



Final Report

# City of Oshawa Parking Study

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by IBI Group  
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<b>ORIGINATOR:</b>	Attila Hertel, Stefan Tsang
<b>REVIEWER:</b>	Attila Hertel, Patrick Garel
<b>AUTHORIZATION:</b>	Peter Richards
<b>CIRCULATION LIST:</b>	City of Oshawa
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## Executive Summary

To remain ahead of a developing city, the parking system in the City of Oshawa also needs to evolve. The City needs to develop a parking strategy that proactively anticipates growth in parking demand. This demand is then accommodated through environmentally, socially, and economically sustainable policies, rather than reacting to parking issues after growth and economic development has occurred. By understanding existing problems and identifying sustainable parking solutions, the City has the opportunity to support and foster new development in the Urban Growth Centre (U.G.C.) and have the right balance of parking.

The City of Oshawa initiated the Parking Study project to develop a forward-looking plan for managing parking operations until the 2031 horizon year. The Parking Study analyzed Oshawa's citywide parking opportunities and needs with a focus on the U.G.C. while:

- Assessing existing and future municipal parking operations in the U.G.C.;
- Hearing from stakeholders and the public and addressing any concerns;
- Creating a citywide parking policy framework;
- Reviewing Oshawa's citywide residential parking requirements; and
- Reviewing financial operations and investigating the potential for a cash-in-lieu (C.I.L.) of parking program.

### Background and Existing Conditions Review

The *Background and Existing Conditions Review* task examined Oshawa's historical and existing parking operations to develop a foundation on which the study conclusions and recommendations can be formed.

### Background Document Review

The background document review revealed that Oshawa has a strong policy planning framework to help guide parking related decisions throughout the City's U.G.C., Transportation Hubs (T.H.), and the City as a whole. The Official Plan's overarching parking objective is to ensure sufficient parking opportunities are provided to meet the existing and future demand while promoting alternative modes of transportation.

### Official Plan Comparison

Similar to Oshawa, the Official Plans of municipalities comparable to Oshawa promote alternative modes of transportation while aiming to provide sufficient parking opportunities to meet existing and future needs. However, unlike the comparator municipalities, the Oshawa Official Plan was noted to not contain a

section dedicated to general parking policies. Oshawa is recommended to add a designated parking section to the Official Plan as a sub-section of *Section 3: Transportation*. Best practice parking policies identified include:

- Surface parking should be minimized and structured parking that is integrated into the urban fabric and compliments the surrounding area's character should be promoted.
- High density mixed land uses should be promoted. Above ground parking structures should have alternative uses on the ground floor with green roofs to manage the urban heat island effect.
- The zoning by-laws or guidelines should allow for innovative parking strategies that optimize the parking system's utilization.
- Zoning by-law parking requirement reductions should be considered where it is demonstrated that the reduced parking supply will be sufficient to meet the development's parking needs.

### Parking Supply Review for the U.G.C. and T.H.

The *Parking Supply Review* task developed a parking management plan by examining existing parking supply and demand in Oshawa's U.G.C. and T.H.s, and projecting future parking needs.

#### Existing Parking Supply

The Oshawa U.G.C. parking system consists of approximately 4,045 parking spaces divided in the following manner:

- 919 municipal on-street parking spaces;
- 2,268 municipal off-street parking spaces; and
- 858 publicly accessible private off-street parking spaces.

Hourly pay parking, daily permit parking, and monthly permit parking opportunities are provided. Pay parking operations are in effect between 8:00 a.m. and 6:00 p.m. Monday to Friday with free parking on weekday evenings and all day on weekends.

#### Existing Parking Operations

Based on industry standards, parking systems are considered "effectively full" at an occupancy of approximately 85-90%, depending on lot size and other characteristics. This represents the point where finding a space becomes challenging for drivers, resulting in an increased likelihood of a driver having to search for an available parking space. Additionally, both best practices and research from the Victoria Transport Policy Institute note the publicly accepted walking distance between a parking space and the user's final destination ranges between 300–400 metres.



The U.G.C. parking system was observed to operate with a peak utilization of 60%. While system wide operations are below the 85-90% effective capacity threshold, there are some parking facilities that were observed to operate near or above effective capacity. It is likely valid that some users perceive a shortage in parking with occasional difficulty in finding a spot at some of the busier parking facilities. However, sufficient parking opportunities were observed to be available within acceptable walking distance (300-400m). Therefore, the existing parking supply is considered sufficient to accommodate the existing parking demand. Oshawa is recommended to focus efforts on better distributing parking demand rather than managing demand or increasing supply.

### **Future U.G.C. Parking Operations**

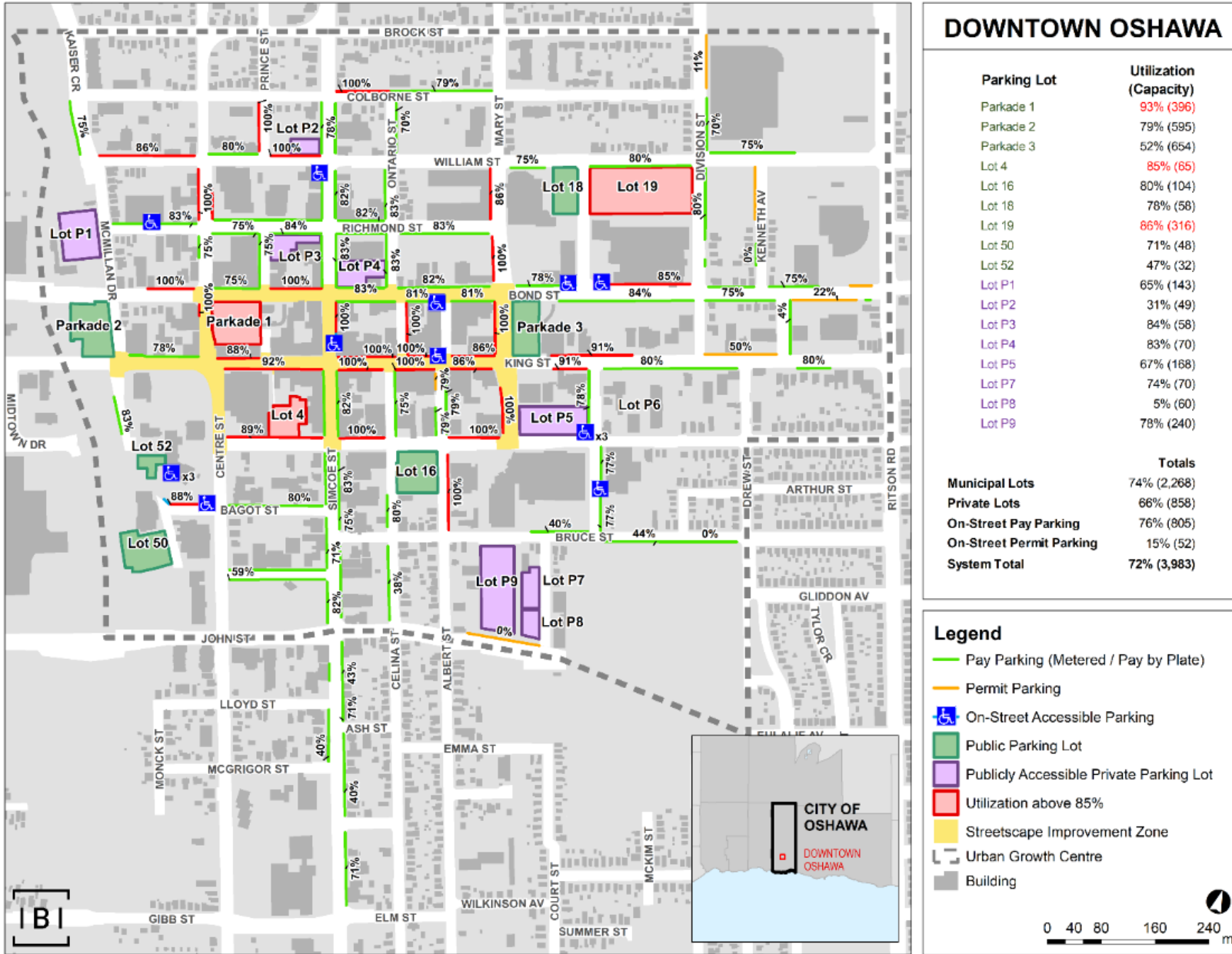
Through the accurate projection of future parking demand, educated long term decisions can be made to support a successful U.G.C. parking system. The assessment was completed under three horizon years: 2024, 2029, and 2031.

**Executive Summary Exhibit 1** shows a map of the projected parking demand in the U.G.C. by 2031.

Similar to existing conditions, system wide operations are projected to remain below the 85-90% effective capacity threshold (72% utilization) with some parking facilities operating near or above effective capacity.

With the projected parking demand growth, more parking users are anticipated to experience difficulty in finding an available space than existing conditions. To manage the foreseen difficulties, Oshawa is recommended to implement measures aimed at better distributing parking demand from facilities operating near or at capacity to underutilized locations. Potential strategies include, variance parking prices, improved parking wayfinding signage, parking time restrictions, and parking user restrictions.

### Executive Summary Exhibit 1: Anticipated 2031 U.G.C. Parking Demand Map



## Parking Management Plan

**Parking Supply Triggers:** Oshawa is recommended to collect comprehensive parking supply and demand surveys every 2-3 years to monitor growth and make educated parking management decisions. Future data collection is especially important given the on-going Coronavirus 2019 (COVID-19) pandemic and the unknown level to which parking demand will rebound. Parking operations and the recommended courses of action are grouped into three performance scenarios.

Parking Trigger			Recommended Action
System wide parking utilization is below 85%.	Individual parking facilities operate above 85% utilization?	Other parking opportunities available within walking distance (300-400 metres)?	
✓	✓	✓	No Action Needed
✓	✓	✗	Adopt strategies that better distribute parking demand to underutilized facilities including parking wayfinding systems, variable parking prices, parking user restrictions, time restrictions, or redistributing permit sales.
✗	✓	✗	Adopt strategies that manage parking demand, such as transportation demand management, or increased parking prices. When all other options are exhausted, construct a centrally located structured parking facility. Size of the facility should be based on the observed parking demand and anticipated parking demand growth.

**Special Event Parking Strategy:** The City of Oshawa regularly hosts special events in the Tribute Communities Centre located in the U.G.C. These events are known to generate a localized peak in parking demand.

To better manage special event parking operations, Oshawa is recommended to reduce the maximum parking time limit from 3 hours to 2 hours during periods of free parking in the U.G.C (for all of these instances, not just during special events). This reduction is intended to direct special event attendees into the off-street parking facilities and maintain on-street parking for local establishment patrons. Special events are typically longer than 2 hours, which would prevent event attendees from legally parking on-street for the duration of the event.

### Future Transportation Hub Parking Operations

The future parking demand in the two future T.H.s are envisioned to be met through private parking supply as part of development applications. In other words, the municipal parking system is not proposed to serve the T.H.s.

