

Interim Report: Kleinburg Parking Strategy Study



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EXECUTIVE SUMMARY

INTRODUCTION AND BACKGROUND

The Kleinburg Village Core (“Kleinburg”) is a picturesque and historic village located within Ward 1 of the City of Vaughan (“City”). Supported by the Kleinburg Business Improvement Area (KBIA), Kleinburg is home to over 60 retail and service businesses, as well as schools, libraries, parks and art galleries. As its popularity grows, Kleinburg is experiencing an ever-increasing demand, and parking has become a significant concern.

To assess immediate and long-term parking needs and develop a parking management strategy, the City has undertaken the Kleinburg Parking Strategy Study (“Study”). The Study will identify and assess alternative solutions for existing and future parking needs following quantitative data collection and analyses, as well as qualitative surveying and consultation. This Executive Summary covers Phase 1 (Existing Conditions Review) of the Study. The project limits for the Study are shown in Figure ES - 1.

NEEDS AND OBJECTIVES

The overall goal is to develop a comprehensive and forward-looking parking strategy with the following objectives:

- Assess existing parking conditions and mobility options
- Engage the public and stakeholders
- Determine short - **(1 to 5 years)**, medium - **(5 to 10 years)**, and long-term - **(2041)** parking needs
- Provide parking management strategies and implementable solutions

The Study has been organized into two phases:

Phase 1: Existing Conditions Review

Phase 2: Parking Strategy Development



Figure ES - 1 Study Area Parking Supply

PUBLIC CONSULTATION

Phase 1 consultation involved all stakeholders and the general public seeking to understand the current concerns, behaviours and perceptions surrounding parking in Kleinburg. Numerous consultation activities occurred, including an online survey, intercept surveys, stakeholder and public meetings, and additional focus group meetings. Through the Phase 1 engagement efforts, the following are key issues/comments received:

- Overall insufficient parking and illegal parking
- Congested traffic conditions on Islington Avenue
- Pedestrian movement and safety
- Lack of cycling infrastructure and bicycle parking within Kleinburg
- Traffic operations and parking at Kleinburg Public School
- Desire for centralized public parking

The consultation found that visitors originate from various locations. However, most are local, hailing from Kleinburg or within the City. Over 80% of survey respondents visit the area travel by private vehicle, with less than 10% doing so by walking or cycling, and little to no transit usage. Many visitors perceive a continuous parking deficiency, expressing that additional public parking should be provided. This perception is consistent with the experiences of some visitors searching to find parking for long periods of time.

EXISTING CONDITIONS REVIEW

Based on the Phase 1 findings, it is apparent that the current configuration of parking in Kleinburg results in an array of challenges, despite the demand for parking remaining within the available supply. These challenges echo the consultation feedback. Kleinburg's parking supply is limited in key areas and does not accommodate certain behaviours. Outside of these key areas, parking is typically underused or not apparent. Overall, the parking supply can cause confusion, while also negatively affecting traffic flow and safety.

Parking Supply and Demand

Of the approximately 690 parking spaces available in Kleinburg (excludes Bindertwine Park as it is beyond a 5-minute walk), private off-street parking lots comprise the majority (81%). A total of 164 spaces are publicly owned, of which 129 public on-street parking spaces are free and available in unmarked spaces along Islington Avenue, Nashville Road, Kellam Street and Napier Street. Parking turnover and duration surveys were conducted during fall and summer weekdays and weekends, and during a special event.

Parking Occupancy

	Survey Period	Peak Period	Total Occupancy	Off-Street		On-Street
				Private	Publicly Owned*	Public
<i>Summer</i>	Weekday - Aug 22	2:00 – 2:30 PM	49%	47%	60%	57%
	Weekend - Aug 24	2:00 – 2:30 PM	42%	39%	46%	50%
		8:30 – 9:00 PM	55%	53%	37%	68%
<i>Fall</i>	Weekday - Oct 24	1:30 – 2:00 PM	50%	46%	77%	60%
		8:30 – 9:00 PM	43%	36%	46%	70%
	Weekend - Oct 26	1:30 – 2:00 PM	55%	53%	20%	73%
<i>Special Event</i>	Weekday - Nov 29	7:30 – 8:00 PM	53%	47%	49%	75%

*Includes municipally owned parking lots at Pierre Berton Heritage Centre and Kleinburg Public Library

Parking demand is greatest for public on-street parking, particularly within “hotspots” where challenges were observed. Most of the residual parking was observed on private property. Residual on-street parking was observed, but outside of the core. Despite this finding, almost all Kleinburg’s parking is within a 5-minute walk of the core. The parking surveys revealed several key observations:

- 1. There are “hotspots”, where peak parking occupancy is above 80%**
 - Starbucks and Kellam St (all surveys)
 - Canada Post Plaza (most surveys)
 - East side of Islington Ave, Kellam St to John St (fall surveys)
 - South side of Nashville Rd, Islington Ave to Lester B. Pearson St (fall surveys)
 - Kleinburg Public School (fall weekday survey)
- 2. Hotspot areas feature limited public on-street parking**
 Many of the businesses are concentrated near the Islington Avenue and Nashville Road intersection. Most reserve capacity is within private off-street lots. The low reserve capacity of public on-street parking contributes to the perception of parking scarcity.
- 3. Special events could have improved organization and parking management**
- 4. Recurring illegal parking in non-designated spaces was observed**
- 5. The location of bicycle parking can be improved as demand for on-street facilities exists**

Study Area Parking Issues

On-Street Parking	Off-Street Parking
Inadequate positive guidance for drivers, including signage, pavement markings, and delineated parking spaces	Parking spaces in majority of marked off-street lots are smaller than required.
Insufficient illumination along Napier Street and poor visibility of parking restrictions	Insufficient directional and wayfinding signage to available off-street parking amenities
Lack of on-street bike parking facilities	Faded pavement markings

Multi-Modal Travel Issues

Vehicular Traffic	Active Transportation
Islington Avenue and Nashville Road are operating with constraint	Vehicles parked on the boulevards encroach adjacent sidewalks
Traffic infiltration resulting from constrained conditions on Islington Avenue	Lack of sidewalk connectivity to the boulevard along Islington Avenue
Heavy vehicles (trucks and school buses) encroach onto sidewalks and opposing lanes	Limited east-to-west pedestrian crossing opportunities along Islington Avenue

LAND USE AND DEVELOPMENT PLANNING

The historic core is covered by Heritage Conservation District policies. Parking supplies for new developments are difficult to accommodate per the current minimum Zoning By-Law requirements. Cash-in-lieu of parking policies are available in Kleinburg to help generate revenue to develop public parking and are being reviewed as part of the Study.

EXISTING ISSUES AND OPPORTUNITIES

Existing Issues

- High parking demand within high activity or “hotspot” areas
- Limited public parking spaces
- Private off-street lots are not available for general public use
- Inadequate signage and pavement markings
- Insufficient visibility or illumination of existing signage/restrictions
- Traffic volumes on Islington Avenue during peak periods
- Kleinburg Public School and YMCA daycare parking demand is high
- Safety concerns with respect to active transportation
- Special event communication to the general public can be improved

Existing Opportunities

- Improve parking and travel efficiency by providing guidance (wayfinding, signage)
- Target and manage visitor groups to better utilize available parking
- Promote underused parking and review shared use of private parking spaces
- Improve or increase the supply of public parking using initiatives such as:
 - *Delineating regular and accessible public on-street parking spaces*
 - *Review legalizing on-street parking spaces in restricted areas*
 - *Providing a centralized public parking facility*
- Encourage Transportation Demand Management (TDM)
- Establish a pedestrian-oriented public realm
- Re-evaluate the role of Islington Avenue as a throughway versus a main street
- Explore new technologies in shared mobility and/or micromobility
- Consider implementing paid parking and a Parking Authority
- Update or change existing policies such as cash-in-lieu of parking
- Capitalize on and coordinate with the improvements planned for Islington Avenue

NEXT STEPS

Phase 2 of the Study will explore solutions and assess potential parking management systems for short, medium and long-term needs. Funding and legal mechanisms will also be reviewed to implement the Strategy. Phase 2 will involve consultation and engagement with members of the public and all stakeholders to obtain feedback and seek input:

- Stakeholder/Agency Session #2 – **late March 2020**
- Public Information and Feedback Session #2 – **early April 2020**
- Online Survey #2 – **March 2020**

The Final Report will provide recommended alternatives for each of the planning horizons, forming an immediate, short- and longer-range plan for parking in Kleinburg. In June 2020 it is anticipated that the Final Report will be complete, and City Council will be informed.

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1

1 INTRODUCTION

Kleinburg is one of Vaughan’s premier commercial neighbourhoods with a charming residential community at its core, and a rich and varied history. The Kleinburg Village core is a picturesque and historic village located within Ward 1 of the City of Vaughan (“City”). Supported by Kleinburg Business Improvement Area (KBIA), the Kleinburg Village core is home to over 60 retail and service businesses, as well as schools, libraries, parks, and art galleries. As the population of the surrounding area and City increases and the popularity of the Village core grows, Kleinburg is facing increasing traffic volumes and visitors to the Kleinburg Village core, as well as growing concerns with respect to parking. The Village core is focused along Islington Avenue, a vibrant main street that runs through the heart of Kleinburg and is fronted by premier retail, commercial and mixed land uses that attracts thousands of local and regional visitors every year. Islington Avenue within the Kleinburg Village core features a pedestrian realm featuring urban design elements, engaging streetscapes, and on-street parking.

The 2011 Kleinburg Economic Development Strategy identified limited public parking as a significant challenge for developments in Kleinburg. To help assess the immediate and long-term parking needs in Kleinburg and develop an appropriate parking management strategy, the City retained McIntosh Perry Consulting Engineers Ltd. (“MP”) to undertake the Kleinburg Parking Strategy Study (“Study”). The Study includes the evaluation and development of a comprehensive forward-looking strategy to accommodate existing demand and facilitate future growth, while supporting the City’s Service Excellence Strategic Plan (2018-2022), with regard to transportation and mobility objectives. The Study explores opportunities and alternatives to accommodate long-term needs for parking in the Kleinburg Village core.

This Study will identify and assess alternative solutions for existing and future parking needs based on parking supply-demand and the area's mobility options, such as improving parking space management to increase available parking supply and identifying sustainable sources of funding or financing alternatives. This interim report encompasses Phase 1 of the Study, which is a review of the existing conditions to inform the alternative solutions emerging from Phase 2 to be documented in a future final report.

As part of this Study, MP has conducted several parking demand, turnover and duration-of-stay surveys of on-street and off-street parking facilities within Kleinburg to understand the daily and seasonal variations in parking demand. In addition, a comprehensive public and stakeholder engagement strategy has been initiated to obtain a detailed understanding of the existing parking issues and requirements, the transportation choices people make, as well as the reasons for those choices and how they relate to the parking needs in Kleinburg. As part the Study, the team also observed and assessed current pedestrian activities and bicycle parking demand relative to available infrastructure.

1.1 STUDY OBJECTIVES

The overall goal of this Study is to develop a comprehensive and forward-looking parking strategy to facilitate growth and accommodate immediate and long-term parking demands in Kleinburg. The City has recently considered parking demand in the area and at the request of the KBIA and the Kleinberg Area Ratepayers Association (KARA), has removed bollards along Islington Avenue to the south of John Street, unlocking up to ten new parking spots. From a longer-term perspective, the City has initiated this Study to identify opportunities and to develop a strategy to accommodate future parking needs of the commercial core, as well as support existing parking demand. In general, the Study is organized in two phases, including:

- **Phase 1: Existing Conditions Review** - seek to understand the current conditions, including stakeholder and public opinions and needs
- **Phase 2: Parking Strategy Review** - discuss parking options and strategies for immediate and future parking needs

The following objectives are key to meeting the goals of this Study:

- Assess existing parking supply and demand, as well as mobility options in the study area
- Engage the public, KBIA, KARA, and other stakeholders to ensure inputs and concerns are reviewed and considered
- Determine short - (1-5 years), medium - (5-10 years), and long-term (2041) horizons parking needs
- Provide parking management strategies, implementable solutions and recommendations for improved accessibility to the Kleinburg area
- Recommend appropriate and sustainable sources of funding or financing alternatives available to the City to implement the recommendations of the Study

The first step in developing a strategy for managing parking in the Kleinburg Village core is to establish a baseline understanding of parking supply and demand in the area. Starting in late August 2019, several parking surveys of existing on-street, off-street, and bicycle parking, both publicly owned and private, were undertaken to determine the occupancy and turnover of parking within the Kleinburg Village core.

This Interim Report covers Phase 1 of the study and provides the findings of the background and existing conditions review, study methodology, results from both on-street and off-street parking surveys, and feedback received from initial consultation/engagement sessions conducted by the City of Vaughan and project team; including:

- A public information session and stakeholder meeting: **September 2019**
- Feedback from an online survey: **September – October 2019**

The final outcomes of the Study will include documentation for an implementation plan. This plan will provide the recommended parking solutions to support long-term mobility options for the area.

1.2 STUDY AREA

The study area for this project encompasses the Kleinburg Village Core and is generally bounded by Treelawn Boulevard to the north and Pennon Road to the south, as shown in **Figure 1-1**. Within the study area, there is on-street parking along Islington Avenue and Nashville Road. Parking is allowed along portions of side streets, including along Kellam Street and Napier Street. Private customer parking lots are available at commercial / retail/ institutional properties and mixed-use plazas, mostly fronting Islington Avenue. Also located within the study area is Bindertwine Park, which has its own parking lot with access from Stegman Mill's Road connecting to Islington Avenue.



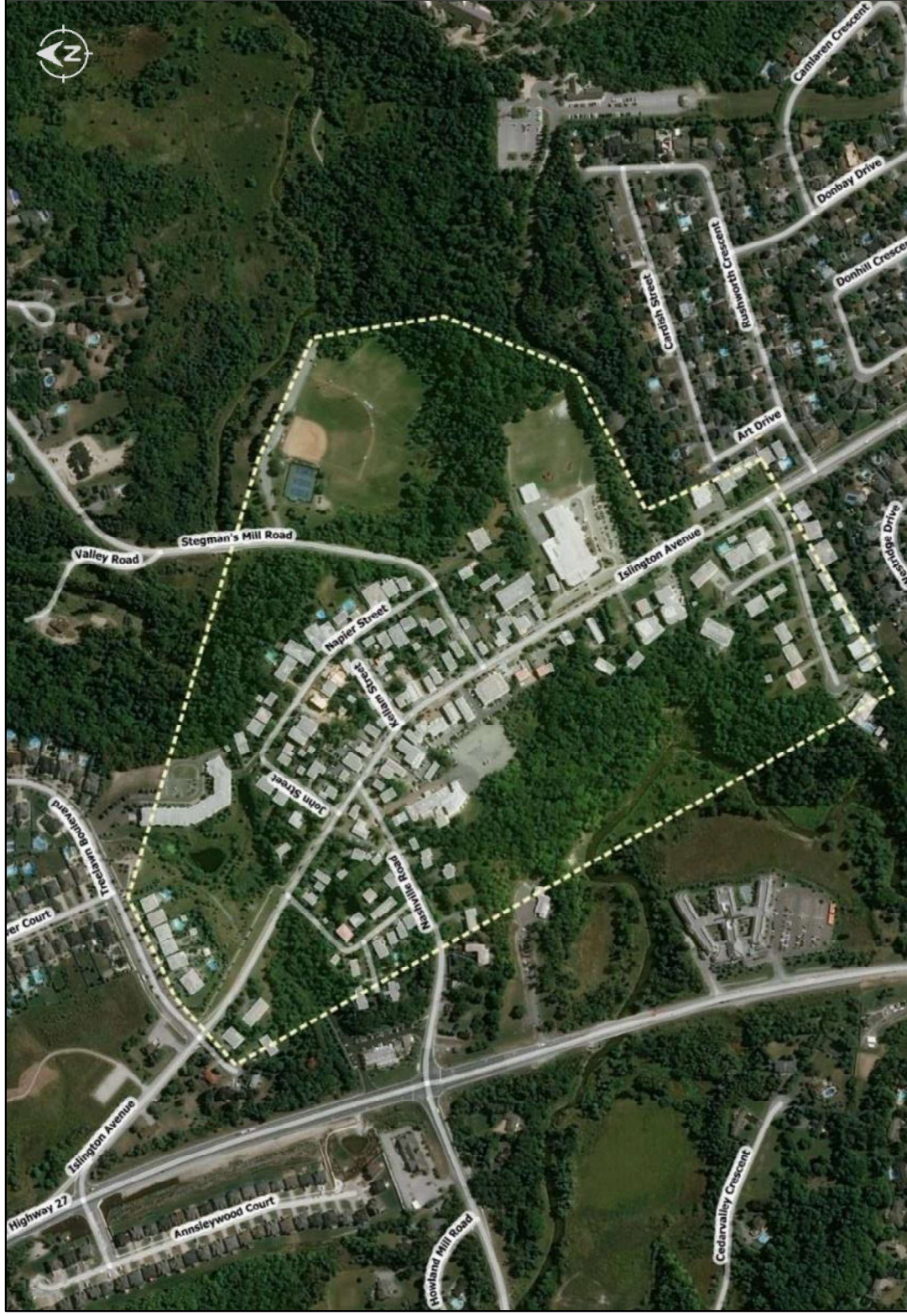


Figure 1-1 Study Area





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2 BACKGROUND DOCUMENTS AND STUDY CONTEXT

A review of the background documentation established the groundwork for the Study, through an examination of Kleinburg’s parking history, policies, guiding principles and recommendations for the study area. Where applicable, background documents will assist in framing the future parking context for the village of Kleinburg.

2.1 CITY OF VAUGHAN OFFICIAL PLAN

A key policy in the City’s Official Plan (OP 2010) is to support the development of business associations in areas, such as the Kleinburg Village Core to enhance retail opportunities and to attract visitors. As a “local centre”, it is characterized as being pedestrian-oriented allowing residents and surrounding communities to meet daily needs where they live or work. The OP 2010 states that, with the intensification of centres, consideration must be given to the urban fabric and support for public transit development. As the City grows, the OP 2010 is committed to protecting and strengthening the character of areas, such as Kleinburg. The policies of the OP 2010 seek to protect and strengthen the character of the area, so it remains mostly stable as the City grows and matures. Small retail, schools, parks and community centres, intended to serve the local area, will continue to be encouraged to reduce the need of residents to drive, to meet regular daily needs for amenities and services. There is a need to ensure the Kleinburg Village Core offers adequate infrastructure to support the existing and planned tourist and commercial activities within this area, including adequate, comfortable and reliable parking amenities.

2.2 VILLAGE OF KLEINBURG ISLINGTON AVENUE STREETScape MASTER PLAN

The Master Plan focuses on the right-of-way of Islington Avenue and Nashville Road, its importance as a public area and treatments for an enhancement of study area streetscapes. The study supports the Kleinburg-Nashville Community Plan incorporating a design that promotes safety, comfort, accessibility and security, an attractive public realm with landscaping elements (including, street furniture, lighting, signage etc.),

sidewalks, bicycle paths and pedestrian-oriented development patterns. Parking strategies identified in the plan include encouraging off-street parking and consolidation of driveways along Islington Avenue. Consolidation of parking into rear lots and laneways, arranged in a manner that supports centralized wayfinding and ticket stations is also considered a feasible method for improving pedestrian safety. Thus, allowing parking within the area to be increased, providing safer routes for pedestrians due to a reduction in driveways.

2.3 KLEINBURG-NASHVILLE HERITAGE DISTRICT STUDY AND PLAN

The study area lies within one of the four Heritage Conservation Districts in the City of Vaughan, where district plans, policies and guidelines stand to conserve, protect and enhance the District's special character. The Kleinburg-Nashville Heritage District Study and District Plan identifies the Kleinburg Core as a prosperous and vibrant area and a tourist attraction, with 45 properties of heritage value. The Plan calls upon any landscape, streetscape and infrastructure improvements and future developments to enhance the heritage character of the District.

2.4 KLEINBURG ECONOMIC DEVELOPMENT STRATEGIC PLAN

The Kleinburg Economic Development Strategic Plan, 2011 (KEDS 2011 Study) provided a detailed assessment of visitors to Kleinburg and laid out goals and objectives for revitalization of the Kleinburg main street area represented by the KBIA. The KEDS 2011 Study envisions that Kleinburg will continue to provide locals and tourists with hospitality and retail-based services, as well as linkages with outdoor recreational amenities/activities, including trails, parklands, forested areas, etc. Two goals and related actions, as identified in the KEDS 2011 Study, set the stage for this parking study:

Goal 4 – Placemaking, Accessibility and Circulation:

- **Action 4.6** calls to review existing boulevard parking to confirm proper sight distance characteristics exist for pedestrian crossing and entry/exit from parallel parking and make certain boulevard parking doesn't encroach the pedestrian sidewalks.
- **Action 4.8** calls to assess the need, type, cost-sharing opportunities for bicycle parking facilities in the study area, based on the short and long-term requirements of the Village.
- **Action 4.9** indicates that the private parking supply should be reviewed and linking opportunities for smaller individual private parking lots be encouraged to increase the efficiency of parking operations. To accomplish this, the existing public and private parking supply, supply-response, as well as the impacts of the current parking operations, need to be understood and used in evaluating future parking needs within the study area, as a whole, through this parking study. Input from area stakeholders including, City Staff, businesses, the KBIA, the Kleinburg Area Rate-Payers Association (KARA), residents, customers and the general public will be crucial in developing effective parking strategies that address current and future potential issues.

Goal 5 – Eliminate Barriers to Development:

- **Actions 5.9 and 5.11** call to adopt and apply parking supply rates in the March 2010 Parking Standards Review by IBI Group and shared parking calculation methodologies to the Kleinburg Village Mainstreet (along Islington Avenue) and Core areas.
- **Action 5.11** requires establishing a benchmark of the publicly available parking supply and update the benchmark over time. This Study includes completed parking utilization surveys to determine current and future parking demand-supply profiles.
- **Action 5.12 and 5.15** call to contact York Region District School Board (YRDSB) and Vaughan Public Library Board to establish conditions for joint use of parking resources to support commercial parking needs of the Kleinburg Mainstreet and Core areas. It is also recommended that the pick-up and drop-off areas at Kleinburg Public School be reviewed for tour bus parking opportunities.
- **Action 5.13** calls to review an extension of boulevard parking along Islington Avenue from north of Nashville Road to Treelawn Boulevard, as well as, to review the United Church (now known as the Pierre Berton Heritage Centre) parking lot layout to maximize the parking supply through joint usage opportunities.
- **Action 5.16** calls to review parking policies for large social gatherings in public venues such as the Bindertwine Park, located along Stegman Mill's Road within the study area.
- **Action 5.17** calls to update the calculation of cost of Cash-in-Lieu of on-site parking, based on current best practices and the directions provided in the March 2010 Parking Standards Review by IBI Group. Current best practices and background studies form the starting point to develop an implementation strategy for the recommended parking plan created through this Study.

Travel modes to Kleinburg in the KEDS 2011 Study are in line with the parking demand survey findings in this Study, with the private vehicle being the predominant mode choice and the primary reason to visit being related to food services and recreational activity. The June 2016 Update of the KEDS 2011 Study reviewed changes in the demand and supply characteristics in Kleinburg and noted that **Goals 4 and 5**, with the associated actions above remain outstanding items. Traffic issues remain an area of focus, including, the lack of parking or coordinated parking spaces, pedestrian safety issues and high traffic volumes during the late afternoon commute. Initiatives suggested by the KBIA include an increased parking (including shared parking) supply.

2.5 CITY OF VAUGHAN TRANSPORTATION MASTER PLAN

The 2012 City of Vaughan Transportation Master Plan (TMP) recognizes that although future forecasted traffic demand is higher than the present capacity along Islington Avenue and Nashville Road, in the study area, widening may not be feasible because of the special historic character of Kleinburg. It is expected that these corridors would operate close to or at effective capacity in the future, while the excess traffic volumes would be diverted to other routes. The TMP, however, proposed installing new traffic signals at the intersection of Nashville Road and Islington Avenue by 2031. In addition, the TMP indicated that, with the planned developments proposed within the Kleinburg-Nashville area, improved transit service and providing transportation choices for area residents are required to reduce reliance on the personal automobile and to contribute to overall Travel Demand

Management (TDM) goals of the TMP. TDM strategies support the physical transportation network by providing policies, programs and innovative mobility services to reduce reliance on single occupant vehicle (SOV) travel.

2.6 PEDESTRIAN AND BICYCLE MASTER PLAN

The City's 2007 Pedestrian and Bicycle Master Plan recommended a community signed bike route/bike lane along Islington Avenue, as well as a community paved shoulder bikeway along Nashville Road and Stegman's Mill Road. The City is developing a new City-wide Pedestrian and Bicycle Master Plan (PBMP) building on the 2007 PBMP and the 2012 TMP. The draft preferred cycling and multi-use trail network indicates Islington Avenue is a local route, while Nashville Road and Stegman's Mill Road form part of the primary network for the Vaughan Super Trail (Phase 2) with connections across Highway 7, and to the McMichael Canadian Art Collection, respectively. These plans highlight the move towards more sustainable modes of transportation, as well as the City's commitment to supporting the expansion of the active transportation network.

2.7 ACTIVE DEVELOPMENT APPLICATIONS

Several development applications are currently active within the study area in Kleinburg, based on a review of the City of Vaughan's online repository ("City of Vaughan PLANit Application Viewer") and observations during site visits by the study team. **Table 2.1** lists the development applications, which will be reviewed in further detail as part of future parking needs assessment following the Interim Report. These locations are mapped in **Figure 2-1**.

Generally, the active applications have reviewed parking requirements of the existing City By-Law 1-88. Where proposed parking supply for a development does not meet requirements under By-law 1-88, parking is proposed in accordance with parking rates in the IBI March 2010 Study. Therefore, all applications meet parking requirements acceptable by the City of Vaughan and are not expected to exacerbate parking supply concerns in Kleinburg. It is important that future parking needs can be accommodated as new developments are introduced to the area. This creates an opportunity to explore funding mechanisms, for parking development which can include initiatives such as paid parking, development charges and cash-in-lieu of parking.

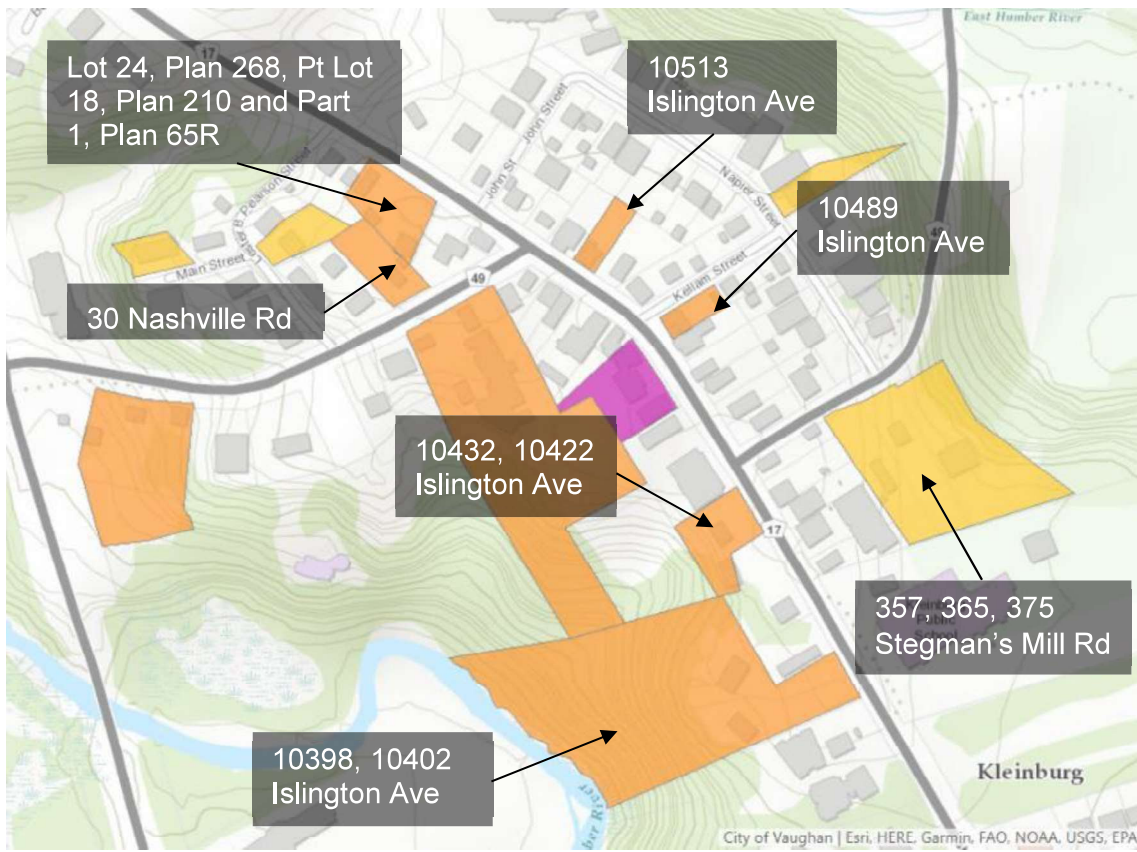


Figure 2-1 Currently Active Development Applications in Kleinburg

Table 2.1 Currently Active Development Applications in Kleinburg

Address	Application Details
<p>10432, 10422 Islington Avenue</p>	<ul style="list-style-type: none"> Planned development for a new two-storey mixed use building (residential units, dance studio). Adequate parking provided to meet City of Vaughan Zoning By-law No. 1-88. A new driveway will be constructed via Islington Avenue to provide full movement vehicle access to the subject development.
<p>30 Nashville Road</p>	<ul style="list-style-type: none"> Planned development for a mixed-use building (residential and commercial) with underground parking. The parking supply for the proposed residential, visitors, and commercial uses is slightly less than the by-law requirement. The development includes a total of 45 parking spaces in accordance with parking rates in the IBI March 2010 Study. However, this supply is lower than the 68 parking spaces required per current By-Law 1-88. The parking variance was deemed to be acceptable considering local on-street parking supply, expected customers' mode of travel and Region's future mode share targets.
<p>10513 Islington Avenue</p>	<ul style="list-style-type: none"> Proposed mixed-use development (restaurant and residential) The development includes a total of 13 parking spaces, exceeding the requirements under the parking rates in the IBI March 2010 Study. However, this supply is lower than the 21 parking spaces required per current By-Law 1-88. The application proposes to <u>remove two on-street parking spaces</u> on the east and west side of the site access driveway to achieve minimum sight distance requirements.
<p>10398, 10402 Islington Avenue</p>	<ul style="list-style-type: none"> Proposed 22 townhouse units with access onto a private driveway from Islington Avenue. 44 resident and 5 visitor vehicular parking spaces provided; 12 visitor bicycle parking spaces provided. Visitor and bicycle parking spaces are not required under the City's By-Law 1-88. The development application proposes the section of Islington Avenue (i.e., west side) along the frontage of the site be signed as "No Stopping" (currently signed "No Parking") to discourage pick-up and drop off-activity associated with the Kleinburg Public School.
<p>357, 365, 375 Stegman's Mill Road</p>	<ul style="list-style-type: none"> Future development of detached residential housing with connected underground parking garage. Parking provided is consistent with the parking required under By-law 1-88. The proposed site access is located 10 m west of Napier Street along Stegman's Mill Road.

Address	Application Details
10489 Islington Avenue	<ul style="list-style-type: none"> OPA application for 3-storey mixed-use residential-commercial development. No other relevant data is currently available for this application.

2.8 CASH-IN-LIEU POLICIES

Cash-in-lieu is a parking policy tool that reduces or waives the provision of on-site parking required by a governing zoning by-law. This policy was initially developed for situations where developers could not physically (or feasibly) accommodate required parking on-site and, in the case of Kleinburg, significantly affected heritage buildings. The policy enables the owner of a site seeking to rezone and/or develop a site for commercial purposes to make an application to the municipality to provide cash-in-lieu of providing on-site parking. The policy can provide benefits to both the owner and municipality which include:

- Creating opportunities for shared parking/public parking, better utilizing parking spaces
- Generating revenue for municipal parking, enabling municipalities to control parking supplies and support desired land uses and can even assist in funding transit
- Area dedicated to parking can be reduced, providing developers with greater flexibility for site plan design
- Can support modal split changes, discouraging car use, encouraging walking and assisting municipalities with urban design.

2.8.1 Current Cash-in-Lieu Application in Vaughan

A cash-in-lieu parking by-law (By-law 159-2006) applies to properties designated as “Mainstreet Commercial” within Kleinburg under Official Plan #601 (Kleinburg-Nashville Community Plan). A review of a 2013 report for the area, known as the Vaughan Metropolitan Centre (VMC), propositioned that a cash-in-lieu policy be applied for this area, as a means of financing surface and structure parking. The City uses the following formula to calculate fees to be paid under the policy:

$$\$ = ((P \times 40) + (S \times 28) + (L \times 12)) \times M + \$m$$

P = Land acquisition cost per m²

40 = area of a parking space, plus the area associated with a portion of the required aisles and access plus the area of landscaped open space

S = Construction cost per m² of parking spaces

28 = area of a parking space, plus the area associated with a portion of the required aisles and access

L = Construction cost per m² of amenity/landscape/lighting

12 = area of land associated with amenity/landscape/lighting

M = Multiplier (0.1 for conversions and renovations and 1.0 for new construction and additions)

\$m = Recurring maintenance charge

Notably, this formula includes a **cost recovery component (\$m)** for amenity costs and recurring maintenance.

