



Draft Final Report

Parking Standards Review

City of Hamilton

DRAFT

**R.J. Burnside & Associates Limited
6990 Creditview Road, Unit 2
Mississauga ON L5N 8R9 CANADA**

**August 1, 2023
300055923.000**



Distribution List

No. of Hard Copies	PDF	Email	Organization Name
0	Yes	Yes	City of Hamilton

Record of Revisions

Revision	Date	Description
0	July 28, 2023	Initial Submission to City of Hamilton
1	August 1, 2023	Second submission to City of Hamilton

R.J. Burnside & Associates Limited**Report Prepared By:**

Gordon Hui, P.Eng.
Senior Transportation Planner
GH

Nansen Feng, P.Eng.
Transportation Planner
NF

Sameem Raheemi
Transportation Planner
SR

Report Reviewed By:

Ray Bacquie, P.Eng., MBA
Project Manager
RB:

Table of Contents

1.0	Introduction.....	1
2.0	Developing a Parking Standards Policy Framework	1
3.0	Background Review.....	2
3.1	Policy Framework	2
3.1.1	2016 – 2025 Strategic Plan	2
3.1.2	Urban and Rural Official Plans	3
3.1.3	Protected Major Transit Station Areas.....	3
3.1.4	Climate Change Impact Adaptation Plan.....	4
3.1.5	City Zoning By-Laws	5
3.2	Previous City Parking Studies and Reviews.....	5
3.2.1	Parking Master Plan.....	5
3.2.2	City-Wide Downtown Parking and Loading Study (2005)	7
3.2.3	City Review of the Residential Parking Standards outside Downtown	8
3.2.4	City Review of Temporary Amendment to the Cash-In-Lieu of Parking Policy for the Downtown Secondary Plan Area.....	8
3.3	Previous Transportation Studies	9
3.3.1	Metrolinx Regional Transit Plan.....	9
3.3.2	Transportation Master Plan	11
4.0	Review of Parking Standards Best Practices	11
5.0	Vehicle Trends Affecting Parking Demand	12
5.1	Rising Vehicle Ownership	13
5.2	Consumer Trends in Electric Vehicle Sales	13
5.3	Consumer Trends in Vehicle Size.....	13
6.0	City of Hamilton Factors Affecting Residential Parking Demand.....	14
6.1	Average Persons Per Household.....	14
6.2	Average Rooms per Household.....	14
6.3	Commuting Trips within the City of Hamilton.....	15
6.4	Household Affordability	15
6.5	Auto Mode Share.....	16
6.6	Vehicle Ownership per Household.....	16
7.0	Opportunity Cost to Vehicle Ownership.....	23
8.0	Setting the Parking Standards Framework	23
8.1	Expanding on the City's Geography-Based Approach	23
8.2	Modernizing the City's Parking Standards	24
8.3	Guiding Principles.....	25
9.0	Setting the Geographic Areas.....	26
10.0	Evaluating Alternative Philosophies	27
10.1	Identification of Alternative Philosophies.....	27
10.1.1	Sustainable Mobility Philosophy	28

10.1.2 Existing Parking Demand Philosophy	28
10.1.3 Hybrid Approach Philosophy	28
10.2 Evaluation of Alternative Philosophies	29
11.0 Assigning Philosophies to Geographies.....	31
11.1 Overview	31
11.2 Policy Directions	31
12.0 Draft Proposed Residential Parking Requirements.....	32
12.1 Approach	32
12.2 Recommended New Definitions.....	33
12.3 Recommendation for Multiple Dwelling Categories	33
12.4 Recommendation for Additional Dwelling Units.....	34
12.5 Recommendation for Visitor Parking for Multiple Dwelling	35
12.6 Recommendation for Parking Adjustments	35
12.7 Summary of Parking Requirements	35
12.8 Summary of Recommendations.....	38

Tables

Table 9-1: Setting the Geographic Areas.....	26
Table 10-1: Evaluation of Alternative Philosophies	30
Table 12-1: Zone A Residential Parking Requirements	35
Table 12-2: Zone B Residential Parking Requirements	36
Table 12-3: Zone C Residential Parking Requirements	36

Figures

Figure 6-1: Variation of Average Persons per Household by Census Tract	17
Figure 6-2: Variation of Average Rooms per Household	18
Figure 6-3: Variation of % of Households Commuting within Hamilton.....	19
Figure 6-4: Variation of % of Households Spending More than 30% of Household Income on Shelter	20
Figure 6-5: Variation of % of Households Commuting by Car	21
Figure 6-6: Average Vehicle Ownership by Ward	22
Figure 9-1: Draft Hamilton Parking Zones.....	27

Appendices

Appendix A Parking Standards Best Practices
Appendix B Vehicular Trends
Appendix C Case Studies
Appendix D Residential Parking Standards: Analysis and Recommendations

1.0 Introduction

The City of Hamilton recognizes the significance of managing parking supply as a vital component of sustainable urban development. The City's Zoning by-laws, which govern the supply of parking for all types of land uses, play a crucial role in achieving the City's vision for its transportation system. The purpose of this study is to conduct a comprehensive review of the parking requirements within the City of Hamilton for both the residential and non-residential land uses.

The City's Transportation Master Plan, a key guiding document, emphasizes the promotion of sustainable forms of development and places a strong emphasis on travel demand management. In line with these objectives and other objectives of the City, this study aims to develop updated parking standards that align with the City's vision and goals.

2.0 Developing a Parking Standards Policy Framework

This study aims to first develop a parking standards policy framework that can guide the update of the parking requirements. The development of the parking standards policy framework involves multiple considerations. Firstly, by aligning the parking requirements with the City's long-term vision and goals, the policy framework ensures that parking regulations contribute to the creation of sustainable, accessible, and livable communities within the City of Hamilton.

Vehicular trends such as consumer spending habits on private vehicle ownership and rising vehicle ownership per household can also affect parking requirements. By understanding these trends, the policy framework can account for the potential impact on parking demand and infrastructure requirements.

This policy framework should also draw upon the best practices in other jurisdictions within Ontario and beyond. Examining successful approaches and lessons learned from similar urban and rural contexts allows the framework to leverage existing knowledge and expertise.

Lastly, parking demand is influenced by several population and household characteristics. In 2001, the City's boundaries expanded with the amalgamation of the former City of Hamilton, Stoney Creek, Dundas, Ancaster, Glanbrook, and Flamborough resulting in a City that contains both rural and urban landscapes. This diverse city contains a population with varying socio-economic backgrounds. Understanding the unique needs of the populations within varying City communities is crucial when developing parking requirements.

In a summary, the parking standards policy framework will be developed through the following process:

- Background review of policy documents, City parking initiatives, and transportation studies;
- Jurisdictional scan of parking standards best practices;
- Review of trends affecting parking demand; and,
- Assessment of household and population characteristics.

The parking standards policy framework focuses first on the residential parking standards, as residential developments are the most common development within the City and contain many more intricate parking issues and opportunities. Non-residential parking standards will then adapt to the approach undertaken for the update of the residential parking requirements.

3.0 Background Review

There are several existing policies, studies, and background information that define the policy direction governing parking supply within the City of Hamilton. This section reviews these policies and summarizes the parking-related elements that will be considered in the development of the City-wide parking standards update.

3.1 Policy Framework

3.1.1 2016 – 2025 Strategic Plan

The 2016 – 2025 Strategic Plan is a 10-year plan where the vision for Hamilton is to be the best place in Canada to raise a child and age successfully. The mission is to provide high quality cost conscious public services that contribute to a healthy, safe, and prosperous community, in a sustainable manner.

The 7 Strategic Priorities are high-level priorities that support the community vision and that encompass all services delivered by the City. These include the following:

- Community engagement & participation.
- Economic prosperity & growth.
- Healthy and safe communities.
- Clean & green.
- Built environment & infrastructure.
- Culture & diversity; and
- Our people & performance.

3.1.2 Urban and Rural Official Plans

The City's Official Plan (OP) is divided into Rural Hamilton Official Plan and Urban Hamilton Official Plan. Both plans were approved by the Ontario Municipal Board in March 2012 and August 2013, respectively.

The Official Plan is a land use planning document that guides and shapes development, considering the economic, social, and environmental impacts of land use decisions. In coordination with the Provincial Policy Statement, Growth Plan for the Greater Golden Horseshoe, and the Greenbelt Plan is meant to help manage the City, which is projected to see continued growth in population and urban development over the next 30 years.

The framework of the City's OP is centred on the following principles:

- Compact urban communities that provide live, work and play opportunities;
- A strong rural community protected by firm urban boundaries;
- Protected and enhanced environmental systems – land, air and water;
- Balanced transportation networks that offer choice so people can walk, cycle, take the bus or drive and recognizes the importance of goods movement to our local economy; and
- Strategic and wise use of infrastructure services and existing built environment.

In June 2022, Council approved a Municipal Comprehensive Review (MCR) for the City, along with an updated long term growth strategy (GRIDS2). The MCR is a process by which the City brings its Official Plans into conformity with updated policies of the Provincial plans that apply to Hamilton (Provincial Policy Statement, Growth Plan for the Greater Golden Horseshoe, Niagara Escarpment Plan, Greenbelt Plan). The Municipal Comprehensive Review implemented a growth strategy in the City's Official Plan with no expansions to the City's existing urban boundary. This decision was forwarded to the Province for approval.

In November 2022, the Province issued a decision on the MCR, which made multiple changes to the City's Official Plan. Modifications included changes to the City's urban boundary which expanded the Urban Boundary to include additional lands, which were identified by the Province as "Urban Expansion Areas." Six areas of land totaling approximately 2,200 hectares were added to the City of Hamilton's urban area through the Provincial decision.

The Official Plan, as modified by the Province, requires that Secondary Planning be completed for the Urban Expansion Areas prior to development occurring. A Secondary Plan is a land use plan for a particular geographic area that identifies detailed land uses, densities, design requirements, and infrastructure requirements and other implementing actions appropriate for the area.

In March 2023, Council approved a staff report at Planning Committee on options for Secondary Planning approaches and endorsed a recommendation directing City staff to lead Secondary Planning for Urban Expansion Areas.

3.1.3 Protected Major Transit Station Areas

The City is currently determining Protected Major Transit Station Areas (PMTSAs) and Major Transit Station Areas (MTSAs). MTSAs are generally defined as the area within a 500-metre to 800-metre radius of higher order transit station representing about a 10-minute walk. PMTSAs are a sub-set of MTSAs where Inclusionary Zoning (IZ) may be applied. Inclusionary Zoning requires new market rate residential development within a PMTSA to include a certain percentage of new affordable housing units.

IZ is one tool that could help increase the supply of more affordable housing units in the City over the long term. Inclusionary Zoning policies can include a range of measures to reduce the financial impact of providing affordable units on the private development industry. These measures may include establishing more permissive planning regulations such as reduced parking requirements and increased density.

3.1.4 Climate Change Impact Adaptation Plan

Hamilton's Climate Change Impact Adaptation Plan (CCIAP) is an evidence-informed, action-oriented plan to help minimize the impacts of climate change on our residents, businesses, and infrastructure. The CCIAP was developed in response to Hamilton City Council declaring a Climate Change Emergency in 2019. The City of Hamilton is on a mission to achieve net zero greenhouse gas emissions by 2050 and prepare for the unavoidable impacts of climate change.

Climate change refers to changes in global or regional climate patterns largely caused by increased atmospheric carbon dioxide from burning fossil fuels. Mitigation aims to reduce greenhouse gas concentrations by transitioning to low-carbon sources and reducing consumption. Adaptation measures help adjust to climate impacts on social, economic, built, and natural systems. Both are needed to address the causes and effects of climate change.

Hamilton's Adaptation Plan is a comprehensive program that aims to address the priority climate impacts that may affect City operations and the community at large. The plan created the following value-based vision statement. "The City of Hamilton will be a national leader on Climate Adaptation: a healthy, equitable, vibrant, and sustainable community that responds to the needs of residents, businesses and institutions, and is resilient in the face of a changing climate."

3.1.5 City Zoning By-Laws

There are currently six zoning by-laws within the City of Hamilton. The City of Hamilton's Comprehensive Zoning By-law No. 05-200 came into effect on May 25, 2005. This Zoning by-law regulates Downtown Hamilton and most of the properties in Ancaster, Dundas, Flamborough, Glanbrook, the Former City of Hamilton, and Stoney Creek. The remaining areas are regulated by the Zoning by-laws from:

- Town of Ancaster Zoning by-law 87-57,
- Town of Dundas Zoning By-law 3581-86,
- Town of Flamborough By-law 90-145-Z,
- Township of Glanbrook Zoning By-law 464,
- City of Hamilton Zoning by-law 6593, and
- City of Stoney Creek Zoning By-law 3692-92.

Each Zoning by-law has separate parking regulations and specifically parking regulations that govern the minimum parking requirements for new developments. The City is currently moving forward with expanding Zoning By-law No. 05-200 to the entirety of the City.

3.2 Previous City Parking Studies and Reviews

3.2.1 Parking Master Plan

The City of Hamilton has undergone significant changes and growth since the last citywide review of parking operations in 2005. To address these developments and changing needs, the Hamilton Parking Master Plan was initiated to provide direction on a strategic approach to parking policy, planning, financial sustainability, and enforcement. The plan focuses on public parking supply and operations, with a particular emphasis on Downtown Hamilton and the City's 13 Business Improvement Areas (BIA). The study examined existing parking supply and demand, consulted stakeholders and the general public, reviewed best practices in other Canadian municipalities, and established future scenarios to test potential solutions. Based on the study findings, 25 strategic recommendations were identified to help guide HMPS staff in addressing existing parking issues and meeting future parking needs.

The City of Hamilton is projected to have nearly 820,000 residents and almost 360,000 jobs by 2051. Under a base case scenario, the Downtown Hamilton parking system is projected to experience peak period demand of 840 vehicles on-street, 2,200 vehicles off-street (public), and 4,100 vehicles off-street (private) by 2030, resulting in an overall demand of 7,100 vehicles and 91% utilization. Factors affecting parking demand include population and employment growth, new developments, changes to parking supply, and changing travel patterns. Forecasting future parking demand is complex but necessary to support economic development and sustainable mobility. The Downtown Hamilton

parking system is projected to approach an overall 91% utilization by 2030, leading to perceived parking shortages and inefficiencies. To manage future parking demand, solution-oriented policies are recommended that increase available parking while maintaining financial sustainability and meeting sustainable transportation policy goals.

Considering the demand, supply, and financial sustainability of the parking in the city, Hamilton Parking Master Plan makes 25 strategic recommendations. Nine of those 25 recommendations are summarized below based on relevancy to parking standards.

1. **Allow public use of private facilities during off-peak times;** Implementing a system to make underutilized parking spaces in locations with varying peak demands available to the public can increase parking supply without incurring large capital costs associated with new parking facilities.
2. **Pursue joint parking opportunities with private development;** New developments or redevelopments can be leveraged to create publicly accessible parking with potentially lower costs and high potential for shared use through tools such as cash-in-lieu of parking, efficiently distributing new parking supply where it is needed most.
3. **Manage on-street parking in future residential areas;** Implement regulations on on-street parking through residential permits, similar to older parts of the city, but it would be best to do so during the initial development phase. The solution should be consistent with the city's long-term transportation goals and meet the needs of current and future residents.
4. **Continue to identify opportunities to leverage city-owned surface parking lots for new, integrated development;** Leveraging city-owned surface parking lots for development can mitigate parking supply losses and support sustainable transportation mode choices to reduce the environmental and carbon footprint of parking facilities, in line with Hamilton's transportation and climate action plans.
5. **Expand Parking Reserve and Cash-In-Lieu (CIL) policies to support TDM and sustainable mobility initiatives;** The General Parking Reserve and CIL Reserve policies should be expanded to allow collected monies to be used for demand management investments, such as micro-mobility or smart technologies, to offset parking demand.
6. **Limit residential boulevard parking agreements;** The boulevard parking program should only be used in exceptional circumstances and reviewed to ensure it doesn't result in a loss of on-street parking supply or greenspace.

7. **Develop a comprehensive plan for EV charging;** a comprehensive EV charging strategy should be developed, including considerations for off-street and curbside charging, enforcement, and pricing.
8. **Continue to expand bicycle and other micro-mobility parking;** consider parking for other modes of transportation such as bicycles and e-scooters.
9. **New municipal parking should be integrated within developments and have the ability to be converted to alternative uses in the future;** integration within new developments or retrofitting under-utilized parking structures, rather than standalone parking structures or new surface parking lots and designed to be convertible to alternative uses in the future.

3.2.2 City-Wide Downtown Parking and Loading Study (2005)

In support of developing Zoning By-law No. 05-200's initial parking regulations, Macklin Monaghan Group (MMM Group) was retained to undertake the City-Wide and Downtown Parking and Loading Study, 2005. This study reviewed Hamilton's existing parking rates and the best practices of similar municipalities. It also looked at perceived existing parking demand and vehicle occupancy, design elements of parking areas (including setbacks, landscaping, lighting and surface treatment), accessible parking space provisions, loading space provisions, potential opportunities for new parking structures, and the role of the municipality in providing parking options. The study considered all types of land uses and was referenced in the 2005 staff report implementing the Downtown Zones of Zoning By-law No. 05-20 (PED05123).

While the study primarily focussed on parking in the Downtown context, it recommended a set of City-wide residential parking rates. Parking regulations relating only to the Downtown were approved at the time. This study's parking rates were derived from a face-value review of existing requirements and were intended to reconcile the differences among each By-law and remedy issues of inequality, inconsistency and confusion.

The recommendations were principally derived from qualitative surveys of existing parking rates with little analysis of empirical data (geographic context, vehicle ownership trends, travel patterns, and transit ridership, etc.). To avoid perpetuating any existing problems with the current regulations, caution should be used when conducting comparative analysis; close attention should be paid to the accuracy and applicability of existing rates before they are implemented with the new Residential Zones. Accordingly, the proposed 2005 rates for lands outside the Downtown Hamilton Secondary Plan area require further refinement to ensure they are representative of current planning practices and to ensure they are sensitive to local context.

3.2.3 City Review of the Residential Parking Standards outside Downtown

As discussed, the primary purpose of the 2005 MMM Group Report was to establish parking rates which would be applied to the Downtown through the implementation of Zoning By-law No. 05-200.

In 2016, The Planning Partnership was retained to conduct a review of residential parking standards outside Downtown. The scope of the study included areas within the urban boundary outside Downtown, and the purpose was to address challenges of developing parking rates that are sensitive to varying geographic contexts.

This background study provided a number of considerations for developing residential parking rates. Firstly, it included an overview of vehicle ownership per community (with information from the 2011 Transportation Tomorrow Survey). Secondly, it provided an overview of the Urban Hamilton Official Plan (UHOP) policies that apply to parking, specifically: incentives for transit, alternative paving materials, surface water management, landscaping, traffic calming, and on-street parking, among other things.

The 2016 study further presented a description of key issues put forth by Planning Division and Building Division staff through a focus group held on March 16, 2015. These issues include the variation in parking needs between urban and suburban communities, increasing vehicle ownership levels, the need for larger parking spaces and internal garage dimensions, visitor parking, and concerns related to the on-street parking permit system.

The Planning Partnership reviewed precedent studies, surveys and case studies. The common theme among these documents was that a one-size-fits-all approach does not work, and that geography and proximity to transit are important factors in developing functional comprehensive parking rates.

The Planning Partnership's technical background study provided a recommended methodology for establishing residential parking rates throughout the urban area, including developing "parking zones" with different parking rates based on the urban, semi-urban and suburban nature of development, proximity to transit, and various levels of vehicle ownership. This Discussion Paper will build upon the recommended methodology which accounts for access to alternative modes of transportation and the geography of vehicle ownership.

3.2.4 City Review of Temporary Amendment to the Cash-In-Lieu of Parking Policy for the Downtown Secondary Plan Area

The City of Hamilton has provided developers with the option of meeting their parking requirement through a "cash-in-lieu provision" for many years. Hamilton city's Cash-In-Lieu of Parking (CILP) Policy recommends that 50% of the cost for the construction of an

off-site parking spaces should be paid to the city in substitution of the provision of Parking Spaces required by the Zoning Bylaw, as a condition of approval of an application. According to the city of Hamilton the total estimated cost of constructing a parking space is between \$33,000 to \$35,000 in the downtown area. This includes both the capital construction cost and the land cost. Developer can pay \$17,550 to substitute the parking requirement for their applications. However, due to the high cost associated with CILP, the policy has been rarely used.

The city staff was directed to look into options for modifying the existing CILP policy to provide for a temporary reduced CILP fee within the Hamilton Downtown Secondary Plan (DTSP) Area. Staff recommend that a rate of not less than 25% should be adopted temporarily for the DTSP area (which would be approximately \$8,750 per parking space) for new developments. The staff report expects that the reduced rate would encourage developers to take advantage of the CILP policy and provide less parking spaces in their new development applications. This will result in provisions of less parking spaces in the DTSP area.

- Reduced CILP rates will lead to lower number of onsite parking which would have the following benefits:
- Materials such as concrete, asphalt and steel used in the construction of parking generate high amounts of greenhouse gas emissions in their production. Using less of these materials will have a positive impact from a climate change perspective.
- Funds collected by CILP will be used for the development of new municipal parking structures.
- Reduced number of onsite parking would reduce the cost of development. This in turn will contribute to economic recover and stimulus of the City of Hamilton.

The paper proposes the following alternative options as well:

- Option 1: Keeping the status quo and make no changes to CILP policy.
- Option 2: Alternative reduced rate by adopting recommend changes to CILP policy and applying alternative reduced rate for the DTSP area.
- Option 3: City wide reduced rate for all non-residential developments at the rate of 50%.
- Option 4: City wide reduced rate for affordable housing only.

The report anticipates that the recommended changes in CILP policy will result in higher utilization of the CILP option and generate additional revenue for the city.

3.3 Previous Transportation Studies

3.3.1 Metrolinx Regional Transit Plan

The 2041 Regional Transportation Plan (RTP) for the GTHA by Metrolinx is the second transportation plan for the GTHA developed by Metrolinx. The first – known as *The Big*

Move – was released in 2008, and it set the stage for today's massive investments in rapid transit. The 2041 RTP presents a common vision for the region: The GTHA will have a sustainable transportation system that is aligned with land use and supports healthy and complete communities. It builds on *The Big Move* by putting the needs of travellers at the core of transportation planning and operations. The goals of the RTP to pursue the vision are as follows:

- Strong connections: Connecting people to the places that make their lives better, such as homes, jobs, community services, parks and open spaces, recreation, and cultural activities.
- Complete travel experiences: Designing an easy, safe, accessible, affordable and comfortable door-to-door travel experience that meets the diverse needs of travelers.
- Sustainable and healthy communities: Investing in transportation for today and for future generations by supporting land use intensification, climate resiliency and a low-carbon footprint, while leveraging innovation.

Central to the Goals and Objectives of the 2041 RTP is the creation of a 'people-centred' transportation system – one that improves people's lives by giving travellers attractive choices. More and better choices will give people – regardless of their ability, income, home location or schedule – greater access to places in the GTHA.

The following are the strategies that are to be used to reach these goals:

- Complete delivery of current projects,
- Connect the region,
- Optimize the system,
- Integrate transportation and land use, and
- Prepare for an uncertain future.

There are a number of projects currently in delivery or proposed by Metrolinx through the RTP. Projects in delivery include the Hamilton B-Line LRT (McMaster University – Eastgate Mall) and Lakeshore West Two-Way, All-Day GO Service (Aldershot GO – Hamilton GO). Other projects proposed in the 2041 Regional Transportation Plan include the:

- Lakeshore West 15-min GO Service Extension (Aldershot GO – Hamilton GO),
- Hamilton A-Line BRT (West Harbour GO – Rymal Rd.),
- Hamilton A-Line South Priority Bus (Rymal Rd. – Hamilton Munro International Airport),
- Hamilton L-Line Priority Bus (Downtown Hamilton – Waterdown),
- Hamilton S-Line Priority Bus (Ancaster Business Park – Confederation GO), and
- Hamilton Mohawk T-Line Priority Bus (Centre Mall – Meadowlands Terminal).