### Develop a Citywide Parking Policy Framework

The *Citywide Parking Policy Framework* task develops a decision making framework intended to aid Oshawa staff in making parking policy and strategy decisions. Additionally, updated residential parking requirements are proposed that are divided into Intensification Areas (I.A.s) and Rest of City. Oshawa's I.A.s consist of the Urban Growth Centre, Transportation Hubs, and Intensification Corridors.

## Vision Statements

Self-sufficient, sustainable, and user-friendly municipal parking operations are envisioned for the U.G.C. that meets the parking needs of a rapidly growing City, while promoting alternative modes of transportation. Parking needs should be met through structured parking that are integrated with the urban fabric in a discreet manner that compliments the surrounding area's character. To achieve long-term economic sustainability, engaging forward-looking fiscal parking strategies are required that are centered on operational efficiency, positive financial performance, and supporting growth.

Parking needs in the T.H.s and Intensification Corridors (I.C.s) are envisioned to be met through on-site private parking supply. Private parking demand shall be managed through transit oriented development that is supported by parking requirements tailored to the local environment. Developers should be encouraged to adopt T.D.M strategies such as carshare, shared parking, bicycle parking, and unbundled parking.

## Parking Policy Framework

To maintain up-to-date and modern parking practices, existing policies and standards must be periodically revisited and updated. A parking policy framework was developed to provide the City with a recommended methodology that can be used for future parking policy, strategy, and standard updates. The framework includes the following items:

- Best practices review: Identify parking policies that have successfully been implemented in other municipalities.
- Zoning by-law parking standards: Establish parking requirements tailored for Oshawa's local context.
- Area specific strategies: Develop area specific parking policies and standards for Oshawa's I.A.s that cater to the area's unique parking operations.
- Macro level trends: Plan for emerging macro-level trends, such as ridesharing and connected autonomous vehicles.

## Standards and Regulations Review

Oshawa currently has one set of parking requirements for the entire City. By reviewing the parking requirements of the comparator municipalities, many municipalities were determined to have a second set of parking requirements for Intensification Areas. Given the higher population and employment density targets, as well as the transit-oriented development in these areas, a development located in an Intensification Area is anticipated to generate lower parking demand than a similar development located elsewhere in the city. Oshawa's parking standards are envisioned to be designed in the following manner:

- **Rest of City:** general Citywide parking requirements similar to the current ZBL # 60-94 requirements; and,
- **Intensification Areas:** reduced parking requirements tailored to areas targeted for high employment and population density. In Oshawa, these Intensification Areas include the U.G.C. the future T.H., and the I.C.

Oshawa's existing and proposed residential parking requirements summarized in **Executive Summary Exhibit 2.**

### **Non-Residential Exemption Zone**

Parking exemption zones are intended to promote new developments in targeted areas. Oshawa currently has a non-residential exemption zone in the Downtown core. Residential developments are required to provide on-site parking but at reduced rates.

Given that no parking supply issues are projected within the 2031 horizon, the exemption zone can be supported by the municipal parking system. The existing boundaries are also recommended to be maintained.

## Executive Summary Exhibit 2: Residential Parking Requirement Summary

Land Use	Existing Requirement (Spaces)	Rest of City Proposed Requirement (Spaces)	Intensification Area Proposed Requirement (Spaces)
Single Detached Semi-Detached Street Townhouse	2.00 per unit	2.00 per unit for residents 0.00 per unit for visitors	Not permitted
Duplex	1.00 per unit	1.00 per unit for residents 0.00 per unit for visitors	Not permitted
Block Townhouse	1.65 per unit for residents 0.35 per unit for visitors	1.65 per unit for residents 0.35 per unit for visitors	0.80 per unit for residents 0.20 per unit for visitors
Accessory Apartment	1.00 per unit (plus the residential requirement)	1.00 per unit (plus the residential requirement)	1.00 per unit (plus the residential requirement)
Condominium / Apartment	1.75 per unit	1.00 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors	0.50 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors
Bed and Breakfast	2.00 plus 1.00 per traveller bedroom	2.00 plus 1.00 per traveller bedroom	2.00 plus 1.00 per traveller bedroom
Group Home	1.00 per 3 residents	1.00 per 3 residents	1.00 per 3 residents
Lodging House	1.00 plus 1.00 per 2 lodging units	1.00 plus 1.00 per 2 lodging units	1.00 plus 1.00 per 2 lodging units
Senior Citizen Apartment	0.50 per unit	0.45 per unit for residents 0.05 per unit for visitors	0.27 per unit for residents 0.03 per unit for visitors
Nursing Home	1.00 per 4 beds	1.00 per 4 beds	1.00 per 4 beds
Retirement Home	0.38 per unit	0.30 per unit for residents 0.15 per unit for visitors	0.30 per unit for residents 0.15 per unit for visitors
Student Housing (New Land Use)	N/A	0.20 per bed for residents 0.05 per bed for visitors	0.20 per bed for residents 0.05 per bed for visitors
University Residence	0.50 per bed	0.20 per bed for residents 0.05 per bed for visitors	0.20 per bed for residents 0.05 per bed for visitors

Land Use	Existing Requirement (Spaces)	Rest of City Proposed Requirement (Spaces)	Intensification Area Proposed Requirement (Spaces)
Other Residential (1 or 2 Dwellings)	1.00 per unit	1.00 per unit for residents 0.00 per unit for visitors	1.00 per unit for residents 0.00 per unit for visitors
Other Residential (3+ Dwellings)	1.00 per unit for residents 0.00 per unit for visitors	1.00 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors	0.50 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors

### Bicycle Parking Requirements

The provision of adequate bicycle parking, and shower and change facilities is an important element in the promotion of bicycle use. More bicycle trips will typically reduce the number or growth of vehicle trips and tends to lead to a more sustainable pattern of urban travel. As a method of promoting cycling, Oshawa is recommended to adopt the bicycle parking requirements outlined in **Executive Summary Exhibit 3**.

### Executive Summary Exhibit 3: Recommended Bicycle Parking Standards

Land Use	Parking Type	Intensification Area	Rest of City
Commercial including restaurants	Short-term	0.25 spaces/100 m <sup>2</sup> GFA	0.20 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.08 spaces/100 m <sup>2</sup> GFA
General Office	Short-term	0.15 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
	Long-term	0.13 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
Medical Office	Short-term	0.12 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.08 spaces/100 m <sup>2</sup> GFA
Multi-unit Residential	Short-term	0.10 spaces/unit	0.07 spaces/unit
	Long-term	0.68 spaces/unit	0.55 spaces/unit
Post-Secondary School	Short-term	0.60 spaces/100 m <sup>2</sup> GFA	0.40 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.05 spaces/100 m <sup>2</sup> GFA

Additionally, the following shower and change facilities requirements are recommended for non-residential developments requiring long-term bicycle parking spaces:

- 2 if 5 to 60 long-term bicycle parking spaces are required;
- 4 if 61 to 120 long-term bicycle parking spaces are required;
- 6 if 121 to 180 long-term bicycle parking spaces are required; and
- 8 if more than 180 long-term bicycle parking spaces are required.

### Transportation Demand Management

Transportation demand management (T.D.M.) initiatives influence travel behaviour by improving and promoting modes of transportation alternative to single occupancy vehicles. This improves transportation system efficiency and helps manage parking demand by decreasing the volume of single occupancy vehicles on roads and in parking lots. These initiatives take many forms, including policies, programs, services, and products to influence why, when, where, and how people travel.



The T.D.M. review’s objective is to identify strategies private developers can adopt to manage the parking demand generated by a proposed development. Oshawa is recommended to consider the following T.D.M. strategies:

- **Bicycle Parking:** Adopt a 1 vehicle parking space reduction for every 5 bicycle parking spaces provided beyond the required minimum, up to a max vehicle parking space reduction of 10%.
- **Carshare:** Adopt a 4 vehicle parking space reduction for every carshare vehicle and space provided up to a maximum reduction of 12 spaces.
- **Shared Parking:** Develop shared parking guidelines where parking occupancy rates are provided for AM, midday, PM, and evening.
- **Unbundled Parking:** Consider providing up to a 5% parking requirement reduction (high density residential developments only).
- **Off-site Parking:** Consider allowing developers to meet a small portion of the parking requirement off-site.

## Financial Review

### Historical Financial Performance

Over the 5-year review period (2014-2018), the parking system generated \$18.66 million in revenue, with \$18.35 million in expenditures, resulting in an overall net surplus of \$316,000 and a revenue/expense ratio of 1.02.

However, while overall healthy, expenditures surpassed revenues for 3 out of 5 years. Capital expenditures were observed to fluctuate substantially year to year, years with high capital expenditures generally resulted in a deficit.

### Parking Price Optimization

With the objective of achieving an affordable yet financially sustainable parking system, the financial performance of five parking price plans were projected to the 2031 horizon year. The five parking price plans are summarized in **Executive Summary Exhibit 4**.

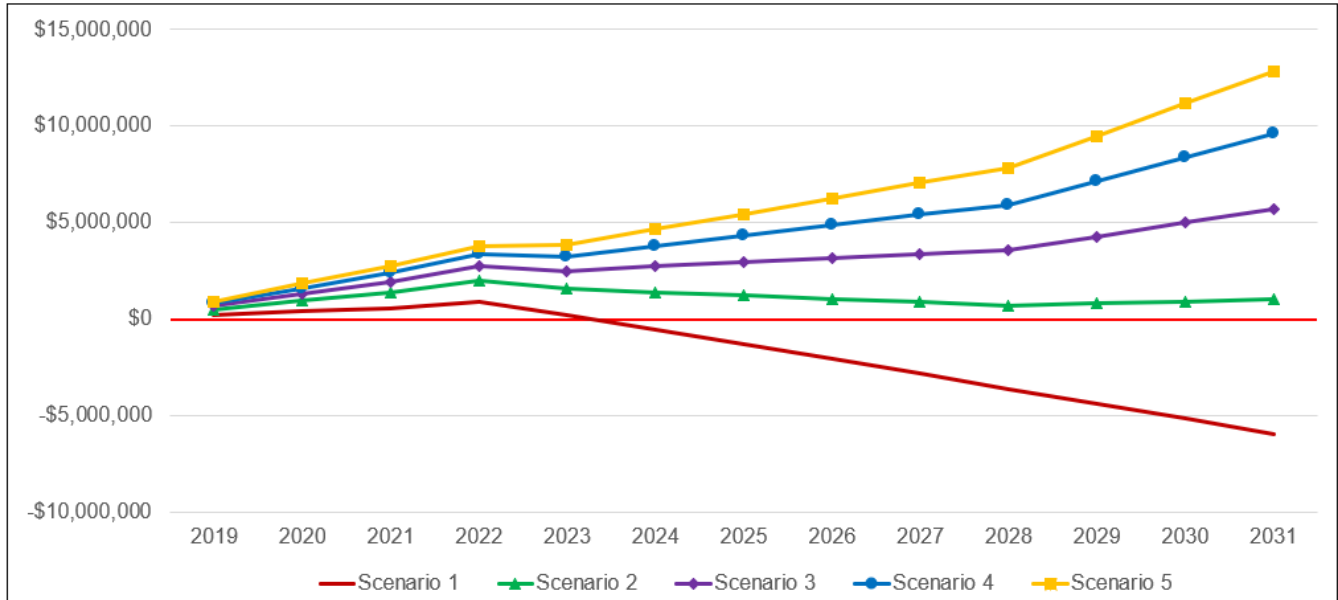
#### Executive Summary Exhibit 4: Evaluated Parking Price Plans

Scenario	Permits	Transient
1	No change from current	No change from current
2	10% increase every 5 years	\$0.25 increase every five years
3	15% increase every 5 years	\$0.50 increase every five years
4	20% increase every 5 years	\$0.75 increase every five years
5	25% increase every 5 years	\$1.00 increase every five years

All parking rate increases are presented in present day dollars.

