington

7.3 Municipal Servicing

The following section summarizes key municipal servicing policy guidance, and preliminary policy recommendations, to inform the preparation of the Markham Road – Mount Joy Secondary Plan. Specifically, direction is provided with respect to water and wastewater, source water protection, and stormwater management.

7.3.1 Water and Wastewater

- » It is recommended that the Secondary Plan be planned to:
- » Ensure all servicing and utility infrastructure complies with City of Markham, York Region and TRCA standards, and that adequate servicing is available to support the intensification that is envisioned within the Secondary Plan Area.

7.3.2 Stormwater Management

- » It is recommended that the Secondary Plan be planned to:
 - » Protect water quality and aquatic wildlife;
 - » Provide water quantity, flooding and erosion controls for key hydrologic features; and,
 - » Utilize Low Impact Development Infrastructure to infiltrate stormwater in-situ, and reduce load to existing Stormwater Management Infrastructure.

7.4 Phasing and Implementation

The following section summarizes key phasing and implementation policy guidance, and preliminary policy recommendations, to inform the preparation of the Markham Road – Mount Joy Secondary Plan. Specifically, direction is provided with respect to the coordination of development, existing lawful uses, conveyance of lands, landowner agreements, development phasing plans, zoning, future studies, and other considerations.

7.4.1 Coordination of Development

- » It is recommended that:
 - » Development be coordinated to ensure that growth is supported by the appropriate level of infrastructure, services, and facilities;
 - » Each development block be planned comprehensively. In some cases, this may require coordination between multiple landowners; and,
 - » Applicants be required to demonstrate, to the satisfaction of the City, that development achieves the intended land use, built form, density and other provisions of the Secondary Plan.

7.4.2 Existing Lawful Uses

- » It is recommended that:
 - » Land uses, buildings and structures which legally exist prior to the adoption of the Secondary Plan, be permitted to continue. However, they are ultimately intended to be redeveloped in conformity with the Secondary Plan;
 - » Enlargements, extensions, additions and alterations of existing lawful buildings and structures be permitted without amendment to the Secondary Plan; and,
 - » Replacement and repair of existing lawful buildings and structures be permitted without amendment to the Secondary Plan.
-

7.4.3 Conveyance of Lands

- » It is recommended that:
 - » As a condition of development approval, where lands have been identified as being required for public benefit, or are necessary for the securement of infrastructure, community facilities or parkland, such lands be dedicated through conveyance to the City of Markham.
-

7.4.4 Landowner Agreements

- » It is recommended that:
 - » As a condition of development approval, applicants enter into one or more Landowner Agreements to address cost sharing issues associated with the provision of new infrastructure and services (e.g., reconfiguration of Mount Joy Creek, parks, school site, etc.).

7.4.5 Development Phasing Plans

- » It is recommended that:
 - » As a condition of development approval for multi-phased development, applicants be required to submit a development phasing plan. The Development Phasing Plan is recommended to establish the timing and delivery of infrastructure including but not limited to sanitary and storm sewer pipes, watermain, roads as well as community services such as parks, schools and trails for each phase of development to be implemented through development approvals; and,
 - » The development phasing plan be prepared by the applicant, in consultation with the City of Markham and York Region, in a manner consistent with the required supporting studies, and applicable Provincial, Regional, City and TRCA policies.

7.4.6 Implementation Tools

Zoning

- » It is recommended that:
 - » To implement the Secondary Plan, City Council enact amendments to the City of Markham's Zoning By-law. In the process of doing so, repeal existing and in force Zoning By-laws, establishing a consolidated Zoning By-law for the Secondary Plan Area;
 - » Inclusionary Zoning be implemented within the Mount Joy MTSA to require the provision of affordable housing in accordance with Regulation 232/18 of the Planning Act;
 - » A Holding Provision be implemented on the lands identified for the future School site, as well as lands south of Major Mackenzie Drive East, subject to further study of the feasibility of the potential Major Mackenzie GO Station; and,
 - » A Holding Provision be implemented on other lands, which are considered premature or inappropriate for development for any one or more of the following reasons:
 - » A concept Site Plan and/or Streetscaping and Landscape Plan has not been submitted and finalized to the City's satisfaction;
 - » Public infrastructure and community facilities, such as sanitary sewers, water supply, stormwater management facilities, parks, community and recreation facilities, schools, and libraries are insufficient to serve the proposed development;
 - » The existing street network does not have the capacity or is inadequately designed for the anticipated traffic and/or the access requirements;