If a landowner/developer within Vaughan wishes to reduce the number of parking spaces determined to be required by Zoning By-law 1-88, they must apply to the Committee of Adjustment (COA) for a minor variance or pursue an amendment to the zoning by-law.

Cash-in-lieu is not an as-of-right tool. It is a tool that is solely at the discretion of those that are reviewing the site development application. When the proposal is at odds with the zoning by-law requirements, including the setbacks, driving aisle widths, and, of course, the number of parking spaces on-site, the proponent needs to make an application through the COA. The COA process allows for other property owners, within a prescribed area surrounding the site in question, to be informed and to have an opportunity to submit their support and concerns regarding the application to the COA. The COA may then choose to apply the cash-in-lieu option to account for a parking space deficiency.

2.9 VAUGHAN DRAFT ZONING BY-LAW

The Kleinburg core is designated as a mixed-use zone under the by-law (KMS - Kleinburg Main Street Mixed-Use) where specific parking requirements are applied that differ from the City at-large. Requirements for residential uses are consistent with rates that appear for “All Other Zones” but are higher than other zones such as the Vaughan Metropolitan Centre (VMC). Commercial parking requirements for KMS are either consistent with or lower than requirements for areas designated “All Other Zones”. Under Section 8.1.12 of the Draft Zoning By-Law, surface and below-grade parking are permitted in KMS. From an active transportation perspective, the Zoning By-Law positively outlines requirements and design guidelines for bicycle parking.

The requirements for the City, at-large, speak to a *minimum* and *maximum* parking requirement in most case, while the KMS predominantly shows an application of only a *minimum* standard.

The framework for setting parking requirements also incorporates the notion of:

- Temporal variation of parking demand over the course of the day
- Allowing for shared use of parking spaces

2.10 PREVIEW OF BILL 108

Bill 108 proposes several amendments to the land use planning regime (Planning Act) in Ontario. Bill 108 proposes to repeal many – but not all – of the amendments introduced through Bill 139 (the *Building Better Communities and Conserving Watersheds Act, 2017*) in 2017.

The final content of Bill 108 has not yet been determined and proposed regulations are not yet available. Matters such as transition, along with other matters that, were addressed in regulations to the *LPAT Act* are expected to be dealt with in the regulations. Revisions to the LPAT’s Rules of Practice and Procedure are also anticipated.

Bill 108 retains the LPAT name but proposes to repeal the “two-stage” appeal process, returning to a single hearing. However, the Province of Ontario will have the authority to exempt certain types of development from the community benefits charge. Before passing a community benefits charge by-law, municipalities will be required to prepare a community benefits charge strategy, identifying the facilities, services and matters to be funded with community benefits charges. At this point, it is unclear if community benefits include parking, parkland, or transportation mobility strategies.

Bill 108 proposes to cap the amount of community benefits as a percentage of land value, to be prescribed by regulation. Bill 108 also sets out a process for owners to object to the value of the community benefits charge, and a process governing municipalities' collection and use of the funds, including a requirement that the municipality spend or allocate at least 60% of the funds in a year.





3

3 EXISTING CONDITIONS

The existing land use and planning policies, parking amenities, multi-modal transportation network, and traffic operations and safety have been documented to frame the existing conditions and inform the recommended solutions to follow as part of Phase 2.

3.1 POPULATION AND LAND USE

A small historic village, Kleinburg occupies a narrow section of hilly landscape located between two branches of the Humber River. Kleinburg has a small population, with approximately 3,686 people living inside the village in 2015, as estimated in the 2016 Kleinburg Economic Development Strategy Update (2016 KEDS Update). Kleinburg is surrounded by a “primary trade area” that extends to Rutherford Road to the south, Kirby Road to the north, Pine Valley Drive to the east, Huntington Road to the west. The 2011 KEDS Report estimated that the 2010 population in the primary trade area, of 22,000, is expected to grow to over 40,000 by the year 2031. Historic population data indicates that Kleinburg has an approximate annual population growth rate of 3.2% while the primary trade area surrounding Kleinburg is expected to grow annually at a rate of 8.3%.

Kleinburg is designated as a “Local Centre” within the Vaughan Official Plan (OP), serving as a mixed-use core offering a limited range of uses. Local Centres are noted to be predominantly residential but with a mix of uses that meet the daily needs of residents and the surrounding community. As per current City of Vaughan Zoning, the core area in Kleinburg, along Islington Avenue between John Street and just south of Stegman’s Mill Road, is predominantly zoned as Commercial. These land uses are surrounded by Residential and Open Space land uses. **Figure 3-1** shows a map of Kleinburg and surrounding area land use designations.

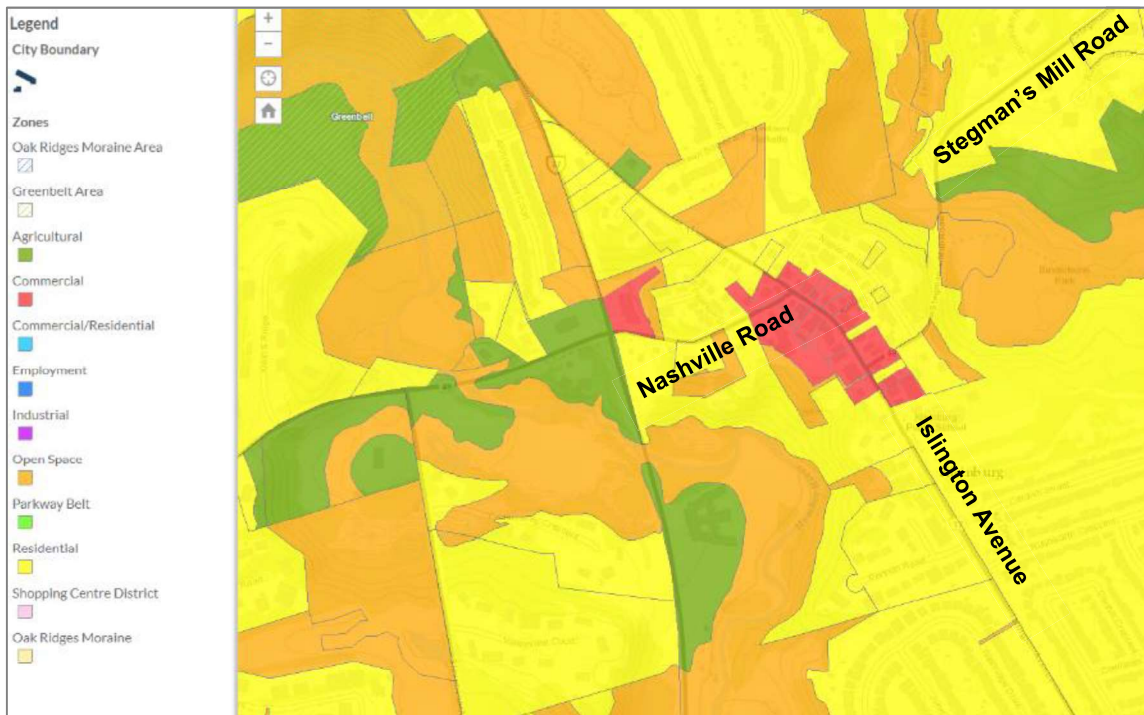


Figure 3-1 Land Use Designations (Source: Vaughan Zoning)

Schedule 13 within the OP identifies the Commercial areas as Low-Rise Mixed Use, the Residential areas as Low-Rise Residential and the Open Space areas as Natural Areas:

- **Low Rise Mixed-Use** areas allow for an integrated mix of residential, community and small-scale retail uses to serve the local population. Uses permitted include residential units, home occupations, small scale hotels, retail and office uses. Building types permitted include townhouses, stacked townhouses, low-rise buildings and public and private institutional buildings.
- **Low-Rise Residential** areas permit residential units, home occupations, private home day care for a maximum five children; and, small-scale convenience retail no greater than three storeys. Within these areas, public and private institutional buildings are also permitted. The City's heritage properties within the study, including the Kline House at the northwest corner of the intersection of Islington Avenue and Nashville Road, the Pierre Berton Heritage Centre and the Kleinburg Railway Station across from the Pierre Berton Heritage Centre are located within Low-Rise Residential areas. These heritage sites attract visitors to the area and affect both parking demand and supply. The Kleinburg Public School, the McMichael's Art Gallery and the Kleinburg Public Library are also located within these areas.
- **Natural Areas** form part of the larger Regional Greenlands system, contain key features of the landscape and contribute to the overall environmental health of the City and wider region.

The floor space for each type of land use is summarized in **Table 3.1** based on the City's property records database:

Table 3.1 Floor Area by Land Use within Study Area

Land Use	Floor Area (ft²)
Low Rise Mixed-Use	105,293
Low-Rise Residential	
<i>Residential (112 dwellings)</i>	10,294,351
<i>Pierre Berton Heritage Centre</i>	3,956
<i>Kleinburg Public School</i>	68,437
<i>Kleinburg Public Library</i>	3,886

The 2016 KEDS Update provided the Kleinburg Business Improvement Association (KBIA) retail audit indicated a total increase in retail floor space by 26,900 ft² from 2010 to 2015. The number of stores for each type of retail/commercial land use in 2010 and 2015 is shown in **Table 3.2** below.

Table 3.2 Retail Commercial Audit

Retail Activity	No. of Stores in 2010	No. of Stores in 2015
<i>Total Retail Merchandise</i>	15	14
<i>Total Convenience Goods</i>	3	2
<i>Total Food Service</i>	9	11
<i>Total Personal Service</i>	13	14
<i>Total Professional Services</i>	17	23
<i>Vacant Retail</i>	5	2
Total Retail Commercial	62	68

The most common type of business located in Kleinburg are professional services, with a total of 23 as of 2015. Of the 23 professional service establishments, 12 are designated as professional offices (including veterinary and photography) while 7 are designated as medical. Retail merchandise and personal services are the second most common business type with a total of 14 businesses each. The most common type of retail merchandise store are clothing and accessories stores with a total of 7 businesses located in Kleinburg.

A review of York Region’s Business Directory showed most businesses in the Kleinburg core have employee numbers in the range of 1 – 20 employees. Only a few establishments such as the McMichael Canadian Art Gallery and the Doctor’s House employ 50 – 99 employees in the area.

3.2 PARKING AND SITE CHARACTERISTICS

A complete parking inventory and site characteristics review was conducted on August 16, 2019. The complete inventory can be found in **Appendix A – Parking Inventory and Site Characteristics** and all recorded site observations are included in **Appendix C – Parking Survey Site Observations**. The task included recording the following information for on- and off-street facilities as applicable:

- Type of facility (on/off-street, private/public, paved/unpaved surface)

- Number of stalls (regular, accessible), type (parallel, angle, right-angle) and dimensions of parking stalls
- Time restrictions
- Pavement markings
- Other signage (e.g. customer-only lots)
- Presence/condition of illumination
- Presence/condition of pedestrian access
- Presence of bicycle parking facilities
- Other amenities (e.g. bus stops, telephone, garbage cans, newspapers, bench)

3.2.1 Parking Supply

Within the Kleinburg study area, there are a combined total of 690 non-residential parking spaces (excluding Bindertwine Park [64 spaces], which is beyond a 5-minute walking distance of the Village core):

Table 3.3 Parking Supply Summary in Study Area

		Pavement Markings	Total Spaces (Accessible)	Bike Parking Stalls
Public Parking	On-street	Marked	2 (-)	-
	On-street	Un-marked	127 (-)	-
	Off-street ¹	Marked	35 (2)	5
Private Parking	Off-street	Marked	467 (16)	64
	Off-street	Un-marked	59 (-)	-
TOTAL ESTIMATED NO. OF PARKING SPACES			690 (18)	69
Bindertwine Park	Off-street ²	Marked	64 (1)	-

¹ Includes Kleinburg Public Library and Pierre Berton Heritage Centre, which are municipal properties but provide dedicated parking space to visitors.

² Bindertwine Park is beyond a 5-minute walk of the Village core.

It is key to note that these spaces are a combination of public on-street/off-street spaces, private customer-only lots and private reserved spaces. The private parking spaces in standalone or shared customer lots are intended for use by customers or employees of the respective businesses. The publicly owned off-street spaces are also intended for use by patrons of Kleinburg Library or the Pierre Berton Heritage Centre. As such, it should not be assumed that the combined parking inventory is available for use to all visitors of Kleinburg throughout the day.

The only public off-street parking within the study area is at Bindertwine Park, which is connected to the Kleinburg village core by Stegman’s Mill Road. Considering that it takes longer than 5-minutes to walk to Bindertwine Park from the core and there is a steep-grade on Stegman’s Mill Road, this off-street parking lot was surveyed for parking demand, but was not included in the aggregate results. Further details can be found in **Section 5 – Parking Demand Survey**.

All on-street and off-street parking facilities are mapped along with a tabulation of parking space capacities in **Figure 3-2**. Additionally, the study area has been divided into several blocks based on a consideration of both the area road network and land use. The blocks

or sub-areas of the study area are intended to help categorize and understand the spatial context, as well as variation, in land use and parking needs. The blocks delineated in **Figure 3-2** also helped to organize parking data collection such that all areas could be covered effectively during each survey period and to collect data via the Online Surveys discussed in later chapters. A description of each block is provided below:

Table 3.4 Blocks within Kleinburg Study Area

Block ID	Description
N01	Areas from the north of Lester B. Pearson Street to the study boundaries
S01	Areas south of the study boundaries (while no parking data have been collected in this block, it was included in the Online Survey to better understand trips and related parking in Kleinburg)
W01	Areas to the west of Islington Avenue, bounded by Nashville Road and Lester B. Pearson Street. This block contains personal services including RBC Bank and Registered Massage Therapist
W02	Areas to the south of Nashville Road containing only the Doctor's House and XXI Chophouse (large event space and restaurant)
W03	Areas to the west of Islington Avenue, between Nashville Road and Stegman's Mill Road. This block contains several plazas (Kleinburg Pharmacy Plaza, Cookie Crumble Café Plaza, Nuage Med Spa Plaza, Canada Post Plaza), boutique shops and restaurants
W04	Areas to the west of Islington Avenue, between Stegman's Mill Road and the roadway to McMichael's Art Gallery on the east side of Islington Avenue. This block contains the Pierre Berton Heritage Centre
E01	Areas to the east of Islington Avenue, between Lester B. Pearson Street and John Street
E02	Areas to the east of Islington Avenue, bounded by John Street and Kellam Street. This block contains restaurants/cafes and personal services (hair salon, plastic surgery, etc.)
E03	Areas to the east of Islington Avenue, bounded by Kellam Street and Stegman's Mill Road. This block contains realtor offices, a dentist's office, a fitness centre and a boutique
E04	Areas to the east of Islington Avenue, bounded by Stegman's Mill Road and roadway to McMichael's Art Gallery. This block contains the institutional land uses such as the Kleinburg Public School and a music school, a veterinarian's office and the Immanuel Florist Plaza
E05	Areas to the east of Islington Avenue, between the roadway to McMichael's Art Gallery and the southern study area limits. This block contains the Kleinburg Public Library



Figure 3-2 Parking Space Inventory



Table 3.5 Kleinburg Parking Inventory

Lot #	Business	Public / Private	On / Off - Street	Marked / Unmarked	Total Spaces	Accessible Spaces	Bicycle Spaces
1	Kleinburg Public Library	Public	Off-Street	Marked	18	1	5
2	Kleinburg Public School	Private	Off-Street	Marked	44	2	46
3	Pierre Berton Heritage Centre	Public	Off-Street	Marked	17	1	0
4	Immanuel Florist Plaza	Private	Off-Street	Marked	20	1	7
5	Dean Veterinary Hospital	Private	Off-Street	Unmarked	6	0	0
6	DeGazon Music of Vaughan	Private	Off-Street	Marked	12	1	0
7	Remax West Realty Inc. - Adeel Waris	Private	Off-Street	Marked	12	0	0
8	Napa Valley Dental Care	Private	Off-Street	Marked	8	1	0
9	Remax West Realty Inc. - Adamo Colella	Private	Off-Street	Marked	17	1	0
10	Kleinburg Pharmacy Plaza	Private	Off-Street	Marked	45	3	0
11	Cookie Crumble Café Plaza	Private	Off-Street	Marked	26	1	0
12	Nuage Med Spa Plaza	Private	Off-Street	Marked	7	1	0
13	Kleinburg Clinic Plastic Surgery / The Laser Clinic	Private	Off-Street	Marked	9	0	0
14	Starbucks	Private	Off-Street	Marked	7	0	5
15	Avlyn Gardens Ristorante	Private	Off-Street	Unmarked	19	0	0
16	Hawthorne House	Private	Off-Street	Unmarked	3	0	0
17	The Burg (Formerly Longchamp Pub)	Private	Off-Street	Unmarked	12	0	0
18	Avenue Cibi E Vini ¹	Private	Off-Street	Marked	20	0	0
19	Chroma Hair One	Private	Off-Street	Marked	13	0	6
20	The Doctor's House	Private	Off-Street	Marked	208	2	0
21	RBC Bank	Private	Off-Street	Marked	17	2	0
22	Registered Massage Therapist	Private	Off-Street	Marked	3	0	0
23	Canada Post Plaza	Private	Off-Street	Marked	13	1	0
24	Inklein Fitness Centre	Private	Off-Street	Unmarked	6	0	0



Lot #	Business	Public / Private	On / Off - Street	Marked / Unmarked	Total Spaces	Accessible Spaces	Bicycle Spaces
25	Bindertwine Park	Public	Off-Street	Marked	64	1	0
26	Azure - Enabling Ideas	Private	Off-Street	Unmarked	7	0	0
27	Femme by Christina Inc.	Private	Off-Street	Unmarked	2	0	0
28	The General Store (Under Renovation)	Private	Off-Street	Unmarked	8	0	0
38	Ambiance Boutique	Private	Off-Street	Unmarked	2	0	0
	Nashville Road (North Side)	Public	On-Street	Unmarked	13	-	0
	Nashville Road (South Side)	Public	On-Street	Unmarked	6	-	0
	Islington Avenue (East Side)	Public	On-Street	Unmarked	63	-	0
	Islington Avenue (West Side)	Public	On-Street	Unmarked	15	-	0
	Kellam Street	Public	On-Street	Marked	2	-	0
	Napier Street	Public	On-Street	Unmarked	30	-	0
		Public	On-Street	Marked	2	0	0
		Public	On-Street	Unmarked	127	0	0
		Publicly owned	Off-Street	Marked	35	2	5
		Public	Off-Street	Marked	64	1	0
		Private	Off-Street	Marked	467	16	64
		Private	Off-Street	Unmarked	59	-	0
				Grand Total	754	19	69

¹ Not included in the Total supply values as the restaurant did not wish to participate in the parking demand after first survey on August 22, 2019.



3.2.1.1 Public Parking

Public on-street parking is either provided or permitted along Islington Avenue, Nashville Road, Kellam Street and Napier Street without any payment or metering systems.

Table 3.6 Summary of On-Street Parking Characteristics

Street	Characteristics
Islington Avenue	<ul style="list-style-type: none"> Boulevard parking, distinguished by the colored interlock on both sides of street No pavement markings delineating the parallel parking spaces No designated accessible parking spaces
Nashville Road	<ul style="list-style-type: none"> Boulevard parking, distinguished by the colored interlock on both sides of street No pavement markings delineating parallel parking spaces Bollards present to prevent parked vehicles from encroaching onto the sidewalks No designated accessible parking spaces
Kellam Street	<ul style="list-style-type: none"> Lay-by parking spaces marked by paint on one side of the street No designated accessible parking spaces
Napier Street	<ul style="list-style-type: none"> Un-marked parallel parking permitted on one side of the street No designated accessible parking spaces

Table 3.6 indicates that there is an opportunity to provide positive guidance for drivers regarding on-street parking, including, signage, pavement markings delineating parking spaces and designated accessible spaces.

A review of the physical conditions and amenities for on-street parking facilities showed that the pavement conditions are generally good; and, that there is adequate illumination in the sections of Islington Avenue, Nashville Road and Kellam Street where on-street parking is provided. However, illumination was deemed to be poor along Napier street where parking is permitted on the east side, as well as in some sections of area roads where on-street parking is not permitted, specifically, the north side of Kellam Street. Parking restrictions are described in **Section 3.3 – Transportation and Safety**.

Dimensions of the lay-by parking spaces on Kellam Street conform to the stall size requirements under existing City of Vaughan By-law 1-88 and proposed standards in the March 2010 Parking Standards Review by IBI Group. All other on-street parking is unmarked.

Publicly owned off-street parking lots include Kleinburg Public Library and Pierre Berton Heritage Centre, which are municipal properties but provide dedicated parking space to the visitors. Bindertwine Park parking lot is open to all members of the public. All three properties have at least one accessible space designated by signage and pavement markings. The pavement markings are generally in fair or good condition. There is

adequate illumination and access from the parking lot to the building or amenities on the property.

Dimensions of perpendicular/parallel parking spaces within all three lots do not meet size requirements under existing City of Vaughan By-law 1-88 (6.0m x 2.7m) and proposed new standards (5.7m x 2.6m) in the March 2010 Parking Standards Review by the IBI Group.

3.2.1.2 *Private Parking*

Overall parking facilities did not have any visible drainage issues, and many of them were newly paved and had cracks sealed indicating good state of maintenance. Out of 28 private off-street parking facilities, 9 were unmarked paved or gravel lots. The pavement markings in the remaining parking lots were found to be in good condition except at the following locations where the markings were difficult to see (i.e. poor conditions):

- Remax West Realty Inc. Adamo Colella (10473 & 10459 Islington Avenue)
- Nuage Med Spa Plaza (10496 Islington Avenue)

Parking space dimensions within most paved and marked lots do not conform to the parallel/perpendicular stall size requirements under City of Vaughan By-law 1-88 (6.0m x 2.7m), except at the Kleinburg Public School and at the Registered Massage Therapist lots. The length of the stalls is generally shorter than the required 6.0m. The March 2010 Parking Standards Review in the IBI Group report proposes new standards for parallel/perpendicular spaces (5.7m x 2.6m) in line with other jurisdictions, such as Vancouver and Toronto. Parking stalls within 7 of the 17 private lots with marked spaces meet the stall size requirements under the proposed new standards. Stalls that do not meet the proposed new standards were generally found to be shorter in length than the required 5.7m.

While signage inside the parking lots was deemed to be adequate (see **Section 3.2.2 – Parking Restrictions** for further details on signage), there was a clear lack of directional and wayfinding signage at the vehicular level to available off-street parking amenities.

Most parking lots provide direct access to the business(es) or building(s) on the property and provide adequate illumination.

3.2.2 *Parking Restrictions*

Under the provisions of City of Vaughan Parking By-Law 064-2019 exacted May 1, 2019 on-street parking is generally (i.e. without a valid permit for the date/time) allowed for up to 3 hours and completely prohibited between 2:00 AM. and 6:00 AM. There are “no parking” signs installed along some sections of Islington Avenue, Nashville Road, Kellam Street and Napier Street, which are noted in **Figure 3-3**.

As described earlier, illumination is poor on the north side of Kellam Street, close to its intersection with Napier Street, where no parking signs are installed. Site observations indicate difficulty in seeing the no-parking signage along the subject section of Kellam Street.

In the off-street parking supply, overnight parking is not permitted at the Pierre Berton the Heritage Centre and the Kleinburg Public School parking lots. As most off-street parking facilities are private, several of the lots have “customer-only parking signs”. In some

private off-street parking facilities, there are time restrictions on parking, as indicated in **Figure 3-3**.

3.2.3 Bicycle Parking

There are no on-street bicycle parking facilities. Only a handful of off-street parking lots offer cycling facilities as listed in the table below and mapped in **Figure 3-6**.

Table 3.7 Facilities with Bike Parking

Off-street Facility	Lot #	Address	Type	Spaces / Stalls
Kleinburg Public Library	1	10341 Islington Avenue	Bike Rack	5
Kleinburg Public School	2	10391 Islington Avenue	Bike Rack	46
Immanuel Florist Plaza	4	10423 Islington Avenue	Bike Rack	7
Starbucks	14	10499 Islington Avenue	Bike Rack	5
Chroma Hair One	19	10525 Islington Avenue	Bike Parking Ring	6
Total number of bicycle parking spaces / stalls				69





Figure 3-3 Study Area Parking Restrictions



3.3 TRANSPORTATION AND SAFETY

3.3.1 Road Network

Islington Avenue is the primary spine through Kleinburg, connecting to Regional arterial roadways to the north and south of the study area. Other collector roads within the study area, Stegman's Mill Road and Nashville Road, are east-west roadways that connect to Islington Avenue at T-intersections. All 3 collector roadways have a 2-lane cross section (1 lane per direction). Based on typical vehicular capacities of roadways indicated in the City's 2012 TMP, collector roads can carry 500 vehicles per hour per lane (vphpl).

Local roads make up the remaining elements of the road network within the study area and include, John Street, Kellam Street, Napier Street, Lester B. Pearson Street and Pennon Road.

Islington Avenue, Nashville Road and Stegman's Mill Road are designated as Minor Collectors (24m proposed / 23m existing rights-of-way) within the City's Official Plan. Islington Avenue from south of the study area to just north of Nashville Road and Nashville Road through the study area are currently signed at speed limits of 40 km/h. A Community Safety Zone is demarcated between north of Stegman Mill's Road southerly past the study limits. Traffic calming measures through the school zone and commercial core includes speed bumps with an advisory speed of 30 km/h. Stegman's Mill Road is signed at 50 km/h east of Islington Avenue.

There are unsignalized intersections within the study area. **Figure 3-4** illustrates the intersection lane configurations and traffic control at the key intersections of collector roads within the area.

Through the City's Traffic By-law 284-94, heavy traffic is currently prohibited on Islington Avenue south of Kleinburg, between Major Mackenzie Drive West and Highway 27, and on Nashville Road between Islington Avenue and Highway 27. Through By-law 169-2019 enacted in November 2019, sections of Stegman's Mill Road from Islington Avenue, easterly to Kleinburg Summit Way also prohibits heavy traffic. As such heavy trucks observed to have difficulty in completing left- and right-turning manoeuvres at the intersection of Islington and Stegman's Mill Road will no longer be permitted in Kleinburg.

The boulevard space along Islington Avenue is shared by street furniture, including landscaping and gateway effects at the intersection of Nashville Road. York Region Transit (YRT) bus stops are also located along Islington Avenue within the boulevard on the near side of the intersections.



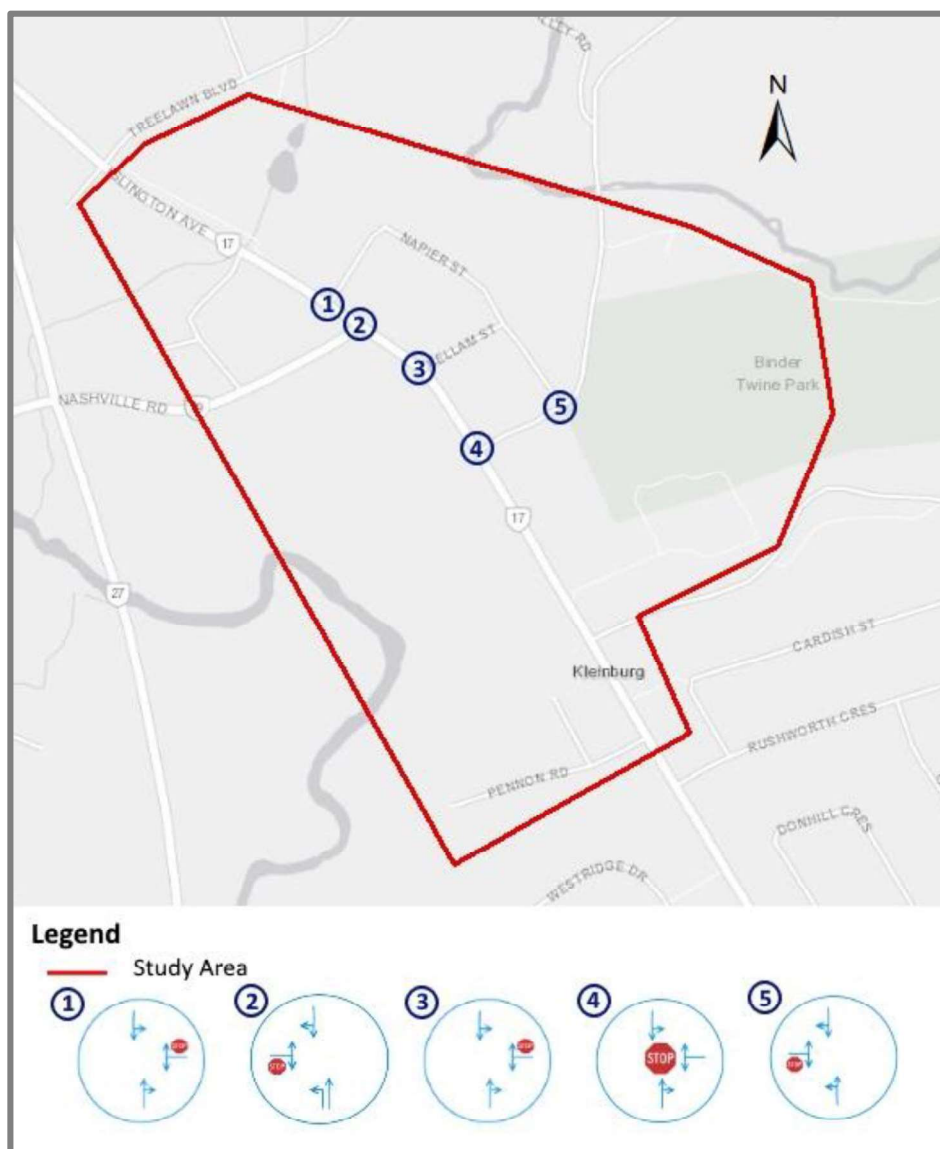


Figure 3-4 Study Area Intersections

3.3.2 Active Transportation and Transit Network

Kleinburg is located within the western half of Ward 1 Maple/Kleinburg in the City of Vaughan, which is generally bounded by Major Mackenzie Drive/Teston Road/Rutherford Road to the south, Highway 50 to the west, King Vaughan Road to the north and Bathurst Street to the east. The 2016 Transportation Tomorrow Survey (TTS) indicates that over a typical 24-hour weekday period, trips made by Ward 1 residents are primarily vehicular trips, with driver trips making up 71% of all trips, followed by passenger trips making up 14% of all trips. Trips to Ward 1 by residents of the area show similar mode shares as indicated in **Figure 3-5**.

Other modes of travel include local and regional transit, as well walking and cycling, and together make up about 14 and 16% of all trips by Ward 1 residents and all trips to Ward 1, respectively. These statistics, although applicable to the whole of Ward 1, indicate that

there are high levels of personal vehicle use in and around Kleinburg, but that alternative travel modes are also in use. Therefore, when considering the mobility options in the Kleinburg Village Core, there is a need to accommodate the parking needs of multi-modal users, including carpooling and cycling, as well as impacts to foot traffic and transit services.

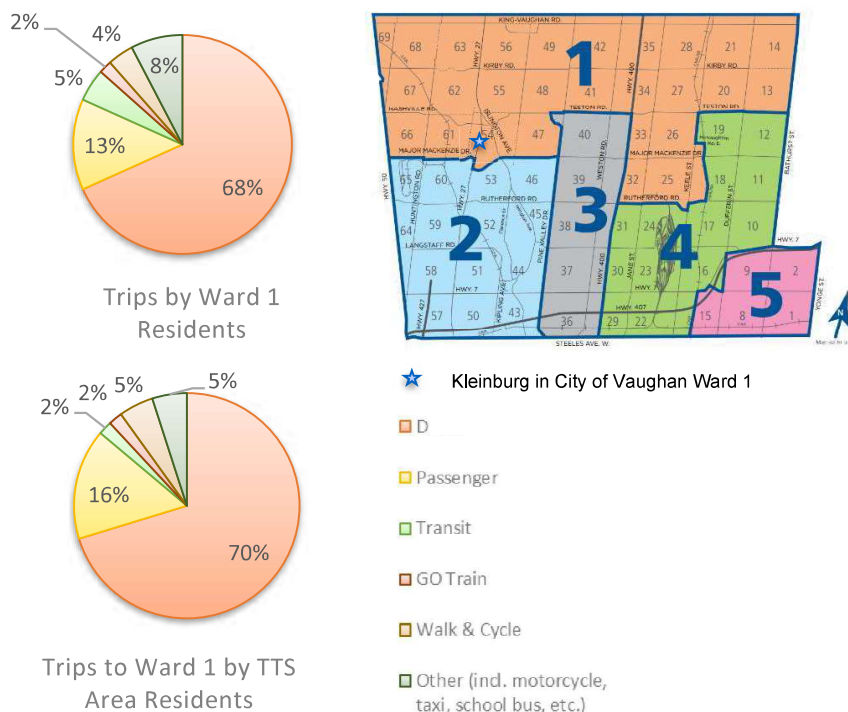


Figure 3-5 Mode Share for Trips to and From Ward 1

Figure 3-6 shows the sidewalk network in Kleinburg which provides access to properties from the main corridors in the study area. However, there are a few gaps in the pedestrian facilities network as well as opportunities to improve overall pedestrian connectivity in the study area:

- There are no sidewalks along the side streets of John Street, Napier Street or Lester B. Pearson Street, which provide driveway accesses to residential properties.
- The sidewalk along the east side of Islington Avenue from 110m north of John Street to Treelawn Boulevard is separated by a grassy boulevard. While there are “no parking” signs along some portion of the adjacent paved interlock concrete boulevard and curb, there are no restrictions to park along the boulevard from Treelawn southerly to 200m north of John Street. For any parked vehicles in this section, access to the sidewalk separated by grassy boulevard is difficult and could be a barrier to using the boulevard space for on-street parking to walk down towards the main commercial areas of the Kleinburg core.