The annual cumulative net position is displayed in **Executive Summary Exhibit 5** for all price scenarios.

**Executive Summary Exhibit 5: Reserve Fund Projections (Scenario 1-5)**



Based on these results, Oshawa’s parking operations are not anticipated to be financially sustainable if parking prices are not increased, as indicated by the deficit under Scenario 1 (Do Nothing). Adopting Scenarios 2, 3, 4, or 5 is projected to achieve financial sustainability.

The operational goal is not to maximize revenue, but rather to set parking prices at a point that manages parking demand while meeting Oshawa’s parking financial needs. Based on this objective, Oshawa is recommended to consider adopting the Scenario 2 parking price plan. Under Scenario 2, the net position at the end of the projection period (2031) is anticipated to be approximately \$1,039,255, which provides funding for unexpected parking related expenses.

Note that on-street parking in the Oshawa U.G.C. has been free during the ongoing COVID-19 pandemic. Oshawa is recommended to evaluate revenue collected in 2020 and 2021, and if necessary, adopt a slightly larger price increase to achieve financial sustainability.

**Cash-in-Lieu (C.I.L.) of Parking Program Review**

Cash-in-lieu (C.I.L.) of parking grants developers an exemption from meeting parking requirements in exchange for a payment, which is then used to construct municipal parking facilities to supplement the exempt spaces.

### **Cash-in-Lieu of Parking Program Feasibility**

Based on current land value and capital costs, the cost of constructing a 110-space parking structure is estimated to be between \$3,900,000 and \$5,640,000. The cost estimate increases to between \$5,660,000 and \$7,840,000 for a 110-space underground parking garage.

Based on Oshawa's population and employment projections and typical C.I.L. rates, C.I.L. is projected to generate from \$1,650,000 to \$2,365,000 in revenue.

When comparing projected revenue to estimated parking structure costs, sufficient C.I.L. of parking revenue is not anticipated to be collected to fund a new parking facility. Therefore, the program is not considered feasible in Oshawa.

### **Exemption Zone Sensitivity Analysis**

A sensitivity analysis was completed to determine whether the C.I.L. program would be feasible if the U.G.C. parking exemption for non-residential development was removed. With additional C.I.L. of parking revenue generated from non-residential developments, the programs projected revenue is estimated to increase to between \$3,360,000 and \$4,816,000. This revenue is still not projected to be sufficient to fund a structured parking facility expansion.

### **Public and Stakeholder Consultation**

The *Public and Stakeholder Consultation* task engages stakeholders and the general public in two phases.

#### **Phase 1 Consultation Activities**

Phase 1 was conducted near the beginning of the study (Spring 2019) to obtain feedback regarding existing parking operations, knowledge of existing issues, and desired study outcomes. Phase 1 consisted of Public Information Centre #1 (P.I.C. #1), an online survey, and an online crowdsourced parking hotspot map. The City of Oshawa also hosted community outreach sessions in the Delpark Homes, South Oshawa, and Donevan Recreation Complexes.

Commonly identified themes during the Phase 1 consultation activities included:

- U.G.C. parking experiences are mostly positive. Areas of improvement include improved duration and payment method flexibility, finding an on-street and off-street parking space, and overnight on-street parking;
- Many residents would consider using transit or cycling instead of driving, if service and infrastructure was improved;
- Additional bicycle parking would be beneficial, particularly on Bagot Street and King Street East;
- New subdivisions and developments should promote alternative modes of transportation while minimizing parking space;

- Respondents were split on parking space sizes, with most feeling they are either appropriately sized or too small;
- There is not enough parking for single family homes, one option is an on-street residential permit parking program;
- The distance between a parking spot and destination is preferred to be less than 400m (5 minute walk); and
- U.G.C. parking prices are currently suitable, with mixed feelings on price increases to improve parking operations.

### **Phase 2 Consultation Activities**

Phase 2 was conducted near the end of the study (Fall 2020) to present the study's preliminary findings and recommendations. Due to the on-going COVID-19 pandemic, Phase 2 consultation activities were completed virtually. Phase 2 consisted of the P.I.C. #2, stakeholder meetings, and an online public survey.

Commonly identified themes during the Phase 2 consultation activities included:

- There is a need for improved parking enforcement;
- There are residential parking supply issues in some neighbourhoods (driveway size and garage dimensions). On-street residential parking permit program is a potential tool that can help meet residential parking needs in select neighbourhoods;
- The future conditions assessment could be considered dated as there are new developments and projects since the analysis completion;
- Concerns raised regarding the proposed retirement home parking requirements. Additionally, questions asked regarding how bachelor apartments and apartments with dens are considered;
- Can the proposed parking prices be justified;
- Concerns raised about whether the maximum parking duration can be enforced when using a parking mobile app such as Honk;
- A majority of survey respondents noted that strategies should be implemented to better distribute parking demand throughout Downtown, this could be achieved through the implementation of a variable parking price structure; and
- In the event that Oshawa needs to increase parking revenue, the preferred strategies were to extend weekday paid parking past 6:00 p.m., implement paid parking on Saturdays, or increase parking prices.

### **Recommendations**

The recommended implementation plan is outlined in **Executive Summary Exhibit 6**.

## Executive Summary Exhibit 6: Parking Implementation Plan

Recommendation	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Short Term (1 – 2 years)</b>											
Add a designated parking section to the Official Plan											
Adopt the Scenario 2 parking price plan											
Promote the upper levels of Parkades 1 and 3 as permit parking spaces											
Adopt the recommended parking vision statements and guiding principles											
Implement recommended special event parking strategy											
Develop a T.D.M. checklist using the recommended T.D.M. strategies											
Adopt the recommended bicycle parking requirements											
Adopt the recommended residential parking requirements											
Develop non-residential parking requirements											
<b>Medium Term (3 – 5 years)</b>											
Complete a parking wayfinding strategy to better distribute parking demand											
Re-evaluate an on-street residential permit parking program											
<b>Long Term (6 – 10 years)</b>											
Update parking policies using the developed framework (every 5 years)											

Recommendation	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>On-Going</b>											
Monitor parking demand through regular parking utilization surveys (every 2-3 years)											
Apply recommended parking triggers to identify appropriate strategies using the parking utilization survey findings											
Release additional parking permits are facilities with available capacity using the parking utilization survey findings											
Adjust variable parking prices to better distrusted parking demand using the parking utilization survey findings											
Maintain U.G.C. parking exemption zone, while re-evaluating the parking system’s ability to support the zone using the parking utilization survey findings											
Apply curbside decision-making framework when curbside regulation revisions are needed											

# 1 Introduction

The City of Oshawa initiated the Parking Study project to develop a forward looking plan for managing parking operations until the 2031 horizon year. The study was initiated on January 8, 2019 and is scheduled to be completed by the end of 2020.

## 1.1 Study Background and Objectives

To remain ahead of a developing city, the parking system in the City of Oshawa needs to evolve. Altering an existing parking system can be a complex process, requiring the consideration of different user groups, geographic zones, price ranges, and time periods. For example, parking in the Urban Growth Centre (U.G.C.) must cater to various users ranging from employees and residents with long term parking needs, to visitors and retail patrons with short term parking needs. This Parking Study will balance the needs and objectives of the City of Oshawa and its' various stakeholders.

The Parking Study develops a parking strategy that proactively anticipates growth in parking demand. This demand is then accommodated through environmentally, socially and economically sustainable policies, rather than reacting to parking issues after growth and economic development has occurred. By understanding existing problems and identifying sustainable parking solutions, the City has the opportunity to support and foster new development in the U.G.C. and have the right balance of parking.

Significant intensification is also planned in Oshawa's two future Transportation Hubs (T.H.s):

- A new centrally located GO Station midway between Simcoe Street South and Ritson Road South; and
- A new Transitway Station located near the Simcoe Street North Highway 407 interchange.

Substantial travel patterns changes are anticipated in the T.H.s including a shift towards alternative modes of transportation (transit, cycling, walking, etc.). This study will develop area specific residential development parking requirements appropriate for the future T.H.s. In addition to the T.H.s, the study will examine residential parking requirements for student housing and new subdivisions.

## 1.2 Study Scope

The Parking Study is divided into the following nine tasks:

- **Task 1: Study Commencement:** Commence the project and confirm the project scope and schedule.
- **Task 2: Background and Existing Conditions Review:** Examine Oshawa's historical and existing parking operations to develop a foundation on which the study conclusions and recommendations can be formed.
- **Task 3: Parking Supply Review for the U.G.C. and T.H.:** Develops a parking management plan by reviewing existing parking supply and demand in Oshawa's U.G.C. and T.H.s, and projecting future parking needs. Also develops a decision making framework for the allocation of limited curbside space.
- **Task 4: Develop a Citywide Parking Policy Framework:** Develops a decision making framework to aid Oshawa staff in making parking policy and strategy decisions.
- **Task 5: Financial Review;** Reviews potential sources of funding to support Oshawa's parking operations, and provides recommendations aimed at achieving long term financial sustainability.
- **Task 6: Cash-in-lieu (C.I.L.) of Parking Program Review;** Determines whether implementing a C.I.L. program as a funding tool to support municipal parking operations is feasible.
- **Task 7: Public and Stakeholder Engagement;** Consults stakeholders and the general public to obtain feedback regarding existing parking operations, knowledge of parking issues, desired study outcomes, and the preliminary study findings.
- **Task 8: Draft Study Report:** Prepares a draft study report summarizing the Parking Study findings.
- **Task 9: Final Study Report.** Finalizes the draft study report based on comments received from City staff.

Four technical memorandums were submitted outlining the analysis, findings, and conclusions of the study tasks. These documents were reviewed and finalized with the help of the Technical Advisory Committee. This document is the Draft Final Report which summarizes the findings of the previously submitted memorandums. The complete memorandums are included as appendices to this report.



## 2 Background and Existing Conditions Review

The background and existing conditions review is intended to gain an understanding of Oshawa's historical and existing parking operations. Given this understanding, the proposed recommendations can be tailored to meet Oshawa's unique needs.

The complete *Task 2: Background and Existing Conditions Review* analysis and findings can be found in Technical Memorandum 1, which is located in Appendix A.

### 2.1 Background Document Review

The background document review's intent is to help establish the groundwork for the Parking Study by examining Oshawa's parking history and to ensure the Parking Study recommendations are compatible with other studies, policies, and initiatives. Documents such as Oshawa's Zoning By-laws, Official Plan, Transportation Master Plan, and other relevant parking related documents were reviewed.