3.3.2 Transportation Master Plan

The City's Transportation Master Plan Review and Update, dated October 2018, provides an update to the previous TMP that was issued in 2007. The TMP continues to plan for a 2031 planning horizon and beyond and provides better alignment with the City's strategic plan and vision. The catalyst for an update is the change in anticipated population growth to a population of 660,000 people by 2031 and a projection of 300,000 jobs by 2031. The main objective of the TMP is:

"To provide a comprehensive and attainable transportation blueprint for Hamilton as a whole that balances all modes of transportation to become a healthier city. The success of the plan will be based on specific, measurable, achievable, relevant, and programmed results."

The key recommended parking related actions are outlined in the TMP as follows:

- Undertake City-wide Parking Master Plan.
- Integrate requirements for EV parking into Zoning By-law and expand EV charging stations.
- Adopt off-street and on-street policies that ensure a responsible amount of parking, are in line with mode share target and recognize increasing pressures on on-street parking.
- Evolve the Hamilton Municipal Parking System to support new mobility options.

4.0 Review of Parking Standards Best Practices

Traditional, minimum parking requirements have historically focused on ensuring that developments provide sufficient parking to meet the peak demand for each specific land use. However, this approach has led to an overabundance of parking supply, which has inadvertently supported auto-oriented land use planning and increased reliance on private vehicles.

The excessive parking infrastructure required by these minimum requirements not only consumes large areas of valuable land but also perpetuates an inefficient and unsustainable urban environment. This approach runs counter to many jurisdictions' commitment, including the City of Hamilton's, to creating an attractive, environmentally friendly built environment that promotes alternative modes of transportation and reduces dependency on cars.

As a response to these concerns, parking standards have evolved over time to address the overabundance of parking supply and emphasize the importance of sustainable development practices that prioritize efficient land use and support more livable and environmentally conscious communities. Trends in the evolution of parking standards

are summarized below. More information regarding these trends and specific details can be found in Appendix A.

1. **Introduction of Parking Maximums:** Maximum parking requirements strictly ensure that an overabundance of parking supply is not provided by putting a limit on the number of parking spaces provided.
2. **Decreasing Parking Minimums:** Recognizing that there was a need to balance between accommodating vehicular parking with other sustainable objectives, municipalities have been decreasing their parking minimums in more urbanized areas within their jurisdiction.
3. **New Accessible Parking Standards Calculations:** Decreasing parking minimums may lead to an under-supply of accessible parking spaces. Traditionally, the required number of accessible parking spaces is a function of the required number of total parking spaces. As the total number of parking spaces decreases, the required number of accessible parking spaces decrease. Some jurisdictions have provided solutions to overcome this issue.
4. **Introduction of Electric Vehicles Parking Standards:** Some jurisdictions have introduced parking requirements for electric-vehicle ready spaces for new developments to support and encourage the adoption of electric vehicles.
5. **Visitor Parking Rates:** Visitor parking rates have been adopted by many municipalities and provide a quality of life for residents and visitors. Visitor parking can be used to provide sufficient space for:
 - Service vehicles and loading which provides a certain level of quality of life to residents.
 - Personal care workers that may need to stay longer than on-street parking limits or do not want to face difficulties finding nearby parking on-street to provide their services.
6. **Shared Parking:** Shared parking regulations allows for the provision of off-street parking spaces to be shared by multiple land uses decreasing the overall requirement of parking spaces. For residential parking requirements, jurisdictions have adopted shared parking regulations that allow for visitor parking spaces to be used in the day time by offices, medical clinics, and other predominantly day-time uses.

5.0 Vehicle Trends Affecting Parking Demand

Over the past decade, there have been trends that could have direct impact on residential parking demand. These trends are summarized below and discussed in more detail in **Appendix B**.

5.1 Rising Vehicle Ownership

Vehicle ownership can be estimated within the Greater Toronto and Hamilton Area (GTHA) through the Transportation Tomorrow Survey (TTS) which collects data every 5 years for approximately 5% of households. Certain municipalities have seen a rise in 3-or-more vehicle households such as the City of Hamilton, City of Brampton, and the City of Kitchener. In 2011, 10% of the households within the City of Hamilton had 3 or more vehicles. This proportion rose to 13% in 2016 while persons per household maintained steady at 2.5 persons per household.

Parking standards must balance between providing sufficient parking on-site while managing overall travel demand to support other City strategic objectives such as sustainability and climate change commitments.

5.2 Consumer Trends in Electric Vehicle Sales

Electric vehicle and plug-in hybrid vehicle have grown rapidly in Ontario. Between 2016 and 2022, the number of electric and plug-in hybrid vehicle registrations grew by 400% from 4,000 registrations to 20,000 registrations. Before 2016, the proportion of electric and plug-in hybrid vehicle registrations was almost 0%.

The availability of electric vehicle charging infrastructure is a consideration for residents who are considering or have purchased these types of vehicles. Detached homes, semi-detached homes, and townhomes can usually easily retrofit their garages to provide adequate charging capability.

Retrofitting underground parking lots of multi-unit residential buildings with electric vehicle charging infrastructure is more challenging. Municipalities have been adopting new parking standard requirements that require the developer to create electric vehicle-ready parking stalls.

5.3 Consumer Trends in Vehicle Size

Greater vehicle sizes in Ontario are more popular now than in 2011. Between 2011 and 2021, the proportion of multi-purpose vehicles, pick-up trucks, and vans grew from 57% of new vehicle registrations to 80%.

The rise of SUV sales has some implications for parking requirements in new and existing developments. SUVs are larger in size compared to traditional passenger cars and require more space to park, which means that parking lots and garages may need to consider how to accommodate them. The Zoning by-law contains policies regarding the dimensions of parking spaces which should be reviewed during the update of the City's parking standards.

6.0 City of Hamilton Factors Affecting Residential Parking Demand

Parking demand is influenced by several population and household characteristics. In 2001, the City's boundaries expanded with the amalgamation of the former City of Hamilton, Stoney Creek, Dundas, Ancaster, Glanbrook, and Flamborough resulting in a City that contains both rural and urban landscapes. This diverse city contains a population with varying socio-economic backgrounds. Understanding the unique needs of the populations within varying City communities is crucial when developing parking requirements.

The population and household characteristics that have been assessed within the City of Hamilton include the following:

- Average persons per household
- Average rooms per household
- Housing Affordability
- Auto Mode Share
- Vehicle Ownership per Household

The below sections outline how these characteristics can affect residential parking demand. To provide a more comprehensive understanding of these characteristics based on geographical variations within the City, a set of maps was created which showcase the Z-scores of each characteristic across different Census Tracts.

Z-score is a statistical measurement that represents the number of standard deviations away from the mean of the data set. A Z-score of zero would represent the average. A Z-score much higher than zero would signify that the value of that characteristic within an area of the City is much higher than the mean of the City.

6.1 Average Persons Per Household

As the number of persons per household increases, the likelihood of vehicle ownership per household increases. The average household size in the City of Hamilton is 2.5 persons per household. Ward 2 has on average the smallest household sizes whereas Ward 13 and 15 have the highest. The geographic variation of this characteristic is illustrated in Figure 6-1.

6.2 Average Rooms per Household

Some jurisdictions provide parking standards as a function of the number of bedrooms or habitable rooms. Zoning By-Law 6593 defines a habitable room as the following:

- Any room of a residential building or an institutional building, used or capable of being used by one or more persons for living, eating or sleeping, or as a kitchen serving a dwelling unit; but does not include a bathroom, water-closet compartment,

laundry, serving or storage pantry, corridor or other space not for use frequently or during extended periods.

The assumption is that the number of required vehicles per household should be proportional to the number of persons that could be living in that household.

Wards 1 to 5 have the smallest number of rooms per household. This is most likely due to the higher number of smaller dwelling types such as apartments and townhomes. The wards representing the outer communities such as Glanbrook (Ward 11), Ancaster (Ward 12) and Flamborough (Ward 13 and Ward 15) have the highest number of rooms per household. This is most likely due to the higher number of lower-density housing and larger dwelling type. The geographic variation of this characteristic is illustrated in Figure 6-2.

6.3 Commuting Trips within the City of Hamilton

Commuting trips within the City of Hamilton provides a high-level understanding on trip distances. Work trips destined to the same census subdivision (e.g., City of Hamilton) may be more feasible switching to transit than work trips in a different census subdivision than their residence.

The average percentage of households within a census tract that commute to the City of Hamilton for work is 70%. Ward 1, Ward 2, and Ward 5 have the highest proportion of households working within the City. Ward 10 (i.e. Stoney Creek), Ward 13, and Ward 15 have the lowest proportion. These areas are much more likely to commute outside the City of Hamilton for work and thus rely more on their personal vehicles. The geographic variation of this characteristic is illustrated in Figure 6-3.

6.4 Household Affordability

As a traditional measure of housing affordability, Statistics Canada and Canada Mortgage and Housing Corporation (CMHC) uses a threshold of 30% of the total before-tax household income spent on shelter costs. If household spending is above the 30% threshold, that household is considered to be experiencing affordability issues.

In addition to housing costs, a considerable proportion of a household's expenditure can be transportation. Another benchmark has recently been considered taking into account geographic affordability which combines both housing and transportation costs. Typically, the benchmark for affordability using this measure is no more than 45% to 50% of a household's income should be spent on housing and transportation.

There is a common perception that housing in areas farther away from densely populated city centres is more affordable. However, in many cases, the increase transportation costs to work due to longer average trip lengths, reliance on the

automobile, and higher automobile ownership offsets the potential savings of housing in a sub-urban or rural setting.

In low-income households closer to transit, reliance of the automobile may decrease which can correlate to a decrease in vehicle ownership. In low-income households farther away from transit, reliance of the automobile is more likely still high and vehicle ownership is unchanged.

As much as housing affordability affects parking demand, the inverse relationship can also occur. Parking infrastructure is expensive. For example, a cash-in-lieu of parking policy was applied to a downtown Hamilton development in 2018. The application estimated the total cost was \$35,100 per parking space which included \$30,000 as the estimated construction cost and \$5,100 in land value per space. These parking costs are typically passed on from the developer to the home buyer or renter.

Parking standards that provide an opportunity for the developer to include no or minimal parking can increase housing affordability. This strategy can be implemented in areas where residents' place of work is close so walking and cycling is feasible or if there is strong local and/or regional transit system.

The average percentage of households that spend more than 30% of their household income on shelter within a census tract is 28%. There are a higher proportion of households in Ward 1 and Ward 2 and a lower proportion of Ward 10, Ward 13, and Ward 15. The geographic variation of this characteristic is illustrated in Figure 6-4.

6.5 Auto Mode Share

Existing auto mode share for commuting trips provides insight on areas within the City that rely or do not rely heavily on the personal automobile. The average auto mode share within the City of Hamilton is 76%. Wards 1 to 3 have the lowest auto mode share. Auto mode shares for communities within the urban boundary tend to observe auto mode shares close to or below the City average while the auto mode shares in the rural communities tend to observe higher than average modal shares. The geographic variation of this characteristic is illustrated in Figure 6-5.

6.6 Vehicle Ownership per Household

This statistic is provided in absolute values as opposed to z-scores as it has direct correlation to the parking standards. The average number of vehicles per household is 1.6. The downtown area has the lowest average number of vehicles per household while the communities within the rural boundary have the highest. The geographic variation of this characteristic is illustrated in Figure 6-6.

Figure 6-1: Variation of Average Persons per Household by Census Tract

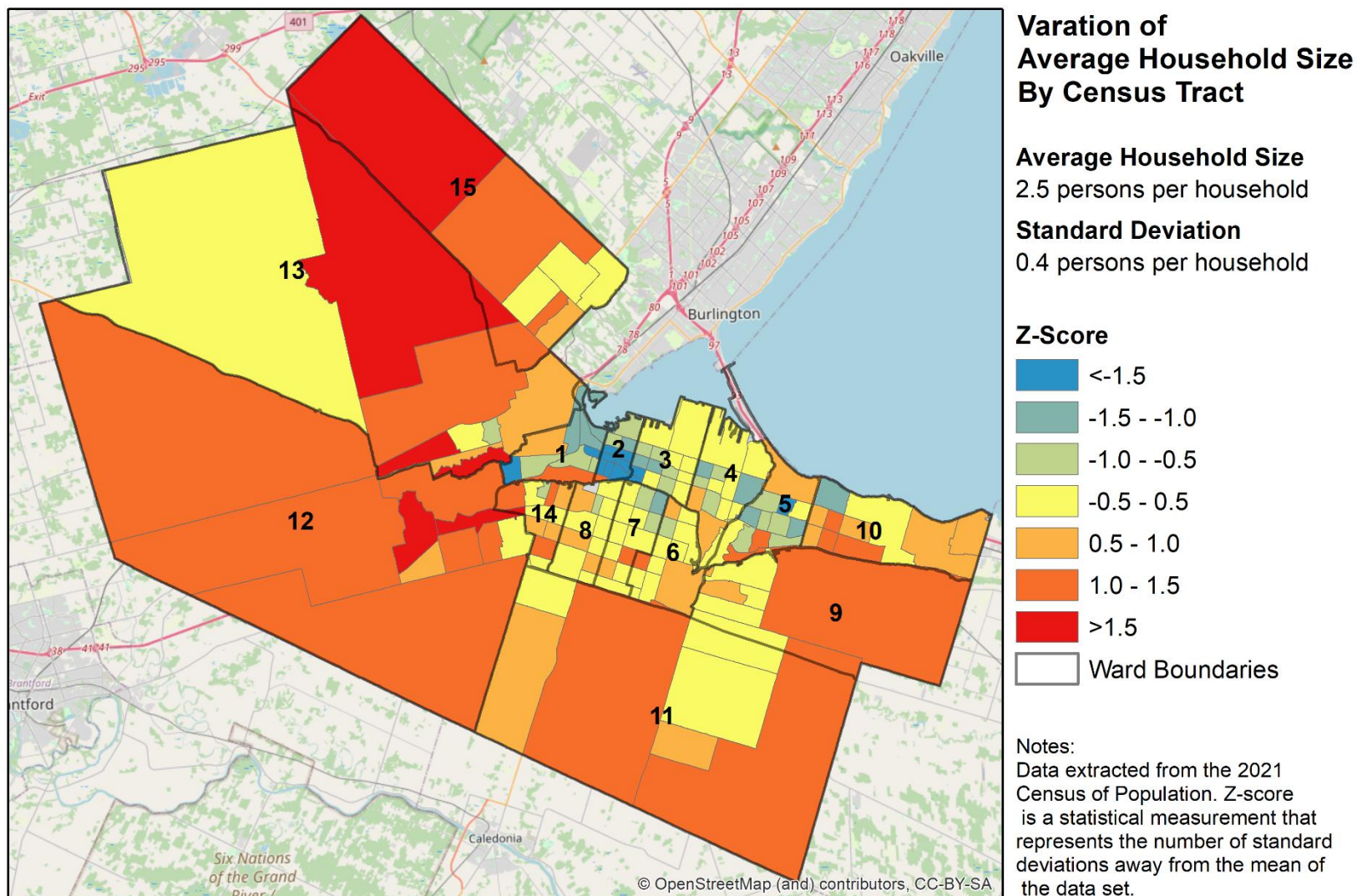


Figure 6-2: Variation of Average Rooms per Household

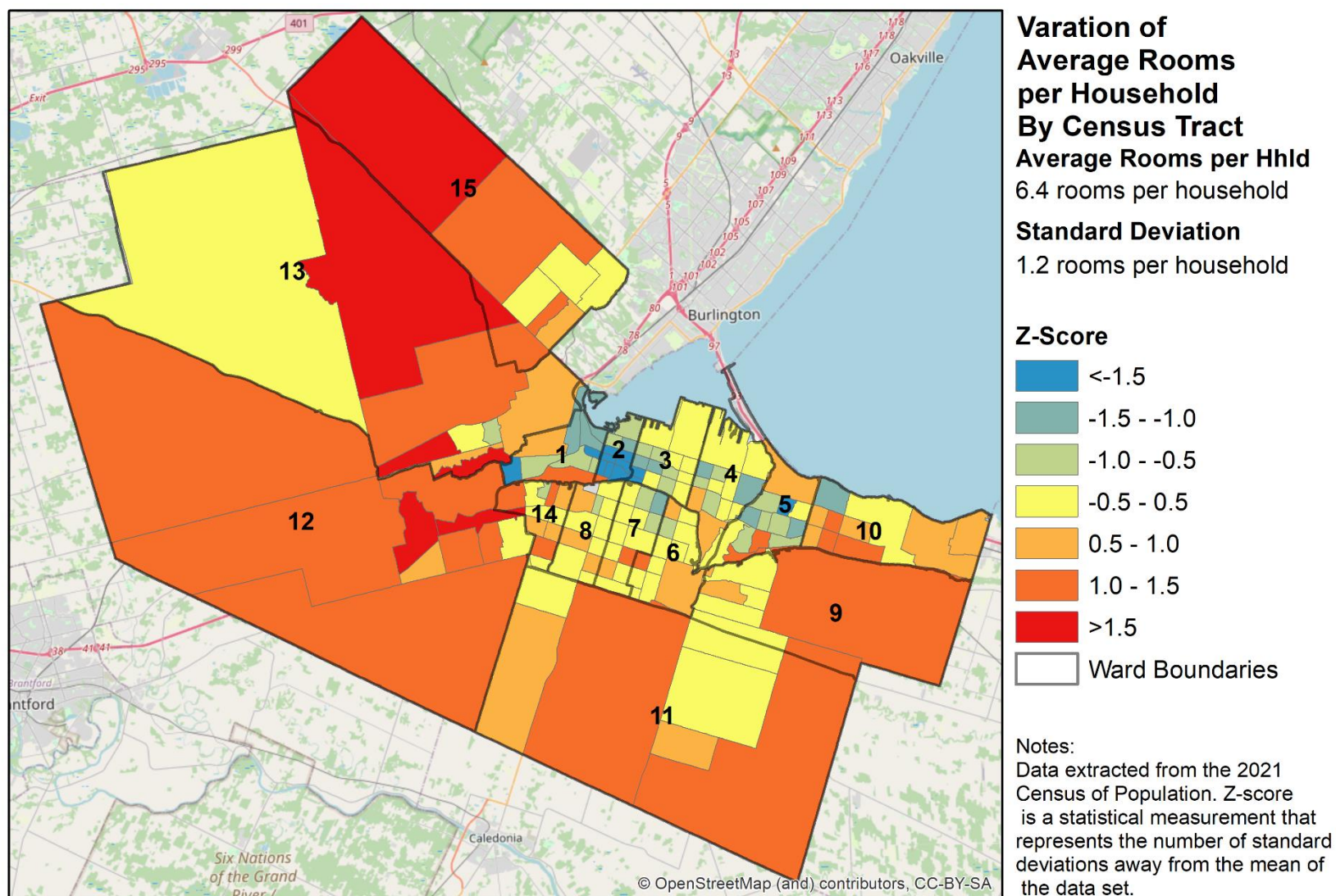


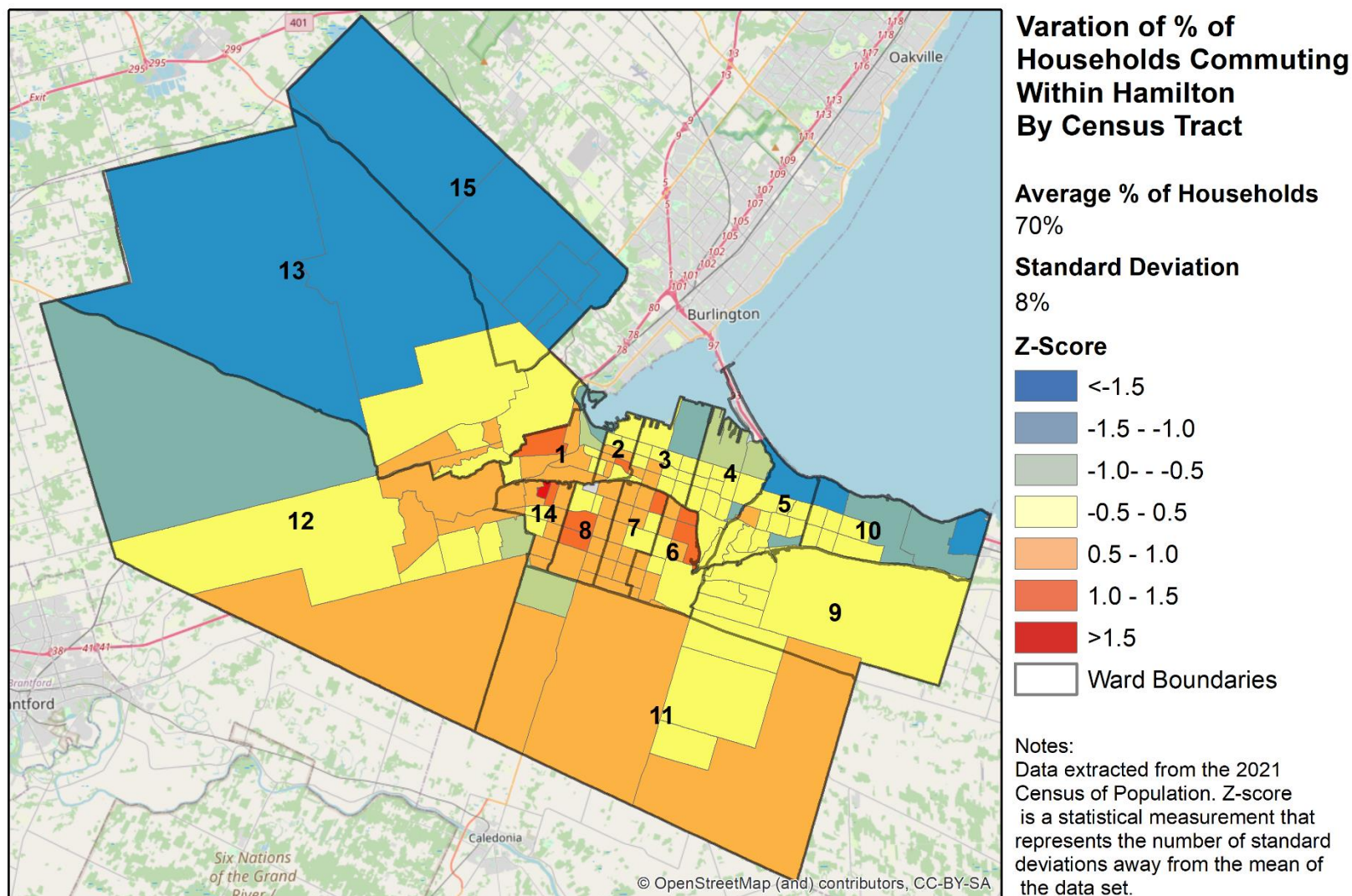
Figure 6-3: Variation of % of Households Commuting within Hamilton