There are limited pedestrian crossings within the study area. Further supported by site observations of jaywalking along Islington Avenue and Nashville Road, there are

opportunities to provide additional mid-block crosswalks or intersection crosswalks (e.g. Islington Avenue and Kellam Street).



Figure 3-6 Active Transportation and Transit in Kleinburg

Overall, sidewalks are 1.5m wide and compliant with the requirements of the Accessibility for Ontarians with Disabilities Act (AODA). A visual inspection of sidewalk infrastructure during site review indicated that the pavement is in good condition throughout the study area. However, the City has a comprehensive program to patrol all sidewalks annually, recording defects which may be potentially dangerous and prioritizing action according to severity. Sidewalk inspections in the study area, between 2012 and 2018, indicate common issues that range in severity, including:

- Interlock (concrete pavement) defects
- Cut joint deflection
- Cracks
- Spalling, (requirements to) replace panel and egress

It is assumed that the City’s inspection program continues to monitor and address these sidewalk issues according to needs and priorities and compiling a list of sidewalk issues/repairs is beyond the scope of this study.

Figure 3-6 also shows a bike route through Kleinburg extends from the Bindertwine Trail westerly along Stegman’s Mill Road, north on Islington Avenue and West on Nashville Road. There are “Share the Road” signs along Nashville Road. Aside from this signage, there are no dedicated cycling facilities in the Village.

As for transit, there is currently one York Region Transit (YRT) bus route servicing Kleinburg in the study area (limited service on Route 13 Islington). The north-south route on Islington Avenue serves bus stops on either side of Islington Avenue and via a loop also serves the bus stop at the intersection of Nashville Road and Highway 27 west of the

study area. Route 13 is operational on weekdays during the morning and afternoon peak periods.

3.3.3 Traffic Conditions

24-hour Automatic Traffic Recorder (ATR) data containing traffic volumes, vehicle classification and traffic speeds collected by the City were available for segments of Islington Avenue and Nashville Road. These data were collected at various times of the year (spring, summer and fall seasons), between 2017 and 2019 for 3 or 5 days of the week. A review of the data showed some key information regarding traffic composition, as well as daily variations and peak hour vehicular and cyclist traffic volumes.



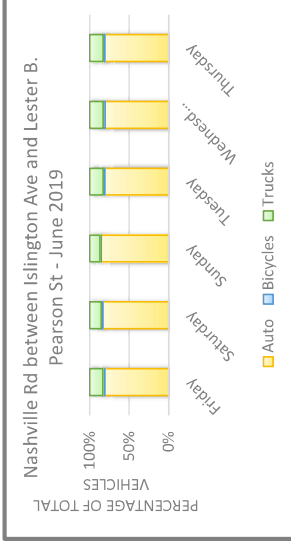
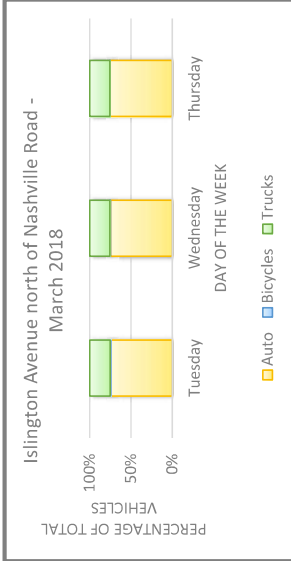
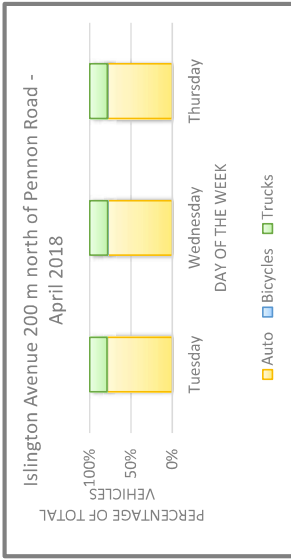


Figure 3-7 Traffic Composition

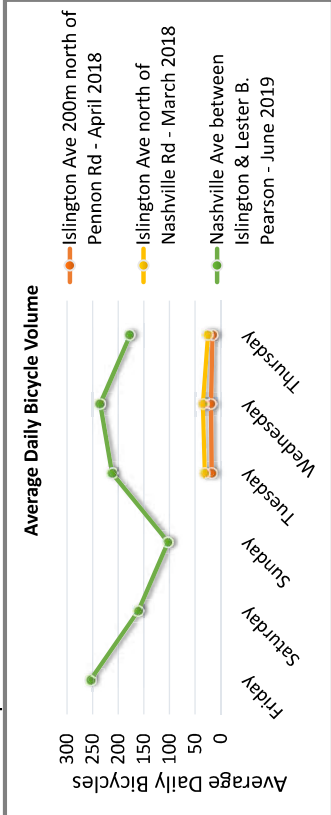
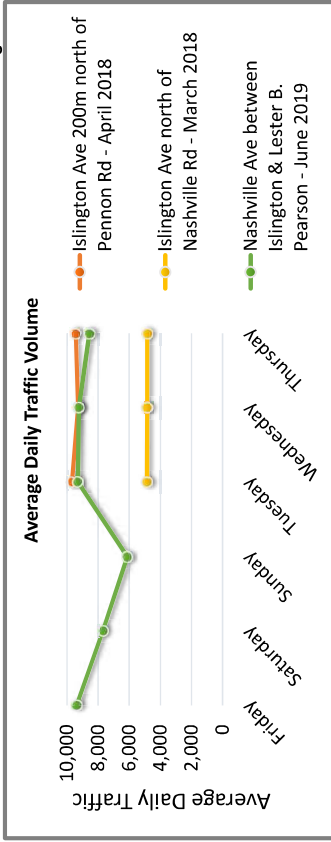


Figure 3-8 Daily Traffic and Bicycle Volumes

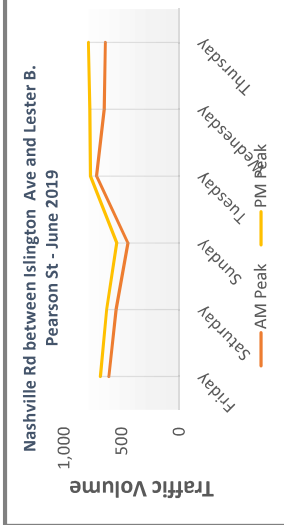
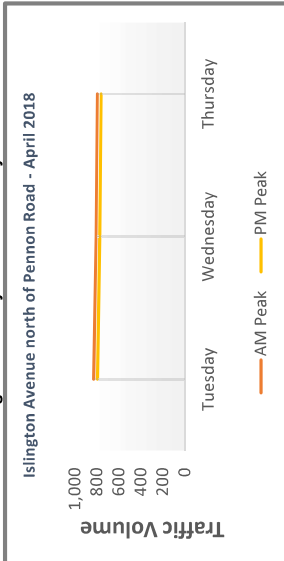
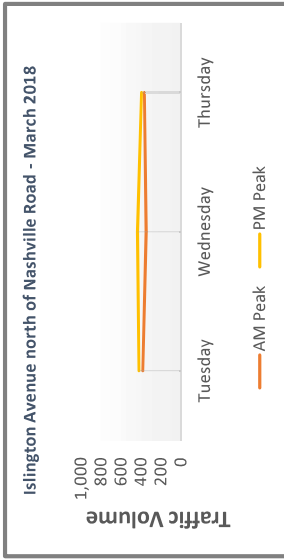


Figure 3-9 Peak Hour Traffic and Bicycle Volumes

As shown in **Figure 3-7**, traffic along Islington Avenue is primarily composed of automobiles and trucks, with very low volumes of bicycles. During weekdays in March 2018, less than 40 bicycles were recorded passing through Islington Avenue north of Nashville daily. There were even fewer (less than 20 daily) passing through Islington Avenue north of Pennon Road in April 2019. The highest proportion of truck traffic was also observed in this section. The highest proportion of bicycles were observed along Nashville Road between Islington and Lester B. Pearson Street during a Wednesday in June 2019 where 2.7% of vehicles on the road were composed of bicycles. Based on **Figure 3-8**, the daily highest number of bicycles (254 bicycles) observed on Nashville Road occurred on a Friday.

Daily traffic volumes are noted to be highest at Islington Avenue just north of Pennon Road (close to 10,000 vehicles per day). Nashville Road was also observed to carry close to 10,000 vehicles per day during the weekdays and relatively lower volumes on the weekends. As shown in **Figure 3-9**, the AM and PM peak-period volumes are very close in magnitude and approaching 800 vehicles per hour along both Islington Avenue (north of Pennon Road) and Nashville Road (between Islington Avenue and Lester B. Pearson Street) on Tuesday, the busiest day recorded.

While this is not a traffic capacity and operational study, from the review of traffic volumes and comparison with planning level capacities for collector roads noted in the City's 2012 TMP, it is clear that both Islington Avenue and Nashville Road are highly utilized and operating close to capacity during peak hours. In particular, the peak direction of travel on Islington Avenue during the PM peak hour experiences at-capacity conditions. The traffic volumes collected on Islington Avenue north of Pennon Road indicate 480 – 495 vehicles travelled northbound during the afternoon peak hour between April 10, 2018 and April 12, 2019, which is the effective capacity of Islington Avenue (500 vphpl). This is supported by queuing observed in the field – specifically, along northbound Islington Avenue in the weekday afternoon peak period between 4 PM to 6 PM. Queues were observed to stretch from Stegman's Mill Road to beyond the study area limits to Bindertwine Boulevard. Detailed observations of traffic operations made during site visits are provided in **Section 5.2 – Site Observations** and **Appendix C – Parking Survey Site Observations**.

Islington Avenue provides a through corridor for vehicles travelling north through Kleinburg and surrounding areas, while Nashville Road provides an east-west connection to Highway 50. The respective parallel routes along Highway 27 and Major Mackenzie Drive West are potentially longer alternative routes. Although no traffic data are available for Stegman's Mill Road, this roadway similarly provides east-west connectivity through the area. As a result, both the intersections of Islington Avenue with Nashville Road and Stegman's Mill Road within the study area are highly utilized.

3.3.4 Speed and Collision Review

Average speed of traffic is reported to be 47 – 49 km/h on Islington Avenue and 41 km/h on Nashville Road. Approximately 15% of reported speeds on Islington Avenue exceeded 56 km/h. Both roads have a posted speed limit of 40 km/h through the study area and as such present evidence that on average vehicles travel at speeds higher than they should on Islington Avenue.

Within the study area, 2 Property Damage Only (PDO) collisions have been reported at the intersection of Islington Avenue and Nashville Road between 2014 and 2015:

- The collision in 2014 involved an automobile and a pick-up truck and was a result of the driver following too close. It occurred in dark conditions (5:50 PM) with loose snow on the ground.
- The collision in 2015 involved an automobile and a bicycle and was a result of the driver being inattentive, failed to yield while turning left. It occurred during the daytime (3:25 PM) with dry conditions.

Based on the above speed and collision review, there are potential safety concerns in the area due resulting from speeding, especially in mixed traffic that includes pedestrians and cyclists, as well as the Kleinburg Public School community.

3.4 SUMMARY OF EXISTING CONDITIONS

The existing land use, parking and multi-modal travel conditions in Kleinburg presented in this section have been summarized below:

Land Use

A small historic village, Kleinburg occupies a narrow section of hilly landscape located between two branches of the Humber River. Islington Avenue is the main artery through the Kleinburg core and provides access to small scale retail and services within commercial plazas, restaurants, offices and institutional land uses, including the Kleinburg Public School and the Pierre Berton Heritage Centre as well as recreational facilities at Bindertwine Park. Along with commercial establishments, there are several City heritage properties within the study area with direct access from Islington Avenue, which attract visitors to the area. The wider study area surrounding the main streets include residential homes.

Parking Conditions

Although a total of 690 non-residential parking spaces are available in Kleinburg (excluding Bindertwine Park), the majority of the parking spaces are within private parking lots, accessible to patrons of the commercial plazas, retail/restaurant or service land uses to which they belong. A total of 129 public on-street parking spaces are available in Kleinburg, along with 64 public off-street spaces in Bindertwine Park, which is more than a 5-minute walk away from the village core on a steep grade along Stegman's Mill Road. Public on-street parking is either provided or permitted along Islington Avenue, Nashville Road, Kellam Street and Napier Street without any payment or metering systems and are unmarked. Publicly owned parking spaces are available at the Kleinburg Library and the Pierre Berton Heritage Centre. These parking spaces are intended for use by patrons of the respective establishments.

There are 69 bike parking stalls available, most of which are located within Kleinburg Public School parking lot. Off-street parking lots (3 public, 23 private) make up many of the total parking spaces within Kleinburg. There are no on-street bicycle parking facilities.

Overall, on-street and off-street parking amenities in Kleinburg are in good physical condition with adequate pedestrian connectivity to buildings or the street. On-street spaces are marked only on Kellam Street and comply with the parallel/lay-by parking space dimensions under existing City of Vaughan By-Law 123-244 and proposed standards in the 2010 IBI Draft Parking Standards. Parking spaces within most marked off-street parking lots are slightly smaller than required by existing City of Vaughan By-Law. Parking spaces in 7 out of 17 marked parking lots meet the proposed dimensions in

the 2010 IBI Draft Parking Standards. Other issues noted during on-site reviews include the following:

On-Street Parking:

- Inadequate positive guidance for drivers, including signage, pavement markings, and delineated regular and accessible parking spaces
- Insufficient illumination along Napier street where parking is permitted on the east side and poor visibility parking restrictions on the north side of Kellam Street

Off Street Parking

- Insufficient directional and wayfinding signage at the vehicular level to available off-street parking amenities
- Faded pavement markings, including for accessible stalls at few off-street parking lots (the Pierre Berton Heritage Centre and the Bindertwine Park)

Multi-modal Transportation Conditions

The road network in Kleinburg is made up of collector roads and local roads. There is a sidewalk network which provides access to properties from the main corridors in the study area, with few gaps in the network. There are no dedicated cycling facilities within Kleinburg. A limited service York Region Transit bus route runs through the study area. Specific issues noted in the multi-modal travel options in Kleinburg include the following:

Vehicular Traffic:

- Islington Avenue and Nashville Road operate close to capacity during peak hours and the only collisions reported in the study area within the last 5 years occurred at their intersection.
- The northbound direction of travel on Islington Avenue during the afternoon peak hour experiences at-capacity conditions with queues stretching from Stegman's Mill Road to south of the study area. Vehicles were seen using the parallel Napier Street as a by-pass and speeding.
- Due to the two-lane cross-sections of area roads, heavy vehicles (trucks and school buses) encroach onto the opposing lane when turning and pose a safety concern for parked vehicles and sidewalk users.

Active Transportation

- Vehicles parked on the boulevards along Islington Avenue consistently encroach adjacent sidewalks in the absence of any physical separation.
- Lack of sidewalk connectivity to the boulevard along Islington Avenue from south of Treelawn Boulevard to 200m north of John Street where vehicles were noted to park during multiple surveys.
- Limited east-to-west pedestrian crossing opportunities along Islington Avenue, often resulting in jaywalking.



4

4 PHASE 1 CONSULTATION

4.1 CONSULTATION PURPOSE AND PROCESS

The Consultation and Engagement component of the Parking Strategy Review for Kleinburg Village is vital to the success of the overall project. It requires a multi-faceted approach to reach the various stakeholder groups and segments of the population.

A key component of the study is to convey the study information meaningfully to the audience, including the public, stakeholders, Councillors, and City staff, as well as, to collect and incorporate input from them throughout the study. Therefore, the study includes proactive consultation and engagement with stakeholder groups and the public to obtain a detailed understanding of the parking issues and requirements. The goal is to exceed basic consultation requirements and seek opportunities to involve and collaborate with stakeholders through a more interactive approach.

Engagement is also critical to building consensus for the way forward, as the City of Vaughan/ Kleinburg Village will need to partner with Council and internal departments and external interest groups, agencies and the general public (residents and visitors/tourists) in order to achieve the study objectives. Continuing stakeholder involvement throughout the study will be critical to ensuring that the public fully understands the proposed parking strategy and can subsequently provide meaningful feedback.

Phase 1 of the Consultation and Engagement process was developed to involve stakeholders and public to better understand the current existing parking issues and to create a shared vision of the future, with a wide range of stakeholders being consulted and engaged to create a collaborative understanding of the challenging decisions that must be made and the trade-offs that must be considered.

The purpose of the Phase 1/ Session #1 meetings was to:

- Introduce the Kleinburg Parking Strategy Review Study

- Inform the public, agencies and stakeholders on the study intents and purposes, process, outcomes and work completed to date
- Gather input on existing conditions and parking issues and needs and opportunities in the study area

All materials used for Phase 1 Consultation are included in **Appendix B – Phase 1 Public Consultation Materials**.

Stakeholders for this study include:

- **Members of the public:** Individual members of the public including Kleinburg residents, individual citizens, local businesses, tourists, special interest groups or whose interest may be centered on specific issues and concerns
- City of Vaughan Staff / Departments
- **Technical Agencies:** York Region Transit, York Region District School Board
- **Interest Groups:** KBIA and KARA, Kleinburg Library, Kleinburg Public School
- Members of Council: Each (local) member of City Council and Regional Council member

4.2 STAKEHOLDER ENGAGEMENT #1

The Agency/Stakeholder Engagement Session #1 was held on September 17, 2019 at the City of Vaughan administrative office. There were 24 participants plus the Project Team that attended the session.

The comments that were provided by participants for further consideration included:

- Businesses/buildings are deficient of parking and the situation has worsened over the years, especially for residents, as more businesses have opened and more services in the community continue to attract visitors.
- Parking at Kleinburg Public School (KPS) is designated for school staff. Currently, there are 50 staff and the number will increase to 70, at which point they will not be accommodated within the school parking lot.
- Employees cannot find places to park and end up parking in customer lots. Private lots are being used by patrons of different establishments.
- Kleinburg Public Library parking is acting as a de facto customer lot, which is causing problems for library patrons (e.g., seniors trying to visit the library or parents with children and must park on a side street and walk).
- The walk to and from the Bindertwine Park is on a steep grade and likely not used by people coming to the Kleinburg Village core.
- On-street parking does not look aesthetically pleasing against the building fronts and unique architecture of Kleinburg and consideration should be given to building a parking lot behind the street, comparable to Unionville in the City of Markham.
- Parking is very confusing, especially since on-street parking is not delineated.

- The success of the Village core depends on enabling pedestrian movements and creating opportunities for a great public realm/environment in the area.
- School buses cannot turn without encroaching onto opposing lanes (at Islington Avenue and Stegman's Mill Road), or complete the turning movement if vehicles are parked close to the intersection/blocking the street.
- The on-going construction in the area adds to the issues. There are multiple schools in the area and traffic is heavy in both directions of travel on Islington Avenue.
- The school experiences traffic operations issues as vehicles and school buses try to enter/exit the school driveway during morning and afternoon drop off and pickup.
- Islington Avenue is a through corridor with steady traffic flow and provides a segue to travel from Stegman's Mill Road to Teston Road.
- Post office boxes for Kleinburg are located at the plaza on Islington Avenue, which contributes to congestion in the area.
- There is limited public transit in Kleinburg resulting in a car-centric culture. In 2016 York Region Transit (YRT) reviewed transit needs and there was low demand in Kleinburg at the time.
- Existing conditions pose a safety problem for vulnerable road users as the boulevard space is shared between vehicles, pedestrians and cyclists, and visibility is constrained in some locations.
- Currently there is no municipally owned cycling infrastructure within the Kleinburg Village core.
- The 2012 Islington Avenue Streetscape Master Plan provides the vision and framework to support cycling and public realm improvements. It is important to include this document as part of the parking strategy review.
- There is no paid parking in Kleinburg. Enforcement is based on complaint and response.
- Consider applying strategies and technology to inform users about parking locations and available parking spaces within an area.

4.3 PUBLIC INFORMATION AND FEEDBACK SESSION #1

Seventeen people attended the Public Information and Feedback Session #1 that was held on September 26, 2019 at the Pierre Berton Heritage Centre in Kleinburg. The attendees were a mix of residents and business owners.

The session included overview project presentation boards as well as facilitated interactive boards to gather input on the existing conditions and key issues / topics which should be addressed through the Study.

Participants had the opportunity to provide comments on parking and traffic related issues along with participating or filling in interactive boards that were part of the presentation materials. An overview of the comments that were received is provided below:

- Traffic issues at the intersection of Stegman’s Mill Road/Kellam Street and Islington Avenue Heavy vehicles restrictions signage exist; however, there is limited enforcement.
- Develop a gateway concept that has a centralized area for parking.
- Searching for available parking is generating more traffic congestion on Islington Avenue.
- Cycling groups often meet at Starbucks and park around Kellam Street for long periods of time.
- Vehicles not obeying stop-control at the intersection of Nashville Road and Islington Avenue.
- New developments appear to be approved with inadequate parking.
- Parking spaces are constrained and too tight making it difficult to park.
- Parking at Post Office is insufficient combined with the bank and other store customers using the parking spaces.
- Parking is a challenge for meetings at the Pierre Berton Heritage Centre since the adjacent municipal lot does not permit public parking.
- Weddings (generally in the proximity of the Doctor’s House) cause an influx of people in Kleinburg. Visitors have blocked parking spaces and disrupted traffic flow while taking photos along the road.

4.4 ONLINE SURVEY #1

Online Survey # 1 is one of two online surveys planned for this study. The purpose of this first survey was to collect input on current parking needs, including issues, opportunities and desired outcomes.

This survey was available online from September 17, 2019 to October 31, 2019. A total of 238 responses were collected via the SurveyMonkey platform.

A complete set of Online Survey #1 questions are provided in **Appendix B – Phase 1 Public Consultation Materials**. A comprehensive analysis of all Online Survey results is documented in **Section 6 – Online and Pedestrian Intercept Surveys** of this report.

4.5 ADDITIONAL PUBLIC CONSULTATION AND ENGAGEMENT

4.5.1 Pedestrian Intercept Survey

A pedestrian intercept survey was completed by MP on Thursday, October 10, 2019. The purpose of this survey was to augment the public engagement efforts by giving pedestrians in Kleinburg the opportunity to provide quicker and less detailed information compared to the Online Survey, but key information on parking - where, when, and which establishment they are visiting on that day.

A total of 32 surveys were completed during the peak lunch times from 10 AM to 2 PM and during the evening from 6 PM – 9 PM to capture the people visiting the core for dinner.

More details and a copy of the pedestrian intercept survey questions are included in **Appendix B – Phase 1 Public Consultation Materials**.

4.5.2 KBIA Parking Task Force Meeting

Based on parking issues in the Kleinburg area, KBIA has established a Parking Task Force.

On October 2, 2019, the Project Team and KBIA Task Force met to inform the Task Force on the intents and purpose of the study, the process being used, work completed to date and expected outcomes of the work. In addition, there was an open discussion to gather input on the parking issues and needs and opportunities from the Task Force.

The issues and concerns discussed were comparable to those raised by the KBIA participants attending the Stakeholder Engagement Session #1 and the Public Engagement Session #1.

4.5.3 KBIA Annual General Meeting

On October 29, 2019, the Project Team attended the Annual General Meeting (AGM) to provide a presentation on the study and to obtain feedback.

The objective of the presentation was to inform the KBIA members on the intents and purpose of the study, the process being used, work completed to date, and expected outcomes of the work.





5

5 PARKING DEMAND SURVEY

A critical objective of this Study is to develop an understanding of the current parking supply and demand in Kleinburg and establish the key parking and mobility issues in the study area. Parking demand is assessed via a parking utilization survey, which is a count of the number of parking spaces occupied by a vehicle during specified intervals. Surveys identify locations where the greatest parking demand exists and where parking supply is underutilized.

To meet this objective, parking turnover and demand were surveyed over 12-hour periods in 30-minute increments detailing existing parking activity for on-street, off-street, and bicycle facilities. Surveys were completed during typical weekdays and weekends in the summer and fall seasons, as well as during a special event in late fall, to include seasonal variations in parking demand. During each survey, a detailed log of site observations was also made to support the findings of the survey and provide context for observed needs and issues.

The parking demand survey complements the other avenues used to determine parking needs and mobility options for the study area, such as stakeholder and public engagements sessions, and the Online Survey #1 results discussed in **Section 6 – Online and Pedestrian Intercept Surveys**.

This section reviews the findings of the parking demand survey, as well as an assessment of issues related to parking supply, accessibility, interactions with other modes of travel or access, and operational and safety concerns.

5.1 SURVEY METHODOLOGY

Information on parking activity, including occupancy, duration of stay, turnover rates and parking violations, is typically collected using licence plate surveys. For this study, licence

plate surveys were completed by recording partial licence plate numbers at regular intervals of 30-minutes along specified routes through Kleinburg, that covered all on-street and off-street parking facilities shown in **Figure 3-2 – Parking Space Inventory**. The licence plate surveys were conducted on the following days:

Table 5.1 Parking Demand Surveys – Dates and Times

Season / Event	Date	Day	Time	Total Survey Duration
Summer	August 22, 2019	Thursday	9:00 AM to 9:00 PM	12 Hours
	August 24, 2019	Saturday	9:00 AM to 9:00 PM	12 Hours
Fall	October 24, 2019	Thursday	8:00 AM to 9:00 PM	13 Hours
	October 25, 2019	Saturday	9:00 AM to 9:00 PM	12 Hours
Special Event - Christmas Tree Lighting	November 29, 2019	Friday	5:00 PM to 9:00 PM	4 Hours

Key measures of parking demand and supply developed from the parking survey data at each parking facility include:

- **Accumulation** – The parking accumulation is the total number of vehicles parked at any instant of time and is presented as an accumulation graph over the survey period.
- **Peak Occupancy** – Parking occupancy is the ratio of the number of parking spaces occupied to the total spaces available expressed as a percentage. For this Study, the parking occupancy is presented for the peak 30-minute period of each survey day, during which the maximum parking accumulation was observed.
- **Turnover** – Parking turnover is the average number of vehicles using a space during the survey period. For this study the turnover values are calculated for each day of the survey at each off-street private parking lot and along sections of on-street boulevard parking along Islington Avenue, Nashville Road and other side streets.
- **Duration of Stay** – The duration of stay is the average length of time vehicles use parking spaces and is related to turnover, as areas of high turnover likely result from parking for short durations.

The above measures in conjunction with site observations during the surveys provide time-based data regarding availability of parking, extent of usage and parking.

Site Observations

Observations related to parking, multi-modal traffic operations and general conditions in Kleinburg have been documented during the site inventory and each licence plate survey in August, October and November 2019. Detailed records of the observations can be

found in **Appendix C – Parking Survey Site Observations**. Key trends are highlighted in the sections that follow.

5.1.1 Parking Usage / Parking Needs

Cars regularly illegally parked along Kellam Street on sidewalk due to short visits to Starbucks. Illegal parking spiked during evening of surveyed summer weekend along the north and south sides of Kellam Street east of Starbucks around 8:00 PM, with live music in front of Starbucks. Pedestrian / visitor activity was also noticeably high around the intersection of Islington Avenue and Kellam Street.

Limos were illegally parked along Nashville Road and Kellam Street during wedding events during summer and fall surveys. Wedding parties also parked at the Kleinburg Public School bus drop off zone to take photos at the historical Kleinburg Railway Station.

Illegal Parking



5.1.2 Traffic Operations / Parking Interactions

- Vehicles backing in and out of parking lots, especially close to the intersection of Islington Avenue and Nashville Road, and were observed to cause traffic disruptions along Islington Avenue.
- Vehicles were undecided about which parking lot to turn into between Stegman's Mill Road and John Street and briefly held up traffic on Islington.

Heavy Vehicles on Nashville Road, Stegman's Mill Road and Islington Avenue



High truck volumes observed along Nashville Road and Stegman's Mill Road. Trucks and large vehicles make wide turns impacting crossing traffic on Islington Avenue. Narrow roads and two-lane cross-sections result in trucks encroaching opposing lane to complete turning movements.

Detours for closures on Pine Valley Drive caused more trucks to use Stegman's Mill Road to turn onto Islington Avenue during the summer surveys.

During the summer survey, large municipal services vehicles (e.g. garbage trucks) were observed to hold up traffic along Islington Avenue during the midday peak period.

High traffic volumes and long queues were observed at the intersection of Islington Avenue and Stegman's Mill Road in the afternoon peak period approximately between 4:00 and 6:00 PM in the summer and 3:00 and 6:00 in the fall. During the fall surveys, the northbound queues along Islington Avenue can extend to Bindertwine Boulevard.

Surveyors noted that vehicles bypassed Islington Avenue from Nashville Road to Stegman's Mill Road via John Street and Napier Street to avoid the stop-signs as well as the slow-moving traffic on Islington Avenue. Vehicles taking this bypass route were seen to be speeding along Napier Street.

Queuing on Islington Avenue and Stegman's Mill Road



Long queues were also observed along Queues along Stegman's Mill Road extending to Napier Street during the summer surveys.

5.1.3 Safety

Vehicles parked on-street often encroach onto the sidewalk and are hazardous for pedestrians as well as cyclists observed to ride on the sidewalk.

During the summer surveys, area residents expressed a safety concern for their children who walk/play on the streets when it gets busy around dusk at Islington/Kellam.

Pedestrian / Cyclist Safety



Illumination along Kellam and Napier Street

- A member of the public indicated that vehicles frequently speed at night on Napier Street, and vehicles sometimes park on both sides of the road even though it is illegal, making it difficult for drivers, and particularly emergency vehicles, to get through. Combined with the lack of streetlights around Kellam Street and Napier Street, there is a safety concern at this location.
- Additionally, visitors/tourists are often unable to see the no-parking signs along the north of Kellam Street due to poor lighting conditions in this area.

Traffic Control



During the summer surveys, enforcement officers were observed to bring vehicles to a complete stop at the intersection of Islington Avenue with Nashville Road, indicating there is an existing traffic control compliance issue at this location.

Due to limited east-west crossing opportunities along Islington Avenue, several pedestrians were observed jaywalking, especially at the intersection of Islington Avenue and Kellam Street.

5.1.4 Active Transportation

The pedestrian activity in Kleinburg was generated by shoppers, diners and tourists. More pedestrian activities were observed during the summer compared to the fall. During the summer weekend survey, there were many pedestrians in the area around the intersection of Islington Avenue and Kellam Street around 8:00 PM.

A higher number of visitors/tourists were seen on the weekend in comparison to the weekday, including a tourist bus seen to arrive at noon during the fall weekend survey.

School children were observed to be walking to cafes/coffee shops during lunch hour during the fall weekday survey.

Seasonal Variation in Pedestrian Activity



Most cycling activity was observed during the typical summer weekend survey throughout the day. Not many bikes were observed stopping in Kleinburg and most appeared to be passing through.

Bikes were seen leaning against The Old Confectionary Hall as people walked along Islington Avenue.

Cycling Activity and Parking Needs



5.1.5 Kleinburg Public School Operations (during fall surveys)

Drop-Off/Pick-up Operations

Pick-up/drop-off periods are well-organized with school staff assisting school buses and parents/passenger cars. Buses arrive/depart the school area within 15 minutes in both morning/afternoon periods.



Some parents were observed to be parked in Pierre Berton Heritage Centre parking lot. Up to 3 vehicles were observed to be parked along the driveway entrance to McMichael Art Gallery.

In the afternoon, parents were observed to be present in the school parking lot beginning at 2:35 PM, forming up to 3 side-by-side lines of cars in front of the pick-up/drop off-area.

The majority of cars parked on-street in front of the school belong to school staff who were observed to park beginning at approximately 7:45 AM. Based on the observations, MP followed up with the Kleinburg Public School (KPS) to confirm any parking capacity issues known to school staff. The School indicated that staff have been known to experience a parking shortage if they arrive late (for example, they might be at a meeting or an appointment and arriving once school has started). There is currently a YMCA daycare on-site and daycare staff regularly have difficulty finding parking spots as their shifts are often midday. The School currently has 45 staff members, 8 student teachers who require parking spots, while the daycare has 7 staff members. There are 44 spaces in the school parking lot.

5.1.6 Observations specific to the Christmas Tree Lighting Special Event

The greatest on-street parking usage was observed between 7 – 8:30 PM. The Tree Lighting took place at 8:00 PM. The number of cars parked on-street on Islington, north of John Street and on Napier Street reduced significantly after 8:30 PM.

Vehicles were parked along Islington Ave on the east side, from north of John Street to just south of Treelawn Boulevard. There were illegally parked cars along the east side of Islington Avenue along stretches where parking is prohibited. No special parking exemptions were seen to be in place at this time. Vehicles also parked at the north end of Napier Street, close to Kline House where the Tree lighting took place.

On-Street Parking Usage / Peaking Characteristics



Some parking lots were observed to be at or near capacity – at RBC Bank (7 – 8:30 PM), Immanuel Florist (5 – 9 PM), Pierre Berton Heritage Centre (5 – 9 PM) and the Kleinburg public School (6 – 8 PM). The parking lots at 10504 Islington Ave (Post Office lot) and 10462 Islington Ave (former Subway) parking lots were being used by people visiting Kleinburg for the special event. They arrived mostly around 7:30 – 8:00 PM and left about 30 minutes after the event.

Visitors of the Christmas Tree Lighting did not use the parking lots at the Doctor's House or Bindertwine Park. This is likely due to Nashville Road being closed from Islington Avenue to the Doctor's House driveway and due to Bindertwine Park being a long uphill walk from the event.

Off-Street Parking Usage / Peaking Characteristics



5.2 SUMMER PARKING CONDITIONS

Critical parking demand and supply measurements collected during the summer surveys are presented in this section at the area-wide level over the entire survey period, as well as during periods of peak parking demand in Kleinburg.