The background document review revealed that Oshawa has a strong policy planning framework to help guide parking related decisions throughout the City U.G.C., the T.H.s, and the City as a whole. The Official Plan's main parking objective is to ensure sufficient parking opportunities are provided to meet the existing and future demand while promoting alternative modes of transportation.

In addition to parking policies, Oshawa regularly completes parking master plan level strategies to develop specific recommendations aimed at meeting existing needs and planning for the future. Most recently, Oshawa completed the Municipal Parking System Downtown Parking Update Study in 2010, and is currently in the process of completing this Oshawa Parking Study.

### 2.2 Municipal Best Practices Review

The parking best practices of municipalities similar to Oshawa were reviewed in this section. Through discussions with Oshawa staff, the Towns of Clarington, Whitby, and Ajax, and the Cities of Pickering, Kingston, Peterborough, Barrie, Burlington, Guelph, and St. Catharines were selected as the comparators.

#### 2.2.1 Official Plan Review

Similar to Oshawa, the Official Plans of the comparator municipalities were determined to promote alternative modes of transportation while aiming to provide sufficient parking opportunities to meet existing and future needs. However, unlike the comparator municipalities, the Oshawa Official Plan was noted to not contain a section dedicated to general parking policies. Oshawa is recommended to add a parking section to the Official Plan as a sub-section of Section 3: Transportation.

**Exhibit 2-1** cross references the identified Official Plan best practice policies by municipality.

**Exhibit 2-1: Official Plan Policy Best Practices**

Municipality / Policy	Clarington	Whitby	Ajax	Pickering	Kingston	Peterborough	Barrie	Burlington	Guelph	St. Catharines
Minimize surface parking by promoting structured parking.	✓	✓	✓		✓	✓	✓		✓	✓
Integrate parking within the urban fabric.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Encourage alternative modes of transportation.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Promote shared parking, access point consolidation, area specific parking standards, off-site parking, and cash-in-lieu of parking in Downtown areas.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pursue on-street parking where appropriate.	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Parking structures should have alternative uses on the ground level.	✓		✓	✓			✓	✓	✓	
Periodically review parking regulations.	✓				✓					✓
Parking facilities provide safe pedestrian walkways.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Provide sufficient accessible parking opportunities.	✓	✓			✓	✓		✓	✓	
Establish maximum parking requirements.							✓		✓	
Consider parking requirement reductions if the reduced supply is sufficient to meet the development's parking needs.	✓	✓	✓	✓			✓	✓	✓	✓
Incorporate pervious pavement in parking facilities.	✓	✓		✓	✓				✓	✓
Implement tree canopies and vegetation in areas with extensive surface parking.	✓	✓	✓						✓	✓

### 2.2.2 Parking Standards Comparison

Oshawa's parking requirements (number of spaces, number of accessible spaces, and space dimensions), as specified in By-law # 60-94, were compared to those of the comparator municipalities. The following conclusions were determined regarding Oshawa's parking standards:

- Oshawa's parking requirements are observed to be slightly higher than the average of comparable municipalities.
- Oshawa's accessible parking requirements are observed to be in line with the Accessibility for Ontarians with Disabilities Act (A.O.D.A.).
- Oshawa has a parking and loading exemption zone within the U.G.C. where non-residential developments are not required to provide any parking or loading spaces.
- Oshawa's parking space dimension requirements are consistent with the average of similar sized municipalities, suggesting that changes are not necessary.
- The dimensions of private residence garages are recommended to be increased from 5.75m in length and 3.0m in width to 6.2m in length and 3.0m in width.
- Oshawa's existing parking space location for private residences is in line with the comparator municipality requirements, suggesting that changes are not necessary.

The review also identified multiple municipalities that provide a second set of parking requirements for specific areas where travel patterns are known to be different from citywide conditions. These areas are typically Downtown cores or mobility hubs where the personal vehicle mode split is lower than the rest of the city, and therefore lower parking requirements are feasible.

These results were one of the factors considered when developing new residential parking requirements as part of this Study.

### 2.3 Minor Variance Applications

A review of recent minor variance applications (2016 to 2018) revealed the following trends:

- All minor variance applications for parking space length were for the *Single with Acc and Street Town* residential land uses indicating that the 5.75m standard for these land uses may not be appropriate.
- Similar to the parking space length applications, the majority of parking space width applications (3 of 4) were for residential land uses indicating that the 2.75m standard may not be appropriate.

- The majority of parking space reduction applications in the U.G.C. were residential developments requesting 0 parking spaces, indicating that including residential developments in the parking exemption may be considered.
- Significant parking requirement reductions were approved for two affordable housing developments in the future T.H.s.
- Only minor parking requirement reductions were granted outside of the U.G.C. and future T.H.s.

## 2.4 On-street Parking Regulations

There are 919 municipal on-street parking spaces available in Oshawa's U.G.C. consisting of hourly/daily pay and permit parking opportunities. In addition to on-street parking, there are seven loading zones and one taxicab stand.

In the residential areas surrounding the U.G.C., free on-street parking is typically permitted on one side of the street while being restricted on the other.

## 3 Parking Supply Review for the U.G.C. and T.H.

The parking supply review aims to develop a parking management plan by reviewing existing parking supply and demand in Oshawa's U.G.C. and T.H.s, and projecting future parking needs.

The complete *Task 3: Parking Supply Review for the U.G.C. and T.H.* analysis and findings can be found in Technical Memorandum 2, which is in Appendix B.

### 3.1 Existing U.G.C. Parking Supply and Demand, Review

This section examines Oshawa's existing parking supply and demand.

#### 3.1.1 Existing Parking Supply

The Oshawa U.G.C. parking system consists of 4,045 parking spaces divided in the following manner:

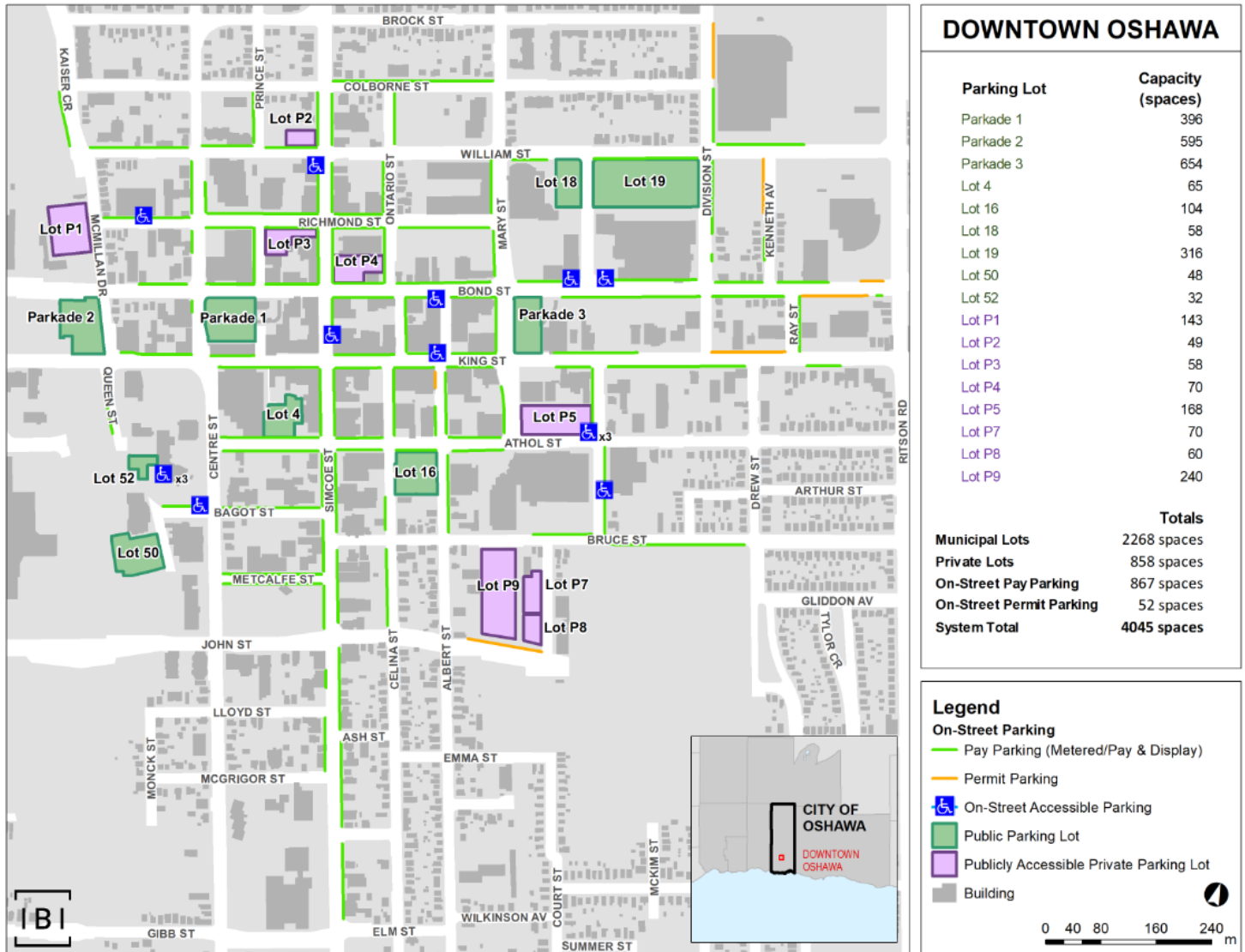
- 919 municipal on-street parking spaces;
- 2,268 municipal off-street parking spaces; and
- 858 publicly accessible private off-street parking spaces.

Hourly pay parking, daily permit parking, and monthly permit parking opportunities are provided. Pay parking operations are in effect system wide between 8:00 a.m. and 6:00 p.m. Monday to Friday with free parking on weekday evenings and all day on weekends.

Parking operations outside the U.G.C. generally consists of privately owned off-street parking lots dedicated to serving specific developments. Municipal on-street parking is free and permitted to a maximum duration of 3 hours. On-street parking is prohibited between 3:00 a.m. and 6:00 a.m. between December 1 and April 1 of the following year to facilitate snow clearing activities.

The location and supply of each parking facility is illustrated geographically in **Exhibit 3-1**.