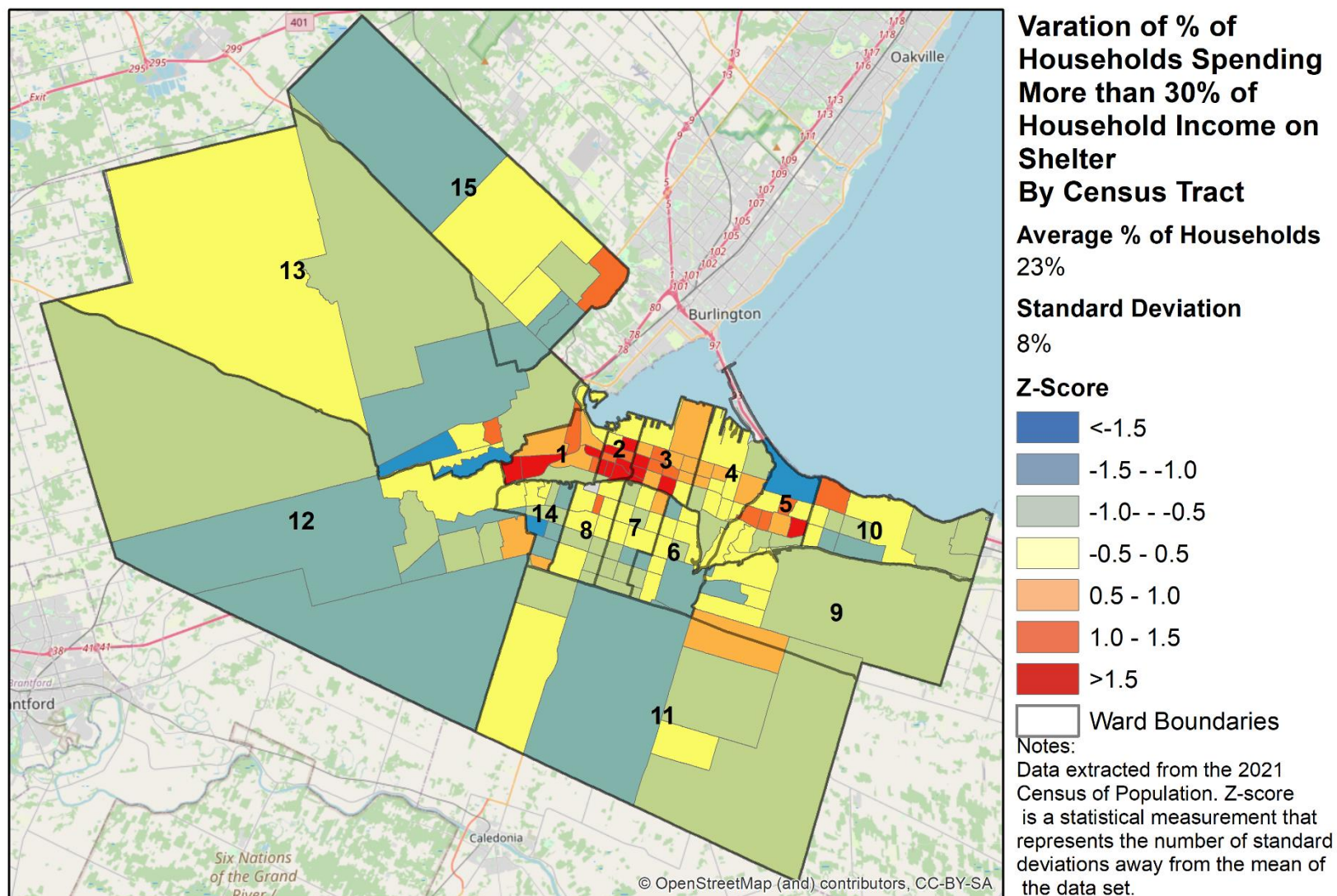
Figure 6-4: Variation of % of Households Spending More than 30% of Household Income on Shelter

Figure 6-5: Variation of % of Households Commuting by Car

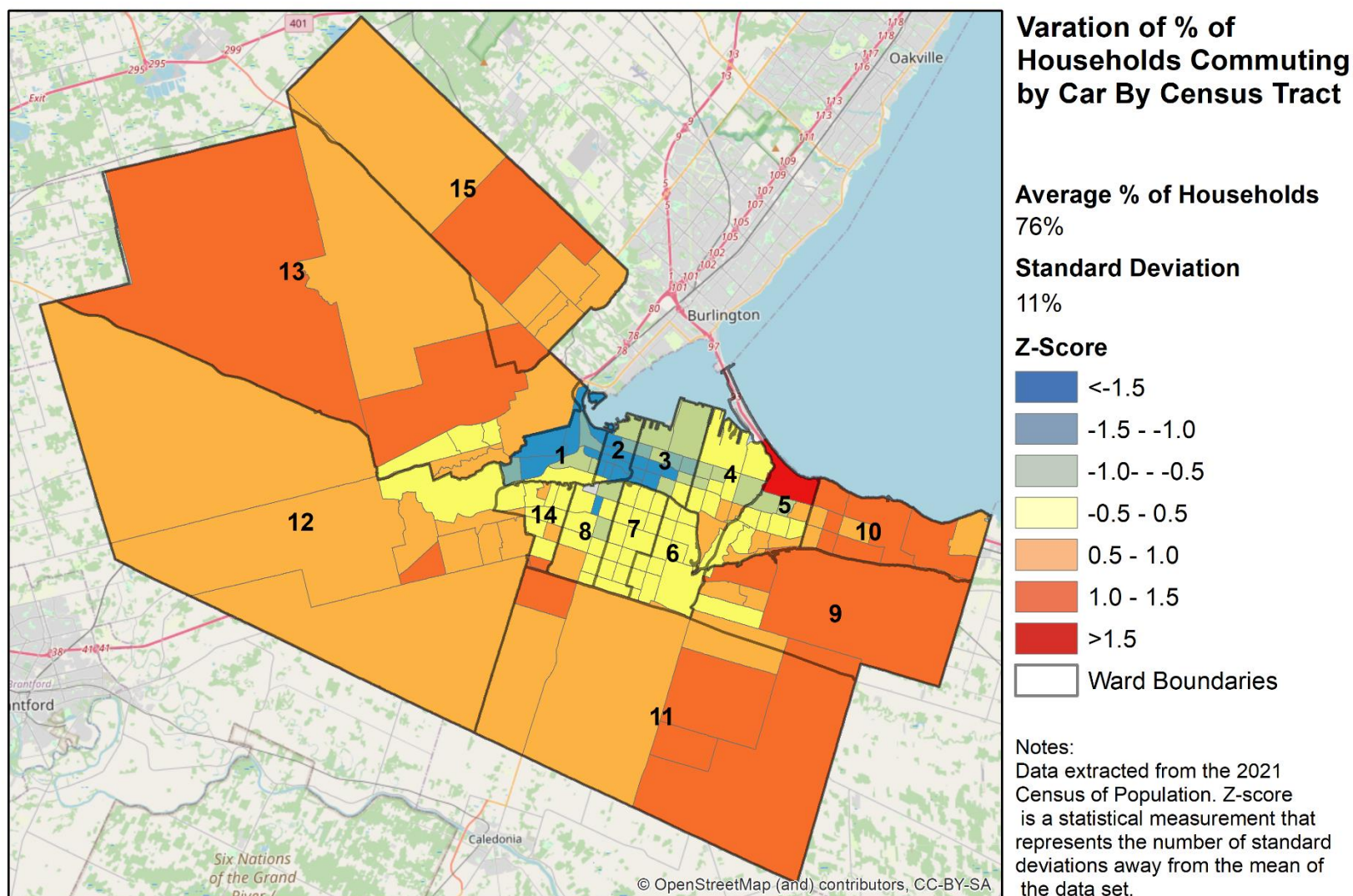
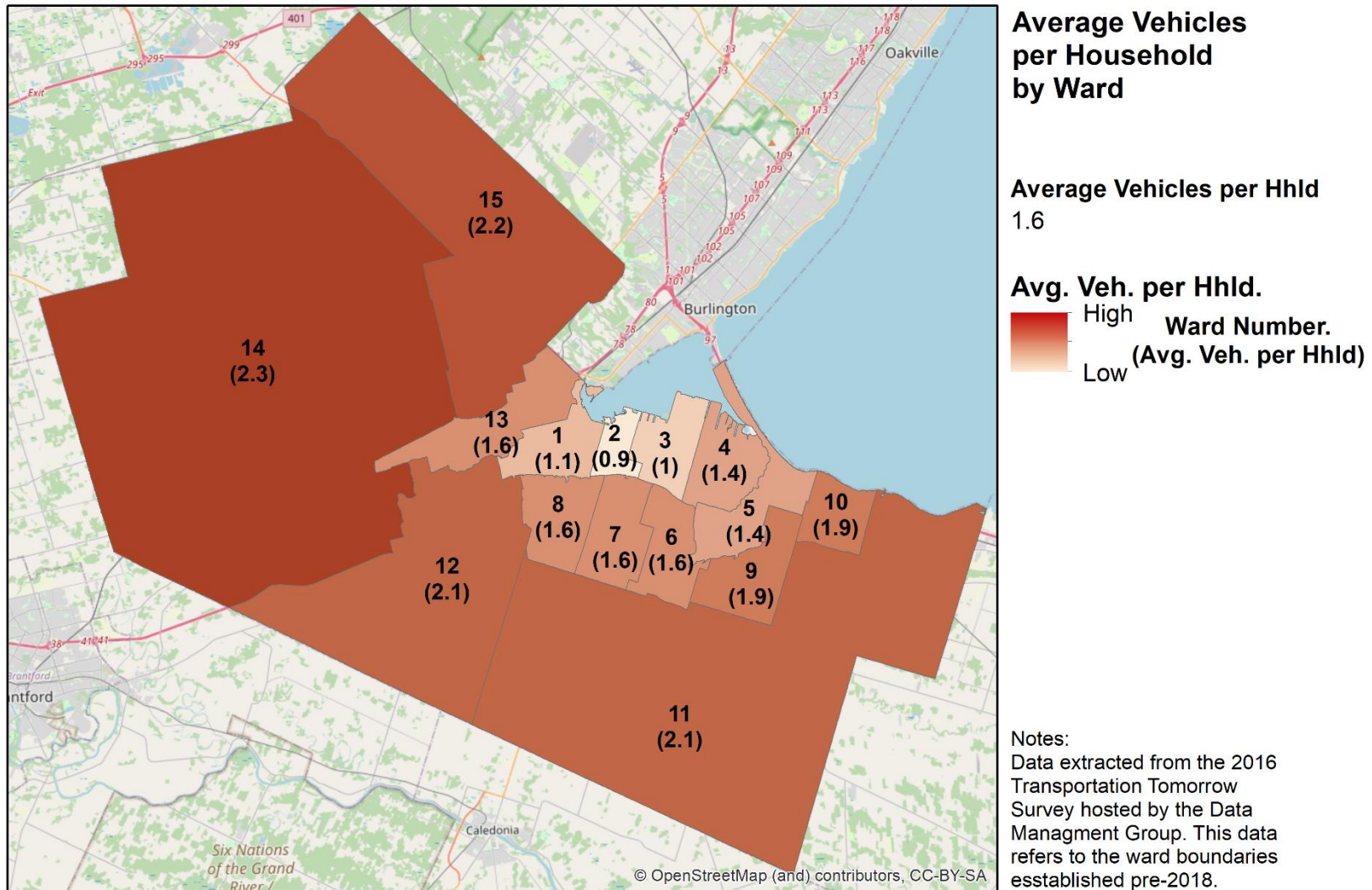


Figure 6-6: Average Vehicle Ownership by Ward



7.0 Opportunity Cost to Vehicle Ownership

The last consideration for the parking standards policy framework is understanding the opportunity cost to vehicle ownership. Opportunity cost refers to the value or benefits that individuals forego when choosing one option over another. In the context of transportation, it refers to the benefits that could be gained by not owning a private vehicle and instead utilizing alternative modes of transportation.

Providing convenient access to transit systems, cycling infrastructure, and car share programs can significantly reduce the need for individuals to own a vehicle. In areas where these alternative mobility options are readily available and reliable, residents may find it more practical and cost-effective to rely on these modes instead of owning a private vehicle. These alternative transportation modes are typically found within the established urban boundary such as the City's downtown.

Conversely, in locations where long-term residential parking is scarce or challenging to obtain, private vehicle ownership becomes less attractive. The cost and inconvenience associated with finding or purchasing additional off-site parking such as parking supplied by the City can outweigh the benefits for many individuals. As a result, residents in such areas may actively choose not to own a vehicle. Scarce on-site parking and off-site parking is typically found in downtown Hamilton where residential parking is limited in part due to the City's historic urban design. In these areas, low-rise housing typically have limited parking and were constructed closely together resulting in reduced boulevard widths and reduction of on-street parking supply.

8.0 Setting the Parking Standards Framework

8.1 Expanding on the City's Geography-Based Approach

Zoning By-law No. 05-200 currently governs most of the City and will eventually be the only Zoning by-law within the City replacing the by-laws of the former communities. Section 5 of the Zoning By-law No. 05-200 governs the supply of parking for all types of land uses. There are currently a set of parking requirements for the Downtown area and areas outside of the Downtown. This geography-based approach allows for parking requirements to consider varying parking needs.

Expanding on this approach, parking requirements within the City of Hamilton should be tailored to reflect the diverse population and household characteristics, socio-demographics, and contrasting rural and urban landscapes that exist throughout the city. By recognizing and accommodating these variations, parking regulations can effectively address the unique parking demand needs within different communities.

Therefore, based on the various policy reviews, demographic assessments, and trend analyses undertaken thus far, the parking policy framework recommends that the two sets of parking standards within Zoning by-law 05-200 should be further expanded into more geographies.

In theory, the City's parking requirements are already differentiated by multiple geographies due to there being six different Zoning by-laws. However, the parking requirements in the Zoning by-laws for the former communities require updating based on best practices and recent trends and a consolidated set of parking standards by geography should be developed with an overarching strategic approach.

In practice, City staff already review each individual development application to provide flexible parking standards on a site-by-site basis based on surrounding contexts. An overarching strategic approach would also reduce requests for zoning variances by ensuring regulations address current land use and trends.

This geography-based approach is also observed in Zoning by-laws of other large Ontario jurisdictions whose urban structure results in areas with varying population densities, land uses, and levels of urbanity.

Appendix C highlights the development of geographies defined by each municipality including the City of Mississauga, City of Toronto, City of Ottawa, and the City of Vaughan.

8.2 Modernizing the City's Parking Standards

Based on the review of latest best practices and vehicular and mobility trends, the City of Hamilton parking regulations should also consider:

- Reducing parking minimums where possible to ensure there is no excess of parking supply and to promote a parking system that considers travel demand management.
- Expanding on the application of parking maximums to help facilitate adequate parking supply levels.
- Accessible parking rate calculations that maintains equitable accessible parking regardless of lower overall required parking supply.
- Ensuring parking spaces are electric vehicle charging-ready to support the consumer adoption of electric vehicles.
- Development of visitor parking standards to provide residents and visitors a certain level of quality of life.
- Shared parking standards to optimize the use of parking spaces for varying land uses.
- Flexible parking standards based on the proximity to transit and car-share.
- Review of parking space requirements to ensure they can accommodate larger vehicles while supporting sound urban design principles.

8.3 Guiding Principles

Based on a review of the policy framework, decisions regarding the update to the City's parking standards should be guided by the following principles:

1. **Efficient land use:** Optimizing parking requirements allows for a more efficient use of land. By ensuring that parking spaces are provided in accordance with actual demand, excessive parking infrastructure can be avoided. This frees up valuable land that can be utilized for other purposes such as green space, affordable housing, or other developments, thereby maximizing the land's potential.
2. **Cost reduction and affordability:** Reducing parking requirements can result in significant cost savings for developers which can be passed on to residents or users. Right-sizing parking requirements can lead to more affordable housing or lower costs for businesses.
3. **Encouraging Sustainable Transportation:** Reevaluating parking requirements provides an opportunity to promote sustainable transportation modes. By aligning parking supply with alternative mobility options like public transit, cycling infrastructure, and car share programs, developers and municipalities can incentivize residents and visitors to choose more sustainable transportation alternatives. This reduces reliance on single-occupancy vehicles, decreases traffic congestion, and contributes to improved air quality and reduced carbon emissions.
4. **Flexibility and adaptability:** Parking requirements should allow for flexibility and adaptability in response to changing transportation needs and trends. As urban areas evolve, travel patterns and mobility preferences may shift. Committed projects from Metrolinx and the City will shape the future transportation system. Parking requirements should provide some level of flexibility that can accommodate for these important transportation investments.
5. **Streamlining Development Processes:** Clear and updated parking requirements simplify the development process for both developers and municipalities. By providing developers with well-defined guidelines that reflect current land use and transportation trends, the need for zoning variances or negotiations related to parking can be reduced. This streamlines the approval process, enhances predictability, and encourages efficient development practices.

9.0 Setting the Geographic Areas

The draft geographic areas were defined based on review of the following:

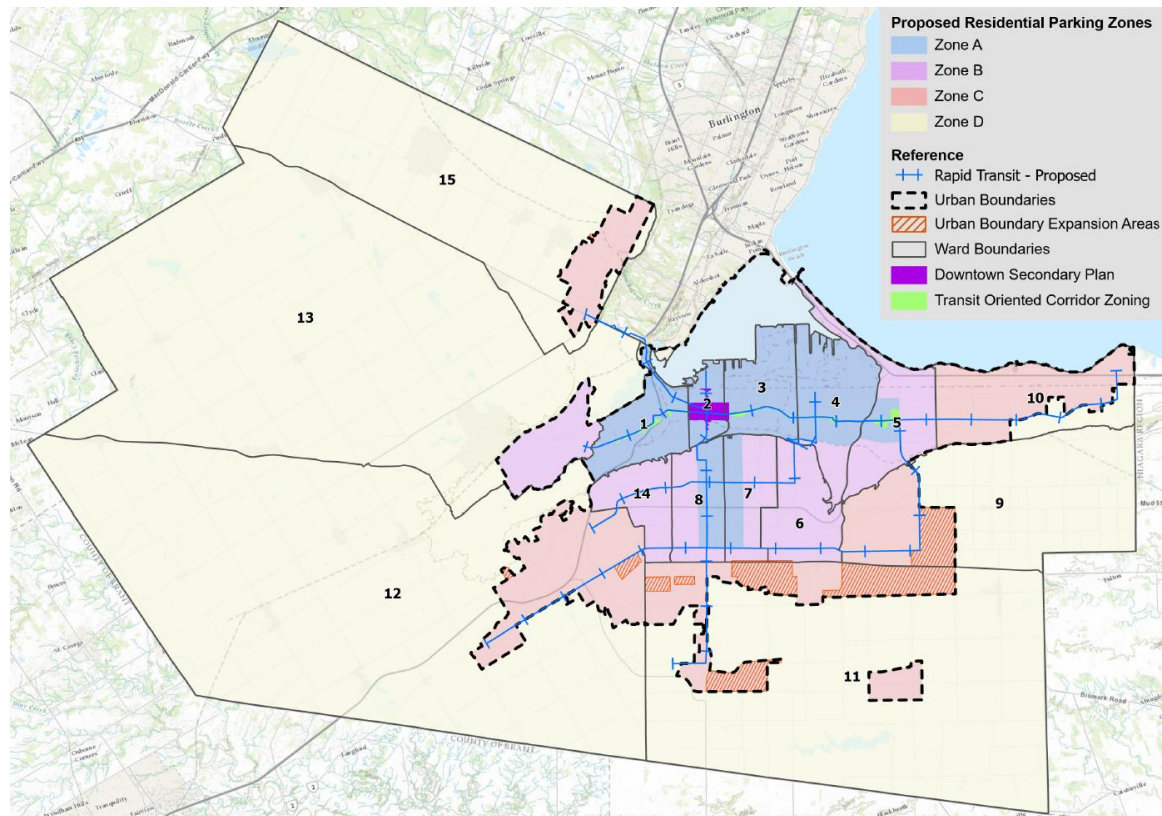
- Varying population and household characteristics,
- Planned urban boundary,
- Existing transportation infrastructure,
- Availability of off-site parking supply and opportunity costs,
- Committed transportation investments from the City and Metrolinx, and
- Consultation with City staff.

The draft geographic areas are described in Table 9-1.

Table 9-1: Setting the Geographic Areas

Zone	Description
Zone A	This area expands on the Downtown Secondary Plan area in all directions representing the City's most urbanized areas. Some areas also follow parts of the proposed frequent transit corridors (e.g., A-Line and B-Line).
Zone B	This area generally includes the rest of the former City of Hamilton and Dundas. Zone B includes a mix of urban and sub-urban areas.
Zone C	This area includes the area outside of Zone B, within the existing Urban Boundary as defined by the Urban Hamilton Official Plan.
Zone D	This area includes the remaining areas of the City of Hamilton and are generally the least developed and most rural.

These zones are illustrated in Figure 9-1.

Figure 9-1: Draft Hamilton Parking Zones

10.0 Evaluating Alternative Philosophies

10.1 Identification of Alternative Philosophies

When considering updates to the City's parking standards, different philosophies emerge, each with its own approach and considerations. These philosophies shape the balance between parking supply and demand and can significantly impact land use, transportation behavior, and urban development. The three main philosophies to parking standards are listed below:

1. Sustainable mobility philosophy
2. Existing parking demand philosophy
3. Hybrid approach philosophy

These philosophies are described below.

10.1.1 Sustainable Mobility Philosophy

This philosophy emphasizes the shift towards alternative modes of transportation and reducing dependence on private vehicles. It advocates for the promotion of sustainable transportation options such as public transit, walking, cycling, and car-sharing. By prioritizing sustainable mobility, this philosophy seeks to reduce parking demand and encourage a more environmentally friendly and efficient transportation system.

To achieve the objectives of this philosophy, parking regulations can include:

- Lower or no parking minimums,
- Application of parking maximums,
- Electric vehicle charging requirements,
- Optimization of parking supply through shared parking

10.1.2 Existing Parking Demand Philosophy

This philosophy focuses on providing sufficient parking spaces to meet the perceived demand and ensures convenient parking accessibility for residents, visitors, and businesses. It aims to minimize parking shortages, avoid on-street congestion, and ensure that parking is readily available for all users. The emphasis is on providing a baseline level of parking that meets the needs of the community.

To achieve the objectives of this philosophy, parking regulations can include parking minimums that meet the existing parking demand and modal share of the City of Hamilton.

10.1.3 Hybrid Approach Philosophy

This philosophy takes a middle-ground approach, incorporating elements from both the promotion of sustainable mobility and the need for adequate parking. It recognizes the importance of reducing parking demand by encouraging alternative transportation options while also ensuring that a reasonable level of parking is available when needed. The goal is to strike a balance between promoting sustainable transportation and meeting the practical parking needs of users, considering factors such as location, transit accessibility, and development characteristics.

To achieve the objectives of this philosophy, parking regulations can include:

- Lower parking minimums,
- Application of parking maximums,
- Electric vehicle charging requirements,
- Optimization of parking supply through shared parking,
- Flexible parking standards based on provision of transit.

10.2 Evaluation of Alternative Philosophies

The objectives of the alternative philosophies were evaluated based on the guiding principles developed as part of the parking standards policy framework. This evaluation is provided in Table 10-1.

Table 10-1: Evaluation of Alternative Philosophies

	Sustainable Mobility	Existing Parking Demand	Hybrid
Efficient land use	Passes <ul style="list-style-type: none"> Decrease in space required for parking 	Fails <ul style="list-style-type: none"> May provide too much excess parking 	Somewhat Passes <ul style="list-style-type: none"> Decrease in space required for parking
Cost reduction and affordability	Passes <ul style="list-style-type: none"> Reduced costs that can be passed to residents or users 	Fails <ul style="list-style-type: none"> Does not reduce costs of parking facilities compared to existing practices 	Somewhat Passes <ul style="list-style-type: none"> Reduced costs that can be passed to residents or users
Encouraging sustainable modes of transportation	Passes <ul style="list-style-type: none"> Reduced costs that can be passed to residents or users 	Fails <ul style="list-style-type: none"> Does not encourage a shift to more sustainable modes 	Somewhat Passes <ul style="list-style-type: none"> Reduced costs that can be passed to residents or users
Flexibility and adaptability	Passes <ul style="list-style-type: none"> Allows for a market-based approach that allows developers to propose parking spaces based on current consumer trends 	Somewhat Passes <ul style="list-style-type: none"> City staff continue to be flexible in parking regulations based on their review on a site-to-site basis 	Passes <ul style="list-style-type: none"> Allows for a flexibility based on the existing transportation infrastructure and committed transportation investments
Streamlining development processes	Passes <ul style="list-style-type: none"> Supports less parking variances and the need for additional studies such as parking justification studies 	Fails <ul style="list-style-type: none"> Increases likelihood of negotiations between the City and developers 	Somewhat Passes <ul style="list-style-type: none"> Supports less parking variances and the need for additional studies such as parking justification studies
Recommendation	Consider	Do not consider	Consider

11.0 Assigning Philosophies to Geographies

11.1 Overview

Older and more established neighbourhoods are located in more urban areas of Zone A and Zone B. These neighbourhoods have limited capacity to accommodate additional parking. These neighbourhoods also rely on limited on-street parking because denser built form and smaller lot sizes create an environment that makes providing on-site parking more difficult. Because of the physical space constraints of older neighbourhoods, lower parking standards in these urban areas could ensure that parking infrastructure does not compromise streetscape, built form, and urban design patterns. These more urban areas also tend to provide higher frequency transit, including Regional transit, and alternative modes of transportation.