5.2.1 Area-wide Parking Accumulation and Peak Occupancy

The area-wide parking accumulation provides a picture of total parking inventory and usage within the study area. The accumulation is aggregated by on-street and off-street facilities in Kleinburg. As noted earlier, all on-street parking is public parking, only two off-street lots are publicly owned, while the remaining off-street lots provide private parking.

The figures in this section depict the total parking demand observed across the study area. More detailed disaggregated results are shown in the sections to follow. Additionally, parking demand throughout the day, expressed as a percentage of parking supply, is included in **Appendix D – Parking Occupancy, Turnover and Average Duration of Stay** for reference. The figures below show the daily variations in parking demand, as well as the time frames during which the peak occupancy occurs.

5.2.1.1 Summer Weekday

During the surveyed weekday in the summer (August 22, 2019), the combined parking accumulation increases gradually from 9:00 AM, to 2:00 PM. A total of 351 parking spaces (i.e. 49% of the available total parking supply) is occupied between 2:00 PM and 2:30 PM, after which the demand tapers and decreases until the end of the survey period. The peak occupancy occurs in the half-hour period starting at 2:00 PM.

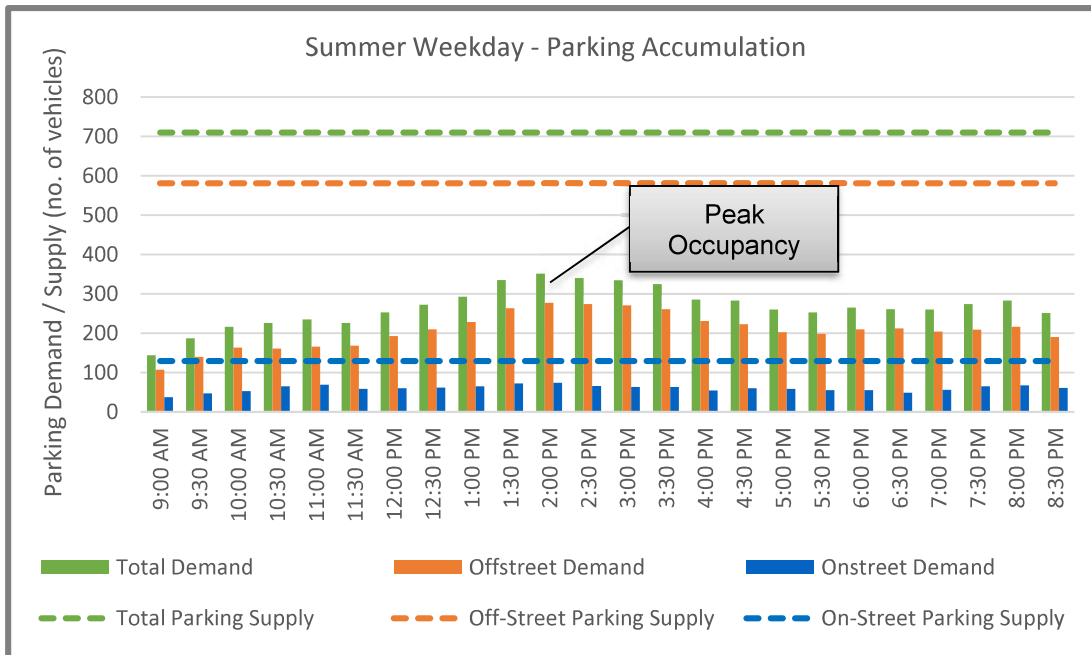


Figure 5-1 Parking Accumulation – Summer Weekday

Table 5.2 Peak Parking Demand – Summer Weekday

Survey Period	Peak Period	Peak Parking Demand (Percent Occupied)			
		All Facilities	Off-Street		On-Street
			Private	Publicly Owned	Public
Thursday August 22, 2019	2:00 PM – 2:30 PM	351 (49%)	256 (47%)	21 (60%)	74 (57%)

5.2.1.2 **Summer Weekend**

During the summer weekend survey (August 24, 2019), the overall peak parking occupancy was observed from 8:30 PM to 9:00 PM, driven in part by more off-street parking use and use of the Doctor’s House parking lot due to multiple weddings.

On site, the on-street parking demand was seen to rise in the evening as a result of vehicles parking at and around the Starbucks area (both legally and illegally) so that visitors could congregate for a live music act in front of the café as well as visit the café.

The Doctor’s House parking lot was near capacity at the start of the evening and remained so for the rest of the night. Since the Doctor’s House was in heavy use for weddings in the evening only, it was deemed that a midday peak parking occupancy occurs from 2:00 PM to 2:30 PM when on-street facilities are 50% occupied and parking lots other than the Doctor’s House parking lot are also in relatively heavier use than in the evening.

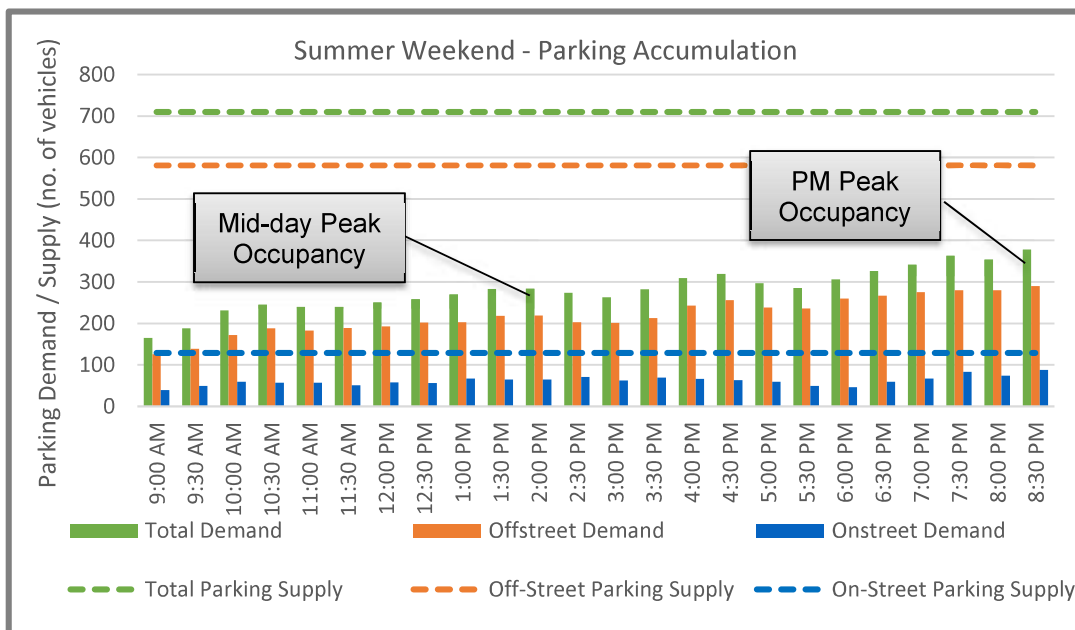


Figure 5-2 Parking Accumulation – Summer Weekend

Table 5.3 Peak Parking Demand – Summer Weekend

Survey Period	Peak Period	Peak Parking Demand (Percent Occupied)			
		All Facilities	Off-Street		On-Street
			Private	Publicly-Owned	Public
Thursday August 24, 2019	Midday Peak 2:00 PM – 2:30 PM	284 (42%)	203 (39%)	16 (46%)	65 (50%)
	PM Peak 8:30 PM – 9:00 PM	378 (55%)	277 (53%)	13 (37%)	88 (68%)

5.2.2 Peak Parking Conditions

Parking occupancy levels for each parking facility during the identified peak periods are mapped in Figure 5-3, Figure 5-4 and Figure 5-5. Tabulated parking occupancies during the peak survey periods can be found in **Appendix D – Parking Occupancy, Turnover and Average Duration of Stay**.

5.2.2.1 Public Parking

As shown in **Table 5.2 - Peak Parking Demand – Summer Weekday** and **Table 5.3 - Peak Parking Demand – Summer Weekend**, less than 70% of all public on-street parking spaces in Kleinburg were occupied during the identified peak periods in summer (weekday and weekend) at the area-wide level, indicating overall reserve capacity. Similarly, publicly owned parking at the Kleinburg Library and the Pierre Berton Heritage Centre remained at low to moderate occupancy levels. However, supply constraints are present in certain sub-areas or segments. Considering industry standards of parking occupancy levels and the data collected in Kleinburg, this report targets an occupancy level of 80% as “effective parking supply”. Beyond 80% occupancy levels, it is anticipated that visitors will need to search longer for parking and experience reduced maneuverability within parking lots.

The highest public on-street parking occupancy was observed during the summer weekend PM peak, driven by a few locations that were heavily utilized (occupancy of 80% to 100%), or utilized beyond effective capacity as a result of illegally parked vehicles (occupancy greater than 100%). These “hotspots” are color coded in **Figure 5-5** and summarized below:

Table 5.4 Public On-Street Parking Hotspots – Summer Weekend (8:30 PM)

Hotspots: Public On-Street Parking	Capacity	No. of Vehicles	Occupancy
<i>Islington Ave East Side - Kellam Street to John Street</i>	11	9	82%
<i>Kellam Street South Side</i>	2	7	350%
<i>Nashville Road South Side - Islington Ave to Lester B. Pearson Street</i>	6	5	83%

Comparable to the weekend PM peak observations, there were more vehicles (five vehicles) parked along Kellam Street than the number of lay-by parking spaces available (two spaces) during the weekend mid-day and weekday peak periods. In fact, a review of the parking occupancies throughout each weekday and weekend survey showed that Kellam Street consistently remained either at capacity or exceeding capacity (i.e. illegally parked vehicles) during each survey period. Illegally parked vehicles observed on-site throughout survey periods were a result of the following visitors:

- Starbucks patrons who are unable to find parking in the Starbucks lot as well as those who attended the live act in front of Starbucks during the weekday PM peak period.
- Pedestrians and visitors enjoying the public realm in Kleinburg, including teenagers and young adults who appeared to use the area as a meeting spot.
- Wedding parties in limousines for photoshoots and events at the Doctor’s House.
- Amongst the publicly owned off-street parking, Kleinburg Library parking lot was found to be 94% occupied during the summer weekday peak period but experienced much lower levels of occupancy during the weekend midday and PM peak periods. During the weekday, the Library parking lot remained above 80% occupancy between 1:00 PM and 4:00 PM. The Kleinburg Library is open during weekdays between 1:00 PM and 8:00 PM.

5.2.2.2 Private Parking

Collectively, private off-street facilities remain more than 45% below capacity during the peak occupancy periods as observed during the summer weekday and weekend peak periods. However, the reserve capacity is not accessible to all visitors, as these parking facilities are private customer-only parking lots. Therefore, there is a greater need to investigate how each parking lot is being used during the peak periods and understand the parking usage, needs and issues at a more site-specific level.

Overall, higher parking demands were observed in private off-street parking facilities during the summer weekday peak period at 2:00 PM. Several private parking lots were identified as hotspots (i.e. locations with occupancy levels beyond 80%).

Table 5.5 Private Parking Demand Hotspots – Summer Weekday (2:00 PM)

Hotspots: Private Parking	Capacity	No. of Vehicles	Occupancy
<i>Dean Veterinary Hospital</i>	6	8	133%
<i>Napa Valley Dental Care</i>	8	9	113%
<i>Kleinburg Pharmacy Plaza</i>	45	41	91%
<i>Cookie Crumble Café Plaza</i>	26	26	100%
<i>Starbucks</i>	7	9	129%

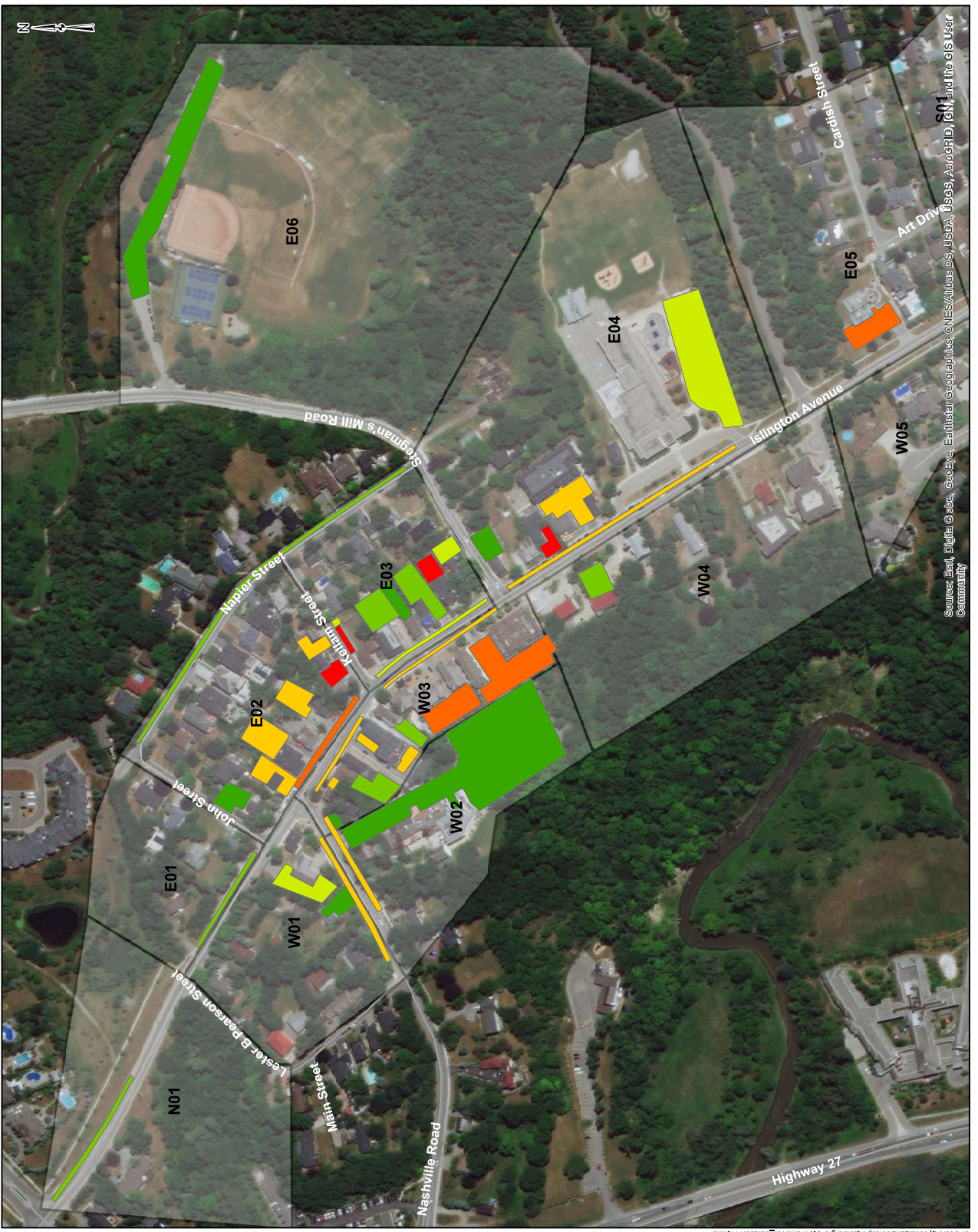
The Starbucks parking lot remained a hotspot during the summer weekend peak periods as well. Additional hotspots identified during the weekend midday peak period at 2.00 PM are listed below and reflect the recreational trip purposes expected during the weekend:

Table 5.6 Additional Private Parking Hotspots – Summer Weekend (2:00 PM)

Hotspots: Private Parking	Capacity	No. of Vehicles	Occupancy
<i>Kleinburg Clinic Plastic Surgery / The Laser Clinic</i>	9	9	100%
<i>Avlyn Gardens Ristorante</i>	19	17	89%
<i>Canada Post Plaza</i>	13	12	92%
<i>Inklein Fitness Centre</i>	6	7	117%

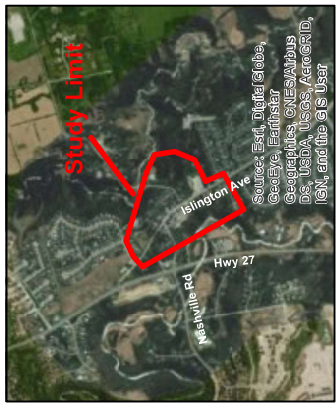
A closer look at the temporal variation of parking occupancy throughout the weekday and weekday survey further highlight how the hotspot locations in Kleinburg can consistently experience high parking demand:

- The Starbucks parking lot is almost always at occupancy levels above 80% and during several periods experienced more parking demand than the available parking supply on both weekdays and weekends.
- The Canada Post Plaza experienced close to or capacity conditions from 9:30 AM to 12:00 noon during the weekday and to 3:00 PM during the weekend.

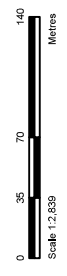


Legend

- Block (E01, E02,...)
- Weekday Peak Occupancy at 2:00 PM
- 0 - 20 %
- 21 - 40 %
- 41 - 60 %
- 61 - 80 %
- 81 - 100 %
- 100% +

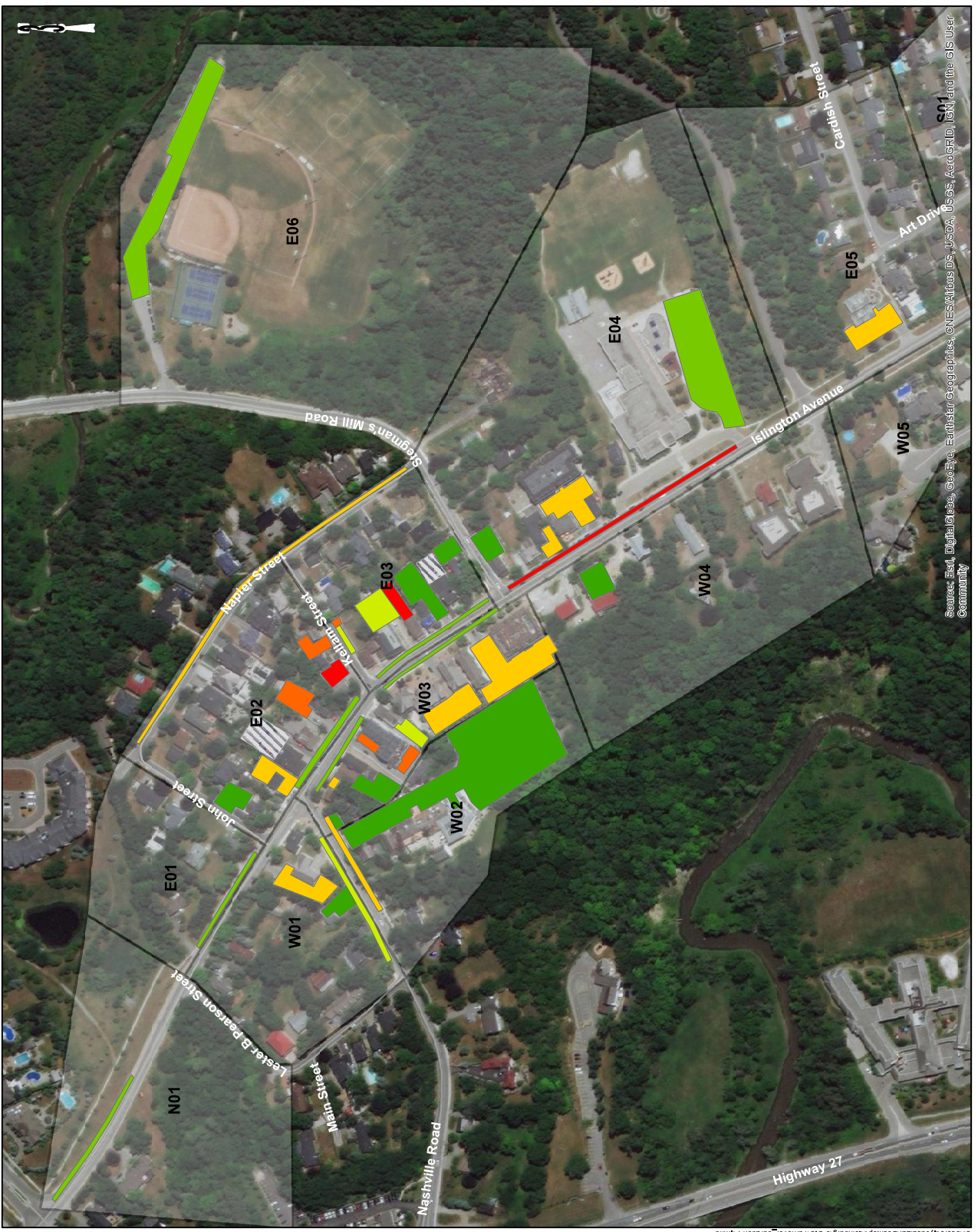


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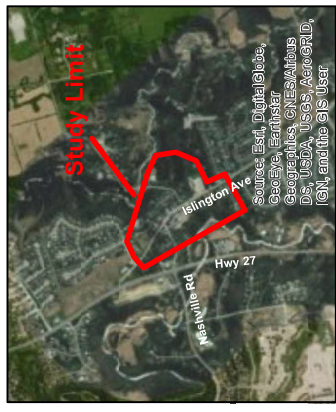
CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Occupancy at Peak	
Summer Survey - Aug 22, 2019, 2:00 PM	
PROJECT NO: BM-19-0231	DATE: Jan. 21, 2020
DRAWN BY: PERRY	CHECKED BY: XX
McINTOSH PERRY Figure 5.3	

Source: Esri, Digital Globe, GeoEye, Earthstar, GeoGraphics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

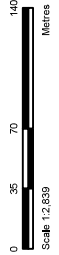


Legend

- Block (E01, E02, ...)
- Weekend Peak Occupancy at 2:00 PM
 - 0 - 20 %
 - 21 - 40 %
 - 41 - 60 %
 - 61 - 80 %
 - 81 - 100 %
 - 100% +
 - Survey Not Available

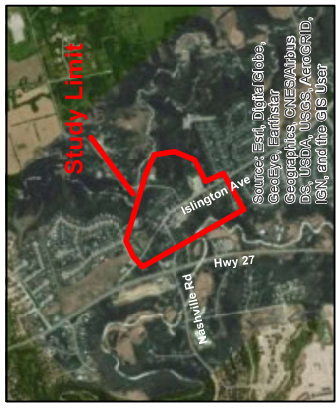
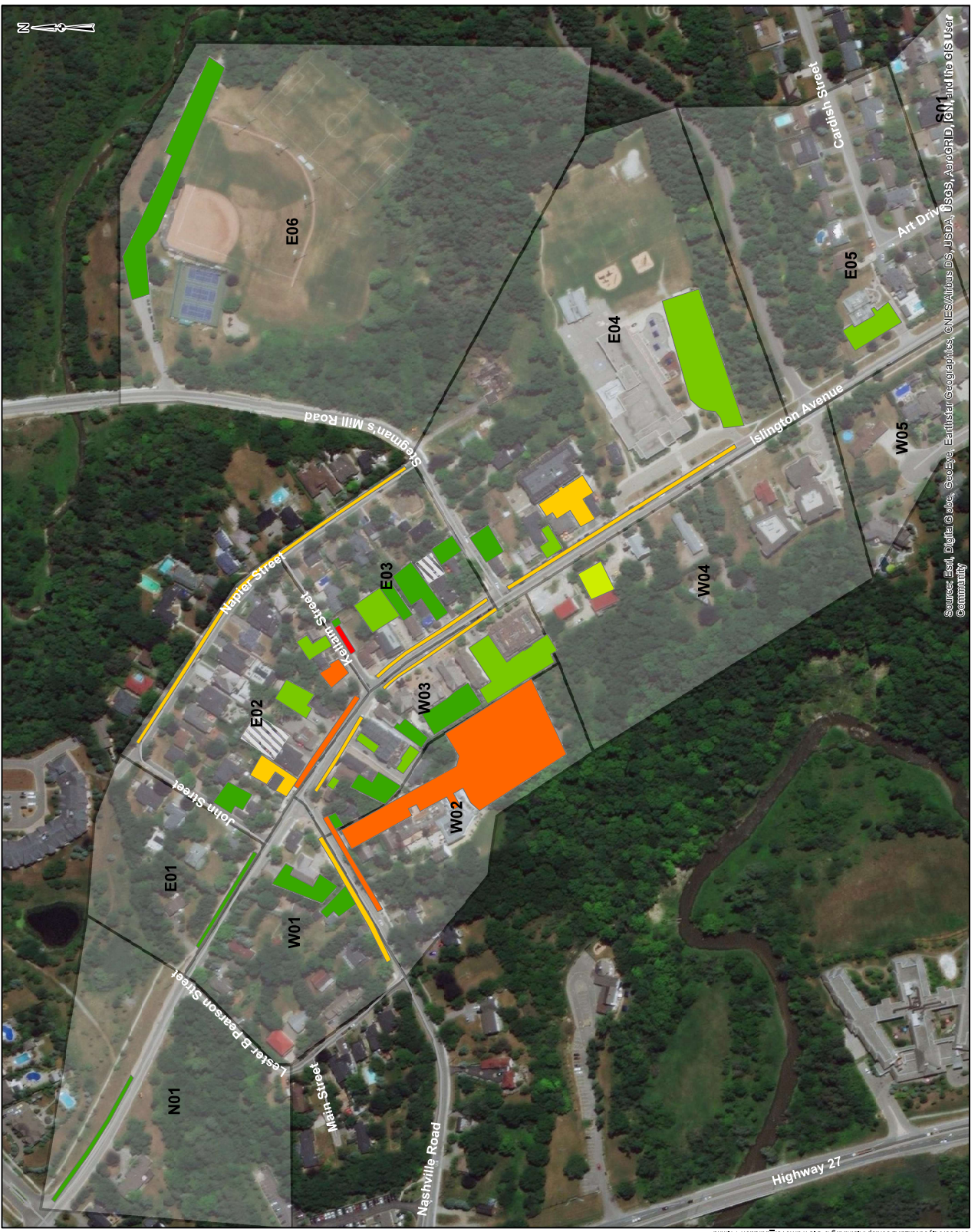


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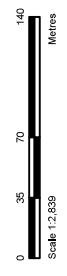


CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Occupancy at Peak Summer Survey - Aug 24, 2019, 2:00 PM	
PROJECT NO. BM-19-0031	Checked By: XX
Date: Feb. 06, 2020	GIS: XX
McINTOSH PERRY	
Figure 5.4	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



REFERENCE



CLIENT:	City of Vaughan
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan
TITLE:	Occupancy at Peak
PROJECT NO:	BM19-0031
Date:	Jan. 21, 2020
GIS:	XX
Checked By:	XX
McINTOSH PERRY	
Summer Survey - Aug 24, 2019, 8:30 PM	
Figure 5.5	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.2.2.3 Block Level Parking Occupancy

It is generally the case that customers prefer to park at or in the immediate vicinity of their destination. In this section, block level parking occupancy is reviewed to further understand the relative attractiveness of sub-areas within the Kleinburg study area and assess the ability to serve the demand. Blocks delineated within the study area have been described in **Section 3.2.1 – Parking Supply** and shown in **Figure 3-2 - Parking Space Inventory**.

While the parking occupancies have already been presented at the facility level, aggregation to the block level helps to identify the areas of relatively higher parking activity within Kleinburg, which sheds light on the issues and opportunities for those areas considering the businesses and parking amenities available to the block. All block level parking occupancies have been tabulated and mapped in **Appendix D – Parking Occupancy, Turnover and Average Duration of Stay**.

The majority of the businesses and their parking lots, and on-street parking segments surveyed within Kleinburg are concentrated within blocks E02, E03, E04 and W03. These blocks are located on either side of Islington Avenue between John Street and Stegman’s Mill Road and on the east side of Islington Avenue south of Stegman’s Mill Road. Almost all the public on-street and private off-street parking hotspots in the summer surveys are within these blocks. As a result, during all peak periods identified from the summer surveys, the parking occupancies are consistently higher in blocks E02, E03, E04 and W03 than other blocks, except in the case of blocks that contain a single business/land use such as:

- The Kleinburg Public Library in E05, which shows relatively higher occupancy rates during weekday (94%) peak period.
- The Doctor’s House in W02, which shows high occupancy during the weekend PM peak period due to on-going wedding events that filled out the large parking lot at the venue.

Among the summer survey peak periods, the weekday peak period at 2:00 PM had the highest number of spaces occupied in Blocks E02, E03, E04 and W03. The table below lists the parking occupancies at these 4 busy blocks.

Table 5.7 Highest Block Occupancies – Summer Weekday Peak (2:00 PM)

Block ID	Public On-Street			Private Off-Street		
	Parking Supply	Demand (Occupancy)	Reserve Capacity	Parking Supply	Demand (Occupancy)	Reserve Capacity
E02	29	17 (59%)	15	55	41 (75%)	23
E03	24	14 (58%)	11	45	15 (33%)	29
E04	21	10 (48%)	7	82	37 (45%)	36
W03	15	11 (73%)	7	108	73 (68%)	24

Based on the capacity and demand for parking spaces, Block W03 on the west side of Islington between Nashville Road and Stegman’s Mill Road has the lowest supply of public on-street spaces and the most private off-street spaces. However, it has the second fewest private off-street spaces in reserve capacity and the fewest public on-street spaces in reserve capacity. This block contains several plazas, including establishments known

to be busy such as the Canada Post Plaza and the Cookie Crumble Plaza. While no block is occupied beyond the target occupancy of 80%, there may still be a perception of inadequate parking due to the private off-street spaces being on private property, and due to the low supply of public on-street parking in these busy blocks.

5.2.3 Parking Turnover

The turnover rates for parking facilities were calculated for the 12-hour survey period during both the weekday and weekend in the summer. The turnover rates have been calculated based on the 30-minute interval surveys. The surveys indicate that average turnover rates for all facilities were comparable between the weekday and weekend, but only slightly higher during the weekend. The table below summarizes the range and average turnover rates by facility type (i.e. by on-street and off-street facilities).

Table 5.8 Turnover Rates by Facility Type – Summer Surveys

Facility Type	Turnover Rate (Vehicles/Space)		
	Minimum	Maximum	Average
Weekday			
On-Street	1.00 veh/space	15.00 veh/space	4.45 veh/space
Off-Street	0.00 veh/space	10.57 veh/space	2.54 veh/space
Weekend			
On-Street	1.14 veh/space	23.00 veh/space	5.85 veh/space
Off-Street	0.00 veh/space	9.57 veh/space	2.15 veh/space

The turnover rate describes the rate of use of parking space within each facility, and the average number of vehicles that used parking spaces within the entire survey duration. Where the parking demand is higher, the turnover rates are expected to be higher as well. The turnover rates at the hotspot locations identified earlier are presented below.

Table 5.9 Turnover Rates by Hotspots – Summer Surveys

Hotspots	Turnover – Weekday (Vehicles/Space)	Turnover – Weekend (Vehicles/Space)
On-Street Parking (Public)		
<i>Islington Ave East Side - Kellam St to John St</i>	4.45	4.45
<i>Kellam St South Side</i>	15.00	23.00
<i>Nashville Rd South Side - Islington Ave to Lester B. Pearson St</i>	3.83	4.67
Off-Street Parking (Private or Publicly-Owned)		
<i>Kleinburg Public Library¹</i>	2.17	3.00
<i>Dean Veterinary Hospital</i>	3.83	2.00
<i>Napa Valley Dental Care</i>	3.38	- ²
<i>Kleinburg Pharmacy Plaza</i>	4.04	3.49
<i>Cookie Crumble Café Plaza</i>	2.92	2.73
<i>Starbucks</i>	10.57	9.57

Hotspots	Turnover – Weekday (Vehicles/Space)	Turnover – Weekend (Vehicles/Space)
<i>Kleinburg Clinic Plastic Surgery / The Laser Clinic (adjacent to Starbucks)</i>	2.78	3.11
<i>Avlyn Gardens Ristorante</i>	3.53	3.16
<i>Canada Post Plaza</i>	4.92	3.62
<i>Inklein Fitness Centre</i>	3.67	3.50

¹Kleinburg Public Library is a publicly owned parking lot. The remaining off-street parking hotspots are private lots.

²Survey team was requested not to collect data at this location on this day.

Summer weekend turnover rates for each facility are mapped in Figure 5-6 and weekday turnover rates are included in **Appendix D – Parking Occupancy, Turnover and Average Duration of Stay**. As shown in Figure 5-6, the on-street areas of high turnover rates are concentrated along either side of Islington Avenue between Nashville Road and Stegman’s Mill Road, along Kellam Street and along the south side of Nashville Road. These on-street parking segments are located along the block-faces of blocks E02, E03, W02 and W04, the majority of which were noted in the previous section together are the busiest areas in Kleinburg.