### Exhibit 3-1: Parking Inventory Map



DOWNTOWN OSHAWA	
Parking Lot	Capacity (spaces)
Parkade 1	396
Parkade 2	595
Parkade 3	654
Lot 4	65
Lot 16	104
Lot 18	58
Lot 19	316
Lot 50	48
Lot 52	32
Lot P1	143
Lot P2	49
Lot P3	58
Lot P4	70
Lot P5	168
Lot P7	70
Lot P8	60
Lot P9	240
<b>Totals</b>	
<b>Municipal Lots</b>	2268 spaces
<b>Private Lots</b>	858 spaces
<b>On-Street Pay Parking</b>	867 spaces
<b>On-Street Permit Parking</b>	52 spaces
<b>System Total</b>	<b>4045 spaces</b>

**Legend**

- On-Street Parking
- Pay Parking (Metered/Pay & Display)
- Permit Parking
- On-Street Accessible Parking
- Public Parking Lot
- Publicly Accessible Private Parking Lot
- Building

0 40 80 160 240 m

#### 3.1.2 Existing Parking Operations

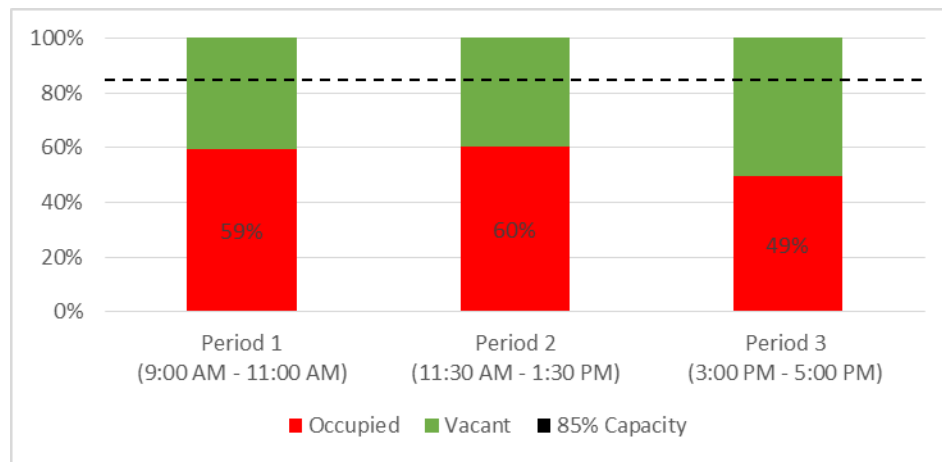
The municipal parking system is intended to serve the parking needs of visitors to the U.G.C. while promoting alternative modes of transportation. In other words, sufficient parking is envisioned to be provided without an oversupply.

Parking systems are generally designed to accommodate the 85-90<sup>th</sup> percentile peak annual parking demand. Monthly parking revenues were reviewed as a proxy to approximate parking activity patterns over the year.

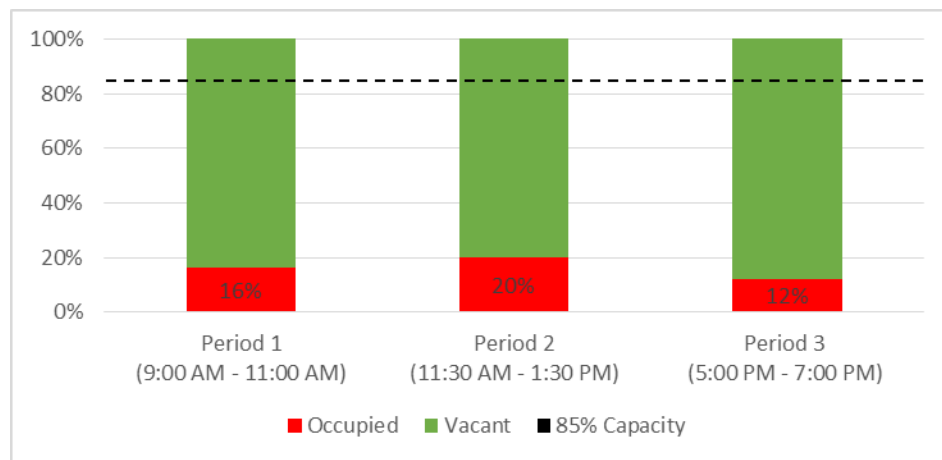
A parking utilization analysis was conducted using the seasonally adjusted parking demand data to identify locations where parking operates at or near capacity. Parking systems are considered “effectively full” at an occupancy of approximately 85-90%, depending on lot size and other characteristics. This represents the point where finding a space is challenging for drivers, resulting in an increased likelihood of a driver having to search for an available parking space.

**Exhibit 3-2** and **Exhibit 3-3** show the U.G.C. parking occupancy for the weekday and weekend periods, respectively.

**Exhibit 3-2: System Wide Parking Utilization (Weekday)**



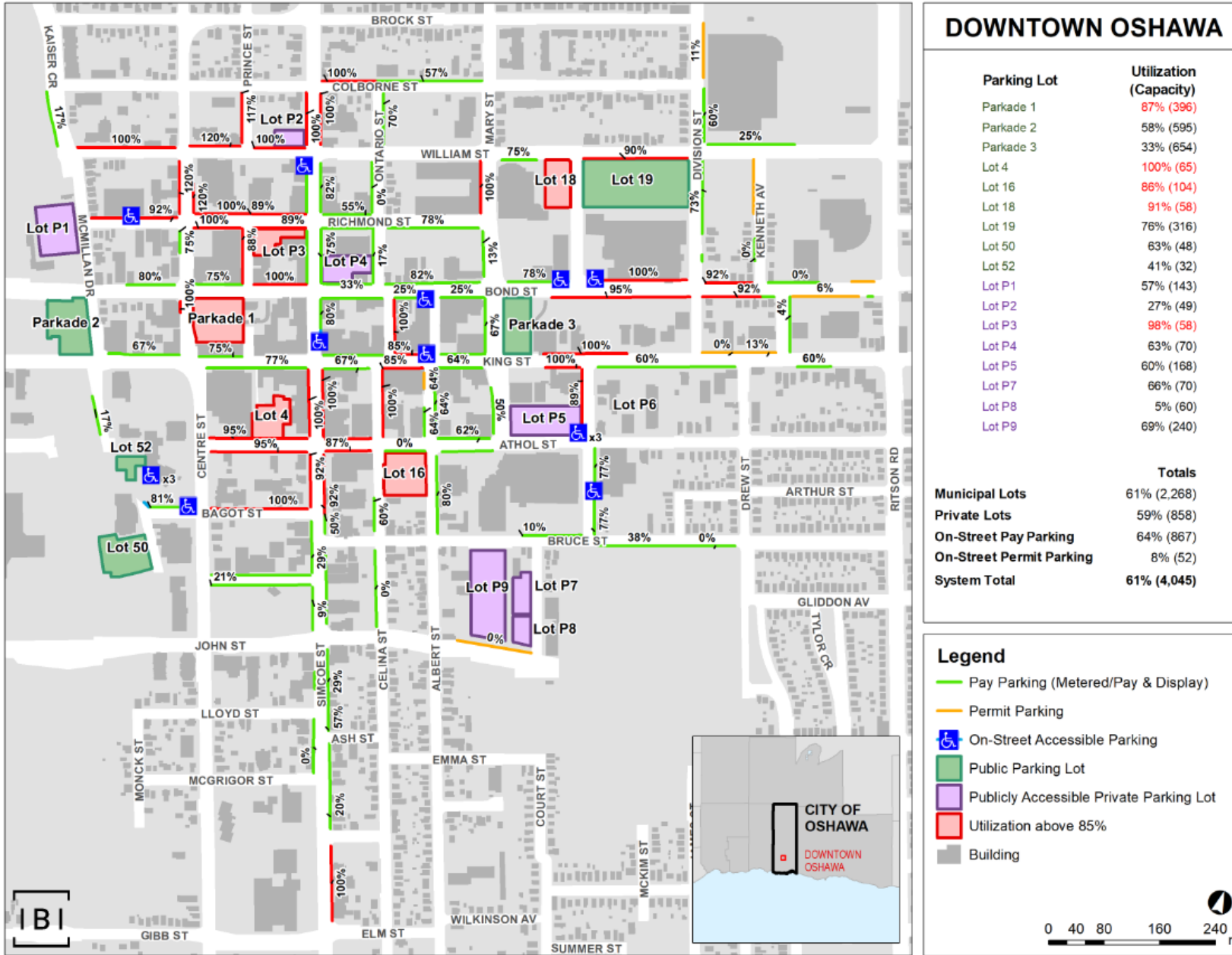
**Exhibit 3-3: System Wide Parking Utilization (Weekend)**



Given that a peak parking utilization of 60% was observed, the overall Oshawa parking system is considered sufficient to accommodate the existing parking demand.

While the overall parking demand is well below the 85% effective capacity threshold, there are some parking facilities that were observed to operate at or near effective capacity. **Exhibit 3-4** geographically displays the parking utilization at each on-street and off-street parking facility during the system wide peak (11:30 a.m. to 1:30 p.m.).

**Exhibit 3-4: Oshawa Weekday Parking Utilization Map (11:30 a.m. – 1:30 p.m.)**





As illustrated in **Exhibit 3-4**, a moderate number of on-street and off-street facilities were observed to operate at or above the 85% effective capacity threshold. Operations such as these are expected as users are known to concentrate near popular destinations.

Research indicates that the distance travellers are willing to park from their destination varies depending on factors such as type of establishment and type of parking facility. Research by Mary S. Smith, Thomas A. Butcher, and the Victoria Transport Policy Institute, suggest the maximum walking distances presented in **Exhibit 3-5** for the corresponding land uses presented in **Exhibit 3-6**.

**Exhibit 3-5: Maximum Walking Distance**

Walking Environment	L.O.S. A	L.O.S. B	L.O.S. C	L.O.S. D
Climate Controlled	300 m	730 m	1,150 m	1,580 m
Outdoor / Covered	150 m	300 m	450 m	600 m
Outdoor / Uncovered	120 m	240 m	360 m	480 m
Through Surface Lot	100 m	210 m	320 m	420 m
Inside Parking Facility	90 m	180 m	270 m	360 m

\*Note: L.O.S. is defined as level of service

**Exhibit 3-6: Walking Distance Targets**

Adjacent	Minimal (L.O.S. A or B)	Median (L.O.S. B or C)	Long (L.O.S. C or D)
People with disabilities	Grocery stores	General retail	Airport parking
Deliveries and loading	Residents	Restaurant	Major sport / cultural event
Emergency services	Medical clinics	Employees	Overflow parking
Convenience store	Professional services	Entertainment center	
		Religious institution	

Land uses within an U.G.C. primarily consist of general retail, restaurant, employees, and entertainment centres. Considering **Exhibit 3-5** and **Exhibit 3-6**, outdoor / uncovered parking opportunities within 240 – 360 metres are considered acceptable distances for most U.G.C. land uses.

Based on the observed operations, it is likely valid that some users perceive a shortage in parking with occasional difficulty in finding an available space at some of the busier parking facilities. However, sufficient parking opportunities were observed to be available within acceptable walking distance to accommodate any excess demand.

Given that the system wide parking occupancy is below the 85-90% effective capacity threshold, and that parking opportunities remain available near facilities operating above effective capacity, the existing parking supply is considered sufficient to accommodate the existing parking demand.

## 3.2 Future U.G.C. Parking Operations

While the existing U.G.C. parking supply is considered sufficient to meet the current parking demand, significant growth is projected by 2031. With the objective of meeting future parking needs, future parking operations were assessed under the 2024, 2029, and 2031 horizon years.