Newer neighbourhoods and subdivisions, generally located in greenfield area and in Zone B, C, and D, have less physical space limitations to accommodate parking infrastructure. Parking can be a consideration from the early planning stages of the new community and can inform such things as lot width and paired driveways, on-street parking in new subdivisions, communal parking in block development formats, and rear lane development. These less urban areas also tend to have minimal alternative transportation modes.

11.2 Policy Directions

The following three recommendations regarding the application of the philosophies to the four zones are based on the reviews and assessments used to develop the parking standards policy framework,

Policy Direction #1: The sustainable mobility philosophy should be applied to Zone A. Residential parking minimums should be removed and lower parking minimums are provided for all other land uses. This philosophy targets Zone A where there is existing transit and existing residents are observed to own less vehicles, take alternative modes of transportation, and have higher housing affordability needs.

Policy Direction #2: The hybrid approach philosophy should be applied to Zone B, C, and D. Parking minimums should strike a balance between providing existing levels of parking demand while supporting the shift to sustainable modes based on existing and committed transportation infrastructure.

Policy Direction #3: Parking requirements for the Urban Expansion Areas in Zone C should be assessed once City staff have conducted and completed the Secondary Planning Process which started in early 2023.

Policy Direction #4: Parking requirements for Zone D should mainly provide existing levels of parking demand with sustainability in mind. The parking requirements should generally remain unchanged however they should consolidate the parking standards found in the existing various Zoning By-laws.

12.0 Draft Proposed Residential Parking Requirements

12.1 Approach

The draft proposed residential parking rates are based on the analysis and considerations outlined below. The full analysis and recommendations are found in Appendix D.

Existing Parking Standards

Existing parking standards provide the basis for setting new standards. Historically, parking requirements have undergone gradual refinement to align with the evolving needs of the City. This parking standards update primarily aims to incorporate best practices and align them more closely with the City's present strategic vision and goals.

Jurisdictional Scan

Many other large jurisdictions in Ontario have recently undergone an update to their parking standards. Gaining insight into the requirements established in their Zoning By-laws offers valuable understanding into best practices.

Data Collection

The spot survey data collection provides an understanding of how the current parking requirements are performing. Based on the results, many dwelling types are currently providing sufficient parking. In the downtown areas, the empirical data suggests that on-street parking spaces are currently close to capacity.

Parking Standards Framework

The parking requirements should adhere to the guiding principles that were developed as part of the parking standards framework that include:

- Efficient land use,
- Cost reduction and affordability,
- Encouraging sustainable modes of transportation,
- Flexibility and adaptability, and
- Streamlining development processes.

Past and Current Development Applications

Approved development applications that required a variance due to reduced parking requirements provide insights into what City staff find acceptable based on the context of the area. The resulting parking rates (spaces per unit) should be considered within the context of the parking standards zone.

12.2 Recommended New Definitions

To encourage small-scale intensification opportunities in low density residential areas, the Urban Hamilton Official Plan now permits fourplexes and multiple dwellings of up to six units for lots in proximity to collector or arterial roads.

Recommended definitions for a triplex and fourplex are the following:

- **Triplex:** shall mean a building that is divided horizontally and/or vertically into three separate dwelling units. A detached house or semi-detached house that has one or more additional dwelling units is not a triplex.
- **Fourplex:** shall mean a building that is divided horizontally and/or vertically into four separate dwelling units. A detached house or semi-detached house that has two or more additional dwelling units is not a fourplex.

Zoning By-law 05-200 currently treats multiple dwelling townhouses (stacked or back-to-back) under the category of multiple dwelling. Although many municipalities explicitly define stacked or back-to-back townhouses, the City of Toronto does not. For simplicity and ease of implementation, multiple dwelling townhouses should continue to be considered under the multiple dwelling types.

12.3 Recommendation for Multiple Dwelling Categories

Zoning By-law 05-200 currently categorizes parking requirements for multiple dwellings in downtown under a 0 – 12 units category, 12 – 50 units category, and 51+ category. This categorization is similar to parking standards in Zoning By-law 05-200 for outside the downtown area. These categories were created for the purpose of supporting transit-oriented corridors. There is also another category for units with 3 or more bedrooms to encourage the development of family-housing.

The logic behind the number of bedroom distinction is to ensure that the parking provisions align more closely with the actual automobile needs of residents based on the size of their dwelling units. Larger dwelling units with more bedrooms are likely to accommodate larger families or multiple occupants, resulting in a higher likelihood of owning multiple vehicles. Conversely, smaller dwelling units with fewer bedrooms may be occupied by individuals or smaller households, leading to a reduced need for parking spaces.

The City of Toronto and the City of Mississauga historically differentiated parking standards by bedroom size but have since moved away from these categories over the past few years to one broad multiple dwelling category. The approach of providing more parking based on number of bedrooms also does not align with this study's guiding principles as outlined below:

- **Efficient land use:** The additional bedrooms may not always be habitable by residents or those that can drive which could cause an overabundance of parking spaces.
- **Cost reduction and affordability:** An overabundance of parking spaces could decrease the affordability of dwellings.
- **Encouraging sustainable modes of transportation:** Categorizing by bedrooms supports more of an auto-oriented approach as it is assuming additional bedrooms will be occupied by those who need a vehicle.

Because parking standards based on number of units was created for a specific purpose in transit-oriented corridors and the number of bedrooms does not align with the study's guiding principles, a single parking requirement is recommended for the multiple dwelling land use.

The parking minimum for a multiple dwelling land use should follow the parking minimum for a bachelor/1-bedroom unit for parking standard geographies with more of the sustainable mobility philosophy and the parking minimum should be more conservative in geographies with more of the hybrid philosophy.

12.4 Recommendation for Additional Dwelling Units

The Residential Zones Project intends to accomplish the following:

- Remove barriers to small-scale intensification in low density residential areas of the City by permitting a wider range of housing options in existing neighbourhoods; and
- Promoting sustainable development by removing barriers to growth in existing neighbourhoods, and affordability by providing more housing choice in these neighbourhoods.

As part of this initiative, changes in the Zoning By-law in 2022 stated that no additional parking space shall be required for either a Secondary Dwelling Unit or a Secondary Dwelling Unit -Detached, provided the required parking spaces which existed on May 12, 2021 for the existing dwelling shall continue to be provided and maintained. Low Density Residential Zones can also be found in the Zoning By-law of the former communities.

To support the goal of the Residential Zones Project to remove barriers of small-scale intensification and enhance affordability, the updated parking standards recommends no parking requirements for any Additional Dwelling Units/ADU-Detached for all parking standard zones.

12.5 Recommendation for Visitor Parking for Multiple Dwelling

As outlined in the report Developing the Parking Standards Framework, Visitor parking can be used to provide sufficient space for:

- Service vehicles and loading which provides a certain level of quality of life to residents.
- Personal care workers that may need to stay longer than on-street parking limits or do not want to face difficulties finding nearby parking on-street to provide their services.

Based on the jurisdictional scan, visitor parking rates typically range from 0.1 spaces per unit to 0.25 spaces per unit. The City of Toronto provides a minimum of 2 total visitor parking spaces with an additional 0.01 visitor spaces per unit in the most urban areas and 0.05 visitor spaces per unit in other areas.

The updated parking standards recommend 2 total visitor spaces plus 0.05 visitor spaces per unit in Zone A, 0.15 visitor spaces per unit in Zone B, and 0.25 visitor spaces per unit in Zone C and Zone D.

12.6 Summary of Parking Requirements

Parking requirements for Zone A are summarized in Table 12-1.

Table 12-1: Zone A Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	0 spaces per unit	Not applicable
Semi Detached	0 spaces per unit	Not applicable
Street Townhouse	0 spaces per unit	Not applicable
Duplex	0 spaces per unit	Not applicable
Triplex	0 spaces per unit	Not applicable
Fourplex	0 spaces per unit	Not applicable
Multiple Dwelling	0 spaces per unit, 2 total visitor spaces plus 0.05 visitor spaces per unit	1.0 total space per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0 spaces per unit, 2 total visitor spaces plus 0.05 visitor spaces per unit	1.0 total space per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking requirements for Zone B are summarized in Table 12-2.

Table 12-2: Zone B Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	1 space per unit	Not applicable
Semi Detached	1 space per unit	Not applicable
Street Townhouse	1 space per unit	Not applicable
Duplex	1 space per unit	Not applicable
Triplex	1 space per unit	Not applicable
Fourplex	1 space per unit	Not applicable
Multiple Dwelling	0.5 spaces per unit plus 0.15 visitor spaces per unit	1.25 total spaces per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0.5 spaces per unit plus 0.15 visitor spaces per unit	1.25 total spaces per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking requirements for Zone C are summarized in Table 12-3.

Table 12-3: Zone C Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	1 space per unit	Not applicable
Semi Detached	1 space per unit	Not applicable
Street Townhouse	1 space per unit	Not applicable
Duplex	1 space per unit	Not applicable
Triplex	1 space per unit	Not applicable
Fourplex	1 space per unit	Not applicable
Multiple Dwelling	0.85 spaces per unit plus 0.25 visitor spaces per unit	2.0 total spaces per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0.85 spaces per unit plus 0.25 visitor spaces per unit	2.0 total spaces per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking standards for the Urban Expansion Areas that are within Zone C are recommended to be determined during the Secondary Planning process which started early 2023.

Parking standards for Zone D should generally remain unchanged, however they should consolidate the parking standards found in the existing various Zoning By-laws.

12.7 Recommendation for Parking Adjustments

12.7.1 Transit

Some jurisdictions' Zoning By-laws provide reductions in parking requirements due to proximity of transit. On the other hand, some jurisdictions that implemented a geography-based approach to their parking standards had zones or geographies that were defined by transit. Examples from the case studies documented in Appendix C of the Developing the Parking Policy Framework include:

- The City of Toronto previously implemented a parking standards zone called "Centres and Avenues on Subway" and "Other Avenues Served by Surface Transit".
- The City of Mississauga generally defines Precinct 1 and Precinct 2, which are the zones with the lowest parking requirements, along the Hurontario LRT.
- The City of Vaughan previously implemented a zone called "Higher Order Transit Hubs".
- The City of Ottawa implements a zone near major LRT stations.

The City of Hamilton's proposed parking zone system generally aligns with the existing and proposed transit system. For example, the City's planned MTSA's are all within the proposed Zone A, which has the lowest parking requirements. The boundary of Zone A also follows parts of the proposed rapid transit network, more specifically the A-Line and B-Line. The proposed Zone B geography captures the existing transit system and other parts of the proposed rapid transit network. Therefore, parking requirement reductions due to provision of transit is not recommended for this update.

12.7.2 Car Share

The provision of car-share to reduce parking requirements is not recommended for this update to the parking standards. Car share is an important mobility alternative, however if there are currently no enforceable mechanisms for car share to be implemented for that space, then the dedicated car share space becomes less useful.

Although car-share can reduce private automobile ownership and promote sustainable modes, which is one of the identified guiding principles, car-share programs are still mainly gas-powered so the effects are minimal compared to focusing on transit and active transportation. In addition, if car-share spaces are not used by car-share program

providers, those spaces are less likely to be used which creates an inefficient use of land and goes against another identified guiding principle.

Changes to car-share programs that would warrant another review of car-share within the parking standards would include the City having an enforceable mechanism to ensure these programs are being implemented in those spaces and private car share providers converting their fleet to zero emission vehicles.

12.8 Summary of Recommendations

The draft proposed residential parking requirements aim to achieve the guiding principles established as part of the parking policy framework which includes:

- Efficient land use,
- Cost reduction and affordability,
- Encouraging Sustainable Transportation,
- Flexibility and adaptability, and
- Streamlining Development Processes.

These objectives were developed based on a review of the challenges that local municipalities such as the City of Hamilton and all levels of government face in the coming decades. Broader issues of climate change and housing affordability require proactive and immediate action. The proposed parking requirements represent a thoughtful and strategic approach to parking management that will play a pivotal role in shaping the city's future, promoting sustainable mobility options, and supporting the development of a more resilient and inclusive built environment.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Appendix A

Parking Standards Best Practices



Appendix A – Best Practices

Date: June 26, 2023 **Project No.:** 300055923.000
Project Name: Parking Standards Review
To: City of Hamilton
From: R.J. Burnside & Associates Limited

1.0 Introduction

Traditional, minimum parking requirements have historically focused on ensuring that developments provide sufficient parking to meet the peak demand for each specific land use. However, this approach has led to an overabundance of parking supply, which has inadvertently supported auto-oriented land use planning and increased reliance on private vehicles.

The excessive parking infrastructure required by these minimum requirements not only consumes large areas of valuable land but also perpetuates an inefficient and unsustainable urban environment. This approach runs counter to many jurisdictions' commitment, including the City of Hamilton's, to creating an attractive, environmentally friendly built environment that promotes alternative modes of transportation and reduces dependency on cars.

As a response to these concerns, parking standards have evolved over time to address the overabundance of parking supply and emphasize the importance of sustainable development practices that prioritize efficient land use and support more livable and environmentally conscious communities. These trends include:

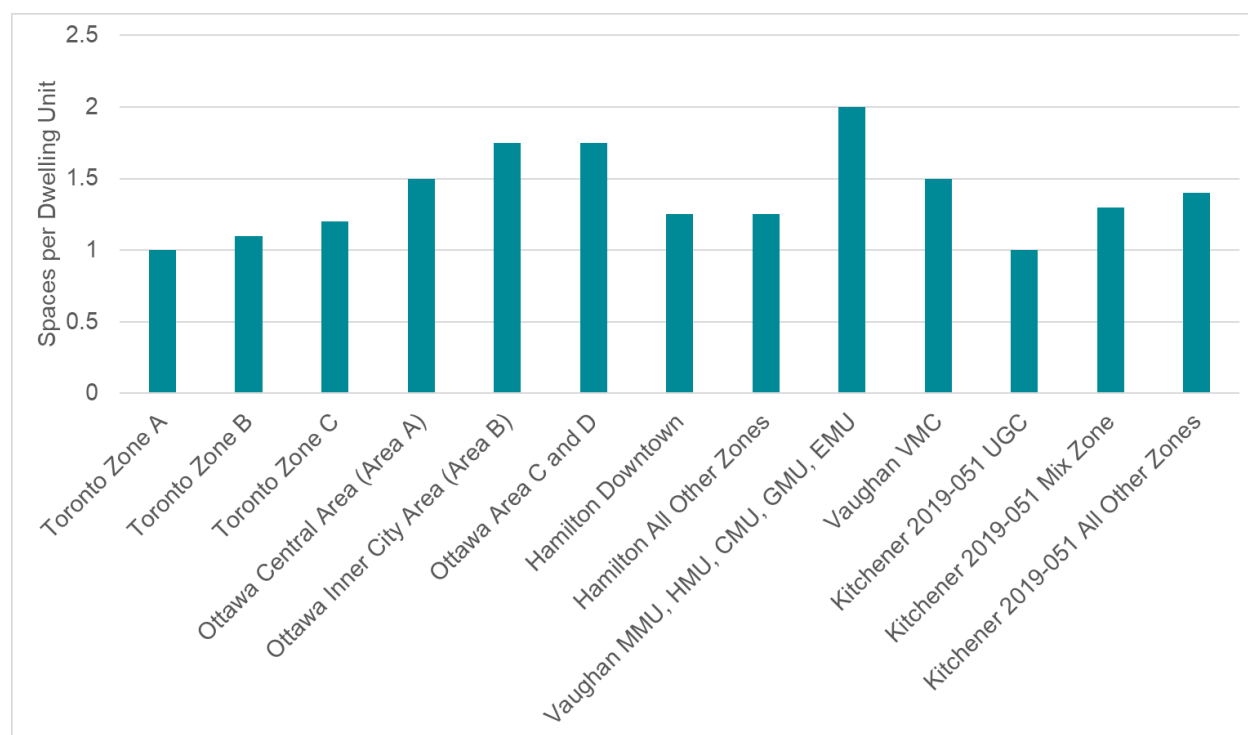
- Introduction of parking maximums;
- Decreasing parking minimums;
- New accessible parking standards calculations;
- Introduction of electric vehicle parking standards;
- Developing visitor parking standards;
- Developing shared parking regulations; and,
- Parking incentives.

2.0 Introduction of Parking Maximums

Maximum parking requirements strictly ensure that an overabundance of parking supply is not provided by putting a limit on the number of parking spaces provided. Parking maximums are typically utilized in highly developed areas where the municipality intends to slow the growth of vehicle ownership and reduce car emissions.

Generally, developers want to create developments that react to the market demand. For maximum parking standards to be effective, the rate should be lower than what the developers want to provide. Since this regulation places a strict capacity limit, for parking maximums to be effective, they should be applied in areas with other alternative modes of transportation such as transit. Multiple jurisdictions have implemented parking maximums for a variety of residential land uses as illustrated in Figure 1.

Figure 1: Parking Maximums by Jurisdiction



3.0 Decreasing Parking Minimums

Recognizing that there was a need to balance between accommodating vehicular parking with other sustainable objectives, municipalities have been decreasing their parking minimums, especially in more urbanized areas within their jurisdiction.

Appendix "B" to Report PED23156
Page 46 of 99

In 2021, the City of Toronto removed parking rates for single detached, semi detached, apartment building, and townhouse land uses.

In 2015, the City of Ottawa moved to a geography-based approach for parking standards and lowered some of their parking minimums in certain land uses as described below:

- In the “Inner Area”, which is more urbanized, for low-rise residential use buildings up to 12 dwelling units, the parking rate was decreased from 0.5 spaces per dwelling unit to 0 spaces per dwelling unit.
- In the “Inner Area”, which is more urbanized, the visitor parking rate changed from one visitor space for every five dwelling units after the first twelve units to one visitor space for every twelve dwelling units in excess of twelve.
- In “Area Y”, which is less urbanized, any dwelling unit contained in a low-rise building is exempt from minimum parking requirements.
- In “Area Z”, which is near rapid-transit stations in more urbanized areas, minimum requirements were removed.

In 2022, the City of Mississauga also moved to a geography-based approach for parking standards with rate reductions based on the precinct area. Differentiating factors between precincts include the level of alternative transportation options and level of urbanity. Precinct 1 includes the City Centre has the lowest parking requirements and Precinct 4 which is more suburban has the highest parking requirements. Residential parking requirements for each precinct are shown in Table 1.

Table 1: Minimum Requirements by Mississauga Precinct

Residential Land Use	Existing Minimum Parking Requirement	Minimum Requirement			
		Precinct 1	Precinct 2	Precinct 3	Precinct 4
Apartment/ Condominium	Studio 1.00 1-Bed: 1.25 2-Bed: 1.50 3-Bed: 1.75	0.8	0.9	1.0	1.1
Apartment Rental	Studio 1.00 1-Bed: 1.18 2-Bed: 1.36 3-Bed: 1.50	0.8	0.8	0.9	1.0
Back-to-back and stacked townhouse - Condominium	Studio/ 1-bed: 1.1 2-Bed: 1.50 3-Bed: 1.75 4-Bed: 2.0	1.0	1.1	1.3	1.5

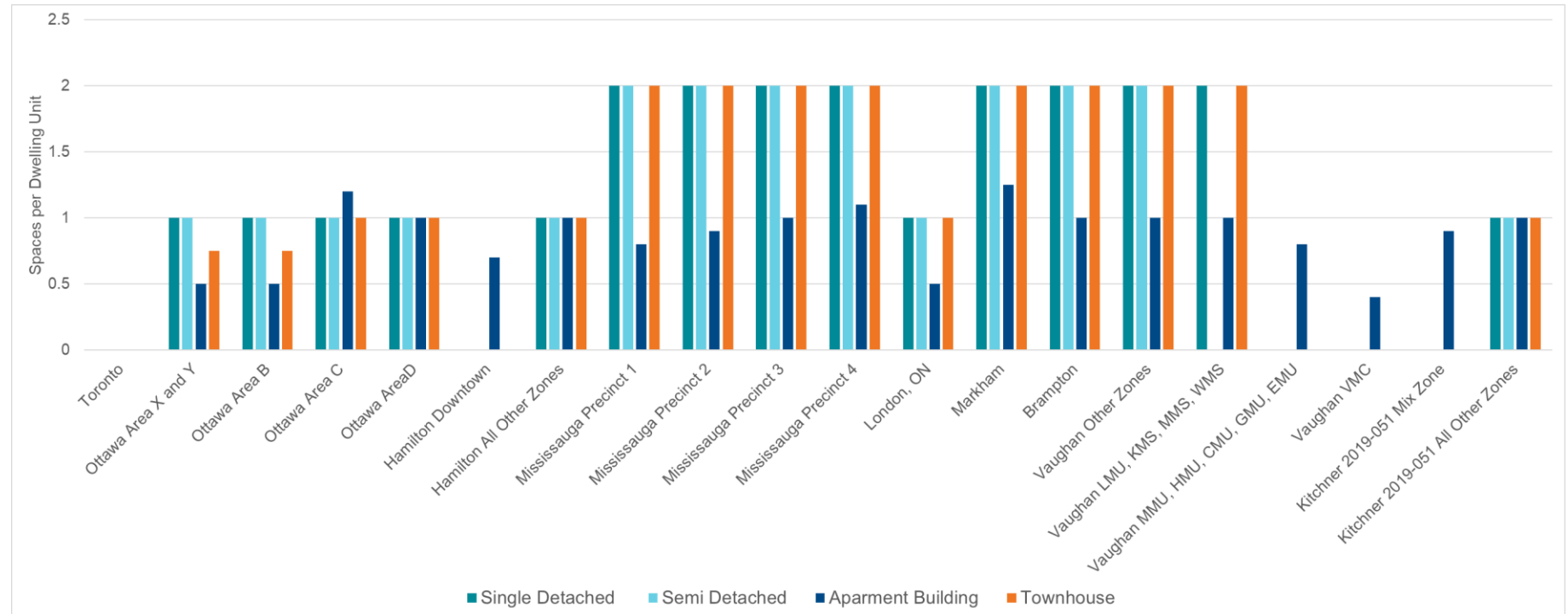
Appendix "B" to Report PED23156
Page 47 of 99

Residential Land Use	Existing Minimum Parking Requirement	Minimum Requirement			
		Precinct 1	Precinct 2	Precinct 3	Precinct 4
Back-to-back and stacked townhouse - Rental	Studio/ 1-bed: 1.1 2-Bed: 1.25 3-Bed: 1.41 4-Bed: 1.95	1.0	1.1	1.3	1.5

A comparison of residential parking minimums is illustrated in Figure 2. In cases where there are no bars illustrated for land use types or municipalities, there are no residential parking minimums.