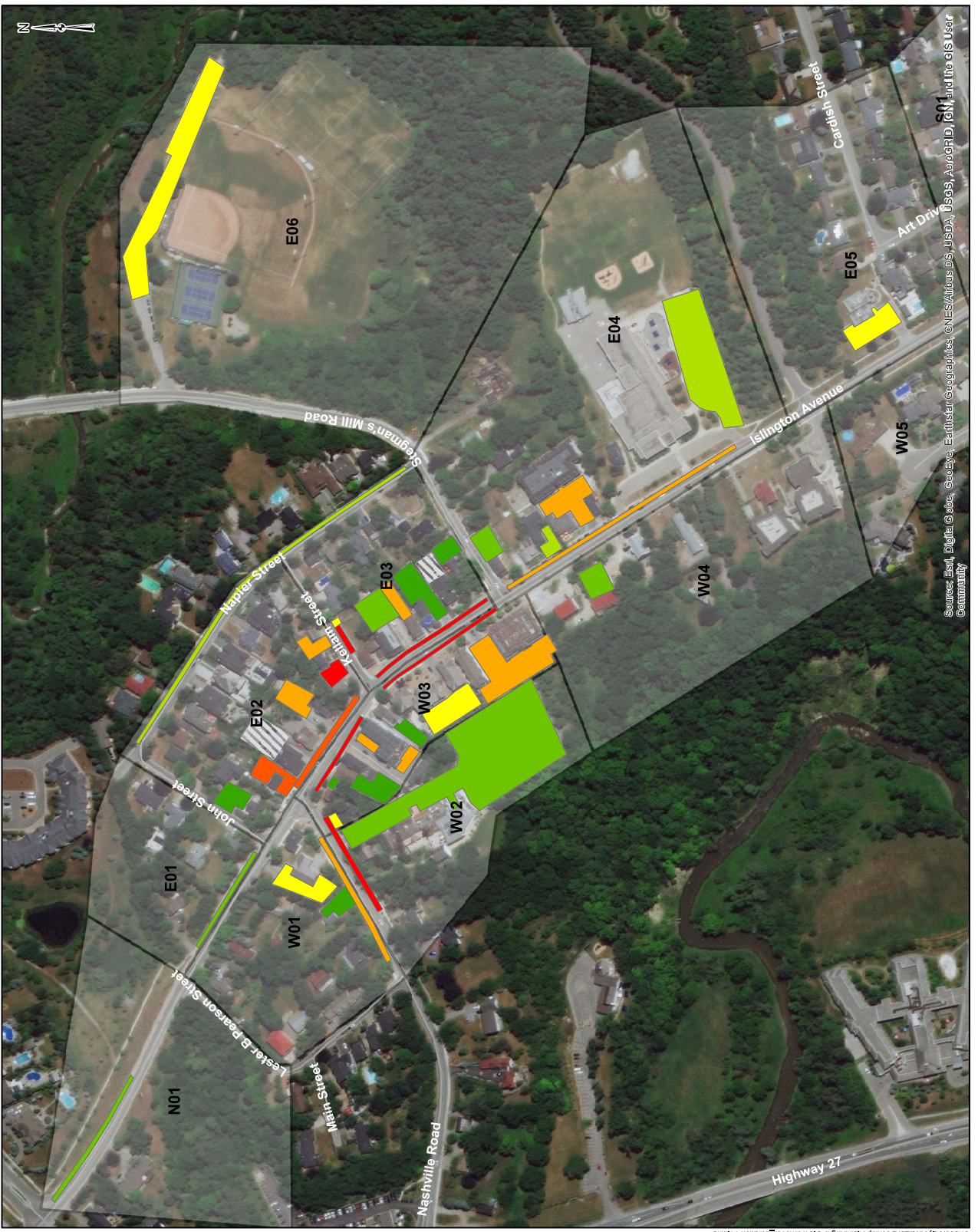
Amongst on-street parking, Kellam Street had the highest observed turnover rates, which are much higher than any other on-street segment. Similarly, amongst off-street parking, the turnover rate at Starbucks is significantly higher than any other off-street parking facility.

From the survey data, both Kellam Street and Starbucks exhibited at- or overcapacity conditions throughout the day. As observed on-site, this area at the intersection of Islington Avenue and Kellam Street was very busy during the survey periods. There were plenty of short-term visitors in the high-demand area, including vehicles that parked illegally along either side of Kellam Street and within the Starbucks parking lot, leading to high turnover.

A comparison of the turnover rates with and without illegally parked vehicles at these two locations are shown below:

	With Illegally Parked Vehicles	Without Illegally Parked Vehicles
<i>Kellam Street</i>	23.00	7.50
<i>Starbucks</i>	9.57	8.29

Intuitively, without considering illegally parked vehicles, the turnover rates at both Kellam Street and Starbucks remain high, and at Starbucks, remain comparable (i.e. within 1 vehicle/space). At Kellam Street, given that there are only 2 designated parking spaces and several illegally parked vehicles throughout the day, the turnover rate is much higher when all vehicles are considered.

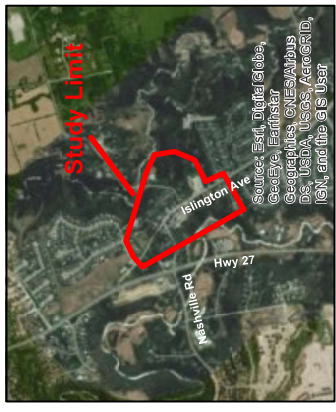


Legend

Block (E01, E02, ...)

- 0 - 0.75
- 0.751 - 1.5
- 1.51 - 2.25
- 2.251 - 3.0
- 3.01 - 3.75
- 3.751 - 4.5
- 4.51 - 23
- Survey Not Available

Average Turnover Rate (Vehicles/Stall)



REFERENCE



CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Average Turnover Rate Summer Survey - Aug 24, 2019	
PROJECT NO: BM-19-0231	Figure 5.6
Date: Jan. 22, 2020	GIS: XX
Checked By: XX	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

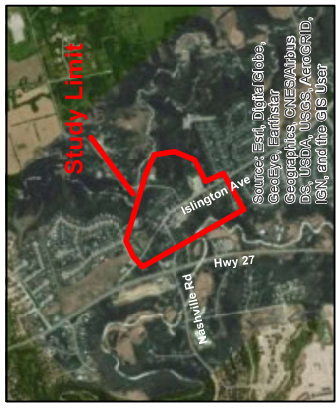
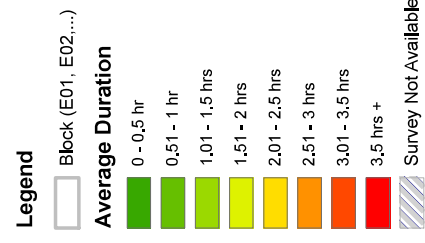
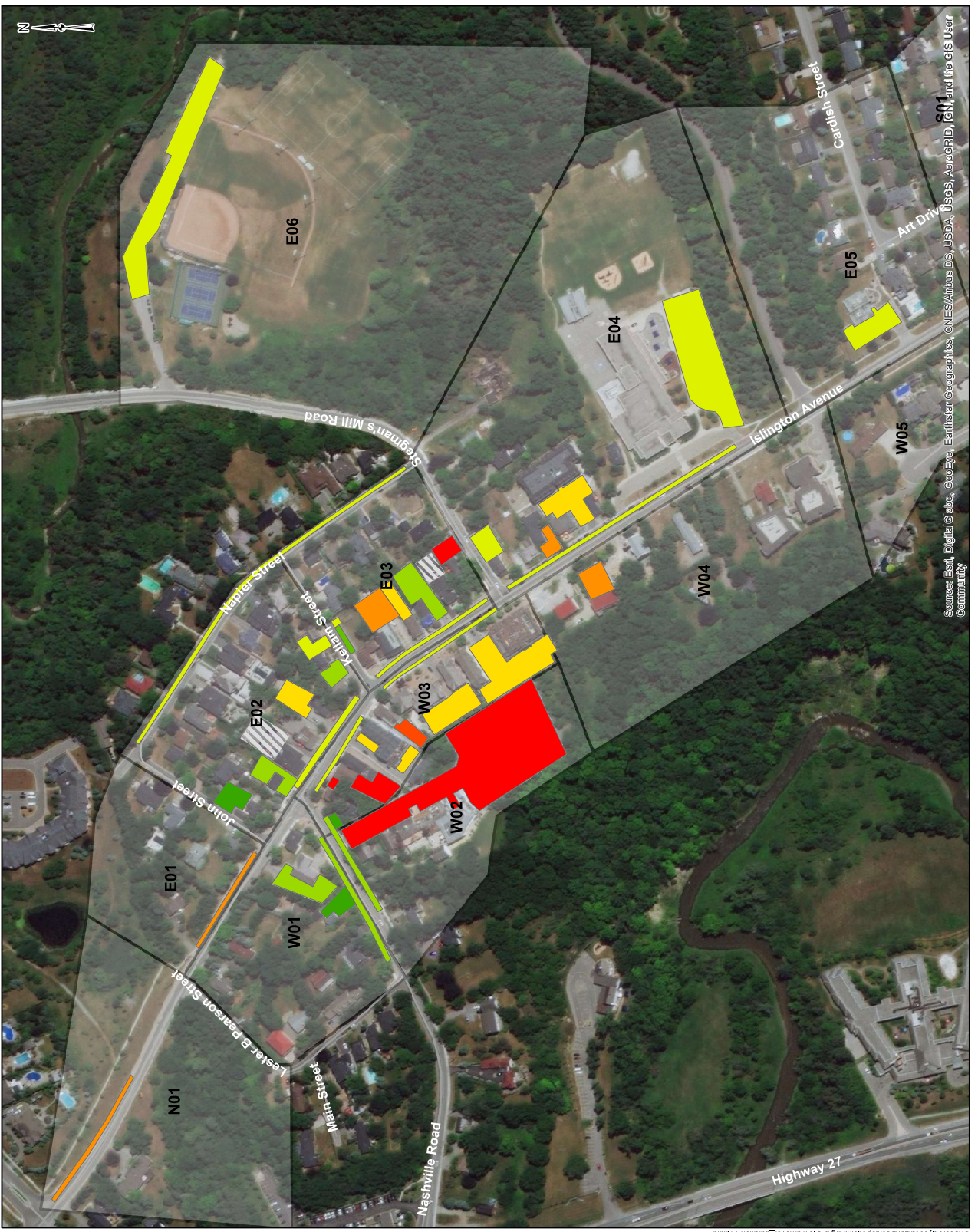
5.2.4 Average Duration of Stay

The average duration of stay statistics for parking facilities were calculated for the 12-hour survey period on both a summer weekday and weekend. Overall visitors appear to park for shorter periods of time during the weekend versus the weekday, which likely reflects the increased commercial/tourist activities on the weekend. Summer weekend average durations of stay rates for each facility are mapped in **Figure 5-7 - Summer Weekend Average Duration of Stay** and weekday average durations of stay are included in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay**.

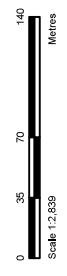
The duration of stay is based on licence plate survey observations at 30-minute intervals. As such it is not possible to obtain precise duration of stay, but rather a range of time, with potential for overestimation, especially as durations of stay shorter than 30 minutes are not captured. However, the trends in average duration of stay for on-street parking spaces align with the turnover statistics – the areas with relatively higher turnover rates exhibit lower average duration of stay. For example, the lowest durations of stay were noted along Kellam Street and Starbucks (approximately 1 hour) on both summer survey days. Both locations have been identified as hotspots with high turnover rates.

During the summer surveys, on-street parking in Kleinburg is occupied for 2 hours or less in majority of the segments of on-street parking. At most off-street parking lots, the average duration of stay was approximately 4 hours or less. A review of average durations of stay and time restrictions in the study (illustrated in **Figure 3-3 - Study Area Parking Restrictions**) area yielded the following key observations:

- The highest average duration of stay for on-street facilities was observed along Islington Avenue, north of John Street, for an average of 3 hours and 7 minutes during the weekday, which marginally exceeds the City-wide parking allowed time limit of 3 hours.
- The RBC parking lot (with 1-hour customer parking time limit) was found on average to be occupied close to 1.5 hours during the summer surveys.
- The Kleinburg Pharmacy Plaza includes signage for a 3-hour parking limit, which appears to apply for most of the parking spaces in the plaza. However, a space in the northwest section of the parking lot has signage indicating 1-hour time limit for customer-only parking. The average duration of stay in the summer is approximately 2 hours or less and is within the general 3-hour limit. There is opportunity to review the 1-hour limit signage to confirm its applicability within the subject lot.



REFERENCE



CLIENT:	City of Vaughan		
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan		
TITLE:	Average Duration of Stay Summer Survey - Aug 24, 2019		
PROJECT NO:	BM-19-0231	Date:	Jan. 21, 2020
GIS:		CS:	XX
Checked By:	XX	Figure:	6.7

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.2.5 *Illegal Parking*

Illegal parking refers to any parking activity in areas that are not designated parking locations and/or non-compliant with City by-laws – e.g. parking in front of fire hydrants, in reserved or accessible parking spaces without a permit, and in no parking zones (hatched areas, signed areas etc.). This does not however, refer to those customers who may have overstayed the 3-hour maximum parking time on-street. This also does not refer to those visitors who visited other sites along Islington Avenue while parked in a customer-only parking facility.



Figure 5-8 Examples of Illegally Parked Vehicles in Kleinburg

The highest incidence of illegally parked vehicles observed at each on-street and off-street facility during each survey day has been tabulated and mapped in **Appendix E – Illegal Parking**. Key locations where illegal parking was observed during both weekday and weekend are tabulated below.

Table 5.10 Locations of Illegally Parked Vehicles - Summer Surveys

Parking Facility	Summer Weekday		Summer Weekend	
	No. of illegally parked vehicles	Time Observed	No. of illegally parked vehicles	Time Observed
<i>Pierre Berton Heritage Centre</i>	4	8:00 PM	3	5:00 PM
<i>Immanuel Florist Plaza</i>	3	1:00 PM	2	12:30 PM
<i>Dean Veterinary Hospital</i>	3	2:00 PM	1	1:00 PM
<i>Kleinburg Clinic Plastic Surgery / Laser Clinic</i>	2	12:00 PM	3	10:30 AM
<i>Starbucks</i>	2	2:00 PM	2	4:30 PM
<i>The Doctor's House</i>	4	6:00 PM	2	10:00 AM
<i>Canada Post Plaza</i>	2	9:30 AM	1	9:00 AM
<i>Kellam St South Side</i>	3	12:30 PM	5	8:30 PM
<i>Napier St East Side</i>	1	1:30 PM	4	3:00 PM

It should be noted that for some of the locations above, the illegal parking was not due to capacity constraints – at Pierre Berton Heritage Centre the vehicles were parked improperly in the lot and taking up several spaces; at the Doctor’s House vehicles were parked in hatched areas; and, vehicles were seen to be parked in accessible spots at Immanuel Florist plaza without a permit, or along the fire route. Illegal parking as a result of capacity constraints typically only occurred around Kellam Street, Starbucks and the Kleinburg Clinic Plastic Surgery / The Laser Clinic.

5.2.6 Bicycle Parking

As noted earlier, there are no on-street bicycle parking facilities in Kleinburg. However, during the summer surveys, cyclists were seen throughout the day visiting or passing through Kleinburg. During both the summer weekday and weekend surveys, bicycles were noted to be parked in front of the Old Firehall Confectionary along the sidewalk.

Table 5.11 Observed On-street Parked Bicycles – Summer Surveys

<i>Date</i>	<i>Time</i>	<i>No. of Parked Bicycles</i>
<i>Thursday August 22, 2019</i>	3:30 PM	1 Bicycle
	7:00 PM	1 Adult Bicycle 2 Child Bicycles
<i>Saturday August 24, 2019</i>	12:00 PM	2 Bicycles
	4:30 PM	2 Bicycles

Among the off-street parking lots which have bicycle parking facilities, only the Kleinburg Public Library and Starbucks lots were observed to be used by cyclists during the weekday. A total of 2 bicycles were parked at the library at 7:30 PM. The Starbucks parking lot was utilized by several cyclists, both children and adults and mostly in the afternoon between 3:30 and 6:30 PM. A maximum of 3 bicycles were parked at approximately 5:30 PM. On the weekend, only one bicyclist was seen using the parking at Chroma Hair One. Most cyclists appeared to pass through Kleinburg on the weekend or meet up prior to/after their bike ride. Meeting places noted on site included Starbucks, where cyclists were observed to get food and beverages to go, dine in or use the restroom both before and after their rides.

5.3 FALL PARKING CONDITIONS

This section presents the key parking demand and supply measures collected during fall surveys. The measures have been compared to summer surveys to identify similarities or seasonal differences in parking behaviours in Kleinburg.

5.3.1 Area-wide Parking Accumulation and Peak Occupancy

Comparable to the summer parking conditions, a review of the area-wide parking accumulation during fall survey period is presented by aggregating total parking demand. Additionally, parking demand throughout the day, expressed as a percentage of parking supply, is included in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay** for reference.

5.3.1.1 Fall Weekday

The fall weekday survey (October 24, 2019) was conducted from 8:00 AM to 9:00 PM to capture parking data and impacts in Kleinburg, as well as relevant observations during the operational hours of the Kleinburg Public School.

As shown in **Figure 5-9 - Parking Accumulation – Typical Fall Weekday**, the combined parking accumulation increases gradually from 8:00 AM, to 1:30 PM. A total of 348 parking spaces (i.e. 50% of available total parking supply) is occupied between 1:30 PM and 2:00 PM, after which the demand decreases until a second smaller peak occurs at approximately 7:30 PM. While off-street facility demand parking declined beyond 7:30 PM, there was an increase in public on-street parking accumulation until 8:30 PM. This pattern is comparable to the summer weekend on-street parking accumulation, although different from the summer weekday parking accumulation. A possible cause for this difference could be that local area residents who may have been on holiday in the summer, tend to visit restaurants, dessert shops and cafés during fall weekdays and park on street.

Therefore, a midday peak occupancy occurs in the half-hour period starting 1:30 PM, and a peak occupancy of on-street parking is noted in the evening starting at 8:30 PM. These two peak half-hour periods are summarized in **Table 5.12 - Fall Weekday PM Peak Occupancy (8:30 PM)** and reviewed further in the next sections.

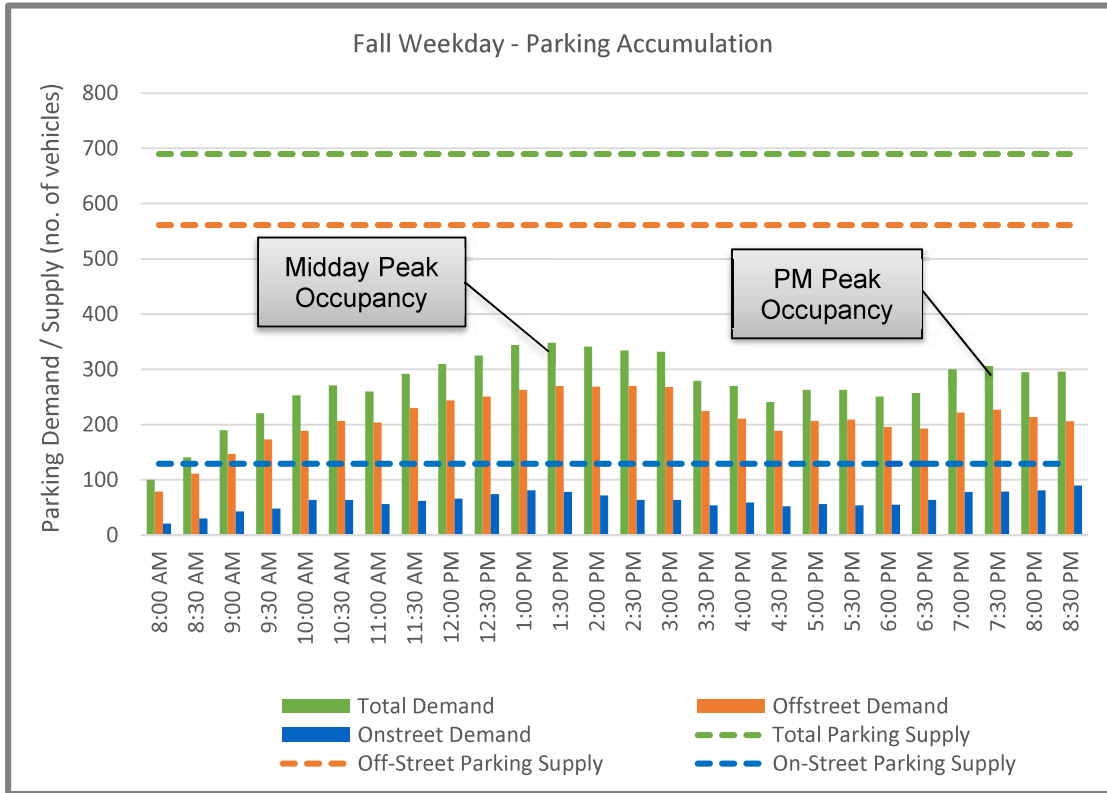


Figure 5-9 Parking Accumulation – Typical Fall Weekday

Table 5.12 Peak Parking Demand – Fall Weekday

Survey Period	Peak Period	Peak Parking Demand (Percent Occupied)			
		All Facilities	Off-Street		On-Street
			Private	Publicly Owned	Public
Thursday October 24, 2019	Midday Peak 1:30 PM – 2:00 PM	348 (50%)	243 (46%)	27 (77%)	78 (60%)
	PM Peak 8:30 PM – 9:00 PM	296 (43%)	190 (36%)	16 (46%)	90 (70%)

5.3.1.2 Fall Weekend

The typical fall weekend parking accumulation profile in **Figure 5-10 - Parking Accumulation – Fall Weekend** indicates that the demand for parking facilities increases from the morning to midday and reaches a peak at 1:30 PM. After this, the demand tapers slightly through the afternoon until increasing and forming a smaller peak again at 4:00 PM. The parking usage decreases slightly beyond 4:00 PM, and sharply after 8:00 PM.

Most businesses, other than restaurants in Kleinburg, close by 6:00 PM on the weekend. The sharp drop observed in off-street parking facility usage and therefore for all facilities likely reflects the departure of diners who may have arrived at the start of the evening. The peak period at 1:30 PM, as shown in **Table 5.13 - Peak Parking Demand – Fall Weekend**, is carried forward for a more detailed review in the later sections.

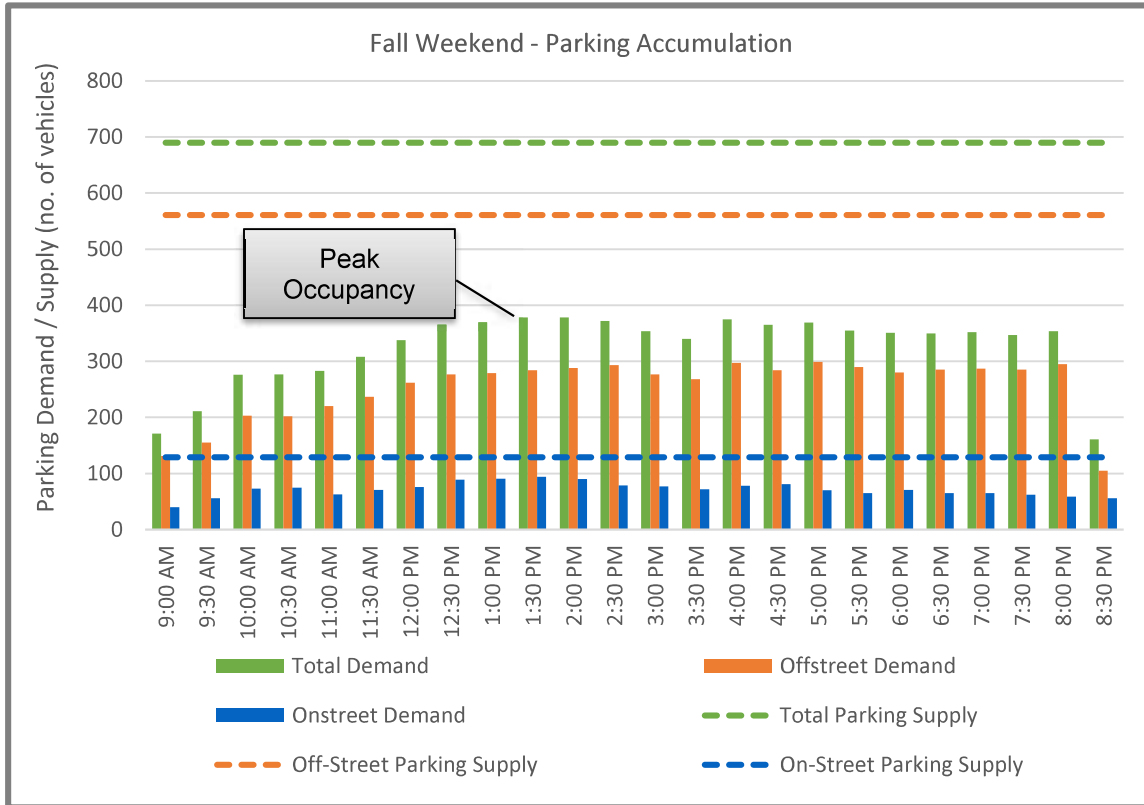


Figure 5-10 Parking Accumulation – Fall Weekend

Table 5.13 Peak Parking Demand – Fall Weekend

Survey Period	Peak Period	Peak Parking Demand (Percent Occupied)			
		All Facilities	Off-Street		On-Street
			Private	Publicly owned	Public
Saturday October 26, 2019	1:30 PM – 2:00 PM	378 (55%)	277 (53%)	7 (20%)	94 (73%)

Occupancy levels in the fall for each parking facility during the identified peak periods are mapped in Figure 5-11, Figure 5-12 and Figure 5-13 - Fall Weekend Peak Occupancy (1:30 PM). Tabulated parking occupancies during peak survey periods can be found in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay**. This section provides a discussion of the parking demand hotspots found during the fall surveys. Several facilities that had high parking demand in the summer peak periods continue to have high occupancies in the fall peak periods.

5.3.1.3 Public Parking

The fall weekday and weekend peak periods generally showed higher occupancy of public on-street parking during corresponding peak periods in the summer. The same hotspot segments identified in the summer peak periods experienced at or above capacity conditions during the fall peak periods.

The hotspot segments identified in the fall weekday PM peak period include side streets, Nashville Road and Kellam Street, as well as sections of Islington Avenue north and south of Nashville Road. Additionally, in the midday peak period, the section of Islington Avenue south of Stegman’s Mill Road was 86% occupied, which may be a result of Kleinburg Public School staff also observed to be parking along this segment. This on-street segment remained at parking occupancy levels of 67% or more between 10:00 AM and 3:00 PM during the fall weekday.

Table 5.14 Public On-street Parking Hotspots – Fall Weekday (8:30 PM)

<i>Hotspots: Public On-street Parking</i>	Capacity	No. of Vehicles	Occupancy	Noted as Hotspot in Summer Surveys?
<i>Islington Ave East Side - Kellam St to John St</i>	11	11	100%	Yes
<i>Kellam St South Side</i>	2	4	200%	Yes
<i>Nashville Rd South Side - Islington Ave to Lester B. Pearson St</i>	6	7	117%	Yes
<i>Nashville Rd North Side - Islington Ave to Lester B. Pearson St</i>	13	12	92%	No
<i>Islington Ave West Side - Nashville Rd to Stegman's Mill Rd</i>	15	17	113%	No
<i>Islington Ave East Side - South of Stegman's Mill Rd</i>	21	18	86%	No

Comparable to the summer surveys, under both fall weekday and weekend peak conditions, the highest parking occupancies were observed at Kellam Street and included illegally parked vehicles. As observed on-site, illegally parked vehicles in this area generally include Starbucks customers, as well as vehicles parked for wedding parties during the weekend, including limousines, either for photoshoots or attending weddings at the Doctor’s House.

Among publicly owned off-street parking lots, the Kleinburg Public Library, much like in the summer, remained at occupancy levels of 94% during the weekday mid-day peak period. In fact, the library parking lot remained a hotspot between 1:00 PM and 4:00 PM during the fall weekday. Much lower levels of occupancy were noted during the weekday evening and weekend peak period. Comparable to the summer surveys, the Pierre Berton Heritage Centre was not noted as a hotspot during either weekday or weekend.

5.3.1.4 Private Parking

The private off-street parking demand was found to be higher during the weekday fall survey than during the weekend fall survey. Several parking lots were at occupancy levels

of 80% or more during the weekday peak period which occurred at 1:30 PM. Most of these lots were identified as hotspots in the summer surveys, except for the Kleinburg Public School during the summer break. The Kleinburg Public School remained close to at- or above capacity from 8:30 AM to 3:30 PM, reflecting normal school hours.

Table 5.15 On-street Parking Demand Hotspots – Fall Weekday (1:30 PM)

Hotspots: Off-street Parking	Capacity	No. of Vehicles	Occupancy	Noted as Hotspot in Summer Surveys?
<i>Kleinburg Public School</i>	44	42	95%	No
<i>Dean Veterinary Hospital</i>	6	5	83%	Yes
<i>Napa Valley Dental Care</i>	8	8	100%	Yes
<i>Cookie Crumble Café Plaza</i>	26	25	96%	Yes
<i>Starbucks</i>	7	7	100%	Yes
<i>Canada Post Plaza</i>	19	19	100%	Yes

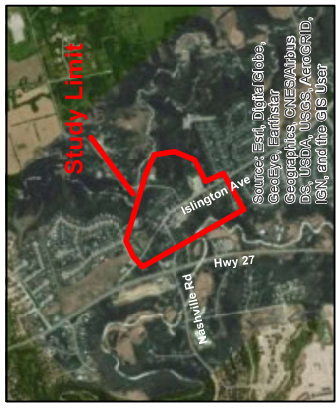
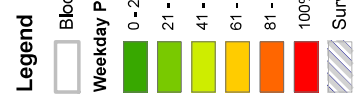
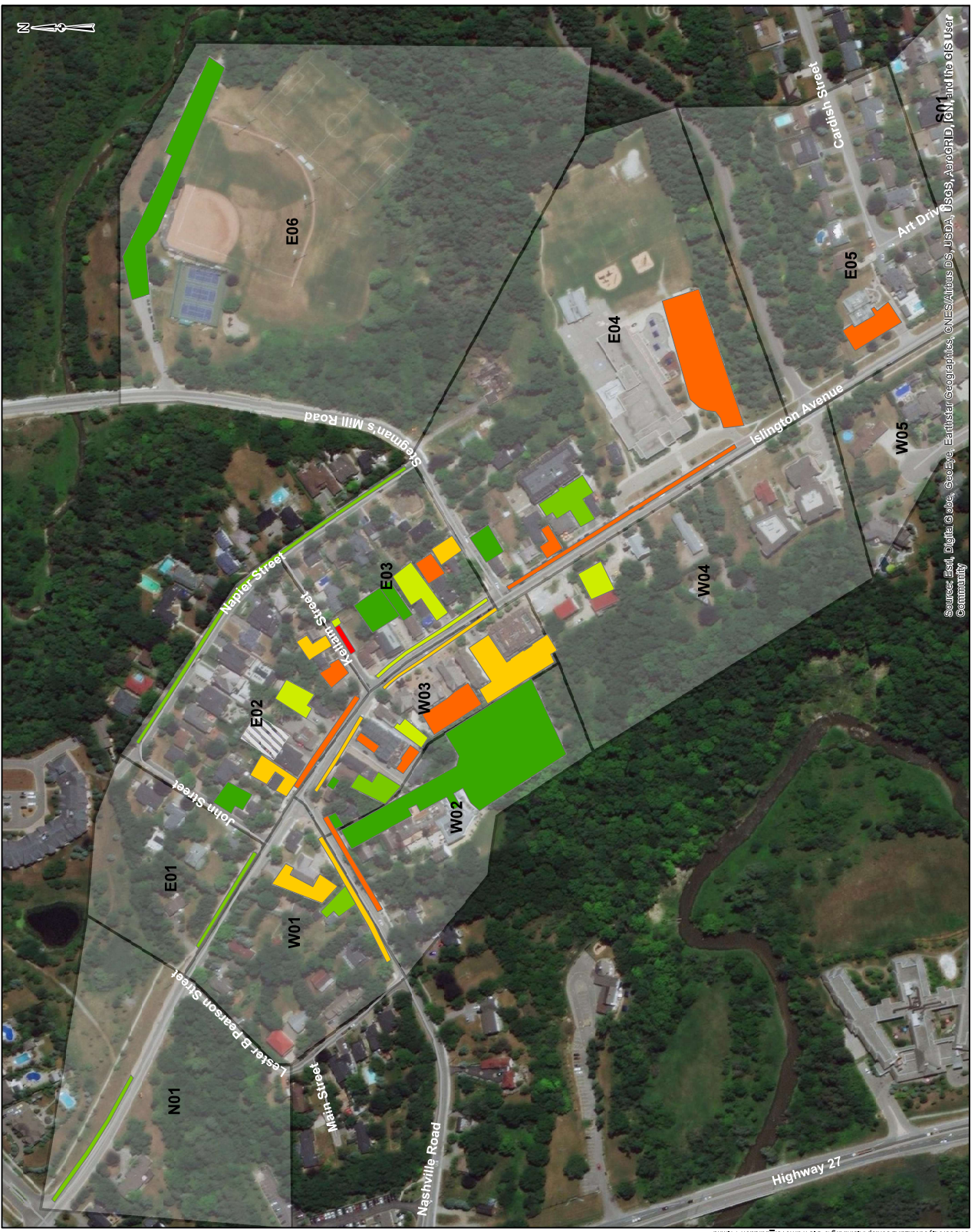
During the weekday peak period which occurred at 8:30 PM, the parking lots at Immanuel Florist Plaza and Chroma Hair One were also found to be at occupancies above 80%.