### 3.2.1 Parking Supply and Demand Projections

Existing parking patterns form the base for the forecasted future parking demand. To estimate the future parking demand, the existing parking demand was adjusted to account for the following:

- **New non-residential developments:** by the 2031 horizon year, parking demand is anticipated to grow by approximately 490 vehicles in the U.G.C. as a result of non-residential growth;
- **New residential developments:** the 40 King Street West development is anticipated to generate a parking demand of 38 vehicles, and the 68-72 King Street East development is anticipated to generate a demand of 45 vehicles. These vehicles were assigned to the nearest Parkade;
- **Mode split changes:** Assuming the City is able to achieve a mode share reduction of 0.6% per year, parking demand by the 2031 horizon year is anticipated to decrease by approximately 170 vehicles compared to existing conditions (0.6% per year); and
- **Municipal parking supply changes:** When accounting for the parking supply losses due to transit improvements, streetscape projects, cycling improvements, the municipal parking system is anticipated to be reduced by 62 spaces.

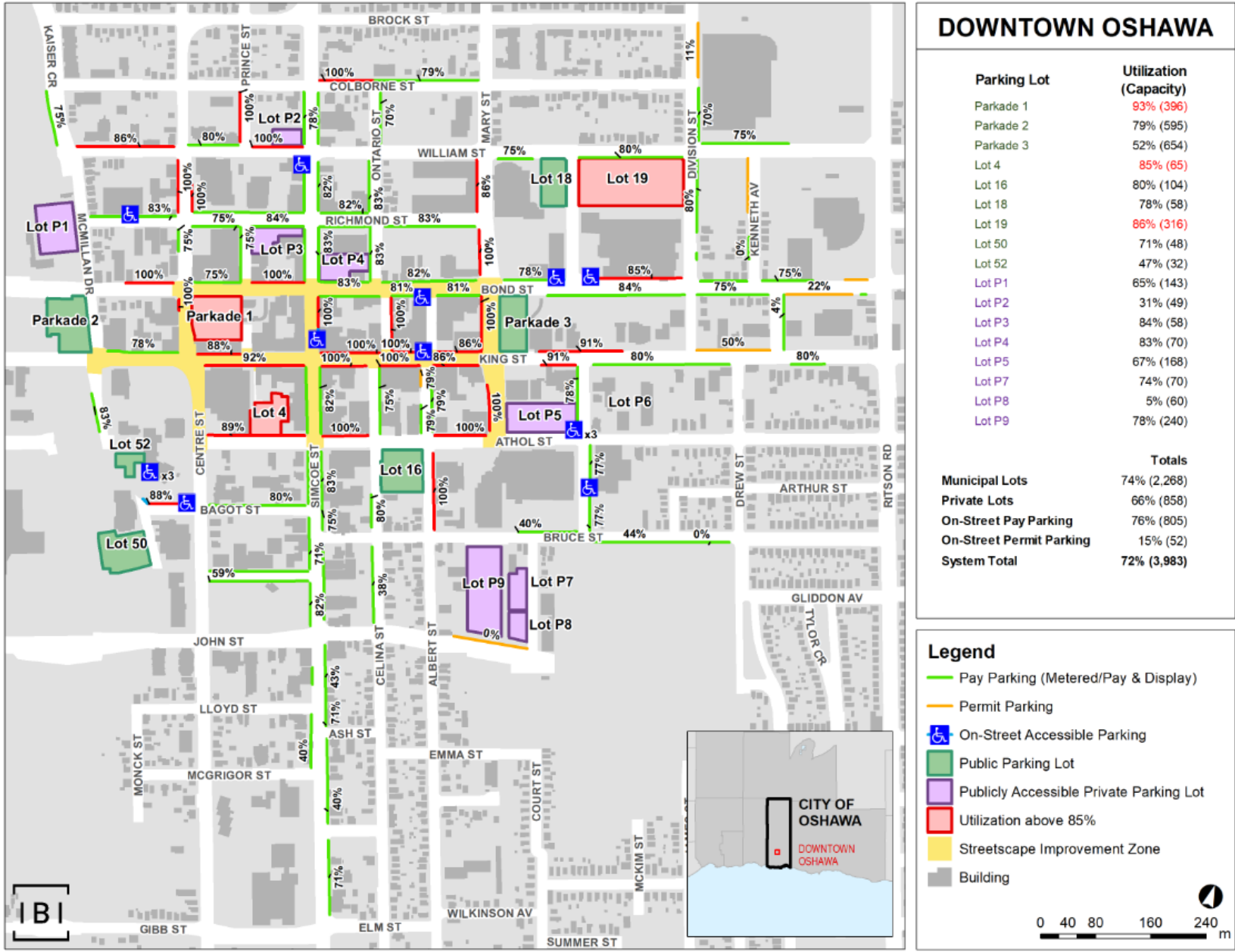
### 3.2.2 Future Parking Operations

The U.G.C. parking system's future performance is projected by consolidating the above parking supply and demand changes. To evaluate whether operations are projected to be acceptable, parking facilities operating above effective capacity were identified, and the available parking facilities within an acceptable walking distance were examined. If sufficient capacity was identified nearby to accommodate any excess parking demand, then operations were considered acceptable. Parking operational issues were identified if the parking system did not have available parking in close proximity to facilities operating near or at capacity. Parking demand was capped at each facility's supply. If demand was projected to exceed capacity, the excess supply was reallocated to a nearby parking facility with available capacity.

In general, the 2024 and 2029 assessment revealed that system wide utilization remains below the 85% effective capacity threshold. Some individual parking facilities continue to operate near capacity, however parking opportunities remain available within acceptable walking distance (300-400m) of all of these parking facilities. Based on these results, the Oshawa parking system is anticipated to be able to accommodate the projected parking demand in 2024 and 2029. Detailed findings for the 2024 and 2029 horizon years are provided in Appendix B.

The projected 2031 parking operations in the Oshawa U.G.C. is illustrated geographically in **Exhibit 3-7**.

**Exhibit 3-7: Anticipated 2031 U.G.C. Parking Demand Map**



The assessment of Oshawa's projected 2031 parking operations revealed the following:

- During the period of peak demand, the U.G.C. parking system is projected to operate below capacity (72% utilization);
- The municipal off-street parking system is projected to operate at 74% utilization, with Lots 4 and 19 and Parkade 1 operating above effective capacity;
- The private off-street parking system is anticipated to operate with available capacity (66% utilization). All off-street parking facilities are projected to remain below effective capacity; and
- Overall, on-street system is projected to operate with under effective capacity (72% utilization). In general, streets operating near or at capacity were located in the Streetscape Improvement Zone.

As parking demand continues to grow, it's anticipated to more and more users will perceive a shortage in parking with occasional difficulty in finding an available space at some of the busier parking facilities. However, even with the demand growth, parking opportunities are anticipated to continue to be available within acceptable walking distance. Based on these results, parking operations in 2031 are projected to be acceptable.

Given these findings Oshawa is recommended to focus efforts towards better distributing parking demand throughout the U.G.C. parking system. With a better distributed demand, the number of users who perceive a shortage in parking can be managed. Strategies aimed at improving the distribution of parking demand include wayfinding technologies, variable parking prices, parking user restrictions, parking time restrictions, and redistributing permit sales. Oshawa could consider developing a parking wayfinding strategy as a next step.

Oshawa is recommended to pay close attention to on-street parking operations in the Streetscape Improvement Zone, as a large portion of streets are projected to operate near or at capacity. Further on-street parking supply losses to the potential streetscape projects would further deteriorate operations. In the event a significant number of on-street spaces are lost, Oshawa is recommended to promote Parkade 3 as a nearby facility with available transient parking opportunities.

### 3.3 Future Transportation Hub Parking Operations

Parking demand in the two future T.H.s is envisioned to be meet through private parking supply as part of development applications. In other words, the municipal parking system is not proposed to serve the T.H.s.

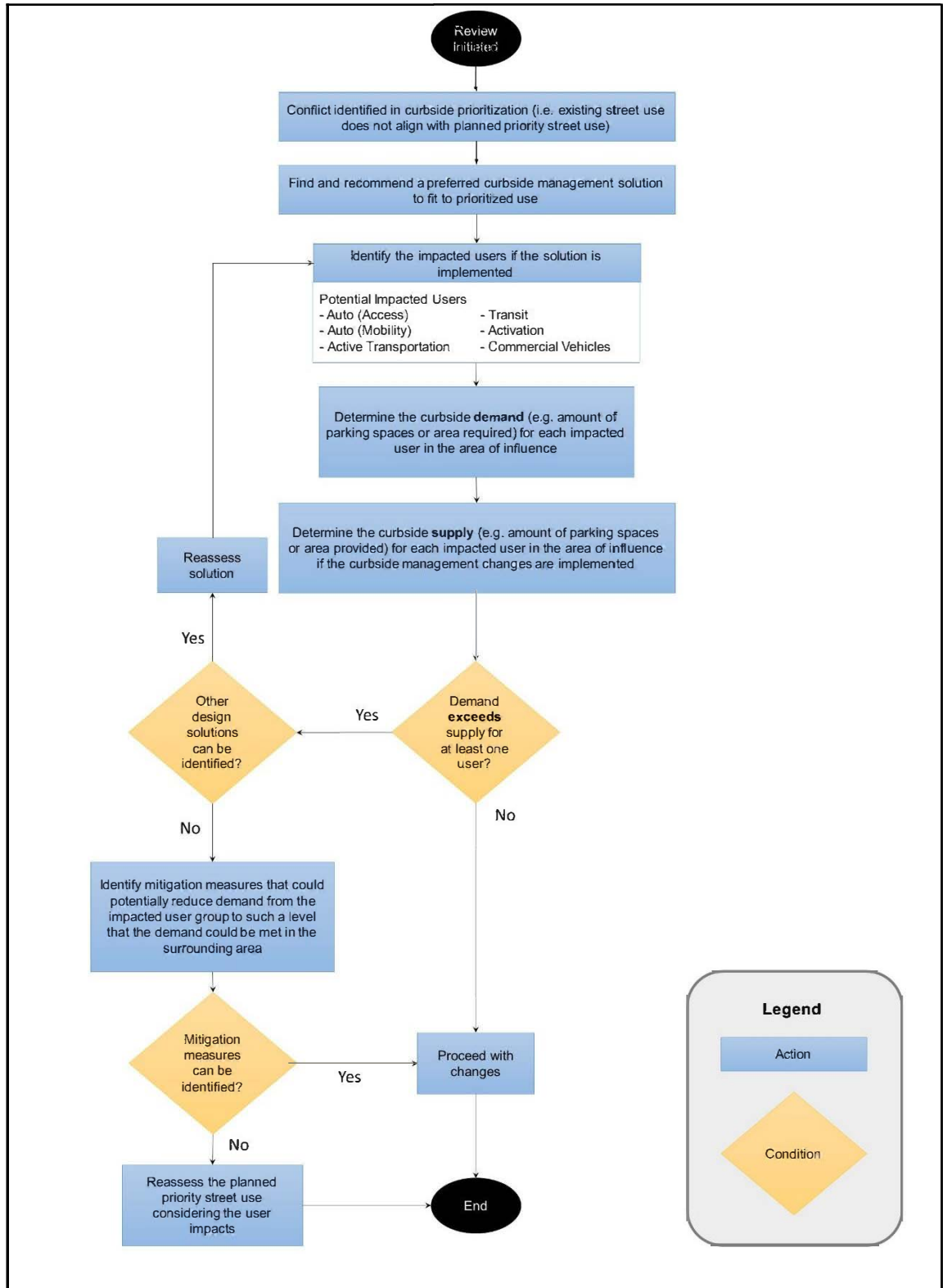
Oshawa's primary strategy for managing private parking supply is through the Zoning By-law parking requirements. Given the high density, mixed use, and transit oriented developed planned for the T.H.s, the parking demand generated by developments within the T.H.s are expected to be lower than they would be elsewhere in the City. To ensure that sufficient on-site parking is provided without an oversupply, Zoning By-law parking requirements tailored to the T.H.s unique context need to be developed.