Appendix "B" to Report PED23156
Page 48 of 99

Figure 2: Residential Parking Minimums by Jurisdiction



4.0 New Accessible Parking Standards Calculations

4.1 Accessibility for Ontarians with Disabilities Act

The Integrated Accessible Standards under the Accessibility for Ontarians with Disabilities Act (AODA), 2005, S.O.2005, c.11 is a: "Regulation that establishes the accessibility standards for each of information and communications, employment, transportation, the design of public spaces and customer service". Section 80.32¹ states the following in quotations: "Obligated organizations shall ensure that when constructing new or redeveloping off-street parking facilities that they intend to maintain the off-street parking facilities meet the requirements set out in this" regulation including:

- "Off-street parking facilities must provide the following two types of parking spaces for the use of persons with disabilities:
 - Type A, a wider parking space which has a minimum width of 3,400 mm and signage that identifies the space as "van accessible".
 - Type B, a standard parking space which has a minimum width of 2,400 mm."

Regulation 80.36 dictates the minimum number and type of accessible parking spaces as stated below:

"Off-street parking facilities must have a minimum number of parking spaces for the use of persons with disabilities, in accordance with the following requirements:

1. One parking space for the use of persons with disabilities, which meets the requirements of a Type A parking space, where there are 12 parking spaces or fewer.
2. Four per cent of the total number of parking spaces for the use of persons with disabilities, where there are between 13 and 100 parking spaces in accordance with the following ratio, rounding up to the nearest whole number:
 - i) Where an even number of parking spaces for the use of persons with disabilities are provided in accordance with the requirements of this paragraph, an equal number of parking spaces that meet the requirements of a Type A parking space and a Type B parking space must be provided.
 - ii) Where an odd number of parking spaces for the use of persons with disabilities are provided in accordance with the requirements of this paragraph, the number of parking spaces must be divided equally between parking spaces that meet the requirements of a Type A parking space and a Type B parking space, but the additional parking space, the odd-numbered space, may be a Type B parking space.

¹ <https://www.ontario.ca/laws/regulation/110191#BK137>

Appendix "B" to Report PED23156
Page 50 of 99

3. One parking space for the use of persons with disabilities and an additional three per cent of parking spaces for the use of persons with disabilities, where there are between 101 and 200 parking spaces must be parking spaces for the use of persons with disabilities, calculated in accordance with ratios set out in subparagraphs 2 i and ii, rounding up to the nearest whole number.
4. Two parking spaces for the use of persons with disabilities and an additional two per cent of parking spaces for the use of persons with disabilities, where there are between 201 and 1,000 parking spaces must be parking spaces for the use of persons with disabilities in accordance with the ratio in subparagraphs 2 i and ii, rounding up to the nearest whole number.
 - Eleven parking spaces for the use of persons with disabilities and an additional one per cent of parking spaces for the use of persons with disabilities, where more than 1,000 parking spaces are provided must be parking spaces for the use of persons with disabilities in accordance with the ratio in subparagraphs 2 i and ii, rounding up to the nearest whole number. O. Reg. 413/12, s. 6.”

4.2 Standard Accessible Parking Standards

The City of Hamilton regulates the minimum number of designated barrier free parking spaces in the Zoning By-law as stated below:

Where 10 or more parking spaces are required by Section 5.6 “Parking Schedules” for all uses on a lot, barrier free parking shall be designated and provided as part of the required parking spaces, in accordance with the following requirements:

Required Parking Spaces	Designated Barrier Free Parking Spaces
10 – 50 spaces	Minimum 1 space
50 – 100 spaces	Minimum 2 spaces
100 or more spaces	Minimum 2 spaces plus for every additional 100 required spaces, 1 additional barrier free spaces shall be provided.

The City of Mississauga regulates the number of accessible parking spaces for residential uses based on visitor parking spaces as shown below.

Total Number of Required Visitor Parking Spaces	Minimum Number of Required Accessible Parking Spaces
1 – 12	1.0 space
13 – 100	4% of the total
101 – 200	1.0 space plus 3% of the total
201 – 1,000	2.0 spaces plus 2% of the total
1,001 and greater	11.0 spaces plus 1% of the total

Appendix "B" to Report PED23156
Page 51 of 99

Other City of Mississauga regulations states the following:

- “Where only one accessible parking space is required, a Type A accessible parking space shall be provided.
- If an even number of accessible parking spaces is required, an equal number of Type A and Type B accessible parking spaces must be provided;
- If an odd number of accessible parking spaces is required, an equal number of Type A and Type B accessible parking spaces must be provided and the odd space may be a Type B accessible parking space.”

The City of Mississauga regulations are aligned with the AODA requirements.

4.3 New Accessible Parking Standard Calculations

The City of Toronto applies a different approach in determining the minimum standards for accessible parking in new and expanded developments. Zoning By-law 569-2013 requires that all accessible parking stalls conform to the Type A standard and does not differentiate between the Type A and Type B parking space sizes as stated in the AODA.

Since the minimum number of accessible parking spaces is based on the total number of required spaces, the City recognized that this may lead to an inadequate provision of accessible parking stalls as the City removed many of their parking minimums in 2021. The City recognized that users of accessible parking spaces may not be able to switch to other modes of transportation as easily as others.

The City of Toronto adopted an approach that calculates the number of effective parking spaces for the sole purpose of determining the required amount of accessible parking spaces. The number of effective parking spaces is the greater number of permitted parking spaces provided and the number of parking spaces calculated from Table 2, which shows the calculation for many residential land uses only.

Table 2: Effective Parking Space Calculations

Land Use Type	Accessible Parking Standards Calculation
Resident Requirement for a Dwelling unit in an: Apartment Building, Assisted Housing or a Mixed Use Building	The rate for calculating effective parking spaces is: <ul style="list-style-type: none">• Parking Zone A (PZA) at a rate of:<ul style="list-style-type: none">– 0.3 for each bachelor dwelling unit up to 45 square metres and 1.0 for each bachelor dwelling unit greater than 45 square metres;– 0.5 for each one bedroom dwelling unit; and

**Appendix "B" to Report PED23156
Page 52 of 99**

	<ul style="list-style-type: none"> – 0.8 for each two bedroom dwelling unit; and – 1.0 for each three or more bedroom dwelling unit; • Parking Zone B (PZB) at a rate of: <ul style="list-style-type: none"> – 0.7 for each bachelor dwelling unit up to 45 square metres and 1.0 for each bachelor dwelling unit greater than 45 square metres; and – 0.8 for each one bedroom dwelling unit; and – 0.9 for each two bedroom dwelling unit; and – 1.1 for each three or more bedroom dwelling unit; • In all other areas of the City, at a rate of: <ul style="list-style-type: none"> – 0.8 for each bachelor dwelling unit up to 45 square metres and 1.0 for each bachelor dwelling unit greater than 45 square metres; and – 0.9 for each one bedroom dwelling unit; and – 1.0 for each two bedroom dwelling unit; and – 1.2 for each three or more bedroom dwelling unit.
Resident Requirement for a Dwelling Unit in a: Detached House, Semi-detached House, Townhouse, Duplex, Triplex or Fourplex	None
Resident Requirement for a Dwelling Unit in a Multiple Dwelling Unit Buildings	The rate for calculating effective parking spaces is 1.0 for each dwelling unit.
Secondary Suite	None
Visitor Requirement for a dwelling unit in an Apartment Building, a Mixed Use Building, and/or a Multiple Dwelling Unit Building	The rate for calculating effective parking spaces is 0.1 per dwelling unit.

Appendix "B" to Report PED23156
Page 53 of 99

Based on the effective number of parking spaces, the minimum number of accessible parking spaces to be provided is calculated based on standards shown in Table 3.

Table 3: Minimum Accessible Parking Rates for Parking Spaces 5+

Total Number of Required Visitor Parking Spaces	Minimum Number of Required Accessible Parking Spaces
1 – 12	1.0 space
13 – 100	A minimum of 1 parking space for every 25 effective parking spaces
100+	if the number of effective parking spaces is more than 100, a minimum of 5 parking spaces plus 1 parking space for every 50 effective parking spaces or part thereof in excess of 100 parking spaces

5.0 Introduction of Electric Vehicle Parking Standards

In the past couple of years, electrical vehicles (EVs) have become more popular as consumers seek environmentally friendly and sustainable transportation options. According to MTO, as of February 2022, there are more than 75,000 EVs registered in Ontario, and the MTO expects that this number will grow to over one million by 2030. Recently the Ministry of Transportation Ontario (MTO) announced that it will provide \$91 million to build EV charging station across the province. This funding package will support the Ontario municipalities to establish more charging infrastructure. The funding package will target the construction of EV charging stations in highway rest areas, carpool parking lots, parks, and community hubs such as sport arenas and municipal parking lots.

The federal government has also undertaken steps to support consumer purchasing of electric vehicles. In December 2020, the Government of Canada introduced A Healthy Environment and a Healthy Economy, a climate plan that builds off the 2016 Pan-Canadian Framework on Clean Growth and Climate Change (PCF). This plan aims to exceed its 2030 Paris Agreement emission reduction target and aims for a net-zero emission future by 2050. A major component to this updated plan is making clean, affordable transportation and power available in every Canadian community. The commitments made by the Government of Canada include expanding the supply of clean electricity, investing in next-generation clean energy and technology, encouraging cleaner modes of transportation such as zero-emission vehicles, transit, and active transportation.

Federal targets on zero-emission vehicles include:

- 10% of light-duty vehicle sales are zero-emission by 2025,
- 30% of light-duty vehicle sales are zero-emission by 2030, and
- 100% of light-duty vehicle sales are zero-emission by 2035.

Appendix "B" to Report PED23156
Page 54 of 99

Electrical vehicles are either partially or entirely powered by electricity. Charging EVs require them to be plugged into the electrical grid through charging stations. Depending on the make and model of the EV and the type of charging stations, charging time for an EV can vary.

Current EV charging technologies fall into three primary categories: Level 1, Level 2, and Direct Current Fast Charging (DCFC) stations.

- Level 1 (L1) charging stations use a standard 120V outlet and provide about 1.1 kilowatts (kW) of power, charging an EV at a rate of 3-7 km per hour.
- Level 2 (L2) stations use a 208V/240V outlet and typically provide 3.3 to 19.2 kW of power, providing 16 to 40 km of range per hour of charging.
- Level 3 (DCFC) stations require 480V service; current stations provide power at 25 kW up to 350 kW. Typically, DCFC stations provide 50 kW of power. These 50 kW plugs can add more than 4.8 km of range per minute. Newer DCFC chargers are capable of power ratings of 350 kW and can add 32 km per minute; compared to the peak charging rates of 0.1 km per minute and 0.7 km per minute for level 1 and level 2, respectively.

Parking regulations can support the adoption of electric vehicles. Without parking regulations, the barriers that can exist for the supply of EV-ready parking stalls include:

- Real estate developers may be hesitant in providing EV-ready parking stalls if they are not counted towards parking requirements. Developers may instead rely on market demand of EV-ready parking stalls which can slow the consumer adoption of EV.
- Residents living in condominiums have to rely on the governance structure of the condo board to determine how electric vehicle would be installed, owned, operated and maintained.

City of Toronto's Zoning Bylaw 569-2013 states the following:

- Parking spaces must be equipped with an energized outlet, which is clearly marked and identified for electric vehicle charging, in accordance with the following:
 - All residential parking spaces provided for dwelling units located in an apartment building, mixed use building, multiple dwelling unit building, detached house, semi-detached house, townhouse, duplex, triplex, fourplex or for a secondary suite or laneway suite, excluding visitor parking spaces, must include an energized outlet capable of providing Level 2 charging or higher to the parking space; and
 - In cases other than those set out above, 25% of the residential and non-residential parking spaces in a building must include an energized outlet capable of providing Level 2 charging or higher.

City of Mississauga, Proposed Draft Zoning By-Law Amendment (March 25, 2022)

- Electric vehicle ready parking spaces shall be provided in accordance with Table 4.

Appendix "B" to Report PED23156
Page 55 of 99

Table 4: Minimum Electric Vehicle-Ready Parking Requirements

Dwelling Type	Regulations
Detached Dwelling, Linked Dwelling, Semi-detached, Street Townhouse, Duplex, Triplex, Street Townhouse, Back to Back and Stacked Townhouse	1.0 of the required parking spaces with an exclusive use garage
Condominium and Rental Apartment, resident parking	20% of the total required parking spaces or 1.0 space, whichever is greater
Condominium and Rental Apartment, visitor parking	10% of the total required parking spaces or 1.0 space, whichever is greater
Back-to-back and Stacked Townhouse, without exclusive use garage and driveway	20% of the total required parking spaces or 1.0 space, whichever is greater.

The City of Kitchener's Zoning by-law 2019-051 states that a minimum of 20 percent of the parking spaces required for multiple dwellings shall be designed to permit the future installation of electric vehicle supply equipment.

6.0 Visitor Parking Rates

Visitor parking is an important component of the parking system. On-street parking can accommodate a portion of the visitor parking need which is the current approach of Zoning by-law 05-200. However, on-site residential parking can benefit residents and visitors.

Visitor parking is not only used for recreational trip purposes to visit residents. Visitor parking can be used to provide sufficient space for:

- Service vehicles and loading which provides a certain level of quality of life to residents.
- Personal care workers that may need to stay longer than on-street parking limits or do not want to face difficulties finding nearby parking on-street to provide their services.

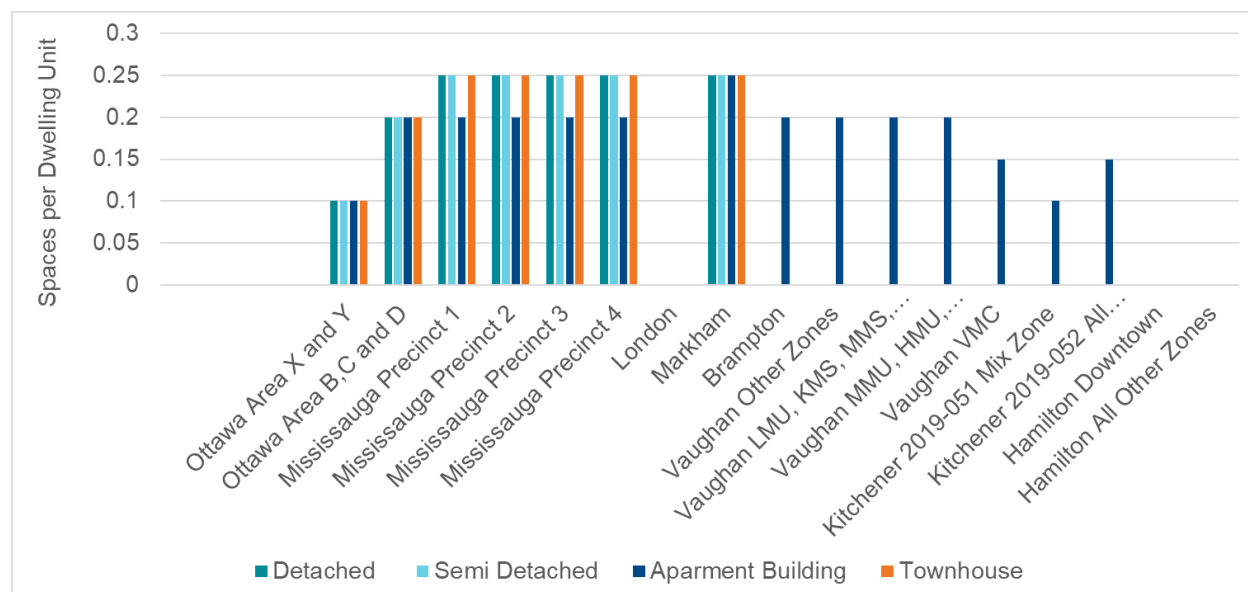
Visitor parking rates usually range from 0.1 spaces per unit to 0.25 spaces per unit based on a comparison between different jurisdictions. The City of Toronto provides a small number of visitor parking spaces as the baseline and a small parking rate per unit. For a dwelling unit in an apartment building, a mixed use building, and/or multiple dwelling unit building, parking spaces must be provided:

- In Parking Zone A, at a minimum rate of 2.0 spaces plus 0.01 per dwelling unit;
- In Parking Zone B and in all other areas of the City, at a minimum rate of 2.0 spaces plus 0.05 per dwelling unit; and
- at a maximum rate of 1.0 per dwelling unit for the first five (5) dwelling units; and
- at a maximum rate of 0.1 per dwelling unit for the sixth and subsequent dwelling units.

Appendix "B" to Report PED23156 Page 56 of 99

The visitor parking rates of other municipalities are illustrated in Figure 3. In cases where there are no bars illustrated for land use types or municipalities, there are no visitor parking required.

Figure 3: Visitor Parking Rates



7.0 Shared Parking

Shared parking allows different land uses to share parking spaces based on their respective peak demand periods, resulting in more efficient utilization of parking resources. This approach benefits both businesses and the community by maximizing parking availability, reducing parking demand, and promoting sustainable development practices. Incorporating shared parking in a Zoning by-law would allow developers to provide sufficient parking for various land uses by leveraging underutilized parking supply during off-peak times. Municipalities such as the City of Mississauga, City of Burlington, City of Guelph, City of Ottawa, and the City of Vaughan contain shared parking provisions for mixed-use developments between different land use types. Typically the visitor component of the residential parking requirements are shared with the non-residential parking requirements.

8.0 Flexible Parking Standards

Some municipalities adopt an approach where parking standards can be reduced based on the provision of certain services on-site or in proximity. Two of the most impactful provisions for reducing parking requirements seen in other jurisdictions Zoning by-law includes proximity of the development to transit and car-share dedicated parking spaces. Examples of flexible parking requirement policies due to transit in Zoning by-laws are presented in Table 5 for transit and Table 6 for carshare.

Appendix "B" to Report PED23156
Page 57 of 99

Table 5: Flexible Parking Requirements Based on Transit

Municipality	Policy
City of Newmarket (Zoning by-law 2017-05)	The minimum and maximum parking rates for each of the permitted residential and non-residential uses may be reduced by 30% if the property of such use is within a walking distance of 500 metres of either the GO train station or a GO bus terminal properties.
City of Vancouver (Zoning by-law 6059, Schedule C)	The minimum required parking spaces for dwelling units is reduced by 10% due to close proximity to a rapid transit station.

Table 6: Flexible Parking Requirements Based on Carshare

Municipality	Policy
City of Newmarket (Zoning by-law 2017-05)	The applicable minimum parking space requirement may be reduced by up to 3 parking spaces for each dedicated car-share parking space.
City of Toronto (Zoning by-law 438-86 – Superseded)	The required parking spaces can be reduced at a rate of 4 parking spaces for each car-share parking space, provided to a maximum of 5 car-share spaces on the lot .



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]



Appendix B

Vehicular Trends

Appendix B



Appendix B – Vehicular Trends

Date: June 26, 2023 **Project No.:** 300055923.000
Project Name: Parking Standards Review
Client Name: City of Hamilton
From: R.J. Burnside & Associates Limited

1.0 Introduction

Recent vehicular trends have given rise to specific parking needs and opportunities in the parking regulations. These vehicular trends include:

- Rising number of vehicles per household,
- Rising consumer adoption of electric vehicles, and
- Rising demand for larger-sized vehicles.

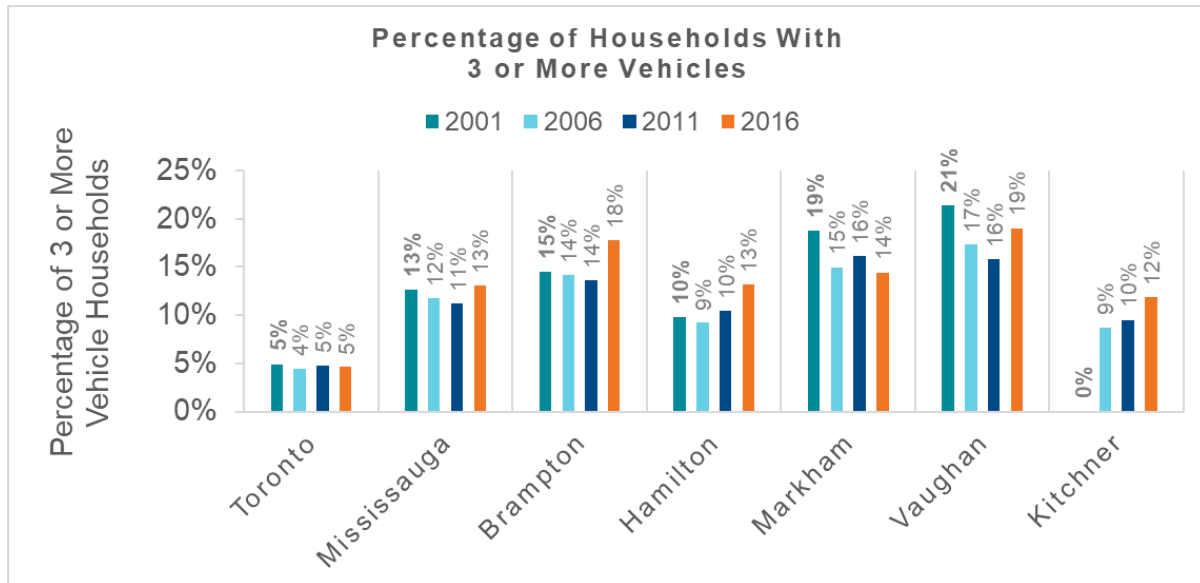
These trends are outlined below.

2.0 Rising Number of Vehicles per Household

Vehicle ownership can be estimated within the Greater Toronto and Hamilton Area (GTHA) through the Transportation Tomorrow Survey (TTS) which collects data every 5 years for approximately 5% of households. Certain municipalities have seen a rise in 3-or-more vehicle households such as the City of Hamilton, City of Brampton, and the City of Kitchener. In 2011, 10% of the households within the City of Hamilton had 3-or-more vehicles. This proportion rose to 13% in 2016 as illustrated in Figure 1. Since 2006, average persons per household has maintained at 2.5 persons per household suggesting that vehicle ownership per person is also increasing.

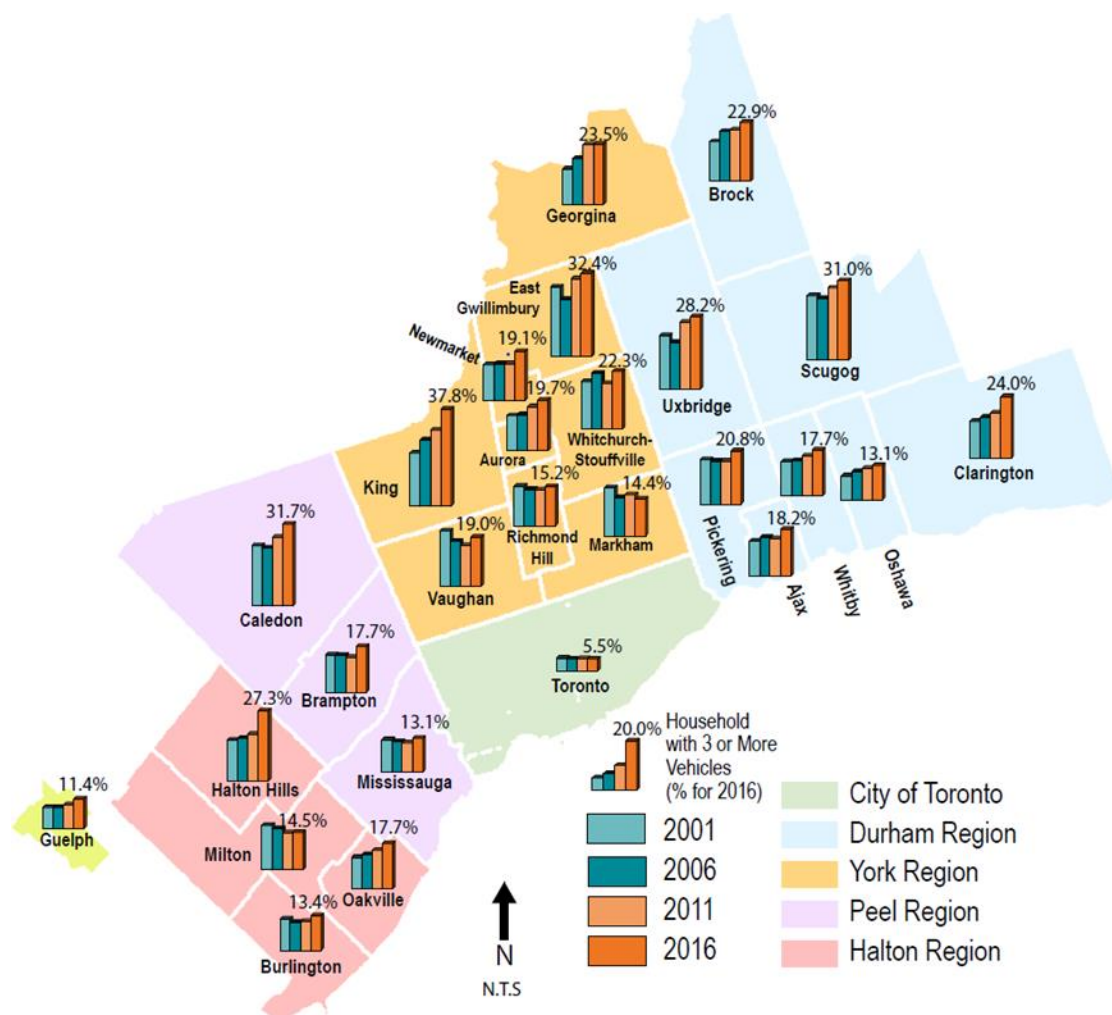
Appendix "B" to Report PED23156
Page 60 of 99

Figure 1: Percentage of 3-or-more Vehicle Households



In the Greater Toronto Area, this trend is also common in many suburban and rural municipalities as illustrated in Figure 2.