- » Development relies upon other matters occurring first, such as the consolidation of land ownership and/or the finalization of a Landowner Agreement regarding the development and funding of infrastructure and services; and/or,
- » Technical studies are required on matters that City Council considers necessary.

Community Planning Permit System

- » It is recommended that the City of Markham:
 - » Consider implementing a community planning permit system to streamline planning approvals on lands in proximity to the Mount Joy and potential Major Mackenzie GO Stations.

Environmental Assessments

- » It is recommended that the City of Markham:
 - » Initiate separate Environmental Assessments for the redesign of Markham Road and reconfiguration of Mount Joy Creek.

Community Improvement Plan and Business Improvement Area

- » It is recommended that the City of Markham:
 - » Introduce a Business Improvement Area for the Secondary Plan Area, centred on the length of Markham Road and connections to Mount Joy GO Station; and
 - » Introduce a Community Improvement Plan to incentivize redevelopment and affordable housing to meet the objectives of the Secondary Plan.

Urban Design Guidelines

- » It is recommended that the City of Markham:
 - » Prepare a comprehensive set of Urban Design Guidelines to guide the design of built form, the public realm, and streetscapes throughout the Secondary Plan Area. The Urban Design Guidelines would serve as a tool to assist City of Markham Staff in the review and evaluation of development applications within the Secondary Plan Area, and would be used to help inform advisement by the City of Markham Urban Design Review Panel.

Other Implementation Tools

- » It is recommended that the City of Markham:
 - » Establish an interim development plan for the Mount Joy GO Station Area, transitioning the area into a mixed use destination in advance of development through the implementation of tools such as pilot projects and tactical urbanism projects;
 - » Incentivize redevelopment of the Mount Joy GO Station Area, as a means of catalyzing future development permissions, creating a destination, and reducing required parking ratios;
 - » Consider development charges for public realm elements to address costs associated with streetscape improvements, pedestrian infrastructure and amenities, open spaces, pedestrian crossing, and civic elements including wayfinding, signage, public art, and gateway features;

- » Utilize international design competitions as a means of ensuring a high quality of design associated with significant public assets and infrastructure, including but not limited to GO Station lands, pedestrian bridges, public parks, and community infrastructure and facilities; and,
- » Introduce a boulevard design pilot project for Markham Road.

7.4.7 Implementation Processes

- » It is recommended that the City of Markham:
 - » Accelerate the timing, sequencing and coordination of capital infrastructure projects which are necessary to ensure the long-term success of the Secondary Plan Area, including:
 - » The Donald Cousens Parkway Extension to Highway 48;
 - » The Highway 48 and Donald Cousens Parkway intersection;
 - » The Major Mackenzie Drive East/Stouffville GO Rail Corridor overpass; and,
 - » Pedestrian bridges.
 - » Continue coordination with Metrolinx, and engage potential developer(s) regarding a future Transit Oriented Community around the Mount Joy GO Station;
 - » Coordinate with York Region and Metrolinx regarding benefits and implications of a potential Major Mackenzie GO Station;
 - » Participate in ongoing engagement with York Region to encourage the implementation of the Donald Cousens Parkway Extension to Highway 48; and,
 - » Work with Parks Canada to enhance access to Rouge National Urban Park.

8.0 Next Steps

This report concludes Phases 1 to 3 of the Markham Road – Mount Joy Secondary Plan Study. The report will be considered by Markham’s Development Services Committee (DSC) in April 2021.

Phases 4 to 6 include public consultation on the draft Demonstration Plan and findings of this report. Feedback received through the consultations will be used to inform potential changes and complete the technical modeling and analysis for the final Demonstration Plan and study report.