Private developers should also be encouraged to manage parking demand by adopting T.D.M. strategies, such as carshare, expanded bicycle parking, shared parking, and/or unbundled parking. Best practice T.D.M. strategies and their impacts on parking demand will be reviewed in detail in Section 4.4.

### 3.4 Curbside Decision Making Framework

In order to address competing uses at the curbside and ensure efficient use of public space, a decision making framework was developed. The proposed framework achieves this by identifying locations where the existing priority curb use and the planned priority curb use are not aligned. By identifying exactly where these misalignments occur, changes to existing curb use can be recommended to better serve the stated priority use in a given location. The framework is shown as a flowchart in **Exhibit 3-8**.

### Exhibit 3-8: Decision Making Framework Flowchart



In the proposed framework, a curb space prioritization review is initiated by any event that includes the assessment of road or curb use (i.e. adjustment to on-street parking facilities, resident complaint, T.M.P., etc.).

The first step is to identify which use is currently being prioritized and which use is planned to be prioritized in a given location. The existing prioritized use is identified based on the current infrastructure in place and the utilization of that infrastructure, whereas the future prioritized use is identified based on planned projects, corridor improvements, or other changes recommended in T.M.P.s, A.T.M.P.s, or other strategic planning documents.

For both existing and future prioritized uses there are six user groups that can be impacted including Auto (Mobility), Auto (Access), Transit, Activation, Active Transportation, and Commercial Vehicles.

Once a conflict between existing and future prioritized uses is identified, the impacts of the recommended modification are then quantified (i.e. km of new protected cycling facilities, number of on-street parking spaces removed, etc.) in order to provide full context to key decision makers. If the future demand for any impacted user group is greater than remaining supply, the project is recommended for modification to attempt to minimize this impact. If the project can be modified no further without voiding the original intention, mitigation measures are then to be identified which help reduce the impact's severity. In the case that no additional mitigation measures can be identified and the impact to users is deemed to be unacceptable based on supply and demand estimates, the planned re-prioritization of that segment may be revisited.

This proposed framework has been applied to the Oshawa U.G.C. to demonstrate its use and output in Section 3.5.4.

### 3.5 Parking Management Plan

The recommended parking management plan is divided into four components:

- Parking Supply Needs;
- Parking Supply Triggers;
- Special Event Parking Strategy; and
- Parking Policies and Regulations.

#### 3.5.1 Parking Supply Needs

Based on the anticipated parking demand in 2031, no parking supply expansions are warranted. While there are some on-street segments that are anticipated to operate above effective capacity (mainly due to the Athol Street Cycle Track and the King Streetscape Pilot), the excess demand on those segments are able to be accommodated in off-street lots within walking distance of the areas approaching capacity. Close attention should be paid to on-street parking operations, as a majority of segments in the Streetscape Improvement Zone are projected to approach effective capacity.



The future parking demand needs in the two future T.H.s are envisioned to be met through private parking supply as part of development applications.

### 3.5.2 Parking Supply Triggers

To remain ahead of a developing city, the parking system in the City of Oshawa needs to evolve. To monitor growth and to inform educated parking management decisions. Oshawa is recommended to collect comprehensive parking supply and demand surveys every 2-3 years.

Regular data collection is especially important following the COVID-19. Given that the vast majority of residents are working from home and are minimizing the amount of trips they make to the Oshawa U.G.C. for recreational purposes, parking demand has significantly decreased since the 2019 parking supply and demand data collection. Parking demand is anticipated to rebound as the world recovers and operations return to normal. However, the lasting operational impacts of COVID-19 and the extent parking demand will rebound are unknown.

Given that near future parking demand is unpredictable, it's important to prepare for a range of demand levels. To remain flexible, parking operational triggers and the associated parking management strategies are recommended. Parking operations are grouped into three possible scenarios.

Parking Trigger			Recommended Action
System wide parking utilization is below 85%.	Individual parking facilities operate above 85% utilization?	Other parking opportunities available within walking distance (300-400 metres)?	
✓	✓	✓	No Action Needed
✓	✓	✗	Adopt strategies that better distribute parking demand to underutilized facilities including parking wayfinding systems, variable parking prices, parking user restrictions, time restrictions, or redistributing permit sales.
✗	✓	✗	Adopt strategies that manage parking demand, such as transportation demand management, or increased parking prices. When all other options are exhausted, construct a centrally located structured parking facility. Size of the facility should be based on the observed parking demand and anticipated parking demand growth.

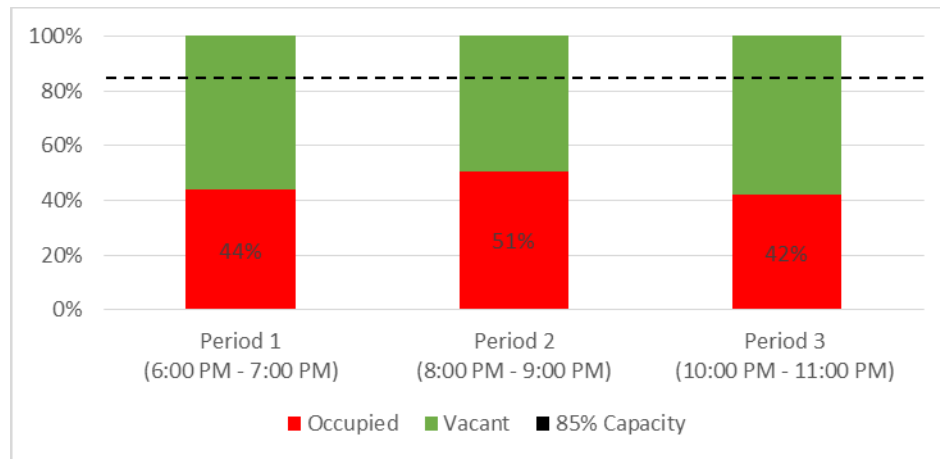
The City of Oshawa regularly hosts special events in the Tribute Communities Centre including concerts, Oshawa Generals hockey games, and performances such as the W.W.E Smackdown. These special events are expected to generate a localized peak in parking demand. A special event parking strategy was developed to help manage parking operations during special events,

To capture parking operations during a special event, a parking demand survey was conducted during the February 9, 2019 W.W.E Smackdown event. The surveyed event (W.W.E. Smackdown) was selected by the City of Oshawa, noting that it was representative of a typical event. The event started at 7:30 p.m. and survey periods were as follows:

- 6:00 p.m. to 7:00 p.m.;
- 8:00 p.m. to 9:00 p.m.; and
- 10:00 p.m. to 11:00 p.m.

The system wide parking utilization observed during the three survey times are summarized in **Exhibit 3-9**. It should be noted that the surveyed area for special events was smaller than the typical weekday and weekend surveys, as the focus was on the area surrounding the Tribute Communities Centre.

### Exhibit 3-9: System Wide Oshawa Special Events Parking Utilization



During the surveyed special event, the parking system experienced a maximum parking utilization of 51%, which occurred between 8:00 p.m. and 9:00 p.m. This was closely tied to the special event that started at 7:30 p.m.

The special event parking supply and demand assessment revealed the following:

- During the system wide peak, the parking system was 51% utilized. On-street parking approached effective capacity with 78% utilization while off-street parking facilities were 44% utilized;
- Several off-street facilities surrounding the Tribute Communities Centre operated at or above effective (85%) capacity; and
- A majority of parking on-street segments operated above effective capacity are contained within walking distance (300 metres) of the Tribute Communities Centre.

Currently, there is cost disparity between special event on- and off-street parking. On-street parking is free while a \$5 flat parking fee is charged in Parkade 3 and in Municipal Lot 16 (two closest off-street lots). As a result, many special event attendees are believed to park on-street, occupying the high turnover premium parking spaces intended to be used by patrons of the local establishments. As observed during the weekday parking survey, some on-street parking segments in close proximity of the Tribute Communities Centre are operating at 50-70% utilization, which indicates parking demand is generated by local establishments.

Oshawa is recommended to adopt the following special event parking strategy.

- **Special events during pay parking operations:** maintain existing pay parking practices.
- **Special events during periods of free parking (after 6:00 p.m. on weekdays or on weekends):**
  - Off-Street Parking: Maintain existing practices (\$5.00 flat rate at Parkade 3 and Lot 16).
  - On-Street Parking: Maintain free parking and adopt a 2 hour maximum parking time limit at all parking spaces controlled by a pay parking device (currently 3 hours during periods of free parking). This will be applied during all periods of free parking, even when special events are not occurring.

The recommended parking strategy maintains consistency with existing off-street practices. The intent of reducing the maximum parking time limit from 3 hours to 2 hours during periods of free parking is to direct special event attendees into the off-street parking facilities. A typical special event is longer than 2 hours, therefore attendees would not be able to park on-street without risking a violation. This should keep on-street parking available for local establishment patrons and free of charge, which maintains consistency with regular free parking operations.

Note that Parkade 3, a 200 metre walk away, is anticipated to have sufficient capacity to accommodate the special event parking demand currently parking on-street. Additionally, the maximum parking time limit reduction is recommended to be limited to the metered and pay by plate on-street parking spaces in the U.G.C. The existing 3-hour maximum parking duration would be maintained outside of the U.G.C.

Proactive enforcement is recommended during special events to ensure compliance.

### **3.5.4 Parking Policies and Regulations**

#### **On-Street Parking Regulations**

By comparing existing curbside uses with upcoming active transportation and transit improvement projects, Oshawa's curbside regulations are evaluated to identify existing regulations targeted for change.

Through a review of Oshawa's planning documents (i.e., T.M.P., A.T.M.P., and I.T.M.P.), five proposed changes to the designated uses of street segments within the U.G.C were identified:

- King Street: to be served by light rail transit and to be converted from a one-way street to a two-way street;
- Bond Street: to be converted from a one-way street to a two-way street;
- Simcoe Street: to be served by light rail transit;

- Athol Street: to be served by a cycle track; and
- William Street: to be served by an active transportation facility.

Note that the scope and status of the above projects are subject to change. Additionally, Athol Street cycle track has since been completed.

### **Free Overnight Parking**

Currently, on-street parking in Oshawa's U.G.C. is free on weekends and weekdays between 6:00 p.m. and 8:00 a.m. of the following morning, and is limited to a maximum of 3 hours unless signed otherwise. Free parking is also provided in the designated permit lots during the aforementioned times. The existing 3 hour maximum time limit prevents users from parking overnight on City streets. However, overnight parking is free in the off-street parking facilities.

Given that no issues with free overnight parking were raised through consultation with Oshawa staff or through phase 1 of the public and stakeholder consultation process, no changes are recommended.