Figure 2: Percentage of Households with 3-or-more Vehicles in the GTA



Parking standards must balance between providing sufficient parking on-site while managing overall travel demand to support other City strategic objectives such as sustainability and climate change commitments.

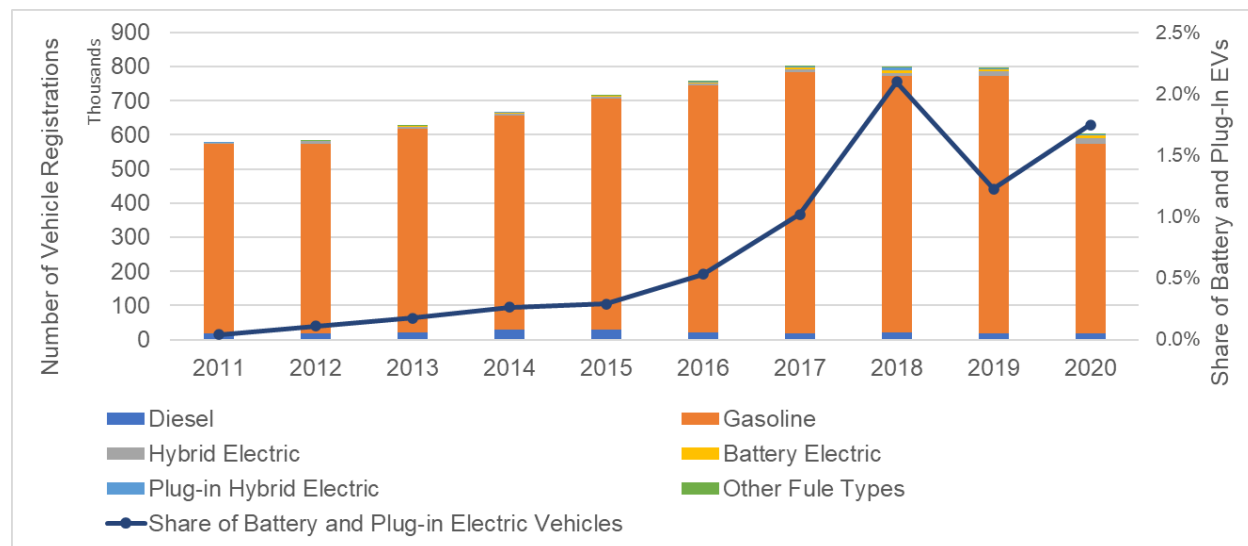
3.0 Consumer Trends in Electric Vehicle Sales

Electric vehicle and plug-in hybrid vehicle have grown rapidly in Ontario. Between 2016 and 2022, the number of electric and plug-in hybrid vehicle registrations grew by 400% from 4,000 registrations to 20,000 registrations. Before 2016, the proportion of electric and plug-in hybrid vehicle registrations was almost 0%.

The availability of electric vehicle charging infrastructure is a consideration for residents who are considering or have purchased these types of vehicles. Detached homes, semi-detached

homes, and townhomes can usually easily retrofit their garages to provide adequate charging capability. Retrofitting underground parking lots of multi-unit residential buildings with electric vehicle charging infrastructure is more challenging.

Figure 3: Share of Electric Vehicle Registrations



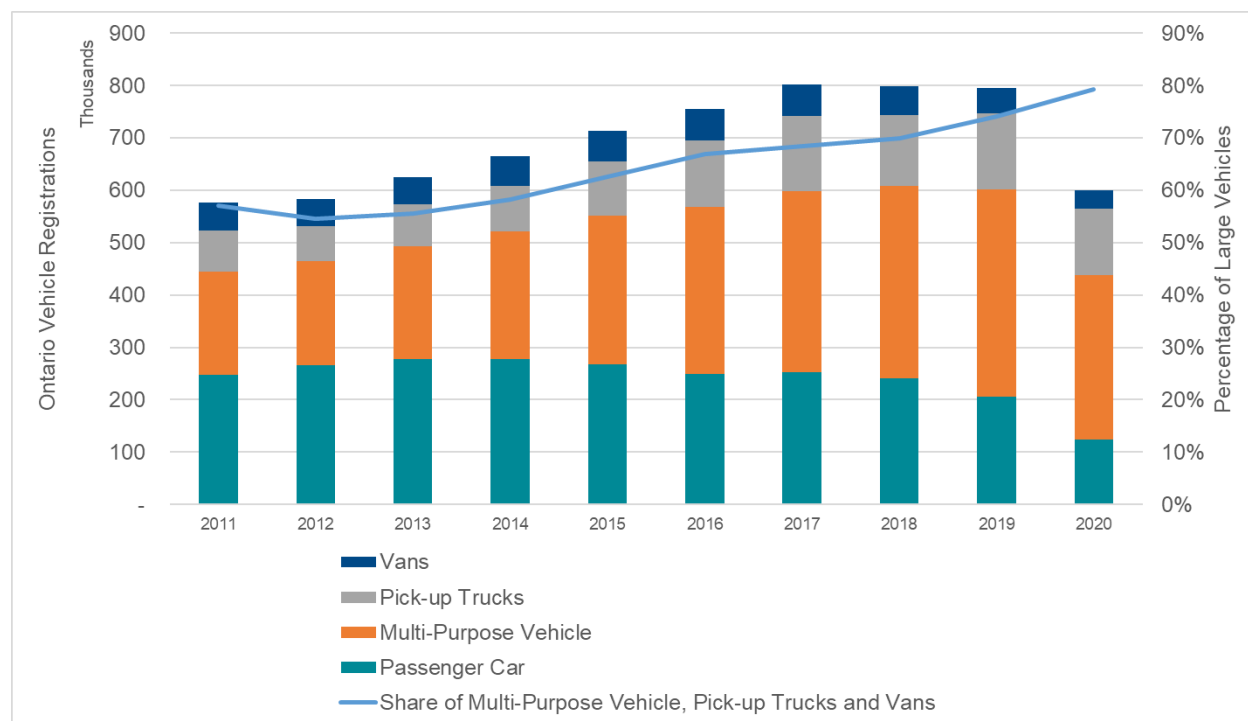
4.0 Rise in Larger Vehicle Purchases

As illustrated in Figure 4, the share of Multi-Purpose Vehicles, Pick-up Trucks, and Vans (SUV) has been increasing steadily from 57% in 2011 to 79% in 2020. This trend is aligned with the rising popularity of SUVs, which are typically classified as Multi-Purpose Vehicles, Vans and Pick-up Trucks. The number of Passenger Cars has been declining over the years, dropping from 247,563 in 2011 to 124,652 in 2020. In contrast, the total number of SUVs (including Multi-Purpose Vehicles, Vans and Pick-up Trucks) has been consistently increasing, from 329,779 in 2011 to 475,974 in 2020.

The increase in SUV purchases can be attributed to various factors, such as the perceived safety and comfort of these vehicles, their spaciousness, and their versatility. As more people prefer the convenience and utility of SUVs, the trend of rising SUV sales is expected to continue in the coming years.

Appendix "B" to Report PED23156
Page 63 of 99

Figure 4: Share of Larger Vehicle Registrations



The rise of SUV sales has some implications for parking requirements in new and existing developments. SUVs are larger in size compared to traditional passenger cars and require more space to park, which means that parking lots and garages may need to consider how to accommodate them. The Zoning by-law contains policies regarding the dimensions of parking spaces which should be reviewed during the update of the City's parking standards.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix C

Case Studies



Appendix C – Case Studies

Date: June 26, 2023 **Project No.:** 300055923.000
Project Name: Parking Standards Review
Client Name: City of Hamilton
From: R.J. Burnside & Associates Limited

1.0 Introduction

This section summarizes four jurisdictions that have or had applied a geography-based approach to parking standards. The focus of this review is understanding how these geographies were developed.

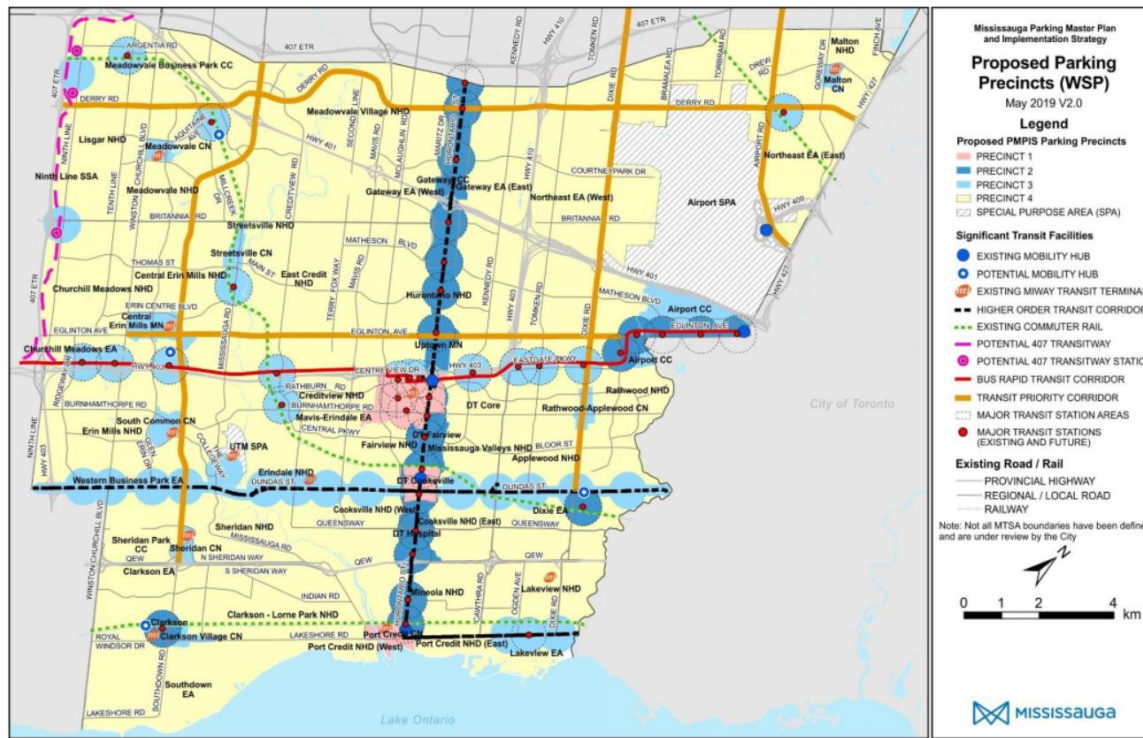
2.0 City of Mississauga

The City of Mississauga amended their zoning by-law in June 2022 taking into consideration more recent trends and best practices in parking requirements. The amended by-laws updated the vehicle parking and bicycle parking regulations. The new parking regulations intend to ensure “a balance between parking provision and management to maximize support for Mississauga as a multi-model city”. A review of the new zoning by-law has adopted a precinct approach to set parking requirements and management approaches. The City defined 4 precinct areas which are illustrated in Figure 1.

Appendix "B" to Report PED23156

Page 66 of 99

Figure 1: Mississauga Precinct Policy Areas for Parking



The location and governing policies in each of the parking precinct policy area is affected by the following six factors:

- Transit Accessibility and Frequency
- Vehicle Ownership
- Availability of Alternative Modes of Travel
- Public Parking Facility
- Land Use
- Walkability

Each of the precincts consist of a different set of parking requirements with Precinct 1 being the most flexible and lower parking requirement and Precinct 4 being the most rigid with higher parking requirements. For defining the parking precinct policy areas, every area of the city is analyzed using the above six factors. Each parking precinct is briefly described in the following.

- **Precinct 1:** This precinct covers Mississauga Downtown Core, Downtown Cooksville and Port Credit where vehicle ownership is the lowest (i.e., lower than the city average of 1.6 vehicles per household). Precinct 1 has the highest number of public parking, mixed land use and existing and future transit. Additionally, Precinct 1 scored the highest in terms of walkability level of travel demand management (TDM). This Precinct has the lowest parking requirement and the highest parking management strategies.

Appendix "B" to Report PED23156
Page 67 of 99

- **Precinct 2:** This precinct covers Mississauga Downtown Fairview, Downtown Hospital, Uptown, Hurontario Intensification Corridor, Dixie Community Node, Gateway Corporate Centre and Major Transit Station Areas such as the Airport Corporate Centre and Clarkson where vehicle ownership is lower than average. Precinct 2 has some public parking and mixed land use. This Precinct is in areas with higher order transit corridors, BRT corridors and/or commuter rail corridors. Additionally, Precinct 2 areas scored second in terms of walkability in Mississauga and has several planned TDM measures. This Precinct has higher parking requirements compared to Precinct 1. Parking maximums are defined for some areas of this Precinct and there are a variety of parking management strategies.
- **Precinct 3:** This precinct covers future BRT stations along Dundas and Major Transit Station Areas not included in Precinct 1 and Precinct 2, Major Nodes such as Central Erin mills and Lakeview and Community Nodes such as Streetsville, Malton, Meadowvale etc. where vehicle ownership is higher than Precinct 1 and Precinct 2. Precinct 3 has limited public parking and mixed land use (more mixed land use will be encouraged in future). This Precinct is in areas with higher order transit corridors, BRT corridors and/or commuter rail corridors. Precinct 3 areas have different walkability scores with some scoring as “very walkable” and some scoring as “car dependent”. There are limited TDM measures in this Precinct. This Precinct contains minimum parking requirements that address existing parking demand site-focused parking management strategies.
- **Precinct 4:** This precinct covers the rest of the city where vehicle ownership is the highest. Precinct 4 has limited to no public parking. This Precinct has the lowest transit ridership and walkability scores and is expected to remain car dependent. This Precinct contains minimum parking requirements that address existing parking demand site-focused parking management strategies.

3.0 City of Toronto

Zoning By-law 569-2013 is the City's comprehensive, city-wide zoning by-law which defined different parking policies for the city considering their location and proximity to the transit services. This by-law defined the following five policy areas:

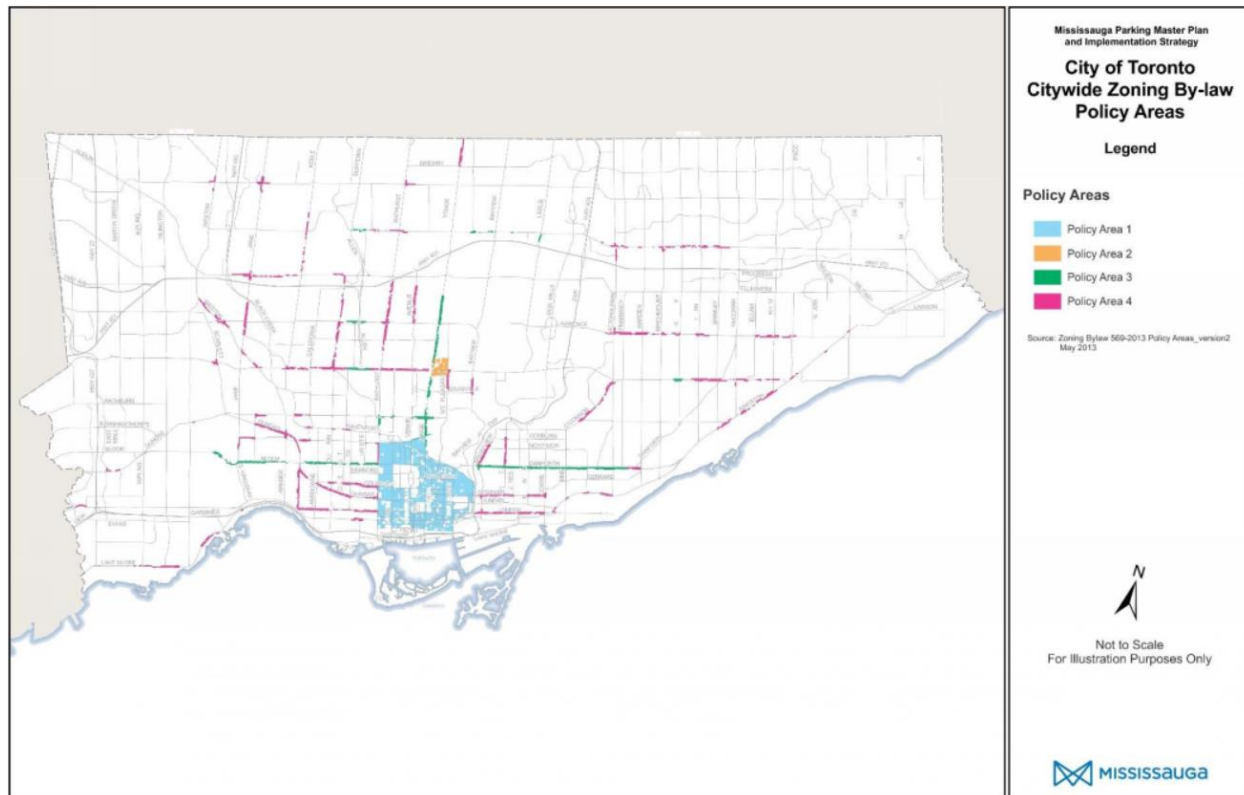
- PA 1: Downtown and Central Waterfront
- PA 2: Yonge and Eglinton
- PA 3: Centres and Avenues on Subway
- PA 4: Other Avenues Served by Surface Transit
- PA 5: Rest of the City

The 2013, the Zoning by-law defined minimum and maximum parking requirements for the mentioned policy areas. The policy areas are shown in Figure 2.

The City of Toronto amended its parking regulations as part of By-law 89-2022 (adopted as amended, by City of Toronto Council in December 2021). The new by-law defined three parking zones including Zone A, Zone B and all other areas. This Zoning By-law applied a range of parking maximums and the application of parking minimums is limited. Generally, the parking maximums are highest in Zone A, higher in Zone B, and the highest in all other areas.

Appendix "B" to Report PED23156
Page 69 of 99

Figure 2: Toronto Zoning By-law Policy Areas



4.0 City of Vaughan

The City of Vaughan adopted a Zoning By-law in 2010 which recommended the following four policy areas:

- Higher Order Transit Hubs
- Local Centers
- Primary Centres and Primary Intensification Corridors
- Other Areas

The parking standards recommended for each of the policy areas is primarily dependent on proximity and frequency of transit services. Areas with lower transit availability had minimum parking requirements and areas with higher transit availability had maximum parking requirements.

Recently, the city of Vaughan passed a new Zoning By-law on October 20, 2021 which is partially deemed in force. The new by-law has defined the following 4 parking zones.

Zone 1: Vaughan Metropolitan Centre VMC

Appendix "B" to Report PED23156
Page 70 of 99

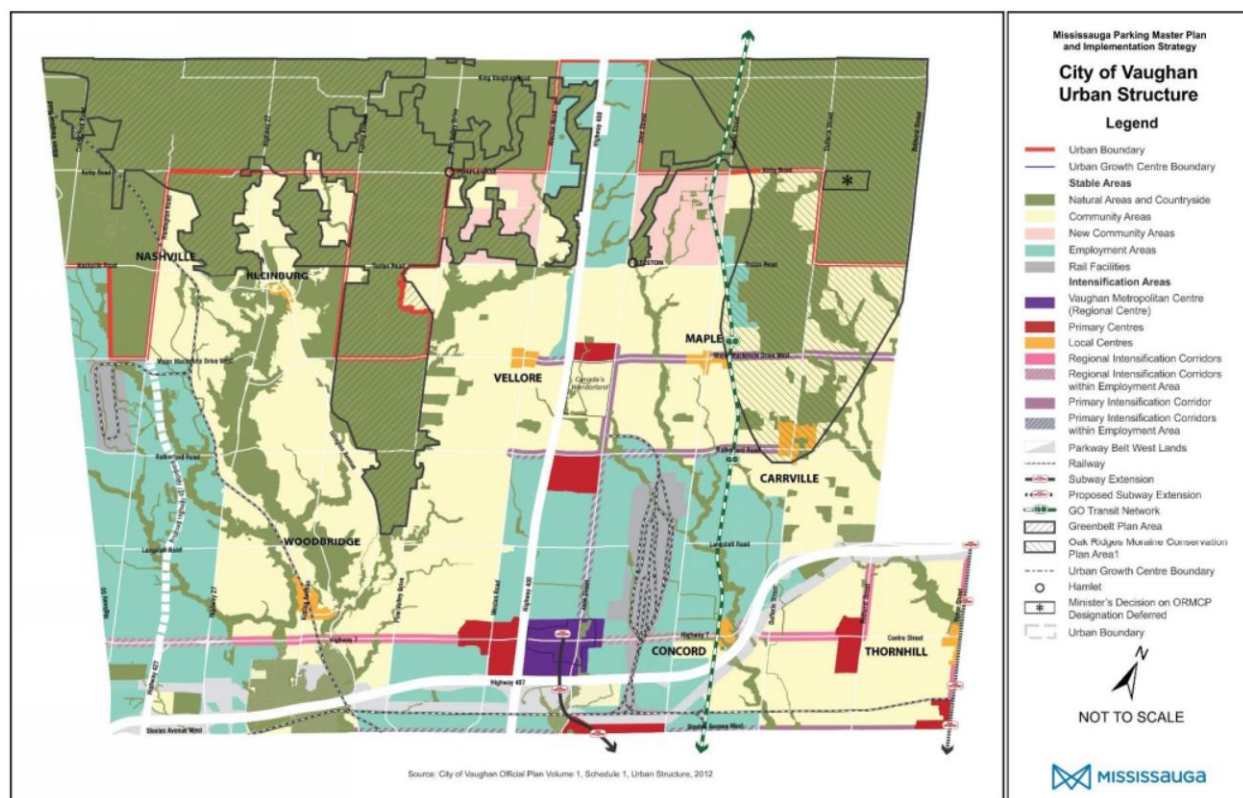
Zone 2: Mid-Rise Mixed-Use MMU, High-Rise Mixed-Use HMU, General Mixed-Use GMU, Community Commercial Mixed-Use CMU, Employment Commercial Mixed-Use EMU

Zone 3: Low-Rise Mixed-Use LMU, Main Street Mixed-Use – Kleinburg KMS, Main Street Mixed-Use – Maple MMS, Main Street Mixed-Use – Woodbridge WMS

Zone 4: All other areas

The parking zones of Vaughan city are shown in Figure 3.