Table 5.16 On-street Parking Demand Hotspots – Fall Weekday (8:30 PM)

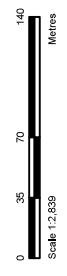
Hotspots: Off-street Parking	Capacity	No. of Vehicles	Occupancy	Noted as Hotspot in Summer Surveys?
<i>Immanuel Florist Plaza</i>	20	18	90%	No
<i>Chroma Hair One</i>	13	13	100%	No

A few parking lots which had been identified as hotspots in the summer peak periods were not as busy in the fall survey, including the Kleinburg Pharmacy Plaza, the Avlyn Gardens Ristorante and the InKlein Fitness Centre. However, consistent with the summer observations:

- The parking lot at Starbucks remained either at capacity or exceeding capacity (with illegally parked vehicles) throughout the day on both the fall weekday and weekend.
- The parking lot at the Canada Post Plaza remained at capacity during the fall weekday peak period; as well, a review of the temporal variation of demand at this lot throughout the day showed it is consistently at near or at capacity between 9:30 AM to 4:00 PM. While this lot was not a hotspot in the weekend peak period at 4:00 PM, it was observed to be at occupancy levels of 85% or more from 9:00 AM to 2:30 PM.

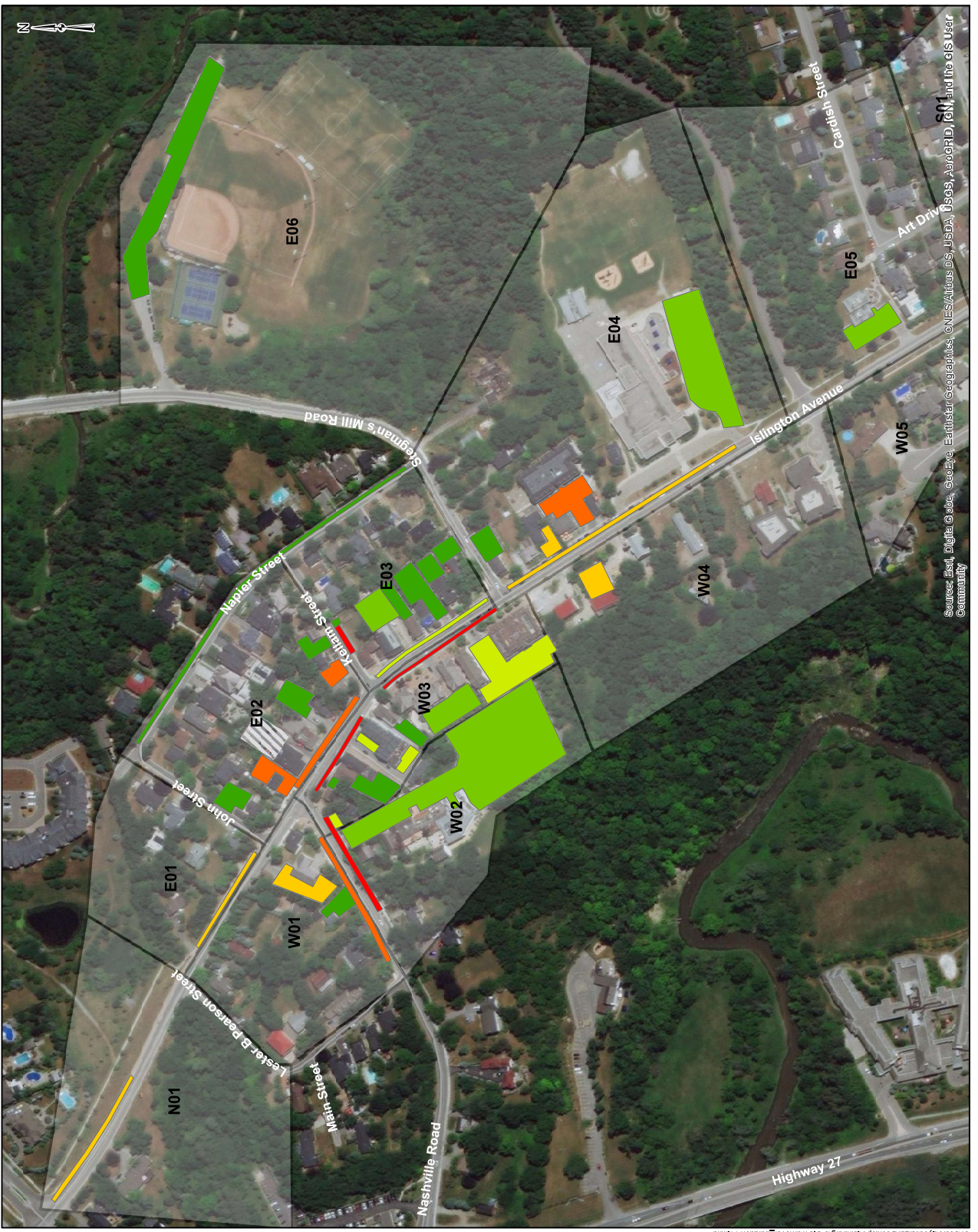


REFERENCE



CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Occupancy at Peak	
Fall Survey - Oct 24, 2019, 1:30 PM	
PROJECT NO: BM19-0231	Figure 5.11
Date: Jan. 22, 2020	GIS: XX
Checked By: XX	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

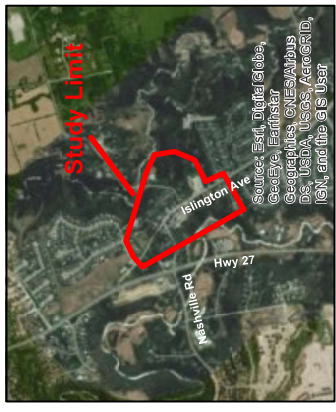


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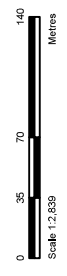
Block (E01, E02,...)

Weekday Peak Occupancy at 8:30 PM

- 0 - 20 %
- 21 - 40 %
- 41 - 60 %
- 61 - 80 %
- 81 - 100 %
- 100% +
- Survey Not Available

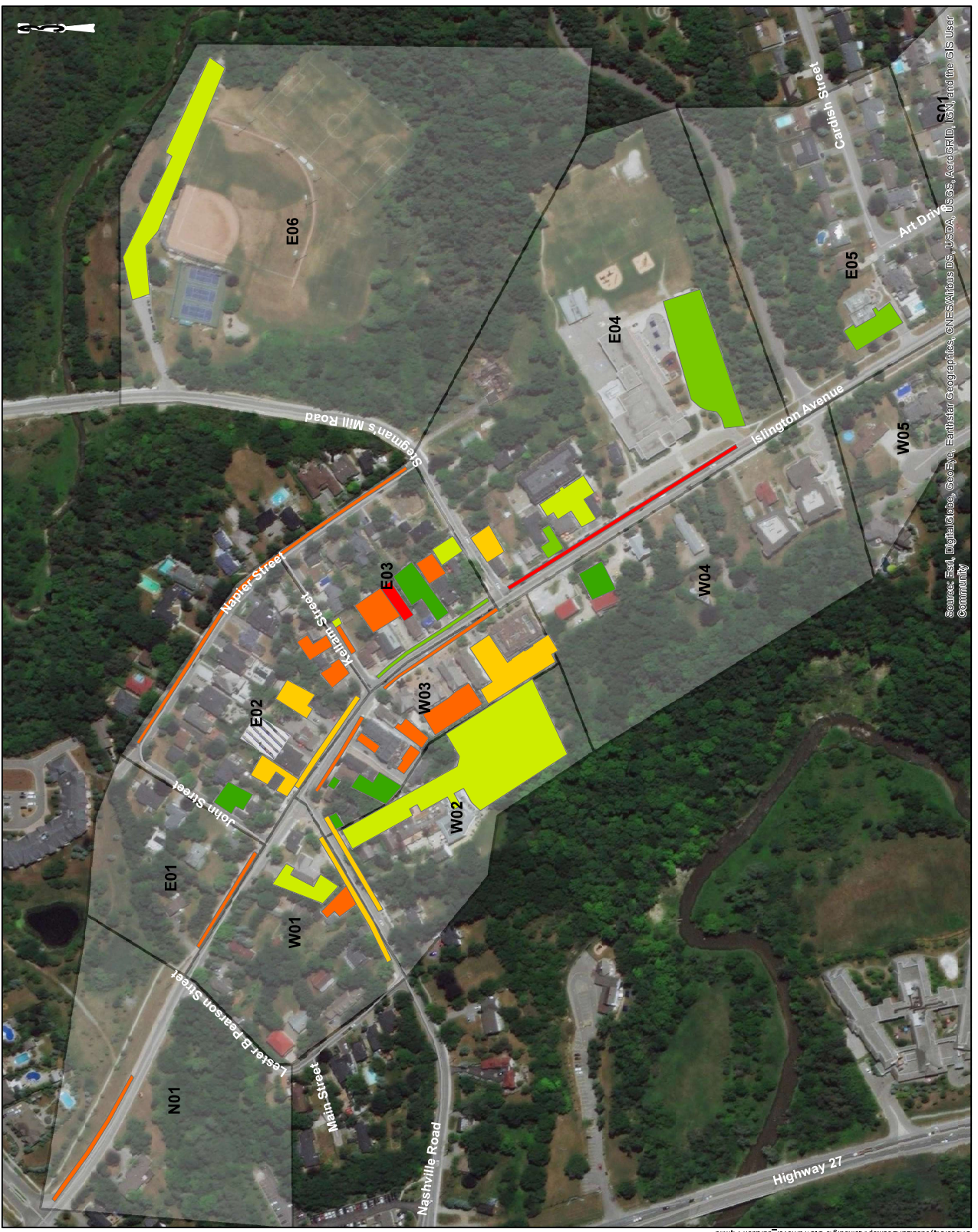


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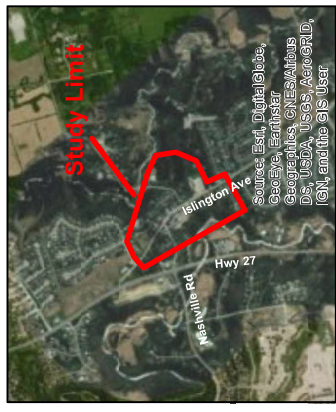
CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Occupancy at Peak	
Fall Survey - Oct 24, 2019; 8:30 PM	
PROJECT NO: BM-19-0231	Figure 5.12
Date: Jan. 22, 2020	GIS: XX
Checked By: XX	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

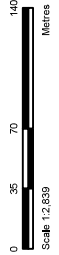


Legend

- Block (E01, E02, ...)
- Weekend Peak Occupancy at 1:30 PM
 - 0 - 20 %
 - 21 - 40 %
 - 41 - 60 %
 - 61 - 80 %
 - 81 - 100 %
 - 100% +
 - Survey Not Available



REFERENCE



CLIENT:	City of Vaughan		
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan		
TITLE:	Occupancy at Peak		
	Fall Survey - Oct 26, 2019, 1:30 PM		
McINTOSH PERRY	PROJECT NO. BM-19-0031	Date	Feb. 06, 2020
		GIS	XX
		Checked By	XX
			Figure 5.13

Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.3.1.5 Block Level Parking Occupancy

Block level parking occupancies observed during the fall surveys have been tabulated and mapped in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay**.

A review of the maps and data show that like the summer, the four blocks E02, E03, E04 and W03 remain high-occupancy blocks during the fall weekday midday peak period (1:30 PM). Compared to the summer, additional blocks showed relatively higher parking occupancies in the fall weekday peak periods including – Blocks E01 and W01 located north of Nashville Road and Block W04 on the west side of Islington Avenue south of Stegman’s Mill Road (containing only the Pierre Berton Heritage Centre). Comparable to the summer, the fall weekday peak period at midday, i.e. 1:30 PM, showed the highest numbers of spaces occupied within these busy blocks. The block-level parking occupancies during fall weekday peak period are summarized as follows.

Table 5.17 Highest Block Occupancies – Fall Weekday Peak (1:30 PM)

Block ID	Public On-Street			Private/Public Off-Street		
	Parking Spaces Available	Demand (Occupancy)	Reserve Capacity	Parking Spaces Available	Demand (Occupancy)	Reserve Capacity
E02	29	12 (41%)	17	55	34 (62%)	21
E03	24	12 (50%)	12	45	28 (53%)	25
E04	21	18 (86%)	3	82	53 (65%)	29
W03	15	11 (73%)	4	108	79 (73%)	29
W01	13	10 (77%)	3	20	12 (60%)	8
W04 ¹	-	-	-	17	10 (59%)	7

¹This is block contains only a publicly owned off-street lot at Pierre Berton Heritage Centre.

As shown above, several blocks have very few public on-street spaces available during the fall weekday peak period at 1:30 PM. This includes Block E04, which contains the on-street parking in front of the Kleinburg Public School and shows the highest on-street parking occupancy (86%). As noted, on-site, school staff have been observed to park in this segment. However, 35% of the private parking spaces in this block remain in reserve capacity, belonging to the Immanuel Florist Plaza, the Dean Veterinary Hospital or the DeGazon Music of Vaughan, amongst which only Dean Veterinary Hospital is over 80% occupied. Therefore, there is parking available for patrons of these establishments in E04. Similarly, while a few on-street public spaces are available in Block W01, there appears to be some (40%) private spaces unoccupied during the peak period.

Blocks that were far less busy during any other summer or fall peak period were found to be highly utilized in the fall weekend peak period including – Blocks E05 (Kleinburg Public Library), W02 (Doctor’s House) and W06 (Bindertwine Park). Notably these blocks contain a single land use and are typical recreational venues visited on weekends.

5.3.2 Parking Turnover

The turnover rates for on-street and off-street parking facilities for 12-hour survey period on the fall weekend (October 26) are mapped in **Figure 5-14 Fall Weekend Parking Turnover** and the 13-hour survey period on the fall weekday (October 24) is included in

Appendix D- Parking Occupancy, Turnover and Average Duration Stay. Table 5.18 summarizes the range and average turnover rates by facility type.

Table 5.18 Turnover Rates by Facility Type – Fall Surveys

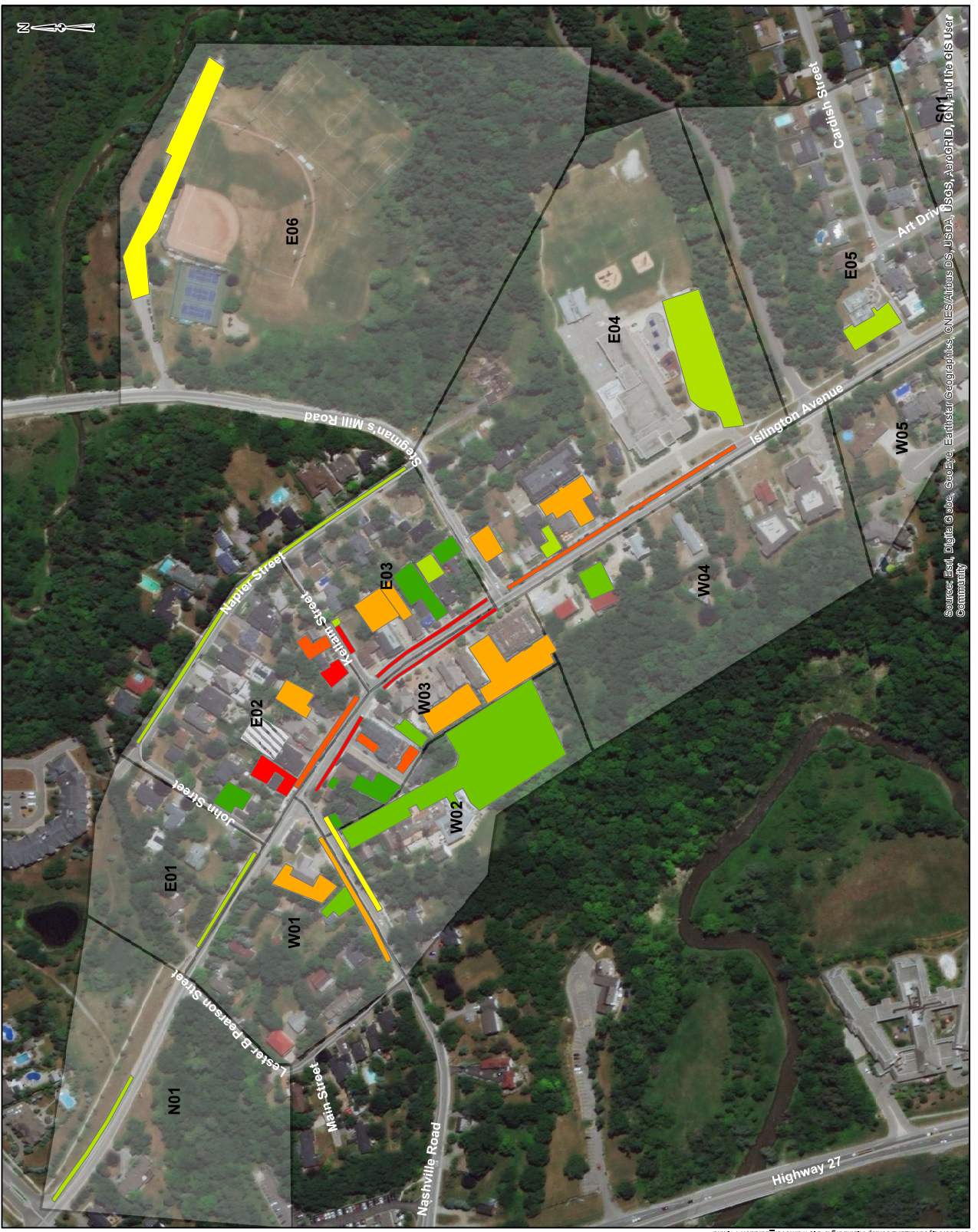
Facility Type	Turnover Rate (Vehicle/Space)		
	Minimum	Maximum	Average
Weekday			
On-Street	1.10 veh/space	18.00 veh/space	4.74 veh/space
Off-Street	0.00 veh/space	9.29 veh/space	2.32 veh/space
Weekend			
On-Street	1.63 veh/space	19.50 veh/space	5.43 veh/space
Off-Street	0.00 veh/space	8.71 veh/space	2.36 veh/space

Overall, the turnover rate statistics for the fall are very similar in magnitude to those for the summer and tend to be higher at the identified hotspot locations during the peak periods.

The highest turnover rate for on-street parking continues to be observed at Kellam Street. The highest turnover rates for off-street parking lots were found at Starbucks. These rates are significantly higher than the next busiest on-street parking segment and off-street parking lot, respectively. Illegal parking contributes to the high turnover rates observed, especially for the on-street parking along Kellam Street.

As expected, the turnover at the Kleinburg Public School is highest during the fall weekday (3.41 vehicles/space) compared to any other survey (turnover rates remained below 2 vehicles/space). This turnover rate captures the pick-up/drop-off periods, including when parents were observed to park in tandem (i.e. not in legal parking spaces) during the pick-up period.



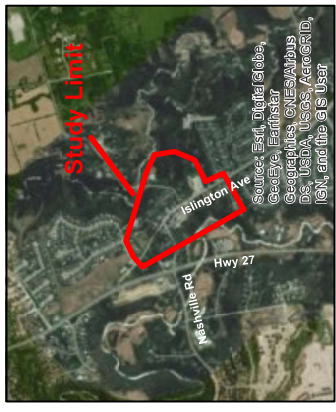


Legend

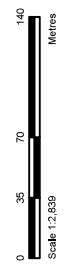
Block (E01, E02, ...)

Average Turnover Rate (Vehicles/Stall)

- 0 - 0.75
- 0.751 - 1.5
- 1.51 - 2.25
- 2.251 - 3.0
- 3.01 - 3.75
- 3.751 - 4.5
- 4.51 - 23
- Survey Not Available



REFERENCE



CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Average Turnover Rate Fall Survey - Oct 26, 2019	
PROJECT NO: BM19-0031	Figure 5.14
Date: Jan. 22, 2020	GIS: XX
Checked By: XX	

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.3.3 Average Duration of Stay

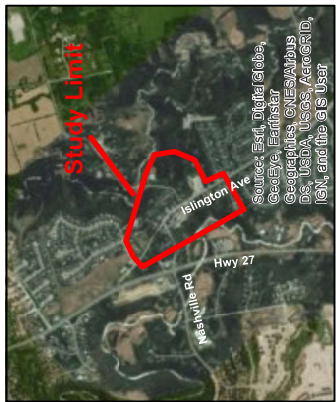
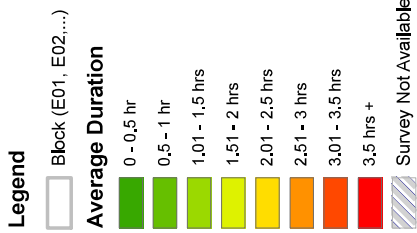
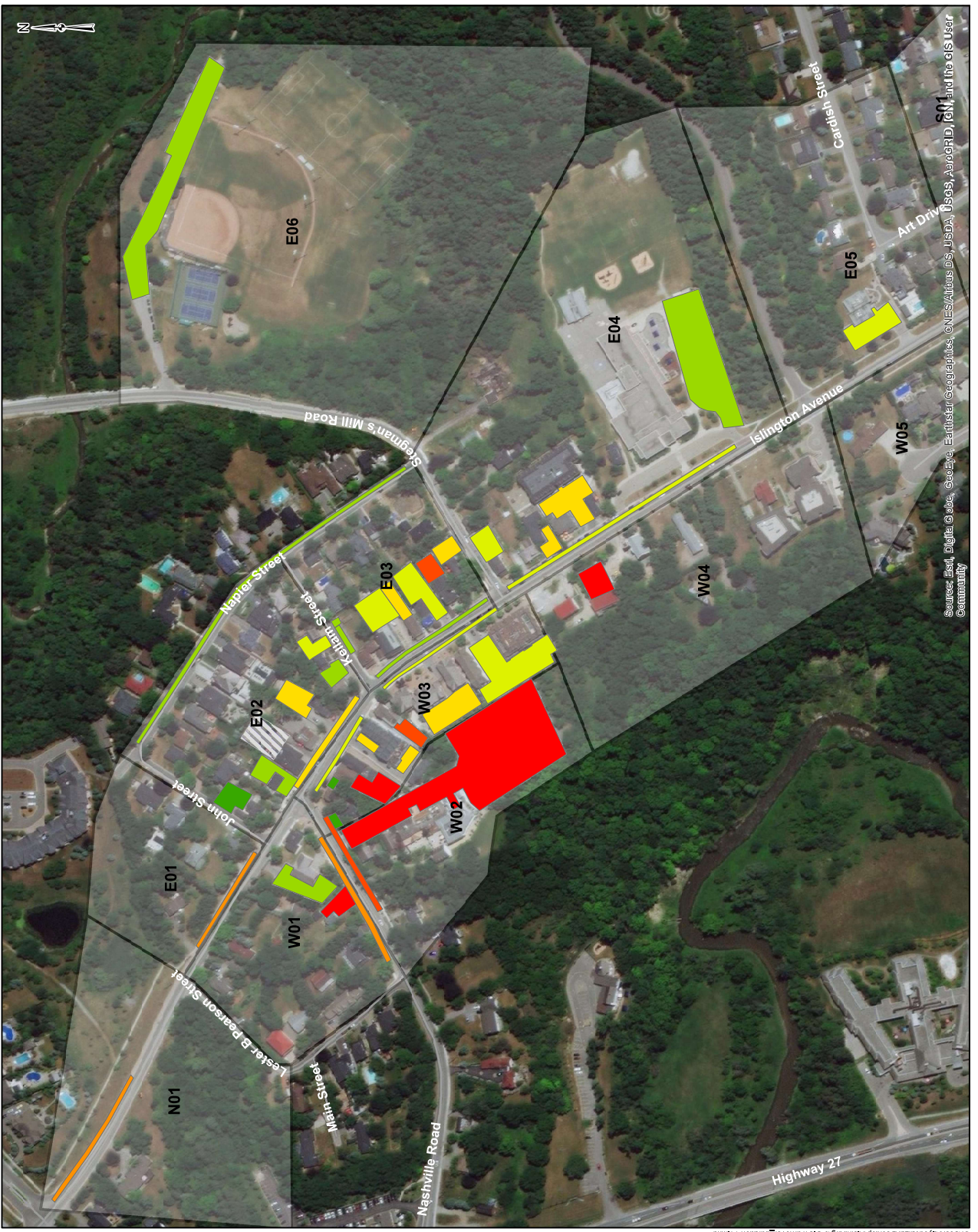
The average duration of stay for the fall weekend for each facility are mapped in Figure 5-15 and weekday average durations of stay are tabulated and mapped in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay.**

During the fall surveys, visitors continue to park for shorter durations in high turnover areas near restaurants/cafes such as Starbucks. Comparable to the summer survey, the longer durations of stay were observed at land uses such as realtor offices during the weekday and event spaces such as the Doctor's House during the weekend.

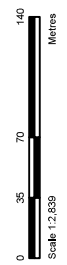
However, overall, visitors parked for longer durations in the fall than in the summer. On-street parking in Kleinburg is occupied for 3 hours or less at the majority of the on-street parking segments. The average duration of stay for off-street facilities was approximately 4.5 hours or less for both weekdays and weekends. The following are key observations from a review of average durations of stay and time restrictions in the study area:

- The average duration of stay for much of the on-street parking in Kleinburg was at or below the City-wide time limit of 3-hours except along the east side of Islington Avenue south of Stegman's Mill Road during the weekday. On average, vehicles parked for longer periods of time along this on-street segment during the typical fall weekday compared to summer survey days and the fall weekend. This is supported by the observations made on-site and heard through the public consultation regarding school staff parking along Islington Avenue in front of the School.
- Amongst off-street parking lots, the average duration of stay continued to exceed the 1-hour time limit for customer parking at RBC during both survey days.
- On both the fall weekday and weekend surveys, the average duration of stay was over 4 hours long at the Pierre Berton Heritage Centre, which is a municipal property, allowing only authorized parking as per the City of Vaughan By-Law 064-199.





REFERENCE



CLIENT:	City of Vaughan		
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan		
TITLE:	Average Duration of Stay Fall Survey - Oct 26, 2019		
PROJECT NO:	BM19-0031	DATE:	Jan. 21, 2020
DRAWN BY:	XX	CHECKED BY:	XX
McINTOSH PERRY			Figure 5.15

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.3.4 Illegal Parking

The maximum number of illegally parked vehicles observed at each on-street and off-street facility during each fall survey has been tabulated and mapped in **Appendix E – Illegal Parking**. There were more locations with illegal parking during the fall surveys, in addition to those areas that saw illegal parking in the summer, as noted below.

Table 5.19 Locations of Illegally Parked Vehicles - Fall Surveys

Parking Facility	Summer Weekday		Summer Weekend		Observed During any day of the Summer?
	No. of illegally parked vehicles	Time Observed	No. of illegally parked vehicles	Time Observed	
<i>Kleinburg Public Library</i>	2	3:30 PM	1	4:00 PM	Weekday Only
<i>Immanuel Florist Plaza</i>	1	10:00 AM	1	11:30 AM	Both days
<i>Napa Valley Dental Care</i>	2	11:30 AM	2	10:00 AM	Weekday Only
<i>Remax West Realty Inc. - Adamo Colella</i>	3	11:30 AM	1	1:30 PM	Weekday Only
<i>Kleinburg Clinic Plastic Surgery / The Laser Clinic</i>	3	1:30 PM	4	10:00 AM	Both days
<i>Starbucks</i>	1	8:00 AM	2	2:30 PM	Both days
<i>Avlyn Gardens Ristorante</i>	1	8:00 AM	1	11:30 AM	Weekend only
<i>RBC Bank</i>	1	12:30 PM	1	11:00 AM	Weekday only
<i>Canada Post Plaza</i>	2	1:30 PM	-	-	Both days
<i>Kellam St South Side</i>	3	9:30 AM	5	3:00 PM	Both days
<i>Napier St East Side</i>	1	8:30 AM	3	9:00 AM	Both days
<i>Islington Ave East Side - Kellam St to John St</i>	1	8:00 AM	1	11:00 AM	Weekend only
<i>Islington Ave East Side - North of John St</i>	6	7:00 PM	4	12:30 PM	No

Locations where illegal parking was recurring across all survey days in the summer and fall include the areas noted as hotspots:

- Immanuel Florist Plaza
- Kleinburg Clinic Plastic Surgery / The Laser Clinic
- Starbucks
- Canada Post Plaza
- South side of Kellam Street
- East side of Napier Street

Additionally, unlike in the summer, there was several illegally parked vehicles observed at Kleinburg Public School (11 vehicles) during the fall weekday afternoon pick-up period. In comparison, no more than 4 illegally parked vehicles were noted in other parking lots.

Amongst on-street parking, up to 6 vehicles were seen parking along the east side of Islington Avenue, north of John Street in sections that are signed as no parking zones. This section falls into Block E01 and is across from Block W02. These blocks are located north of the busier sections of Kleinburg and do not contain land uses with excess parking demand. Therefore, the illegal parking could be a result of customer demand for convenient on-street parking in this area, of signage not being visible and/or of the parking restrictions not being enforced. There is potential to review the no parking zone along this section.

5.3.5 Bicycle Parking

Fewer cyclists were observed to park their bikes in Kleinburg during the fall surveys compared to the summer. On both weekday and weekend, only the bike rack within the Starbucks parking lot was in use, generally accommodating 1 or 2 bikes. The maximum number of bikes were parked on the fall weekend morning (10.30 AM) where 4 bikes were seen parked in the 5-stall rack. Additionally, during the weekend, an adult cyclist group were observed meeting in the parking lot at the Kleinburg Public School either prior to/after their bike ride. However, they did not leave their bikes parked in Kleinburg.

5.4 SPECIAL EVENT PARKING CONDITIONS

The special event parking survey was conducted during the annual Christmas Tree Lighting in Kleinburg, which took place on Friday November 29, 2019. Although it was a cold evening, there was no snow on the ground impacting parking opportunities or traffic circulation. The event started at 6:30 PM and continued until the tree lighting at 8:00 PM. The event took place in front of the Kline House located in the northwest quadrant of the Islington Avenue and Nashville Road intersection. As a result, Nashville Road was closed from Islington Avenue to 234m west of the Islington Avenue/Nashville Road intersection. The closure remained in place from approximately 6:30 PM to 8:15 PM. Access to the Doctor's House remained open but required a detour from Islington Avenue via Lester B. Pearson Street or Highway 27 and Nashville Road.

Unlike the summer and fall surveys, the special event parking survey was conducted for a shorter period from 5:00 PM to 9:00 PM to capture the event-related parking activity and mobility patterns. A review of the area-wide parking accumulation during the 4-hour survey period is presented by aggregating total on-street and off-street parking demands in Kleinburg in this time. Following this, parking demands at each facility are reviewed to understand parking needs in Kleinburg during special event conditions. Tabulated parking occupancies during the peak survey period can be found in **Appendix D - Parking Occupancy, Turnover and Average Duration Stay**.

5.4.1 Area-wide Parking Accumulation and Peak Occupancy

During the special event survey, the total parking usage in Kleinburg started to increase from 6:00 PM to peak between 7:30 PM and 8:00 PM. After the tree lighting occurred at 8:00 PM, the surge in parking usage due to the event quickly dissipated.

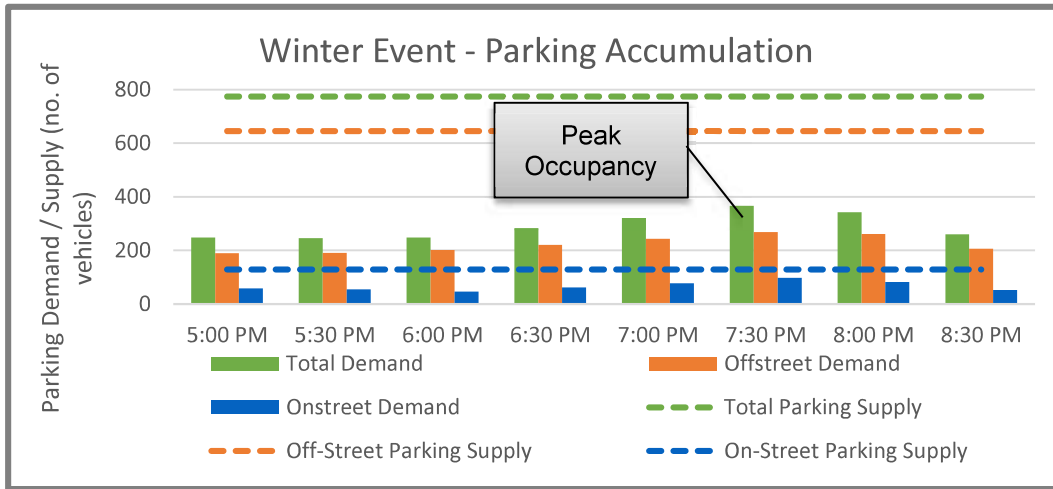


Figure 5-16 Parking Accumulation – Christmas Tree Lighting Special Event

Table 5.20 Peak Parking Demand – Kleinburg Christmas Tree Lighting

Survey Period	Peak Period	Peak Parking Demand (Percent Occupied)			
		All Facilities	Off-Street		On-Street
			Private	Publicly owned	Public
Friday November 29, 2019	7:30 PM – 8:00 PM	362 (53%)	248 (47%)	17 (49%)	97 (75%)

5.4.1.1 Peak Parking Conditions

During the peak period for the Christmas Tree Lighting event between 7:30 PM to 8:00 PM, on-street parking occupancy was significantly higher than off-street parking occupancy. Although there appears to be reserve parking capacity in both types of facilities, on-site observations showed use of non-designated parking spaces in both facility types, which is considered illegal parking in the absence of any special parking exemptions. No such special parking exemptions or signage permitting parking for the event was noted on-site. Parking occupancy levels for each parking facility during the identified peak period is mapped in **Figure 5-17 - Special Event Peak Occupancy (7:30 PM)**. Tabulated parking occupancies during the peak survey period can be found in **Appendix D – Parking Occupancy, Turnover, and Average Duration of Stay**. The sections below take a closer look at the event-related parking behavior.