Figure 3: Vaughan Parking Zones Map



Appendix "B" to Report PED23156
Page 71 of 99

5.0 City of Ottawa

The City of Ottawa is developing a new comprehensive Zoning By-law for approval by Council in 2025. The by-law will implement the policies and directions in the new Official Plan approved by the Minister of Municipal Affairs and Housing on November 04, 2022. The new Zoning By-law will replace the current Zoning By-law (By-law 2008-250). The Zoning By-law 2008-250 recommends the following six minimum parking policy areas:

- **Area X:** Policy area X includes the inner urban areas of the city. This policy area has the lowest minimum parking requirement. In most cases, the rates defined for this policy area (Specially for residential uses) are equal to the rates defined for Area Y.
- **Area Y:** Policy area Y includes the inner urban areas of the city along the main streets. This policy area has the lowest minimum parking requirement. In most cases, the rates defined for this policy area (Specially for residential uses) are equal to the rates defined for Area X.
- **Area Z:** Policy area Z includes the areas near major LRT stations; This area has no minimum parking requirement.
- **Area B:** Policy area B includes the outer urban/inner suburban of the city. This policy area has the second lowest minimum parking requirements.
- **Area C:** Policy area C includes the suburban areas of the city. This area has the highest minimum parking requirements for residential uses. For other uses the minimum parking requirements are as same as Area D.
- **Area D:** Policy area D includes the rural areas of Ottawa City. This policy area has the second highest minimum parking requirement for residential uses. For other uses the minimum parking requirements are as same as Area C.

The policy areas are shown in **Error! Reference source not found..** There are some exceptions to the minimum parking requirement for policy areas B, C and D. Some of the main exceptions are as follow:

- In the case of a building containing residential uses, no off-street motor vehicle parking is required to be provided for the first twelve dwelling units.
- Where a residential use is located within a building of four or fewer storeys, no off-street motor vehicle parking is required to be provided.
- Where a residential use building has an active entrance located within 600 meters of a rapid-transit station or a walking distance of 400 meters or less the minimum parking required for the residential use is calculated using the rates for Area X.

Ottawa Zoning By-law 2008-250 defines maximum parking requirement for some lands uses including Apartment Dwelling, Mid Rise, Apartment Dwelling, High Rise, and Apartment Dwelling, and Low Rise. The maximum parking limits apply only on the lots which are located within 600 meters of rapid transit stations.



BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix D

Residential Parking Standards: Analysis and Recommendations



Appendix D – Residential Parking Standards: Analysis and Recommendations

Date: July 31, 2023 **Project No.:** 300055923.000
Project Name: Hamilton Parking Standards Review
Client Name: City of Hamilton
To: City of Hamilton
From: R.J. Burnside & Associates Ltd.

1.0 Introduction

The City of Hamilton recognizes the significance of managing parking supply as a vital component of sustainable urban development. The City's Zoning by-laws, which govern the supply of parking for all types of land uses, play a crucial role in achieving the City's vision for its transportation system. The purpose of this study is to conduct a comprehensive review of the parking requirements within the City of Hamilton for both the residential and non-residential land uses.

The City's Transportation Master Plan, a key guiding document, emphasizes the promotion of sustainable forms of development and places a strong emphasis on travel demand management. In line with these objectives and other objectives of the City, this study aims to develop updated parking standards that align with the City's vision and goals.

2.0 Overview

The main purpose of this memorandum is to document a comprehensive jurisdictional scan and parking data collection within the City of Hamilton and present a draft set of proposed parking standards focusing on the residential land use types.

The overarching aim is to evaluate the effectiveness and performance of the existing residential parking standards of Zoning By-law No. 05-200. The review and recommendations presented in this memorandum builds on the parking policy framework that was developed and documented in the draft report: "Developing the Parking Standards Framework".

Appendix "B" to Report PED23156
Page 74 of 99

3.0 Jurisdictional Scan

A jurisdictional scan was undertaken to understand parking requirements in other municipalities. The municipalities that were chosen for this jurisdictional scan include the City of Toronto, City of Ottawa, City of Mississauga, City of Guelph, City of Burlington, City of Vaughan, and the City of Kitchener. These jurisdictions were chosen because they either are:

- Similar size to the City of Hamilton,
- Implement a geography-based system for parking standards since many of these municipalities contain a range of land uses that could be considered between urban to rural, and/or
- Have updated their parking requirements recently suggesting these municipalities have also incorporated best practices.

Parking maximums marked as "Not applicable" mean that the jurisdiction did not apply a parking maximum to the dwelling type. Parking maximums marked as "Not implemented" mean that the jurisdiction does not implement parking maximums as a tool in their Zoning By-law. Parking standards marked as "Undefined" mean that the jurisdiction does not have that particular dwelling definition or similar in their Zoning by-law.

For simplicity, parking standards are provided for the "Downtown" which represents the jurisdiction's greatest growth area or highest density urban centre whereas "Other" represents that jurisdiction's most rural area.

3.1 Single Detached Dwelling

3.1.1 Overview

Zoning By-law 05-200 defines a single-detached as a separate dwelling containing one dwelling unit.

3.1.2 Comparison of Parking Standards

Table 1: Parking Minimums for Single-Detached Dwelling

Municipality	Parking Standards
City of Toronto	0 spaces per unit
City of Ottawa	1.0 spaces per unit (All)
City of Mississauga	2.0 spaces per unit (All)
City of Guelph	1.0 spaces per dwelling unit (Downtown, Intensification, Other)
City of Burlington	2.0 spaces per unit (Downtown, Other)
City of Vaughan	0 spaces per unit (Downtown) 2.0 spaces per unit (Other)

Appendix "B" to Report PED23156
Page 75 of 99

Municipality	Parking Standards
City of Kitchener	0.0 spaces per unit (Downtown) 1.0 spaces per unit (Other)

Table 2: Parking Maximums for a Single-Detached Dwelling

Municipality	Parking Standards
City of Toronto	Not applicable
City of Mississauga	Not implemented
City of Guelph	Not applicable
City of Burlington	Not applicable
City of Vaughan	Not applicable
City of Kitchener	Not applicable

3.2 Semi-Detached

3.2.1 Overview

Zoning By-law 05-200 defines a semi-detached dwelling as a building divided vertically into two dwelling units, by a common wall which prevents internal access between semi-detached dwelling units and extends from the base of the foundation to the roof line and for a horizontal distance of not less than 35% of the horizontal depth of the building. Each semi-detached dwelling unit shall be designed to be located on a separate lot having access to and frontage on a street.

3.2.2 Comparison of Parking Standards

Table 3: Parking Minimum for a Semi-Detached Dwelling

Municipality	Parking Standards
City of Toronto	0 spaces per unit (All)
City of Ottawa	1.0 spaces per unit (All)
City of Mississauga	2.0 spaces per unit (All Precincts)
City of Guelph	1.0 spaces per dwelling unit (Downtown, Intensification, Other)
City of Burlington	2.0 spaces per unit (Downtown, Other)
City of Vaughan	0 spaces per unit (Downtown) 2.0 spaces per unit (Other)
City of Kitchener	0.0 spaces per unit (Downtown) 1.0 spaces per unit (Other)

Table 4: Parking Maximum for a Semi-Detached Dwelling

Municipality	Parking Standards
City of Toronto	Not applicable
City of Ottawa	Not applicable

Appendix "B" to Report PED23156
Page 76 of 99

Municipality	Parking Standards
City of Mississauga	Not implemented
City of Guelph	Not applicable
City of Burlington	Not applicable
City of Vaughan	Not applicable
City of Kitchener	Not applicable

3.3 Street Townhouse Dwelling

3.3.1 Overview

Zoning By-law 05-200 defines a street townhouse dwelling shall mean a building divided vertically into three or more dwelling units, by common walls which prevent internal access between units and extend from the base of the foundation to the roof line and for a horizontal distance of not less than 35 percent of the horizontal depth of the building but shall not include a maisonette. Each townhouse shall be designed to be on a separate lot having access to and frontage on a street, laneway, or common condominium driveway.

3.3.2 Comparison of Parking Standards

Table 5: Parking Minimums for a Street Townhouse Dwelling

Municipality	Parking Standards
City of Toronto	0 spaces per unit (All)
City of Ottawa (Townhouse)	0.75 spaces per unit (Downtown) 1.0 spaces per unit (Other)
City of Mississauga	2.0 spaces per unit (All)
City of Guelph	1.0 spaces per dwelling unit (Downtown, Intensification, Other)
City of Burlington	2.0 spaces per unit (Downtown, Other)
City of Vaughan	0 spaces per unit (Downtown) 2.0 spaces per unit (Other)
City of Kitchener	0.0 spaces per unit (Downtown) 1.0 spaces per unit (Other)

Table 6: Parking Maximums for a Street Townhouse Dwelling

Municipality	Parking Standards
City of Toronto	Not applicable
City of Ottawa	Not applicable
City of Mississauga	Not implemented
City of Guelph	Not applicable
City of Burlington	Not applicable
City of Vaughan	Not applicable
City of Kitchener	Not applicable

**Appendix "B" to Report PED23156
Page 77 of 99**

3.4 Multiple Dwelling (Multi-Dwelling)

3.4.1 Overview

Zoning By-law 05-200 defines a multiple dwelling as a building or part thereof containing three or more dwelling units but shall not include a street townhouse dwelling or semi-detached dwelling.

3.4.2 Comparison of Parking Standards

Table 7: Parking Minimums for a Multi-Dwelling

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> 0 space per dwelling unit (All) For visitor parking spaces: <ul style="list-style-type: none"> 2.0 plus 0.01 per dwelling unit (Downtown) 2.0 plus 0.05 per dwelling unit (Other)
City of Ottawa	For low-rise (<4 storeys) <ul style="list-style-type: none"> 0.5 spaces per unit (Downtown) 1.2 spaces per unit (>4 storeys), Other For high-rise (>4 storeys) <ul style="list-style-type: none"> 0.5 spaces per unit (Downtown) 1.2 spaces per unit (>4 storeys), Other Visitor parking spaces include: <ul style="list-style-type: none"> 0.1 – 0.2 spaces per unit
City of Mississauga	<ul style="list-style-type: none"> 0.8 resident spaces per unit plus 0.25 visitor spaces per unit (All)
City of Guelph	First 20-units: 1.5 spaces per unit (Intensification, Other) In excess of 20-units: 1.25 spaces per unit (Intensification, Other) For visitor parking spaces: <ul style="list-style-type: none"> 20% of required parking spaces shall be used for visitor parking (Downtown, Other)
City of Burlington	<ul style="list-style-type: none"> 1.25 spaces per unit inclusive of visitor parking

Appendix "B" to Report PED23156
Page 78 of 99

Municipality	Parking Standards
	<ul style="list-style-type: none"> • 1 space per 1-bedroom unit • 1.25 space per 2-bedroom unit • 1.5 space per 3+ bedroom unit • 0.25 visitor spaces • 1 additional space per 75 units for the use of maintenance • vehicles servicing the site.
City of Vaughan	<ul style="list-style-type: none"> • 0.4 spaces per unit plus 0.15 spaces per unit (Downtown) • 1 space per unit plus 0.2 spaces per unit (other)
City of Kitchener	<ul style="list-style-type: none"> • 0 spaces per unit (Downtown) • 1.0 space per unit (Other) • Visitor parking spaces for 5 – 80 dwelling units: 0.15 spaces per unit • Visitor parking spaces for 80+ dwelling units: 0.1 spaces per unit

Table 8: Parking Maximums for a Multi-Dwelling Dwelling

Municipality	Parking Standards
City of Toronto	<p>For Downtown:</p> <ul style="list-style-type: none"> • 0.3 space per unit for bachelor unit • 0.5 space per unit for a 1-bedroom • 0.8 space per unit for a 2-bedroom • 1.0 space per unit for a 3-bedroom <p>For Other:</p> <ul style="list-style-type: none"> • 0.8 space per unit for bachelor unit • 0.9 space per unit for a 1-bedroom • 1.0 space per unit for a 2-bedroom • 1.2 space per unit for a 3-bedroom <p>For visitor parking:</p> <ul style="list-style-type: none"> • 1.0 per dwelling unit for the first five dwelling units; and 0.1 per dwelling unit for the sixth and subsequent dwelling units.
City of Ottawa	<ul style="list-style-type: none"> • 1.5 spaces per dwelling unit (combined total of resident and visitor parking) • 1.75 per dwelling unit (combined total of resident and visitor parking)

Appendix "B" to Report PED23156
Page 79 of 99

Municipality	Parking Standards
City of Mississauga	<ul style="list-style-type: none"> • Not implemented
City of Guelph	<ul style="list-style-type: none"> • 1.5 spaces per unit plus 0.25 spaces per unit (Other)
City of Burlington	<ul style="list-style-type: none"> • Not implemented
City of Vaughan	<ul style="list-style-type: none"> • 1.5 spaces per unit (Downtown) • N/A (Other)
City of Kitchener	<ul style="list-style-type: none"> • 1 per dwelling unit including visitor (Downtown) • 1.4 per dwelling unit including visitor (Other)

3.5 Multiple Dwelling Townhouse (Stacked or Back-to-Back) Dwelling

3.5.1 Overview

Zoning By-law 05-200 does not contain definitions for multiple dwelling townhouses which can be stacked or back-to-back.

3.5.2 Comparison of Parking Standards

Table 9: Parking Minimums for a Multi-Dwelling Townhouse Dwelling

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> • Undefined
City of Ottawa (Townhouse)	<ul style="list-style-type: none"> • 0.75 spaces per unit (Downtown) • 1.0 spaces per unit (Other) • 0.1 – 0.2 visitor spaces per unit
City of Mississauga	<ul style="list-style-type: none"> • 1.0 spaces per unit (Downtown) • 1.5 spaces per unit (Other) • 0.25 visitor spaces per unit (All)
City of Guelph	<ul style="list-style-type: none"> • 1 space per dwelling unit, plus 0.2 visitor spaces per dwelling unit (Intensification) • 1 space per dwelling unit, plus 0.2 visitor spaces per dwelling unit (Other)
City of Burlington	<p>For stacked:</p> <ul style="list-style-type: none"> • 1 space per unit, 0.25 visitor spaces per unit <p>For back-to-back:</p>

Appendix "B" to Report PED23156
Page 80 of 99

Municipality	Parking Standards
	<ul style="list-style-type: none"> 2 space per unit, 0.25 visitor spaces per unit
City of Vaughan	<ul style="list-style-type: none"> 0.6 space per unit, 0.15 visitor spaces per unit (Downtown) 1 space per unit, 0.20 visitor spaces per unit (Other)
City of Kitchener (Cluster Townhouse)	<ul style="list-style-type: none"> 0 spaces per unit (Downtown) 1.0 space per unit (Other) Visitor parking spaces for 5 – 80 dwelling units: 0.15 spaces per unit Visitor parking spaces for 80+ dwelling units: 0.1 spaces per unit

Table 10: Parking Maximums for a Multi-Dwelling Townhouse

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> Not applicable
City of Ottawa (Townhouse)	<ul style="list-style-type: none"> Not applicable
City of Mississauga	<ul style="list-style-type: none"> Not implemented
City of Guelph	<ul style="list-style-type: none"> 1.5 spaces per dwelling unit, plus 0.5 visitor spaces per dwelling unit (Other)
City of Burlington	<ul style="list-style-type: none"> Not implemented
City of Vaughan	<ul style="list-style-type: none"> 1.5 spaces per dwelling unit (Downtown) 2 spaces per dwelling unit (Less Urban) Not applicable per dwelling unit (Other)
City of Kitchener (Cluster Townhouse)	<ul style="list-style-type: none"> 1 per dwelling unit including visitor (Downtown) 1.4 per dwelling unit including visitor (Other)

3.6 Duplex, Triplex, Fourplex Dwelling

3.6.1 Overview

Zoning By-law 05-200 defines a duplex as a building containing two dwelling units, but shall not include a semi-detached dwelling. The City's Zoning By-law currently does not contain definitions for a triplex or fourplex dwelling.

The following is a list of triplex definitions:

Appendix "B" to Report PED23156 Page 81 of 99

- The City of Toronto's Zoning By-law 569-2013 defines a triplex as a building that has three dwelling units, with at least one dwelling unit entirely or partially above another. A detached house or semi-detached house that has one or more secondary suites is not a triplex.
- The City of Mississauga's Zoning By-law 0225-2007 defines a triplex as a building that is divided horizontally and/or vertically into three separate dwelling units, each with an entrance that is either independent or through a common vestibule.
- The City of Burlington's Zoning By-Law 2020 defines a triplex as a building containing three dwelling units.

The following is a list of fourplex definitions:

- The City of Toronto's Zoning By-law 569-2013 defines a fourplex as a building that has four dwelling units, with at least one dwelling unit entirely or partially above another. A detached house, semi-detached house or townhouse that has one or more secondary suites is not a fourplex.
- The City of Burlington's Zoning By-Law 2020 defines a fourplex as a building containing four dwelling units.

3.6.2 Comparison of Parking Standards

Table 11: Parking Minimums for a Duplex, Triplex, or Fourplex

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> • Duplex, Triplex, Fourplex: 0 spaces per unit
City of Ottawa	<ul style="list-style-type: none"> • Duplex: 1.0 space per unit • Three-unit Dwelling: 0.5 spaces per unit (Downtown) • Three-Unit Dwelling: 1.2 spaces per unit (Other)
City of Mississauga	<ul style="list-style-type: none"> • Duplex, Triplex: 1.25 spaces per unit (All)
City of Guelph	<ul style="list-style-type: none"> • Duplex: 1.0 space per dwelling unit (Downtown, Intensification, Other)
City of Burlington	<ul style="list-style-type: none"> • Duplex: 2.0 spaces per unit • Triplex: 1.0 space per unit plus 0.33 visitor spaces per unit • Fourplex: 2.0 spaces per unit plus 0.25 visitor spaces per unit • Street Fourplex: 2.0 spaces per unit
City of Vaughan	<ul style="list-style-type: none"> • Undefined
City of Kitchener	<ul style="list-style-type: none"> • Undefined

Appendix "B" to Report PED23156
Page 82 of 99

Table 12: Parking Maximums for a Duplex, Triplex, or Fourplex

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> • Not implemented
City of Ottawa	<ul style="list-style-type: none"> • Not implemented
City of Mississauga	<ul style="list-style-type: none"> • Not applicable
City of Guelph	<ul style="list-style-type: none"> • Not implemented
City of Burlington	<ul style="list-style-type: none"> • Not applicable
City of Vaughan	<ul style="list-style-type: none"> • Undefined
City of Kitchener	<ul style="list-style-type: none"> • Undefined

3.7 Dwelling Unit in Mixed-Use Building

3.7.1 Overview

Zoning By-law 05-200 defines a dwelling unit in a mixed-use building as a room or suite of rooms used or intended to be used by one or more persons living together as one household, in which cooking and sanitary facilities are provided for the exclusive use of the household, and to which an independent entrance is provided from outside the building or from a common interior hallway, vestibule, or stairway and shall be located in the same building as a commercial use permitted in the zone.

3.7.2 Comparison of Parking Standards

Table 13: Parking Minimums in a Dwelling Unit in a Mixed-Unit Building

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none"> • 0 space per dwelling unit (All) For visitor parking spaces: <ul style="list-style-type: none"> • 2.0 plus 0.01 per dwelling unit (Downtown) • 2.0 plus 0.05 per dwelling unit (Other)
City of Ottawa	<ul style="list-style-type: none"> • 0.5 spaces per unit (Downtown) • 1.0 spaces per unit (Other) For visitor parking spaces: <ul style="list-style-type: none"> • 0.1 visitor spaces per unit (Downtown) • 0.2 visitor spaces per unit (Other)
City of Mississauga	<ul style="list-style-type: none"> • 1.0 spaces per unit (All)
City of Guelph	<ul style="list-style-type: none"> • In addition to non-residential rate, 1.0 space per dwelling unit (Downtown)

Appendix "B" to Report PED23156
Page 83 of 99

	<ul style="list-style-type: none"> • In addition to non-residential rate, 1.0 space per dwelling unit plus 0.1 visitor spaces per dwelling unit (Intensification) • In addition to non-residential rate, 1.0 space per dwelling unit plus 0.15 visitor spaces per dwelling unit (Other)
City of Burlington	<ul style="list-style-type: none"> • 1.25 spaces per unit
City of Vaughan	<ul style="list-style-type: none"> • Undefined
City of Kitchener	<ul style="list-style-type: none"> • Undefined

Table 14: Parking Maximums for a Dwelling Unit in a Mixed-Use Building

Municipality	Parking Standards
City of Toronto	<p>For Downtown:</p> <ul style="list-style-type: none"> • 0.3 space per unit for bachelor unit • 0.5 space per unit for a 1-bedroom • 0.8 space per unit for a 2-bedroom • 1.0 space per unit for a 3-bedroom <p>For Other:</p> <ul style="list-style-type: none"> • 0.8 space per unit for bachelor unit • 0.9 space per unit for a 1-bedroom • 1.0 space per unit for a 2-bedroom • 1.2 space per unit for a 3-bedroom <p>For visitor parking:</p> <ul style="list-style-type: none"> • 1.0 per dwelling unit for the first five dwelling units; and 0.1 per dwelling unit for the sixth and subsequent dwelling units.
City of Ottawa	<ul style="list-style-type: none"> • 1.5 per unit (combined total of resident and visitor parking) (Downtown) • 1.75 per unit (combined total of resident and visitor parking) (Other)
City of Mississauga	<ul style="list-style-type: none"> • Not applicable
City of Guelph	<ul style="list-style-type: none"> • In addition to the non-residential parking rate, 1.5 spaces per dwelling unit plus 0.25 visitor spaces per dwelling unit (Intensification)
City of Burlington	<ul style="list-style-type: none"> • Not applicable
City of Vaughan	<ul style="list-style-type: none"> • Undefined
City of Kitchener	<ul style="list-style-type: none"> • Undefined

Appendix "B" to Report PED23156
Page 84 of 99

3.8 Additional Dwelling Unit (ADU)

3.8.1 Overview

Zoning By-law 05-200 defines an additional dwelling unit as a separate and self-contained Dwelling Unit that is accessory to and located within the principal dwelling and shall not include a Farm Labour Residence.

Zoning By-law 05-200 defines an additional dwelling unit – detached as separate and self-contained detached Dwelling Unit that is accessory to and located on the same lot as the principal dwelling but shall not include a Farm Labour Residence.

3.8.2 Comparison of Parking Standards

Table 15: Parking Minimums for Additional Dwelling Units (ADUs)

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none">• 0 spaces per unit
City of Ottawa	<ul style="list-style-type: none">• Garden Suite: 0 spaces per unit
City of Mississauga	<ul style="list-style-type: none">• Undefined
City of Guelph	<ul style="list-style-type: none">• 1 space per dwelling unit (Intensification, Other)
City of Burlington	<ul style="list-style-type: none">• 1 space per dwelling unit
City of Vaughan	<ul style="list-style-type: none">• Undefined
City of Kitchener	<ul style="list-style-type: none">• 0 per dwelling unit (Downtown)• 1 per dwelling unit (Other)

Table 16: Parking Maximum for Additional Dwelling Units (ADUs)

Municipality	Parking Standards
City of Toronto	<ul style="list-style-type: none">• Not implemented
City of Ottawa	<ul style="list-style-type: none">• Not implemented
City of Mississauga	<ul style="list-style-type: none">• Undefined
City of Guelph	<ul style="list-style-type: none">• Not implemented
City of Burlington	<ul style="list-style-type: none">• Not applicable
City of Vaughan	<ul style="list-style-type: none">• Undefined
City of Kitchener	<ul style="list-style-type: none">• Not implemented

4.0 Data Collection

4.1 Overview

To better understand the existing parking demand and utilization in different areas in the City, a spot survey approach was adopted to determine parking supply and peak parking occupancy. The goal of this data collection survey was to capture the peak utilization of both on-site parking facilities and the peak utilization of adjacent on-street parking spaces when on-site parking facilities were limited such as in the downtown areas.