5.4.1.2 Public Parking

Generally, there was high utilization of public on-street parking during the Christmas Tree Lighting. Only the section along Nashville Road between the entrance to the Doctor’s House and Islington Avenue had low to no utilization due to event-related closures. Otherwise:

- Both sides of Islington Avenue were 80% or more occupied excepting the section between Kellam Street to John Street. This section was directly across from the

event and considering high pedestrian volumes may have been discouraging to park in.

- Unlike the summer and fall surveys, the east side of Islington Avenue north of John Street was occupied beyond capacity (133%), which reflects full utilization of available parking in this segment along with illegal parking along sections of the boulevard with parking restricted signage.
- Over 50% occupancy was noted along Napier Street, indicating that visitors to the event at the Kline House sought parking close to the event.
- Consistent with summer and fall surveys, the parking along Kellam Street remained above capacity (i.e. with illegally parked vehicles).

Amongst the publicly-owned off-street parking lots, the Pierre Berton Heritage Centre was noted to have occupancy of 94% during the special event peak hour – much higher than during the summer or fall surveys.

5.4.1.3 Private Parking

During the Christmas Tree Lighting event, several private parking lots operated over, at or close to full capacity.

Table 5.21 Private Parking Hotspots – Christmas Tree Lighting (7:30 PM)

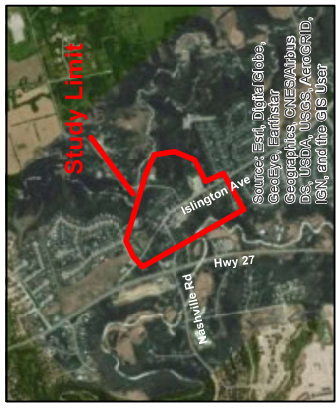
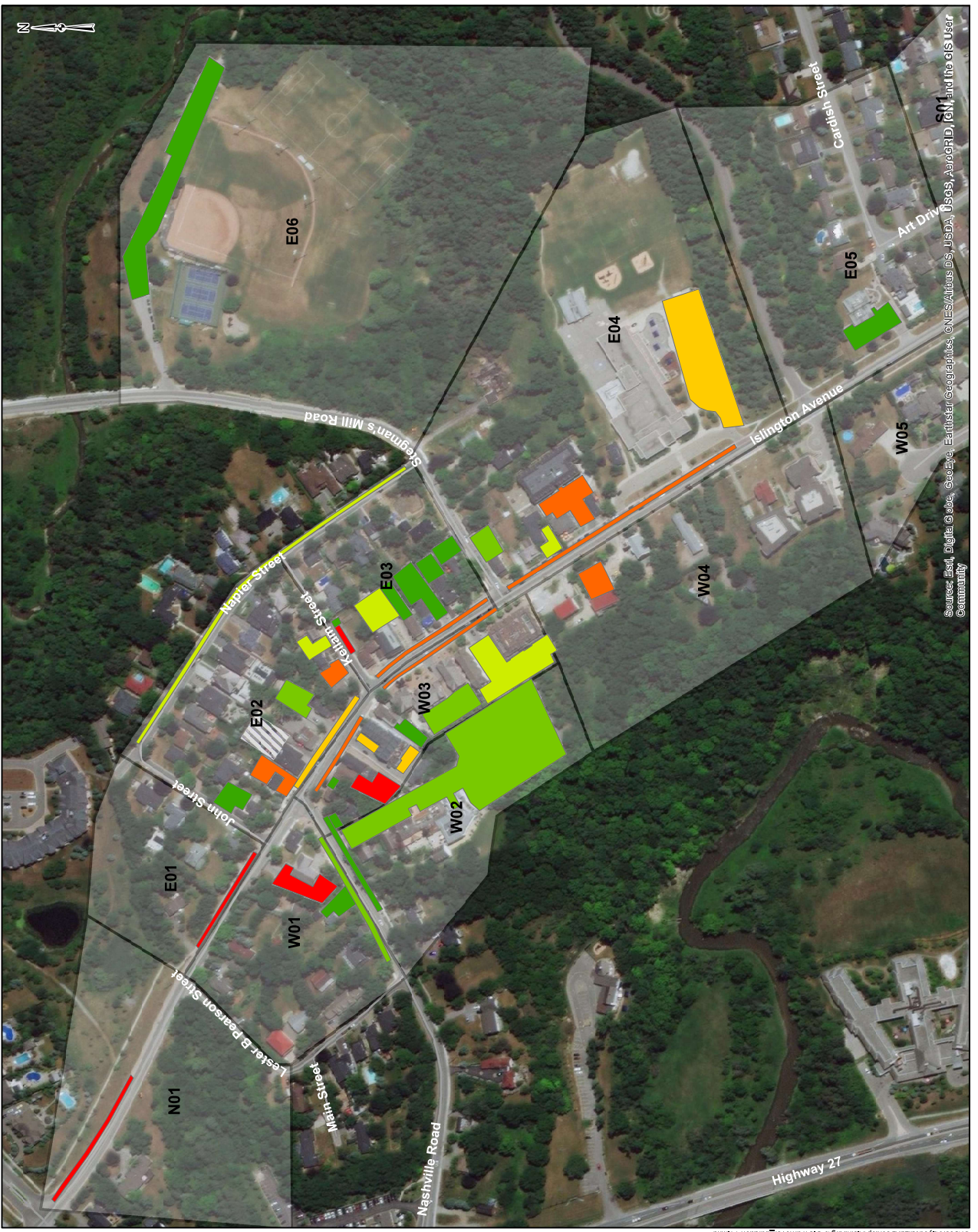
<i>Hotspots: Off-street Parking</i>	Capacity	No. of Vehicles	Occupancy	Noted as Hotspot in Summer / Fall Surveys?
<i>RBC Bank</i>	17	18	106%	No
<i>Immanuel Florist Plaza</i>	20	20	100%	Yes
<i>The Burg (Formerly Longchamp Pub)</i>	12	20	167%	No ¹
<i>Chroma Hair One</i>	13	12	92%	Yes
<i>Starbucks</i>	7	7	100%	Yes

¹ The Burg, (formerly Longchamp Pub) was under renovation during the summer and fall surveys. The occupancy is based on estimated number of spaces in this unmarked lot and therefore only indicates that the parking lot full during the evening due to diners and not necessarily illegally parked vehicles.

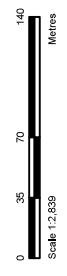
Consistent with summer and fall surveys, the parking lot at Starbucks remained at capacity during the peak period and Chroma Hair One remained close to capacity. Clearly, the excess parking demand at RBC Bank was due to special event parking during the peak period given the proximity of the lot and the inconsistency with summer and fall evening parking data. Additionally, compared to the other PM peak periods during the summer weekend and fall weekday surveys, parking lots at Canada Post Plaza and the Kleinburg Public School showed much higher occupancy, indicative of the irregular demand due to the special event within Kleinburg.

It is worth noting that use of private property is not typically allowed for visiting other destinations or events elsewhere. Comparable to the illegal on-street parking north along the east side of Islington Avenue north of John street, event goers continued to use private lots without permission in the absence of enforcement or guidance from event management. These trends highlight a need to review both the amount of and guidance/wayfinding to public parking spaces during special events in Kleinburg.





REFERENCE



CLIENT:	City of Vaughan		
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan		
TITLE:	Occupancy at Peak		
Special Events Survey - Nov 29, 2019, 7:30 PM			
PROJECT NO:	BM-19-0231	DATE:	Jan. 22, 2020
DRAWN BY:	XX	CHECKED BY:	XX
McINTOSH PERRY		Figure 5.17	

Source: Esri, Digital Globe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.4.2 Block Level Parking Occupancy

Block level parking occupancies are tabulated and mapped in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay**.

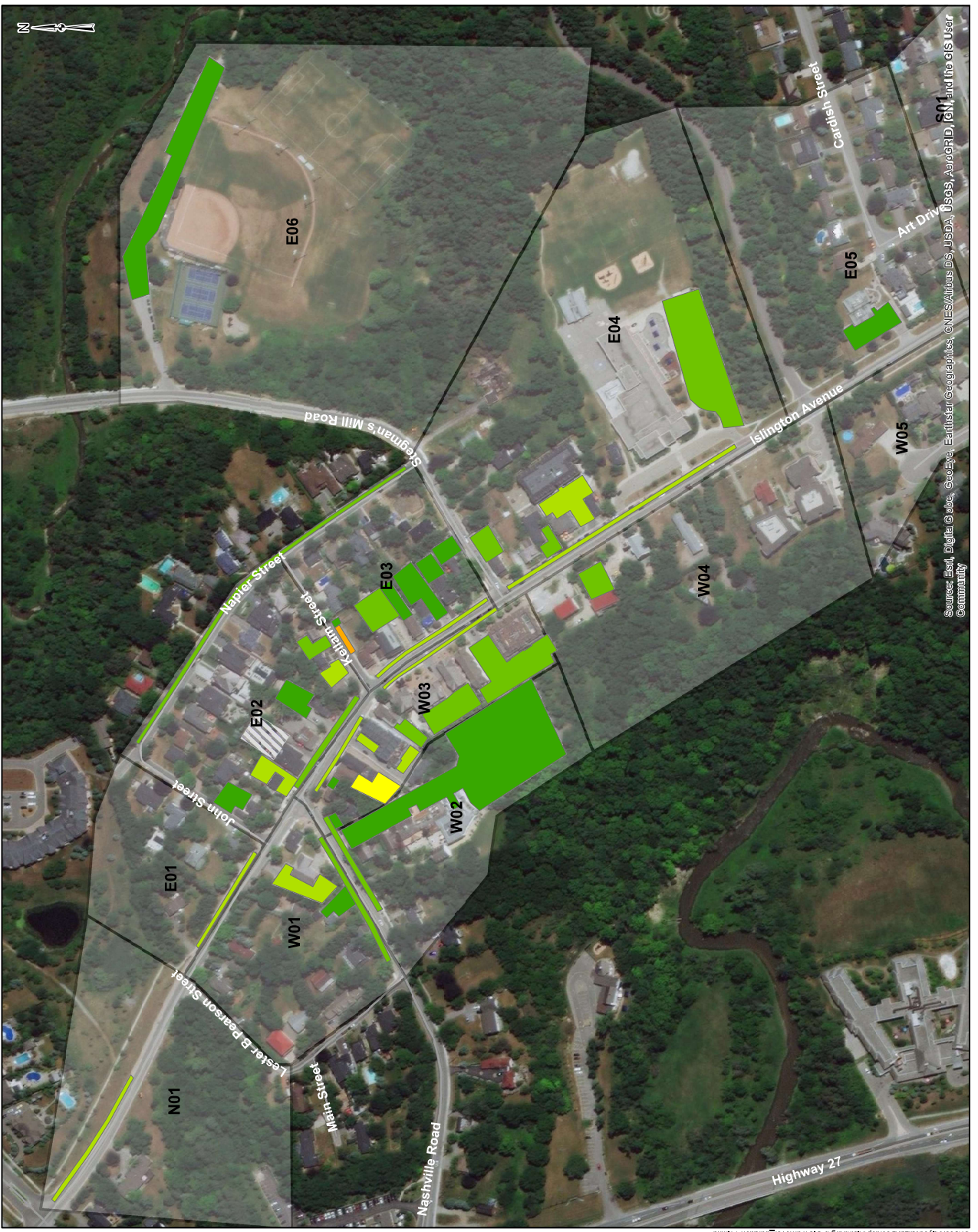
The block level parking occupancies during the peak period (7:30 PM) reflect the concentration of special event parking closer to the location of the Christmas Tree Lighting. Block E01 to the north of John Street was the busiest block and experienced over-capacity conditions due to illegal on-street parking. There are no private or public off-street parking facilities within this block. Additionally, the busy blocks identified in the summer and fall continued to remain busy – E02, E04, W01, W03 and W04.

5.4.3 Parking Turnover

Generally, the turnover rates observed during the special event are lower than during the other time periods observed as the survey captured only the evening time frame between 5:00 PM and 9:00 PM. As a result, while Kellam Street remains the street segment with the highest turnover rates, the magnitude of the turnover rate is significantly lower compared with typical weekdays or weekends in the summer and fall. Special Event turnover rates for each facility are mapped in Figure 5-18 and tabulated results are included in **Appendix D – Parking Occupancy, Turnover and Average Duration of Stay**.

The relatively highest turnover rates were observed at parking facilities in the immediate surroundings of Kline House where the special event took place, including, Canada Post Plaza, Chrome Hair One, Starbucks, RBC Bank and Islington Avenue north and south of Nashville Road. This is consistent with the observations made during the survey – the busiest areas during the Christmas Tree Lighting were in the vicinity of the Kline House. Non-event goers were also seen parking at the Canada Post Plaza visiting the area for postal services and contributing to the higher turnover rates recorded.



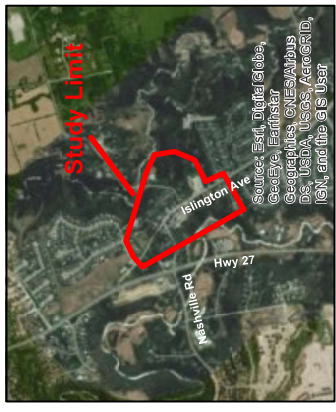


Legend

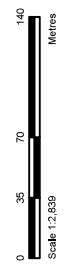
Block (E01, E02, ...)

Average Turnover Rate (Vehicles/Stall)

- 0 - 0.75
- 0.751 - 1.5
- 1.51 - 2.25
- 2.251 - 3.0
- 3.01 - 3.75
- 3.751 - 4.5
- 4.51 - 23
- Survey Not Available



REFERENCE



CLIENT: City of Vaughan	
PROJECT: Parking Strategy Review for the Kleinburg Village in City of Vaughan	
TITLE: Average Turnover Rate Special Event Survey - Nov 29, 2019	
PROJECT NO: BM19-0031	Figure 5.18
Date: Jan. 22, 2020	GIS: XX
Checked By: XX	

Source: Esri, Digital Globe, GeoEye, Earthstar, GeoGraphics, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

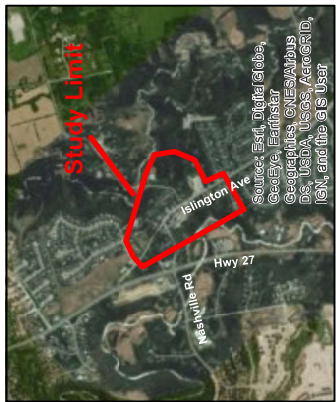
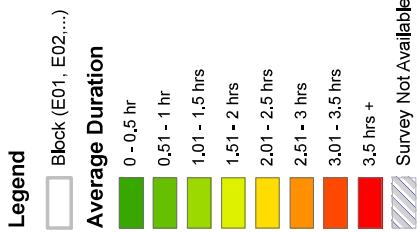
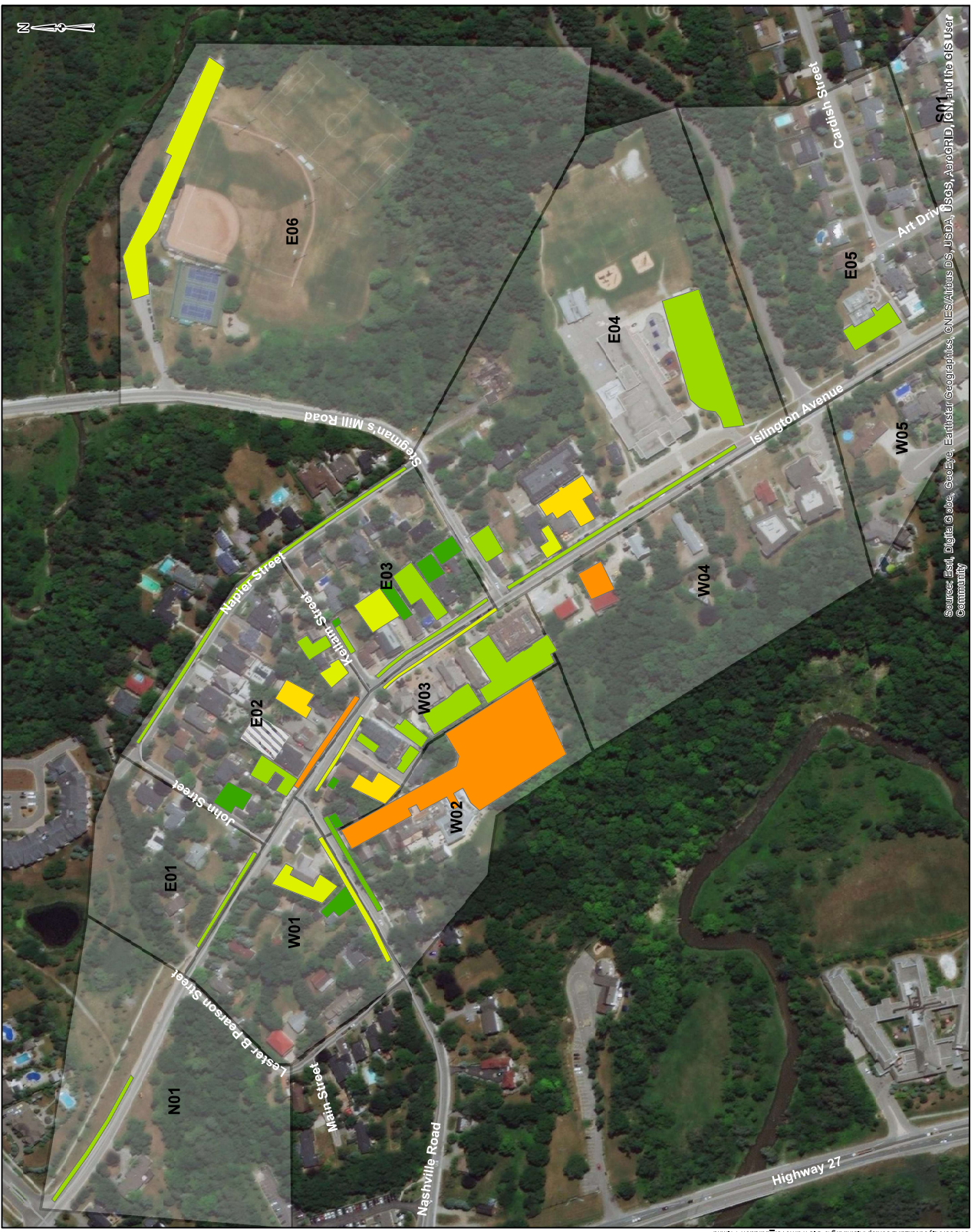
5.4.4 Average Duration of Stay

The average durations of stay statistics for on-street and off-street parking facilities were calculated for the 4-hour survey period during the special event and mapped in **Figure 5-19 - Special Event Average Duration of Stay**. The tabulated results for the duration of stay are included in **Appendix D- Parking Occupancy, Turnover and Average Duration Stay**.

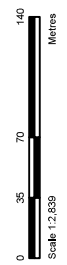
On average, visitors parked for approximately 1.5 hours in on-street spaces in Kleinburg during the special event survey period, excepting along the east side of Islington Avenue from Kellam Street northerly to John Street where vehicles were parked on average for a duration of 2 hours 46 minutes. This segment is adjacent to the event, and therefore it is likely those who want to park in the prime spots for the event arrived and parked early. Additionally, this segment is fronted by the restaurant Avenue Cibi E Vini (not included in summer weekend, fall or special event surveys), whose patrons may have been parking along this segment as well.

The average durations of parking at all off-street lots were below 3 hours during the special event survey and were relatively higher at restaurants, cafes, plazas with restaurants compared to offices or personal services as expected in the evenings. However, visitors parked at the RBC Bank for an average of 1 hour 50 minutes, which is longer than most other survey days (except fall weekday) during the bank's operational hours. This is primarily driven by the event goers using the RBC lot, as it is located immediately adjacent to the Kline House.





REFERENCE



CLIENT:	City of Vaughan		
PROJECT:	Parking Strategy Review for the Kleinburg Village in City of Vaughan		
TITLE:	Average Duration of Stay Special Events Survey - Nov 29, 2019		
PROJECT NO./B.M.#/S-0231	Date	Jan. 21, 2020	Figure 5.19
McINTOSH PERRY	GIS	XX	Checked By XX

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

5.4.5 Illegal Parking

The maximum number of illegally parked vehicles observed at each on-street and off-street facility is tabulated and mapped in **Appendix E – Illegal Parking**.

During the Christmas Tree Lighting special event, up to 16 vehicles were noted to be parked illegally along the east side of Islington Avenue, north of John Street at approximately 7:30 PM. This was the highest number of illegally parked vehicles captured across all survey periods. As noted earlier, this area is in the immediate vicinity of the Christmas Tree Lighting event taking place at the Kline House.

There were no more than 2 illegally parked vehicles at most off-street parking facilities, but as noted earlier, this does not include vehicles that parked on private property to visit other establishments in Kleinburg.

5.4.6 Bicycle Parking

There were no bicycles parked along the street or within off-street lots during the Christmas Tree Lighting special event.

5.5 SUMMARY OF PARKING DEMAND SURVEY

Parking turnover and duration surveys (at 30-minute intervals) were conducted during fall and summer weekdays and weekends, and during a special event (Christmas Tree Lighting in November 2019) in Kleinburg. The surveys show the study area parking occupancy (i.e. the ratio of parking demand to supply) peaks at least once during midday on the surveyed weekdays. Evening peak periods were also identified to capture peaking characteristics of on-street parking facilities. As shown in **Table 5.22 - Summary of Peak Parking Demands**, public on-street parking was utilized at higher levels than private off-street parking on all days.

Table 5.22 Summary of Peak Parking Demands

	Survey Period	Peak Period	Total Occupancy	Off-Street		On-Street
				Private	Publicly Owned	Public
Summer	Weekday - Aug 22 9:00 AM to 9:00 PM	2:00 PM – 2:30 PM	351 (49%)	256 (47%)	21 (60%)	74 (57%)
	Weekend - Aug 24 9:00 AM to 9:00 PM	Midday Peak 2:00 PM – 2:30 PM	284 (42%)	203 (39%)	16 (46%)	65 (50%)
		PM Peak 8:30 PM – 9:00 PM	378 (55%)	277 (53%)	13 (37%)	88 (68%)
Fall	Weekday - Oct 24 8:00 AM to 9:00 PM	Midday Peak 1:30 PM – 2:00 PM	348 (50%)	243 (46%)	27 (77%)	78 (60%)
		PM Peak 8:30 PM – 9:00 PM	296 (43%)	190 (36%)	16 (46%)	90 (70%)
	Weekend - Oct 26 9:00 AM to 9:00 PM	1:30 PM – 2:00 PM	378 (55%)	277 (53%)	7 (20%)	94 (73%)

	Survey Period	Peak Period	Total Occupancy	Off-Street		On-Street
				Private	Publicly Owned	Public
Special Event	Weekday - Nov 29 5:00 PM to 8:00 PM	7:30 PM – 8:00 PM	362 (53%)	248 (47%)	17 (49%)	97 (75%)

Typically, beyond 80% occupancy levels, visitors need to search to find parking. The total parking occupancies in **Table 5.22 - Summary of Peak Parking Demands** are below 80% and indicate reserve parking capacity within Kleinburg for both private and public facilities. However, a closer look at parking occupancy at the facility level during the peak periods reveals the following:

There are several common “hotspots”, where peak parking occupancy is above 80%:

Private Off-Street Parking	Public On-Street Parking
Starbucks	Kellam Street
Cookie Crumble Café Plaza	Islington Ave East Side - Kellam St to John Street
Canada Post Plaza	Nashville Rd South Side - Islington Ave to Lester B. Pearson Street

The parking turnover rate, or the average number of vehicles using a space during survey, was generally higher at the above hotspot locations. Parking turnover rates along Kellam Street and at Starbucks were significantly higher than any other on-street or off-street facility. There were plenty of short-term visitors in this high-demand area, including vehicles that parked illegally along either side of Kellam Street and within the Starbucks parking lot. Parking turnover rates in both locations remain high even when illegally parked vehicles are not considered in the turnover calculation, indicating the spaces are not occupied constantly by the same vehicles.

Some hotspot locations in Kleinburg consistently experience high parking demand throughout the day:

- Starbucks and Kellam Street: The off-street parking lot at Starbucks and on-street lay-by parking on the south side of Kellam Street were almost always at occupancy levels above 80% and during several surveyed periods in summer and fall experienced more parking demand than the available parking supply, resulting in illegal parking.
- Canada Post Plaza: The off-street parking lot at the Canada Post Plaza experienced close to or capacity conditions from the morning (approximately 9:00 AM) to mid or late afternoon (approximately 2:30 to 4:00 PM) on most surveyed days.
- Islington Avenue and Nashville Road: On-street parking along the east side of Islington Avenue between Kellam Street and John Street and the south side of

Nashville Road between Islington Avenue and Lester B. Pearson Street were close to, at or exceeding capacity throughout fall survey days.

- Kleinburg Public School remained close to capacity from 9:00 AM to 3:00 PM during the fall weekday survey, reflecting normal school hours. Site observations at approximately 7:45 AM showed that many cars parked on-street in front of the school belong to school staff. During the pick-up period, parents were observed to park in tandem within the lot and affect circulation for a short duration.

Hotspots are located within sub-areas with limited public on-street parking.

The majority of the businesses in Kleinburg are concentrated within blocks E02, E03, E04 and W03 along with most of the private and public parking spaces in the study area (see **Figure 3-2 - Parking Space Inventory**). These sub-areas within Kleinburg were the busiest across all peak periods in the summer and fall surveys with consistently more occupied parking spaces than in other blocks. Additionally, in the fall, Blocks W01 and W04 experienced relatively higher parking demands during the peak periods.

There is some reserve capacity in each block in the peak periods across all surveys – however, most of the reserve capacity is in private off-street lots within these blocks. During the summer, there were at least 7 unoccupied public on-street spaces in each block. In the fall, some blocks in the busiest areas of Kleinburg (E04, W01, W03) had only 3 or 4 unoccupied public spaces during the peak period. Block W03 contains several plazas, including places of business with parking issues identified by stakeholders/public engagement, such as the Canada Post Plaza. The low reserve capacity of public on-street parking, and the fact that all off-street lots within these blocks are private property, contribute to the appearance of parking scarcity within the busiest areas of Kleinburg.

There is limited signage for time restrictions; however, they are generally followed.

While most visitors parked for reasonable periods of time across all survey days, the average duration of stay at a few parking facilities exceeded the posted time limit or the 3-hour on-street parking limit under By-Law 064-199.

- Islington Avenue to the north of John Street (summer weekday)
- East side of Islington Avenue south of Stegman’s Mill Road (fall weekday)
- The RBC parking (exceeded posted 1-hour limit on all survey days)

Special event parking is not organized and results in illegal parking.

Visitors at the Kleinburg Christmas Tree Lighting special event parked in on-street “No parking” zones and private off-street facilities in the absence of guidance from event management and/or enforcement.

Recurring illegal parking in non-designated spaces was observed.

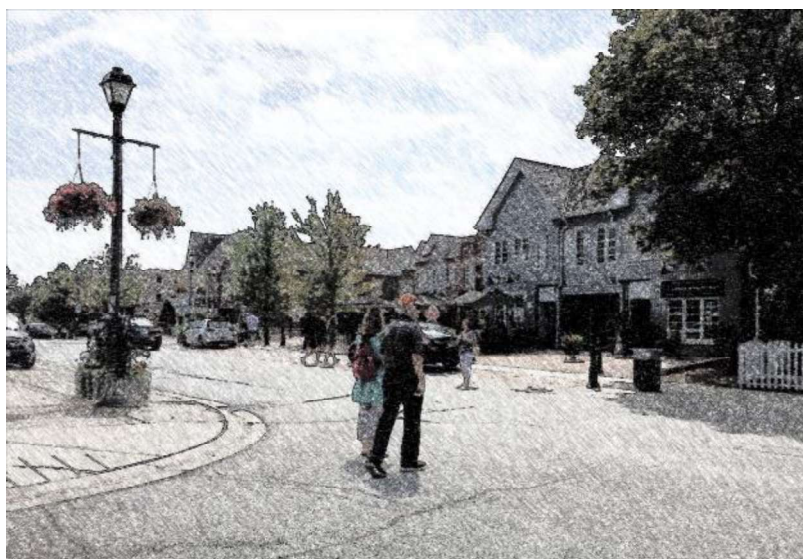
Illegal parking was recurring in hotspot areas during all surveys. Although not a hotspot, Islington Avenue, north of John Street, also saw illegal parking in “no parking” zones in the fall and during the Christmas Tree Lighting Special event.

Bicycle parking is underutilized, but demand for on-street facilities exists.

A few cyclists were noted to use the bicycle parking facilities at Kleinburg Public Library and Starbucks. As per site observations, most cyclists either use Kleinburg as a meeting

point or pass through Kleinburg. Demand for on-street facilities were noted during summer surveys, especially at near the intersection of Islington Avenue and Stegman's Mill Road.





6

6 ONLINE AND PEDESTRIAN INTERCEPT SURVEYS

Parking demand surveys were focused on collecting and analyzing quantitative parking data in Kleinburg. Additionally, an understanding of everyday experiences, behaviours and concerns of those who visit or reside in the area was considered a critical component of Kleinburg's parking paradigm. To obtain this understanding, an Online Survey and Pedestrian Intercept survey were conducted.

Sections 6.1, 6.2 and 6.3 document the profile and responses from participants in the Online Survey which was administered via the Project Website and hosted on SurveyMonkey. **Section 6.4 – Pedestrian Intercept Survey** provides additional and valuable information from pedestrians approached in Kleinburg, thus representing input from typical visitors, including employees, customers and tourists, on their parking experience on the day of the survey.

Survey questions were structured to obtain travel and parking information from visitors to the core. The data identified travel habits of participants (i.e., how and when trips were made to the study area) allowing for correlations to be drawn between parking demand, destinations and travel patterns that impact parking at key locations. In addition to answering the 18 multiple choice questions, most of the survey respondents provided thoughtful comments on two open-ended questions. The commentary was extensive and, in many cases, included several insightful points demonstrating that the survey respondents were highly interested/involved in parking and mobility concerns in Kleinburg.

A copy of the complete online survey and summary of responses received are included in **Appendix F – Online Survey Results**.

6.1 ONLINE PARTICIPANT PROFILE

The Online Survey was available to the public for approximately five weeks from September 26, 2019 to October 31, 2019. The survey responses, fully summarised in **Appendix F – Online Survey Results**, identified the following trip making profiles of residents and visitors:

Trip Origin

- Trips for the majority of the respondents were local i.e. from Kleinburg and Vaughan. On weekdays, a small proportion (<10%) of visitors came from outside these areas. During weekends, **29%** of visitors originated from outside of Kleinburg or Vaughan.

Trip Timing

- Majority of respondents (**77%**) visited Kleinburg on a weekday; **37%** of all trips made to the area were done during the morning (before 11:00 AM), closely followed by in the afternoon (2:00 PM to 5:00 PM).

Trips Destination

- Majority of the respondents (**73%**) indicated that they visited one or two places during their trip to Kleinburg, while fewer visited more, or did not visit any particular place, i.e. they travelled to a meeting point in Kleinburg for other activities not specific to Kleinburg. On average, each respondent visited **1.7 places or destinations**.