4.2 Survey Methodology

The City provided a preliminary list of sites to be surveyed. To confirm the accessibility of the parking facilities, Burnside staff visited all properties on the list where the parking lots (surface or underground) are gated and are not publicly accessible and informed the property management office of the upcoming parking survey. With a few exceptions, most of the management offices agreed to participate in the survey and confirmed that the on-site staff would provide access to the site as well as supervise the Burnside field staff during the survey. The site visits also confirmed the supply of on-street parking spaces at multiple sites.

All the sites that are publicly accessible or agree to participate in the survey are summarized in Table 17 below.

Table 17: Parking Survey Sites

Address	Land Use	Residential Supply	Visitor Supply	On-Street Supply
3200 Highway 56	Condominium	77	39	N/A
135 James Street South	Condominium	150	13	19
512 James Street North	Condominium	N/A	N/A	11
290 Barton Street West	Condominium	39	N/A	12
50 Murray Street West	Condominium	N/A	6	N/A
1670 Garth Street	Condominium	210	N/A	N/A
35 Southshore Crescent	Condominium	43	N/A	17
269 Mohawk Road East	Condominium	10	N/A	25
3 Bruce Street	Condominium	N/A	N/A	25
261 Mohawk Road East	Condominium	8	N/A	16

Appendix "B" to Report PED23156
Page 86 of 99

Address	Land Use	Residential Supply	Visitor Supply	On-Street Supply
1430 Upper Wellington	Senior Home	78	N/A	30
45 Lockton Crescent	Senior Home	52	18	N/A
50 Hatt Street	Senior Home	130	N/A	34
1248 Mohawk Road	Senior Home	98	N/A	N/A
8 Shoreview Place	Senior Home	97	N/A	N/A
83 Young Street	Townhome	N/A	N/A	36
3 Ecker Lane	Townhome	50	N/A	2
1162 West 5th Street	Townhome	30	N/A	3
61 Gibson Avenue	Townhome	N/A	N/A	9
202 Bay Street North	Townhome	N/A	N/A	N/A
575 Woodward Avenue	Townhome	119	N/A	N/A
186 Wilson Street	Townhome	6	N/A	14
325 Mary Street	Townhome	5	N/A	N/A
221 Park Street South	Townhome	N/A	N/A	N/A
191 Queen Street South	Townhome	N/A	N/A	N/A
192 Hess Street South	Townhome	N/A	N/A	N/A
30 Studholme Road	Townhome	183	N/A	1
192 Hess Street North	Townhome	N/A	N/A	N/A
184-186 Markland St	Semi-Detached	N/A	N/A	N/A
133 Markland	Semi-Detached	N/A	N/A	18
94 West Ave North	Semi-Detached	N/A	N/A	N/A
101 Elgin Street	Detached	N/A	10	N/A
112 Wellington St North	Detached	N/A	N/A	N/A
19 Grant Avenue	Detached	N/A	N/A	N/A
406 Crockett Street	Detached	4	N/A	N/A
934 Concession Street	Detached	4	N/A	N/A
25 Viewpoint Avenue	Detached	3	N/A	N/A
162 Charlton Ave West	Detached	N/A	38	58
104 Wellington St North	Detached	N/A	N/A	28

Appendix "B" to Report PED23156
Page 87 of 99

Based on the Parking Generation Manual, 5th Edition, published by the Institute of Transportation Engineers ("ITE"), the parking demand peaks overnight for residential land use types. The survey was conducted between 9 PM and 12 AM on weekdays and between 5 AM to 8 AM on weekends to capture the highest demand.

Weekday data was collected for all sites listed in Table 17, and weekend data was collected for the following site for verification purposes:

- Condominiums:
 - 34 James Street South
 - 50 Murray Street West
 - 3200 Highway 56
- Senior Home:
 - 1430 Upper Wellington
- Townhome:
 - 83 Young Street
- Detached Home:
 - 101 Elgin Street

Multiple site surveyors visited the sites in December 2022. They used an online form via their mobile phones to input the results. The online form required the following input:

1. Address & Name of Establishment
2. Closest Intersection
3. Date and Time of Visit
4. Weather Conditions
5. Total # of Spaces (Separated by residential, visitor, shared, and accessible and if any spaces were impacted by snow or other objects)
6. Total Parking Demand (Separated by residential, visitor, shared, and accessible)
7. If transit is seen close by

4.3 Spot Survey Limitations

The spot surveys were intended to generally understand the performance of the existing parking standards across the City not to be used to define exact parking requirements or parking rates. This is because the data collection had a few limitations:

- Although the late evening time is the best practice for capturing peak residential demand, it may not capture the parking demand of the entire dwelling because residents may have night shifts or are just away.
- For multiple dwelling buildings, there may or may not be a pricing in effect.

- For sites with limited on-site parking such as several low-density housing types in the downtown which had no on-site parking available, street parking utilization was captured. However not all those parkers may be residents of those sites.

4.4 Spot Survey Results

The results of the spot surveys are shown in Table 18.

Appendix "B" to Report PED23156
Page 89 of 99

Table 18: Spot Survey Results

Address	Land Use	Residential Supply	Visitor Supply	On-Street Supply	Parking Lot Utilization (Resident)	Parking Lot Utilization (Visitor)	On-Street Utilization
3200 Highway 56	Condominium	77	39	-	42%	10%	-
135 James Street South	Condominium	150	13	19	42%	-	-
512 James Street North	Condominium	-	-	11	-	-	89%
290 Barton Street West	Condominium	39	-	12	74%	-	-
50 Murray Street West	Condominium	-	6	-	-	-	77%
1670 Garth Street	Condominium	210	-	-	70%	67%	-
35 Southshore Crescent	Condominium	43	-	17	28%	-	-
269 Mohawk Road East	Condominium	10	-	25	30%	-	-
3 Bruce Street	Condominium	-	-	25	-	-	100%
261 Mohawk Road East	Condominium	8	-	16	38%	-	-
1430 Upper Wellington	Senior Home	78	-	30	-	-	53%
45 Lockton Crescent	Senior Home	52	18	-	94%	-	-
50 Hatt Street	Senior Home	130	-	34	-	-	100%
1248 Mohawk Road	Senior Home	98	-	-	25%	-	-
8 Shoreview Place	Senior Home	97	-	-	75%	-	-
83 Young Street	Townhome	-	-	36	-	-	67%
3 Ecker Lane	Townhome	50	-	2	46%	23%	-
1162 West 5th Street	Townhome	30	-	3	53%	15%	95%
61 Gibson Avenue	Townhome	-	-	9	-	-	100%
202 Bay Street North	Townhome	-	-	-	-	-	92%
575 Woodward Avenue	Townhome	119	-	-	55%	100%	-
186 Wilson Street	Townhome	6	-	14	67%	-	-
325 Mary Street	Townhome	5	-	-	60%	-	41%
221 Park Street South	Townhome	-	-	-	-	-	76%

Appendix "B" to Report PED23156
Page 90 of 99

Address	Land Use	Residential Supply	Visitor Supply	On-Street Supply	Parking Lot Utilization (Resident)	Parking Lot Utilization (Visitor)	On-Street Utilization
191 Queen Street South	Townhome	-	-	-	-	-	32%
192 Hess Street South	Townhome	-	-	-	-	-	38%
30 Studholme Road	Townhome	183	-	1	48%	29%	21%
192 Hess Street North	Townhome	-	-	-	-	-	82%
184-186 Markland St	Semi Detached	-	-	-	39%	-	-
133 Markland	Semi Detached	-	-	18	28%	-	-
94 West Ave North	Semi Detached	-	-	-	22%	-	-
101 Elgin Street	Detached	-	10	-	33%	-	-
112 Wellington St North	Detached	-	-	-	-	-	0%
19 Grant Avenue	Detached	-	-	-	-	-	100%
406 Crockett Street	Detached	4	-	-	-	-	100%
934 Concession Street	Detached	4	-	-	-	-	89%
25 Viewpoint Avenue	Detached	3	-	-	-	-	100%
162 Charlton Ave West	Detached	-	38	58	14%	-	-
104 Wellington St North	Detached	-	-	28	94%	-	-

Appendix "B" to Report PED23156
Page 91 of 99

The average utilization for different land uses is summarized in Table 19.

Table 19: Parking Utilization by Land Use

Land Use	Resident	Visitor	On-Street
Condominium	46%	38%	89%
Senior Home	50%	N/A	76%
Townhome	55%	42%	64%
Semi-Detached	29%	N/A	N/A
Detached	47%	N/A	72%

Based on the survey results, the overall parking supply for residents and visitors is sufficient, with exceptions at specific sites where an on-site parking facility is not available, and the on-street parking utilization is high.

5.0 Review of Past and Current Development Applications

City staff provided a comprehensive database of past and current development applications which had the following information:

- Approval status,
- Type of housing,
- Ward number,
- Parking Standards Geography Zone,
- Dwelling type,
- Number of dwelling units,
- Spaces required per By-law,
- Spaces per dwelling unit per By-law,
- Spaces provided by developer,
- Spaces per dwelling unit provided by developer, and
- If a variance was required.

A review of the past and current development applications provides insight into what developers are inclined to offer. Generally, developers must balance multiple objectives when proposing the number of parking spaces such as cost reduction and selling in the market conditions at the time. Approved development applications that required a variance due to reduced parking requirements provide insights into what City staff find acceptable based on the context of the area.

6.0 Proposed Residential Parking Standards

6.1 Parking Standards Geographic Areas

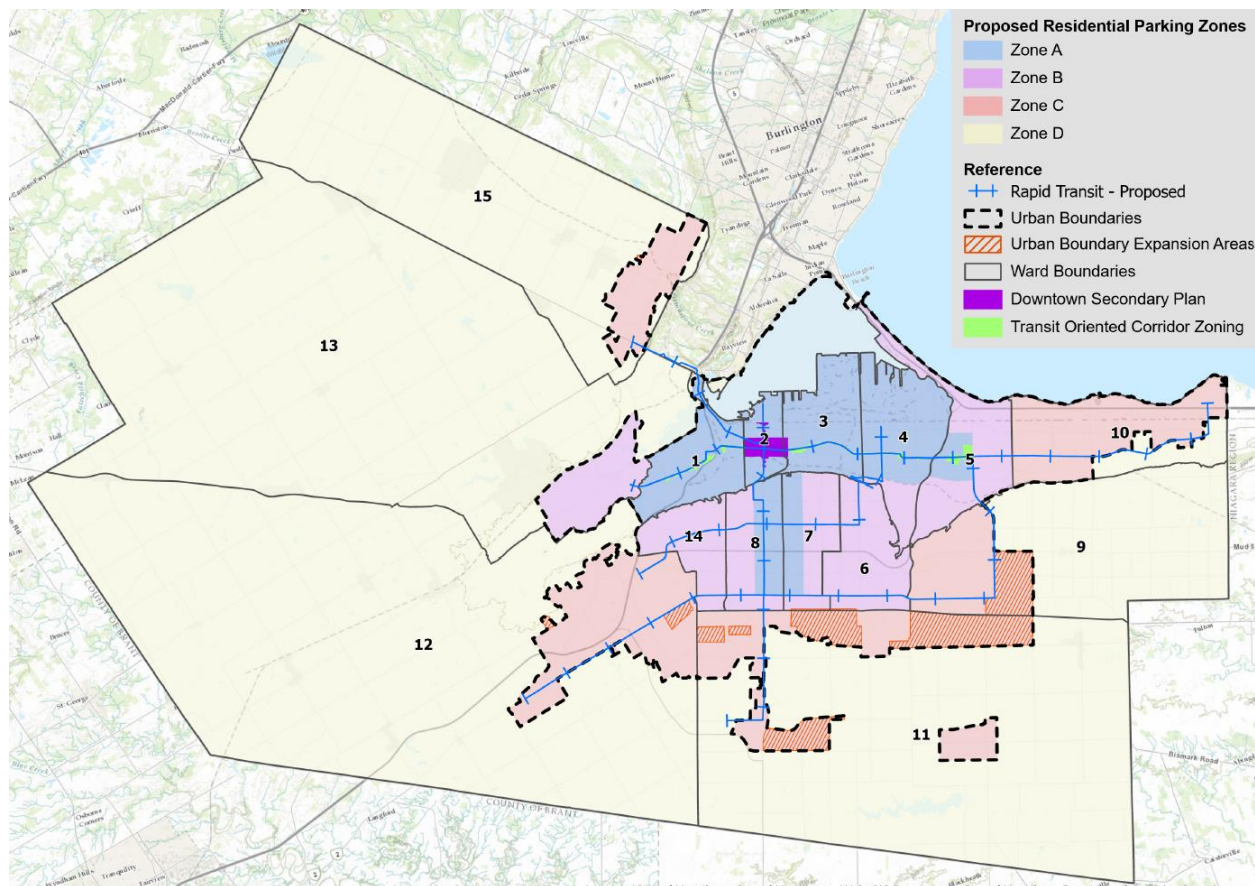
The draft geographic areas are described in Table 20.

Table 20: Description of Zones

Zone	Description
Zone A	This area expands on the Downtown Secondary Plan area in all directions representing the City's most urbanized areas. Some areas also follow parts of the proposed frequent transit corridors (e.g., A-Line and B-Line).
Zone B	This area generally includes the rest of the former City of Hamilton and Dundas. Zone B includes a mix of urban and sub-urban areas.
Zone C	This area includes the area outside of Zone B, within the existing Urban Boundary as defined by the Urban Hamilton Official Plan.
Zone D	This area includes the remaining areas of the City of Hamilton and are generally the least developed and most rural.

These zones are illustrated in Figure 1.

Figure 1: Parking Standards Zones



6.2 Draft Proposed Parking Requirements

6.2.1 Considerations

The draft proposed parking rates are based on the considerations outlined below.

Existing Parking Standards

Existing parking standards provide the basis for setting new standards. Historically, parking requirements have undergone gradual refinement to align with the evolving needs of the City. This parking standards update primarily aims to incorporate best practices and align them more closely with the City's present strategic vision and goals.

Jurisdictional Scan

Many other large jurisdictions in Ontario have recently undergone an update to their parking standards. Gaining insight into the requirements established in their Zoning By-laws offers valuable understanding into best practices.

Data Collection

The spot survey data collection provides an understanding of how the current parking requirements are performing. Based on the results, many dwelling types are currently providing sufficient parking. In the downtown areas, the empirical data suggests that on-street parking spaces are currently close to capacity.

Parking Standards Framework

The parking requirements should adhere to the guiding principles that were developed as part of the parking standards framework that include:

- Efficient land use,
- Cost reduction and affordability,
- Encouraging sustainable modes of transportation,
- Flexibility and adaptability, and
- Streamlining development processes.

Past and Current Development Applications

Approved development applications that required a variance due to reduced parking requirements provide insights into what City staff find acceptable based on the context of the area. The resulting parking rates (spaces per unit) should be considered within the context of the parking standards zone.

6.2.2 Recommended New Definitions

To encourage small-scale intensification opportunities in low density residential areas, the Urban Hamilton Official Plan now permits fourplexes and multiple dwellings of up to six units for lots in proximity to collector or arterial roads.

Recommended definitions for a triplex and fourplex are the following:

- **Triplex:** shall mean a building that is divided horizontally and/or vertically into three separate dwelling units. A detached house or semi-detached house that has one or more additional dwelling units is not a triplex.

Appendix "B" to Report PED23156
Page 95 of 99

- **Fourplex:** shall mean a building that is divided horizontally and/or vertically into four separate dwelling units. A detached house or semi-detached house that has two or more additional dwelling units is not a fourplex.

Zoning By-law 05-200 currently treats multiple dwelling townhouses (stacked or back-to-back) under the category of multiple dwelling. Although many municipalities explicitly define stacked or back-to-back townhouses, the City of Toronto does not. For simplicity and ease of implementation, multiple dwelling townhouses should continue to be considered under the multiple dwelling types.

6.2.3 Recommendation for Multiple Dwelling Categories

Zoning By-law 05-200 currently categorizes parking requirements for multiple dwellings in downtown under a 0 – 12 units category, 12 – 50 units category, and 51+ category. This categorization is similar to parking standards in Zoning By-law 05-200 for outside the downtown area. These categories were created for the purpose of supporting transit-oriented corridors. There is also another category for units with 3 or more bedrooms to encourage the development of family-housing.

The logic behind the number of bedroom distinction is to ensure that the parking provisions align more closely with the actual automobile needs of residents based on the size of their dwelling units. Larger dwelling units with more bedrooms are likely to accommodate larger families or multiple occupants, resulting in a higher likelihood of owning multiple vehicles. Conversely, smaller dwelling units with fewer bedrooms may be occupied by individuals or smaller households, leading to a reduced need for parking spaces.

The City of Toronto and the City of Mississauga historically differentiated parking standards by bedroom size but have since moved away from these categories over the past few years to one broad multiple dwelling category. The approach of providing more parking based on number of bedrooms also does not align with this study's guiding principles as outlined below:

- **Efficient land use:** The additional bedrooms may not always be habitable by residents or those that can drive which could cause an overabundance of parking spaces.
- **Cost reduction and affordability:** An overabundance of parking spaces could decrease the affordability of dwellings.
- **Encouraging sustainable modes of transportation:** Categorizing by bedrooms supports more of an auto-oriented approach as it is assuming additional bedrooms will be occupied by those who need a vehicle.

Because parking standards based on number of units was created for a specific purpose in transit-oriented corridors and the number of bedrooms does not align with the study's guiding principles, a single parking requirement is recommended for the multiple dwelling land use.

Appendix "B" to Report PED23156
Page 96 of 99

The parking minimum for a multiple dwelling land use should follow the parking minimum for a bachelor/1-bedroom unit for parking standard geographies with more of the sustainable mobility philosophy and the parking minimum should be more conservative in geographies with more of the hybrid philosophy.

6.2.4 Recommendation for Additional Dwelling Units

The Residential Zones Project intends to accomplish the following:

- Remove barriers to small-scale intensification in low density residential areas of the City by permitting a wider range of housing options in existing neighbourhoods; and
- Promoting sustainable development by removing barriers to growth in existing neighbourhoods, and affordability by providing more housing choice in these neighbourhoods.

As part of this initiative, changes in the Zoning By-law in 2022 stated that no additional parking space shall be required for either a Secondary Dwelling Unit or a Secondary Dwelling Unit - Detached, provided the required parking spaces which existed on May 12, 2021 for the existing dwelling shall continue to be provided and maintained. Low Density Residential Zones can also be found in the Zoning By-law of the former communities.

To support the goal of the Residential Zones Project to remove barriers of small-scale intensification and enhance affordability, the updated parking standards recommends no parking requirements for any Additional Dwelling Units/ADU-Detached for all parking standard zones.

6.2.5 Recommendation for Visitor Parking for Multiple Dwelling

As outlined in the report Developing the Parking Standards Framework, Visitor parking can be used to provide sufficient space for:

- Service vehicles and loading which provides a certain level of quality of life to residents.
- Personal care workers that may need to stay longer than on-street parking limits or do not want to face difficulties finding nearby parking on-street to provide their services.

Based on the jurisdictional scan, visitor parking rates typically range from 0.1 spaces per unit to 0.25 spaces per unit. The City of Toronto provides a minimum of 2 total visitor parking spaces with an additional 0.01 visitor spaces per unit in the most urban areas and 0.05 visitor spaces per unit in other areas.

The updated parking standards recommend 2 total visitor spaces plus 0.05 visitor spaces per unit in Zone A, 0.15 visitor spaces per unit in Zone B, and 0.25 visitor spaces per unit in Zone C and Zone D.

Appendix "B" to Report PED23156
Page 97 of 99

6.2.6 Summary of Parking Requirements

Parking requirements for Zone A are summarized in Table 21.

Table 21: Zone A Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	0 spaces per unit	Not applicable
Semi Detached	0 spaces per unit	Not applicable
Street Townhouse	0 spaces per unit	Not applicable
Duplex	0 spaces per unit	Not applicable
Triplex	0 spaces per unit	Not applicable
Fourplex	0 spaces per unit	Not applicable
Multiple Dwelling	0 spaces per unit, 2 total visitor spaces plus 0.05 visitor spaces per unit	1.0 total space per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0 spaces per unit, 2 total visitor spaces plus 0.05 visitor spaces per unit	1.0 total space per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking requirements for Zone B are summarized in Table 22.

Table 22: Zone B Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	1 space per unit	Not applicable
Semi Detached	1 space per unit	Not applicable
Street Townhouse	1 space per unit	Not applicable
Duplex	1 space per unit	Not applicable
Triplex	1 space per unit	Not applicable
Fourplex	1 space per unit	Not applicable
Multiple Dwelling	0.5 spaces per unit plus 0.15 visitor spaces per unit	1.25 total spaces per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0.5 spaces per unit plus 0.15 visitor spaces per unit	1.25 total spaces per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking requirements for Zone C are summarized in Table 23.

Appendix "B" to Report PED23156
Page 98 of 99

Table 23: Zone C Residential Parking Requirements

Dwelling Type	Parking Minimum	Parking Maximum
Single Detached	1 space per unit	Not applicable
Semi Detached	1 space per unit	Not applicable
Street Townhouse	1 space per unit	Not applicable
Duplex	1 space per unit	Not applicable
Triplex	1 space per unit	Not applicable
Fourplex	1 space per unit	Not applicable
Multiple Dwelling	0.85 spaces per unit plus 0.25 visitor spaces per unit	2.0 total spaces per unit (including occupant and visitor)
Dwelling Unit, Mixed-Use	0.85 spaces per unit plus 0.25 visitor spaces per unit	2.0 total spaces per unit (including occupant and visitor)
Additional Dwelling Unit / Additional Dwelling Unit - Detached	0 spaces per unit	Not applicable

Parking standards for the Urban Expansion Areas that are within Zone C are recommended to be determined during the Secondary Planning process which started early 2023.

Parking standards for Zone D should generally remain unchanged, however they should consolidate the parking standards found in the existing various Zoning By-laws.

6.2.7 Recommendation for Parking Adjustments

Transit

Some jurisdictions' Zoning By-laws provide reductions in parking requirements due to proximity of transit. On the other hand, some jurisdictions that implemented a geography-based approach to their parking standards had zones or geographies that were defined by transit. Examples from the case studies documented in Appendix C of the Developing the Parking Policy Framework include:

- The City of Toronto previously implemented a parking standards zone called "Centres and Avenues on Subway" and "Other Avenues Served by Surface Transit".
- The City of Mississauga generally defines Precinct 1 and Precinct 2, which are the zones with the lowest parking requirements, along the Hurontario LRT.
- The City of Vaughan previously implemented a zone called "Higher Order Transit Hubs".
- The City of Ottawa implements a zone near major LRT stations.

The City of Hamilton's proposed parking zone system generally aligns with the existing and proposed transit system. For example, the City's planned MTSAs are all within the proposed Zone A, which has the lowest parking requirements. The boundary of Zone A also follows parts of the proposed rapid transit network, more specifically the A-Line and B-Line. The proposed

Appendix "B" to Report PED23156
Page 99 of 99

Zone B geography captures the existing transit system and other parts of the proposed rapid transit network. Therefore, parking requirement reductions due to provision of transit is not recommended for this update.

Car Share

The provision of car-share to reduce parking requirements is not recommended for this update to the parking standards. Car share is an important mobility alternative, however if there are currently no enforceable mechanisms for car share to be implemented for that space, then the dedicated car share space becomes less useful.

Although car-share can reduce private automobile ownership and promote sustainable modes, which is one of the identified guiding principles, car-share programs are still mainly gas-powered, so the effects are minimal compared to focusing on transit and active transportation. In addition, if car-share spaces are not used by car-share program providers, those spaces are less likely to be used which creates an inefficient use of land and goes against another identified guiding principle.

Changes to car share programs that would warrant another review of car share within the parking standards would include the City having an enforceable mechanism to ensure car share programs are being implemented in those spaces and private car share providers convert their fleet to zero emission vehicles.