The most popular destination blocks amongst respondents (shown in **Figure 6-1 - First Destination Block**) were consistent with the findings of the parking demand survey:

- E02 – containing Starbucks, Chrome Hair, Kleinburg Plastic Surgery
- W03 – containing Sugar Plum, Daniel Luis Hair Salon
- E04 – containing Kleinburg Public School, Immanuel Florists

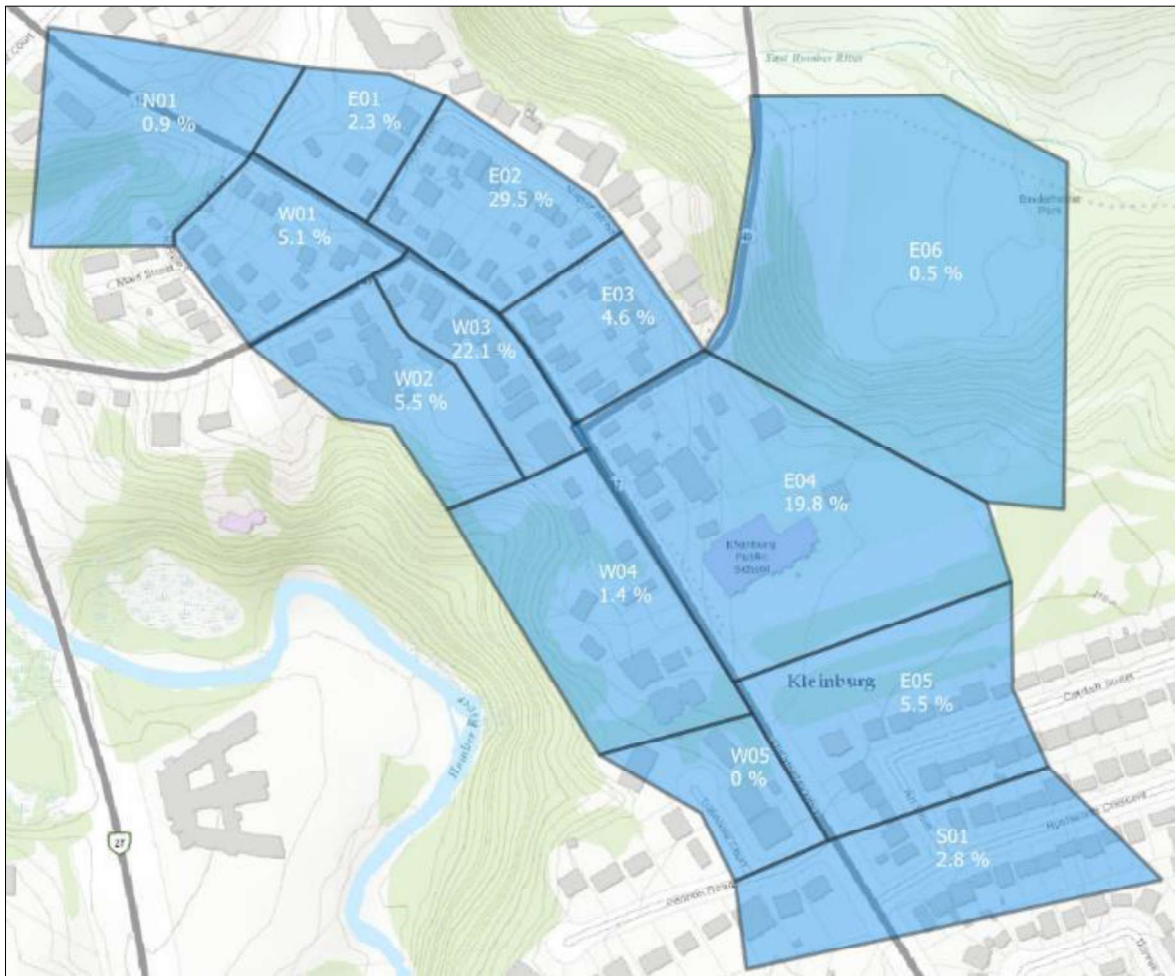
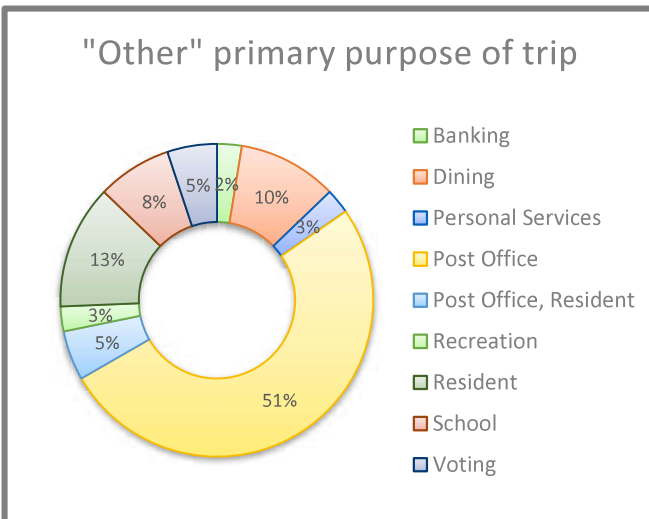
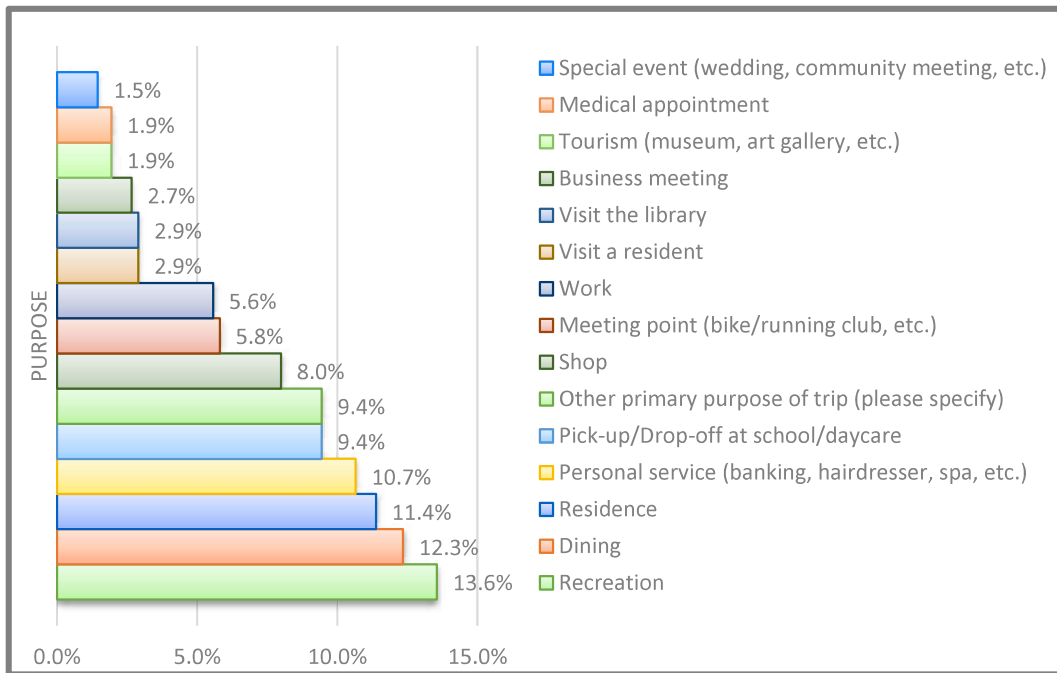


Figure 6-1 First Destination Block

Primary Trip Purpose

- The most common primary trip purposes were recreational (**14%**), dining (**12%**), residence and personal service (both at **11%**).
- Those who indicated residency in Kleinburg also naturally selected combinations of dining, personal services, medical appointments, pick-up/drop-off at school/day care, meeting people, visiting the library and the post office as their trip purposes.
- Of respondents selecting “Other primary purpose of trip”, over half of those (**51%**) specified the post office as their primary purpose, a reasonable trip end given the lack of personal mailboxes or super mailboxes for residents in Kleinburg proper. Distribution of trips by purpose is provided in **Figure 6-2 - Purpose of Trips**.
- A cross tabulation of day of week, time of day and purpose of trip indicate typical travel patterns expected in a community such as Kleinburg featuring a commercial/retail core, residential areas and recreational options.
 - During weekdays, there were a wider range of purposes for travel to Kleinburg, the majority of which included pick-up/drop off (occurring in the morning and afternoon period) and dining (noon and evening).
 - During the weekends, most trip purposes were recreational throughout the day, with dining being the main trip purpose in the noon and evening.



Key Comments:

"To pick up mail at the Kleinburg Post office"

"Resident in the village, and driving every day for various reasons, work, post office, kids at school, etc."

"Drug store, dry cleaner and post office"

"Going for a tea"

Figure 6-2 Purpose of Trips

Trip Duration

- Most survey respondents made short to medium duration trips to Kleinburg (up to 4 hours – 92%) while very few respondents indicated that they stayed in Kleinburg for long durations (over 4 hours).
- For individual survey periods, the highest proportion of respondents (23%) stayed in Kleinburg for **15 minutes or less**. A total of 50% of respondents stayed for an hour or less. A breakdown of durations of visits is shown in **Figure 6.3- Duration of Stay**.
- Generally, durations for weekend visits were longer than those completed on a weekday. Visits to Kleinburg included a variety of purposes, which was reflective of the durations of these trips i.e. weekdays included "pick-up/drop-off at school/daycare" most of which was limited to 15 minutes or 30 minutes in length.
- Dining trips were longer on the weekend. During both weekday and weekend, "work" and "residence" trips had the longest durations indicating the survey captured input from employees and residents.

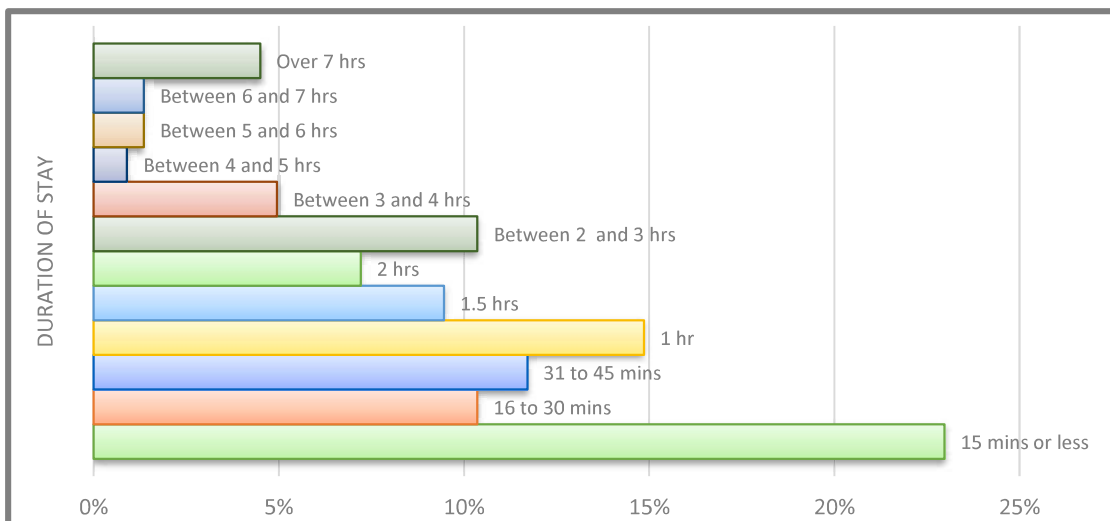


Figure 6-3 Duration of Stay

Typical Trip Frequency and Mode

- The majority of respondents (**42%**) also indicated that they typically visit Kleinburg for non-work purposes more than 3 times a week. This is supported by the fact that the survey attracted proportionally more input from local visitors hailing from Kleinburg and Vaughan (external to Kleinburg), who are likely to make more frequent trips to Kleinburg compared to visitors from other municipalities.
- The majority of respondents (**82%**) travelled to Kleinburg by car. Amongst those who indicated they travelled by a combination of modes, most (**85%**) specified “car” and “walking”, indicating the primary mode was likely by car, and the respondent walked from their car to the ultimate destination. As such, the durations of stay for respondents who drove is expected to be congruent with the observations made from all respondents. The breakdown of mode of travel can be seen in **Figure 6.4**.

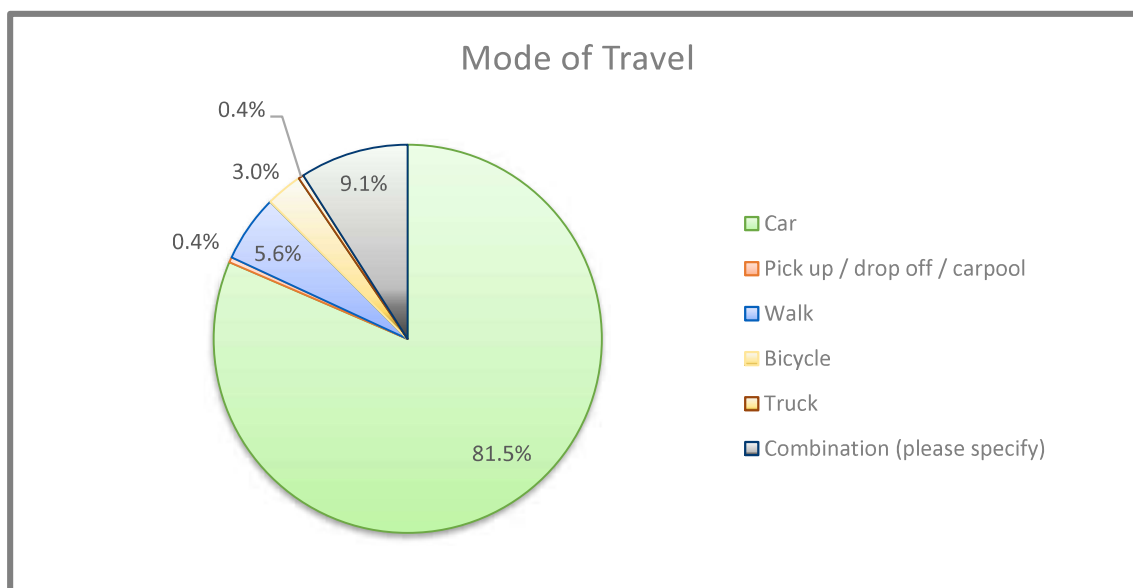


Figure 6-4 Travel Mode

6.2 PARKING SERVICE AND EXPERIENCE

Responses received from Online Survey participants helped to categorize the customer service and experience offered by the existing parking amenities in Kleinburg. The parking service is tied to the availability, characteristics, convenience and conditions of parking, and how respondents utilize and experience them. The following sections summarize input from survey respondents in terms of their parking experience and parking service. Refer to **Appendix F – Online Survey Results** for details.

Parking Experience

Survey Results

- The majority of respondents parked on-street, either along Islington Avenue (**33%**) or a side street (**8%**). The parking demand survey also indicated that the aggregate on-street parking utilization was typically higher across all survey days in comparison to aggregate off-street parking lot utilization.
- Approximately **23%** of respondents parked in privately owned customer only parking lots, while **14%** parked in the Kleinburg Public School parking lot. Amongst those who selected “Other” type of parking space, **43%** specified they parked in a privately owned customer lot, while **9%** and **5%** indicated they parked at Bindertwine Park and Pierre Berton Heritage Centre, respectively. Bindertwine park is a public park while the parking lot at Pierre Berton Heritage Centre is municipal property.
- The most popular parking blocks were W03 – Daniel Luis, Sugar Plum (**24.5%**), E04 – Kleinburg Public School, Immanuel Florist (**20.9%**) and E02 – Chrome Hair, Plastic Surgery (**18.4%**). These same blocks showed the highest parking occupancies in the summer and fall parking demand surveys discussed in **Section 5 - Parking Demand Supply..**

Destination and Parking Space Type Utilized

- A cross tabulation of destinations and parking space type used indicates:
 - On-street spaces were used by visitors to all blocks.
 - Private customer lots were generally used by visitors of all blocks except the northern and southern ends of the study area.
 - The Kleinburg Public School and Kleinburg Public Library lots were used by some visitors whose destinations were in blocks other than those these two buildings are situated in.
 - Very short duration visitors (15 minutes or less) generally parked on-street (along Islington Avenue), the Kleinburg Public School (which reflects pick-up/drop off) and in privately-owned lots (customer lots and reserved spaces).
 - Long duration (more than 7 hours) visitors had higher concentrations of parking parked in privately owned, customer only lots and reserved spaces.

Parking Block and Destination Block

- Cross tabulation of the parking block and destination blocks showed:
 - Those who visited Bindertwine Park also parked at Bindertwine Park.
 - The majority of those who visited blocks , W02 - Doctor's House, W04 – Pierre Berton Heritage Centre, W03 and E04, were able to park in the same block. Less than 50% of those visiting each of the remaining blocks were able to park in the same blocks.
 - The time to find parking varied for visitors to each destination block, except for Bindertwine Park where **100%** of visitors took less than 5 minutes to find parking. Overall, **47%** of respondents took less than 5 minutes to find parking, while less than **10%** took over 15 minutes.

Parking Service

On/Off Street Parking and Accessibility Parking Responses

- Respondents were asked to score the availability of on-street and off-street parking in Kleinburg ranging from “plentiful, never a problem” to “critical shortage”. A total of 121 respondents provided additional comments to describe their experience with regard to parking availability.
 - The weighted average scoring indicates that the on-street space users are less satisfied with the service relative to the off-street service.
 - Overall, the comments indicated shortages and difficulty in parking to visit the Post Office and restaurants, including Starbucks.
- Respondent's were asked to score various aspects of off-street parking (customer lots) in Kleinburg from “excellent” to “unacceptable”. A detailed list of comment tags are found in **Appendix F**. A total of 121 respondents provided additional comments to describe their experience.
 - The weighted average scoring indicates that the customer lot users find signage (wayfinding, restrictions, including time restrictions) to be in “poor” condition, while physical conditions (lighting, visibility, pedestrian walkways) to be “adequate” on average.
 - The key issues tagged in these comments are: pedestrian safety, inadequate parking supply, lack of a collective parking facility and poor signage.

Specifically, the top 5 “pain-points” identified for on-street and off-street parking include the following (the full list can be found in **Appendix F – Online Survey Results**):

Table 6.1 Pain Points Parking Summary

On-Street	Off-Street
Pain Point – Area Parking Shortage	Pain Point – Post Office
Pain Point – Shortage on Islington	Pain Point – Area Parking Shortage
Pain Point – Post Office	Pain Point – Misuse of Private Space
Pain Point – Misuse of Private Space	Pain Point – Parking Near Restaurants
Pain Point – School Spillover	Planning Issue

6.3 PARTICIPANT COMMENTS

Two open-ended questions were provided to give survey participants the opportunity to provide input on:

- Specific issues that people wanted the Study to address (Table 6.2 - Specific and Remedies Summary)
- General comments (Table 6.3)

A total of 102 responses were provided regarding specific issues, while 85 responses were provided as general comments. The study team reviewed each response in detail and assigned a common tag to categorize the comment to identify the top concerns and suggestions. The top 10 tags for specific issues and general comments received are summarized on the following page, and the full list can be found in **Appendix F – Online Survey Results**

Table 6.2 Specific and Remedies Summary

Specific Issues/Remedies	Percentage of Comments
<i>Issue - Bylaw Parking Requirements</i>	19%
<i>Issue - Traffic Volumes</i>	14%
<i>Issue - General Supply Deficiency</i>	14%
<i>Issue - Safety</i>	11%
<i>Issue - Land use not controlled</i>	10%
<i>Issue - Need more Public Space</i>	10%
<i>Pain Point - Post Office</i>	5%
<i>Remedy - New Lot w/ Signage</i>	4%
<i>Issue - Private Space Not Enough</i>	4%
<i>Issue - School Overspill</i>	4%

Table 6.3 General Issues and Remedies Summary

General Issues/Remedies	Percentage of Comments
<i>Issue - Traffic Volumes</i>	34.8%
<i>Issue - Through Traffic</i>	24.2%
<i>Issue - Planning Control Application</i>	20.9%
<i>Remedy - Traffic Control Measures</i>	18.6%
<i>Issue - General Supply Deficiency</i>	16.3%
<i>Issue - Growth Control</i>	14.0%
<i>Issue - Application of Parking Requirements</i>	11.6%
<i>Issue - Bypass Traffic Route</i>	10.5%
<i>Issue - Pedestrian Safety</i>	7.0%
<i>Remedy - Maintain Village Feel</i>	7.0%

As shown in **Table 6.3 - General Issues and Remedies Summary** above, of the top 10 general comments received, four speak to traffic-related issues. Percentages for each issue based on the number respondents providing a comment on said issue. Some **21%** of the comments describe issues related to the inconsistent application of minimum parking requirements toward development applications and variances from the required number of parking spaces over the past three to five years. Other key comments include concerns for general parking supply deficiency, pedestrian safety and the need to maintain a “village” feel.

6.4 PEDESTRIAN INTERCEPT SURVEY

Surveys were conducted on a single weekday between the hours of 10:00 AM to 2:00 PM and 7:00 PM to 9:00 PM. The findings of the pedestrian survey were consistent with the findings of Online Survey #1, with some exceptions, discussed on the following pages.



Pedestrian Intercept Survey Findings

- The primary mode of travel was by car. This is similar to what was observed through the online survey and is to be expected given the location of the Village and the limited availability of other modes of transportation.
- Pedestrians who drove did not have difficulty in finding parking. Most of the pedestrians surveyed indicated that it took them less than 5 minutes to find parking (either on-street or off-street).
- The purpose of the visit varied with the most frequent responses indicating shopping and lunch, followed by work-related visits.
- The average length of stay was approximately 3 hours, with the trip purpose for the majority of visits being for work and shopping/lunch.
 - Online surveys, having a significantly larger sample size showed a consistent number visits for all surveyed durations from less than 15 minutes up to 3 hours for similar trip purposes.
- The majority of the respondents parked either on-street in front of their destination or in the private parking lot of the commercial building they were visiting.
 - This indicates that people did not have issues finding spots as they were able to park close to their destination. This finding is also representative of the time it took for people to find parking (i.e. generally less than 5 minutes).
- Respondents were asked to score their parking difficulty on a scale from 1 to 5 with 1 representing “No Problem” and 5 representing “Very Difficult” based on their overall perception of parking in Kleinburg and not the specific day of the survey.
 - Respondents identified their experience as “often difficult” (4 on survey scale) regarding the ability to finding parking in the Kleinburg Village.
Figure 6.7 shows the number of observed for each parking scale difficulty.
- Additional comments provided by the pedestrians varied drastically. However, the main “pain-point” observed from the surveys was the high through traffic on Islington during peak hours as well as the high number of trucks passing through Kleinburg. Others stated that parking is insufficient in the Village.

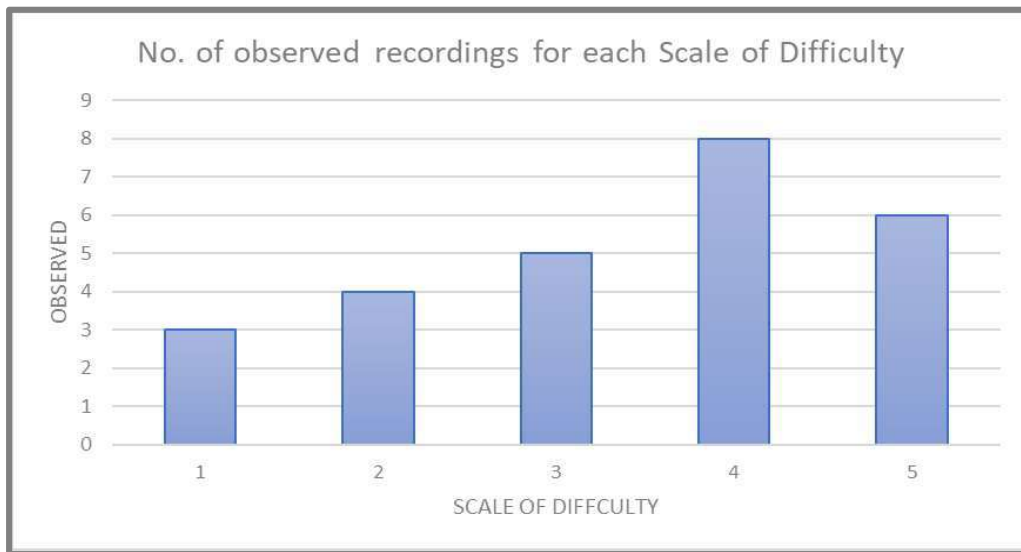


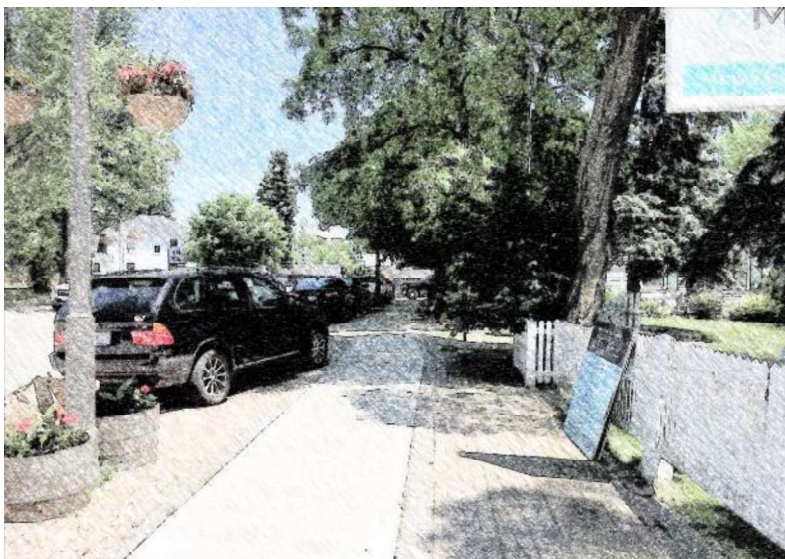
Figure 6-5 Parking Scale of Difficulty

All Pedestrian Intercept Survey responses are documented in **Appendix G - Pedestrian Intercept Survey Responses**.

6.5 SUMMARY OF USER BEHAVIOURS AND PERCEPTIONS

The Online Survey and Pedestrian Intercept Survey, along with the parking demand surveys and site observations form the basis for understanding parking user behavior and perceptions in Kleinburg.

The Online Survey and Pedestrian Intercept Survey had a varied group of respondents including, area residents, local and non-local visitors, tourists and employees who travel to Kleinburg for a wide range of purposes and travel to Kleinburg mostly by a vehicle. While their responses indicate that on average, they did not face any severe problems in finding parking close to their destinations, many visitors to the study area expressed that there is a continuous ongoing parking deficiency in the study area.



7

7 PARKING ISSUES AND OPPORTUNITIES

The review of the existing conditions, parking demand and supply, and user behaviors and perception has resulted in identifying several parking and mobility issues in Kleinburg. Additionally, several opportunities have been identified to be carried forward to Phase 2 of this Study which will involve developing solutions to address the identified issues.

7.1 KEY PARKING AND MOBILITY ISSUES

Overall, the parking and related mobility issues gathered through open discussions and comments from stakeholders and the general public align with the issues noted during on-site reviews. In particular, the feedback from the parking demand survey on the issue of near-capacity conditions noted at “hotspots” during the peak periods, correlated to the on-site review findings. The three streams of data from public consultation, parking demand surveys and online user surveys, highlight a set of key parking issues within Kleinburg:

- **High parking demand within high activity or hotspot areas:** While the parking demand survey indicates that the study area does not have a severe parking shortage, there are key hotspot areas, which are main attractors within the village core. Visitors to Kleinburg seek to park as close as possible to these locations. This behavior creates a high demand in these hotspot areas giving visitors the perception of severe parking shortage within the village core.
- **Public parking spaces are not widely available:** Most of the total 690 parking spaces in Kleinburg (excluding Bindertwine Park) are private off-street parking (526 spaces). Public parking includes on-street spaces (129 spaces) and publicly owned parking (35 spaces) for patrons of the Kleinburg Public Library and the Pierre Berton Heritage Centre. The only off-street public parking is provided in the Bindertwine Park (64 spaces); however, this parking lot is located outside the village core and accessed via Stegman’s Mill Road, which is on a steep grade with sidewalk available

only on one side. As a result, there are limited public parking spaces available during peak periods within the busy blocks containing the hotspots.

- **Private off-street lots are not available for general public use:** Although private off-street parking lots within the busy blocks offer reserve capacity during peak periods, not all spaces are readily available to the general public. Additionally, considering public preference to park close to destinations, visitors to specific land uses can continue to see a parking shortage and resort to parking illegally (e.g. Starbucks parking lot and on-street spaces along Kellam Street).
- **Signage and pavement markings are limited or inadequate:** Lack of signage and clearly demarcated on-street parking spaces impact visitors being able to easily identify public parking spaces.
- **Existing parking signage or restrictions are not visible or apparent:** Lack of visibility or illumination of signage and restrictions contributes to illegal parking.
- **Traffic volumes are high on Islington Avenue during peak periods:** Heavy traffic volumes lead to queuing on Islington Avenue, which has a two-lane cross section, and impact access to parking facilities. Likewise, on-street parking activity on Islington Avenue can affect traffic operations.
- **Kleinburg Public School and YMCA daycare staff parking demand is high:** While pick up-drop off operations at Kleinburg Public School are found to be well managed, staff were noted to utilize public on-street parking as a result of parking shortage within the school lot.
- **Safety concerns related to active transportation are present:** Lack of dedicated cycling facilities, limited pedestrian crosswalks, and sidewalks often encroached by parked vehicles and large vehicles maneuvering through intersections contribute to safety concerns for active transportation users.
- **Communication of closures and plans for special events:** In the absence of guidance from special event management and/or enforcement regarding parking, visitors either parked on-street areas signed as “No Parking” or parked in private lots as close to the event venue as possible.

7.2 OPPORTUNITIES FOR KEY ISSUES

The following opportunities have been identified to address key issues and will be carried forward in the next phase of the Study in order to develop short-, medium- and long-term implementable solutions.

Improve parking and multi-modal travel efficiency by providing guidance to visitors. These may include well illuminated and visible directional or wayfinding signage to available on-street and off-street parking spaces to avoid vehicles circulating through the area.

Target and manage visitor groups, such as cyclist groups that use Kleinburg as a meeting place, to better utilize available public parking and reduce demand at hotspot locations. Employees within the Village can also be managed.

Promote underutilized parking and review shared use of private parking spaces through public private partnerships or use of publicly owned lots during off-peak periods. Improve or increase supply of public parking using initiatives such as:

- Delineating regular and accessible public on-street parking spaces.
- Review legalizing on-street parking spaces in restricted areas (e.g. Islington Avenue, north of John Street)
- Providing a centralized public parking facility

Encourage Transportation Demand Management (TDM) to reduce reliance on single-occupant vehicles.

Establish a pedestrian-oriented public realm and remove boulevard parking. This opportunity has been highlighted in the Kleinburg Streetscape Master Plan, to allow Islington Avenue ability to accommodate improved boulevards with pedestrian-oriented amenities such as street furnishings, lighting, and increased space for pedestrian use. There is an opportunity to designate a village “centre” with a pedestrian-oriented public realm, active streetscaping and more crossing locations.

Capitalize on planned improvements to the Islington Avenue corridor. The Islington Avenue Streetscape Phase 1 is currently underway, and opportunities to integrate solutions to improve parking along Islington Avenue are provided as part of future phases.

Re-evaluate the role of Islington Avenue as a throughway versus main street. This highlights an opportunity to address traffic congestion along Islington Avenue which has impacts on front-lot parking access.

Explore new technologies such as shared mobility, micro-mobility and real-time parking information systems. Adoption of emerging technologies will impact existing parking requirements, curbside management strategies and mobility options, and a forward-thinking parking strategy will need to consider these opportunities.

Consider implementing paid parking and a Parking Authority. Paid parking is a prominent feature within other areas of the City of Vaughan, such as the Vaughan Metropolitan Centre. There is an opportunity to review the incorporation of paid parking in Kleinburg and create a Parking Authority to manage the parking strategies.

Update/change existing policies such as cash-in-lieu of parking. This may include updating the cash-in-lieu formula and reviewing the study area in conjunction with zoning policies to identify an appropriate area for cash-in-lieu application limits.



8

8 NEXT STEPS

The first phase of the Study has established a baseline understanding of parking supply and demand in Kleinburg, as well as highlighting the existing issues and opportunities present in the Village through extensive consultation. This first phase, culminating the review of the existing conditions, has determined a series of issues and challenges to be addressed moving forward. In the next phase of the Study, the medium- and long-term needs of the Village will be projected, and solutions will be developed, through further analysis and consultation, to develop a Parking Strategy that will address the short-term needs of the Village, as well as the medium- and long-term needs.

In addressing the short-term needs of Kleinburg, the Project Team will review areas where opportunity exists to better match supply and demand. These opportunities can include quick-win strategies that will address more nuanced issues users of the Village encounter daily.

Beyond the short-term solutions, this Study will also develop solutions to ensure the sustainability of parking conditions in the Village through the medium- and long-term. This task will involve analyzing current and future development scenarios and the challenges arising from these projections. The next steps will involve:

- Developing a forecast of parking demands based upon:
 - Land use changes (new developments).
 - Changes in travel behaviour.
 - Policy changes (e.g. incentives for transit use).

- Impact of driving technology changes (autonomous vehicles, increasing use of rental of vehicles, Uber-type of practices, parking guidance system that serves to direct motorist to available space through dynamic signage, phone messages or other means)

- Develop options to address future parking supply requirements and assess their justification, feasibility, impacts and optimal timing for implementation, including:
 - Additional on-street parking and their locations, including the neighbouring residential streets.
 - Additional off-street surface parking lots and their locations.
 - Changes to the type and level of enforcement.
- Producing a set of reasonable parking initiatives for consideration by the Project Team, Stakeholders and the public. Each recommendation will include capital costs, operating costs and revenue opportunities, and land acquisition proposals.

The second phase of the study will include options and strategies for immediate and future parking needs. Based on the demand and parking survey (supply-response) results/findings in Phase 1, we endeavor to exploit the areas where opportunity exists to better match the demand and supply.

Phase 2 of the study will assess potential parking management systems including parking industry technology and new program initiatives applied/implemented at other municipalities. One of the key components of the parking strategy is an assessment of future growth and its impact on future parking conditions and requirements, including the role that the City could play in facilitating development from a parking perspective. The planning horizon is set to a short term of 1-5 years, medium term of 5-10 years and long term of 2041.

The Phase 2 of the study may include but not be limited to the following parking solutions:

- Adding public parking at a strategic location in order to support existing and future needs / development to serve the Kleinburg Village core.
- Extend the role of enforcement of regulations (parking duration, revenue capture, benefits of technological implementation, etc.).
- Exploration of mechanisms for the management of the public parking facilities (both on- and off-street; revenue oriented, level of enforcement, municipal department control, parking authority, public private partnership options).
- Exploration of possible opportunities or policy action items that relate to TDM (Transportation Demand Management).
- Funding and legal mechanisms (cash-in-lieu, benefitting assessment, improvement tax, property tax base) required to implement the Strategy.

Phase 2 of the study will also have a Consultation and Engagement process to include members of the public, City of Vaughan staff, technical agencies, interest groups, and members of Council. The next meetings are anticipated to be held in late March 2020 with the Second Public Information and Feedback Session planned for the first week of April 2020. The goal of the Phase 2 consultation and engagement is to present findings and results of the study Phase 1 (existing conditions review), present the parking management strategy and implementation plan, and interactively obtain input.

A second online survey will be conducted with the goal to obtain input on the proposed parking strategy. The survey is anticipated to be hosted from beginning to the end of March 2020.

The consultation activities and input received will be documented in a Public Engagement Report that will be included in the Final Report (completed by May 2020) to allow participants to better understand how their input was incorporated into the process.

The Final Report will provide recommended alternatives for each of the planning horizons, forming an immediate, short- and long-range plan for parking in the study areas.