### **Short term On-street Paid Parking**

On-street parking is considered premium parking given its relatively small supply and its proximity to trip destinations. In general, global best practices have established that the limited on-street parking opportunities be used to serve short term visitors of the Downtown core (less than two to three hours). Parking users who wish to park for longer periods ideally park in off-street facilities.

In Oshawa's U.G.C., the majority of on-street parking opportunities are limited to a maximum of 2 hours. Of the 919 on-street parking spaces, approximately 200 on-street parking opportunities for periods exceeding 2 hours (4, 5, or 10 hours). These longer duration on-street parking opportunities are located near the U.G.C.s northeastern corner.

A review of existing parking utilization along the streets with maximum parking durations greater than 2 hours revealed mixed parking utilization. The streets closer to the U.G.C. were operating near capacity while the streets slightly closer to the periphery had available capacity. Given that no operational issues were identified, and that no issues were raised by either City staff, members of the public, or stakeholders, providing long term parking opportunities near the U.G.C. northeastern corner is considered appropriate for Oshawa.

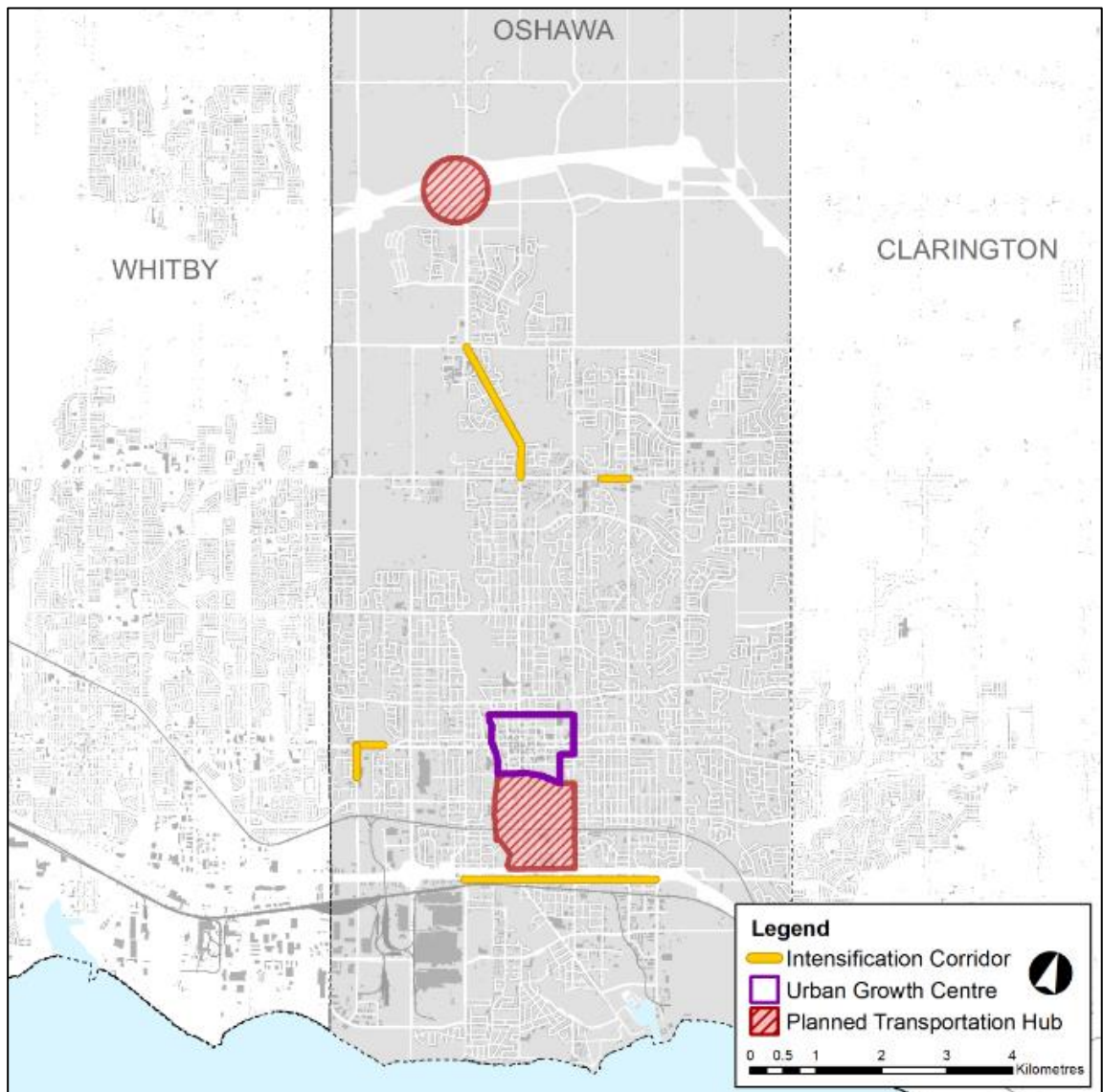
## 4 Develop a Citywide Parking Policy Framework

This task is intended to develop a parking policy framework, update Oshawa’s citywide residential parking standards and regulations, and define the relationship between parking and various transportation demand management strategies.

The complete *Task 3: Develop a Citywide Parking Policy Framework* analysis and findings can be found in Technical Memorandum 3, which is in Appendix C.

The City of Oshawa U.G.C., T.H.s, and I.C.s are illustrated geographically in **Exhibit 4-1**. For the purposes of this study, the three are grouped and referred to as Intensification Areas.

**Exhibit 4-1: Oshawa Intensification Areas**



## 4.1 Vision Statements and Guiding Principles

The parking vision statement and guiding principles are important pieces of policy that help Oshawa staff in making parking related planning decisions.

### 4.1.1 Vision Statements

Self-sufficient, sustainable, and user-friendly municipal parking operations are envisioned for the U.G.C. that meets the parking needs of a rapidly growing City, while promoting alternative modes of transportation. Parking needs should be met through structured parking that are integrated with the urban fabric in a discreet manner that compliments the surrounding area's character. To achieve long-term economic sustainability, engaging forward-looking fiscal strategies are required that are centered on operational efficiency, promote positive financial performance, and support growth.

Parking needs in the T.H.s and I.C.s are envisioned to be met through on-site private parking supply. Private parking demand shall be managed through transit oriented development that is supported by parking requirements tailored to the local environment. Developers should be encouraged to adopt T.D.M strategies such as carshare, shared parking, bicycle parking, and unbundled parking.

### 4.1.2 Guiding Principles

The following guiding principles are recommended for the City of Oshawa to help staff make parking related decisions:

1. Align parking improvements with the guiding principles, and support the policies and strategies outlined by Oshawa's other planning documents (Official Plan, Integrated Transportation Master Plan, Active Transportation Master Plan, etc.).
2. Meet future parking needs while promoting and facilitating alternative modes of transportation such as walking, carpooling, vanpooling, cycling, and transit.
3. Cater on-street parking towards short term parking users, while directing long term parking users to off-street facilities.
4. Implement financial practices and strategies aimed at financially stable and self-sufficient parking operations.
5. Minimize surface parking in the Intensification Areas. Where required, locate surface parking in the rear of the development and implement tree canopies and vegetation to manage the urban heat island effect and protect against climate change.
6. Promote above grade and underground parking structures that are integrated with the urban fabric in a discreet manner that compliments the surrounding area's character. Above grade structures should aim to have alternative uses on the ground floor. Green roofs should be encouraged.

7. Progress towards municipal parking operations that contribute to an active and attractive U.G.C., and are user-friendly and easy to navigate.
8. Encourage innovative parking strategies such as shared parking, unbundled parking, off-site parking, area specific parking requirements, and parking maximums in the Intensification Areas.
9. Consider parking by-law requirement reductions where it is demonstrated that the reduced parking supply will be sufficient to meet the development's parking needs. Strategies proven to reduce a development's parking demand include increased bicycle parking, being located adjacent to rapid transit, provision of on-site carshare services, and shared parking for mixed use developments.
10. Adopt a policy framework which will support a growing city and can adapt to changing parking preferences.

## 4.2 Parking Policy Framework Development

While future parking operations are projected based on current planning knowledge, Oshawa's exact growth cannot be predicted 100% precisely. To maintain up-to-date and modern parking practices, existing policies and standards must be periodically revisited and updated.

A parking policy framework was developed to provide the City with a recommended methodology that can be used for future parking policy, strategy, and standard updates. The following sections outline the recommended framework methodology.

### 4.2.1 Best Practices Review

The parking policy best practices review is intended to identify parking policies that have successfully been implemented in other municipalities, and to consider these policies for Oshawa. To complete the best practices review, the following steps are recommended:

- Develop a list of 8-10 comparator municipalities.
- Once the comparator municipalities have been established, Oshawa staff should review each municipality's Official Plan and the Parking Master Plan to identify parking policy best practices.
- In addition to the planning documents of comparator municipalities, Oshawa staff are recommended to review new and emerging best practices.
- With a consolidated list of parking policy best practices developed, City staff can evaluate each policy for adoption in Oshawa. Given the desired direction of parking operations, City staff can select which parking policies are considered appropriate.

The best practices review is intended to capture policies related to all aspects of parking, including but not limited to enforcement, regulations, and on-street permits.

#### **4.2.2 Zoning By-law Parking Standards**

Zoning By-law Parking Standards define the parking requirements that developers must adhere to when constructing new developments. The standards outline requirements for items such as parking supply, parking space dimensions, aisle widths, and accessible parking supply.

With respect to parking supply, the best practice is to set requirements at a point where sufficient supply is provided on-site to attempt to prevent parking demand spilling into the surrounding neighbourhood, without providing an oversupply. Setting appropriate parking requirements requires an understanding of typical parking patterns of the various land uses and parking patterns local to Oshawa.

When updating zoning by-law parking requirements, Oshawa staff is recommended to consider the following factors:

- Oshawa's existing parking requirements;
- Parking requirements of the comparator municipalities;
- Parking requirements established by the Institute of Transportation Engineers (I.T.E.) Parking Generation Manual 5th Edition and those established by the Urban Land Institute (U.L.I.) Dimensions of Parking 5th Edition;
- Parking demand spot surveys; and
- Parking demand surveys completed as part of parking justification studies submitted to Oshawa.

#### **4.2.3 Area Specific Strategies**

Parking operations are not anticipated to be uniform throughout the City. Given a focus on transit oriented and high density development, the parking demand generated by a development in an I.A is anticipated to be lower than a similar development located elsewhere in the City. Therefore, area specific parking policies and standards should be developed that cater to the unique parking operations of the given area.

Section 4.3 develops parking requirements for residential developments for both I.A. and the Rest of City. Oshawa is recommended to develop Intensification Area parking requirements for non-residential developments as well based on the methodology outlined in Section 4.2.2.



#### **4.2.4 Macro-level Trends**

Many municipalities' main parking related objective is to provide sufficient parking opportunities to meet the existing and future demand, while promoting alternative modes of transportation (transit, cycling, and pedestrian). It is likely that as Oshawa works towards improving alternative transportation options and citizens become more multi-modal, the demand for shared economy services such as carshare and bikeshare will emerge. Considering these trends, the future personal vehicle mode share is anticipated to be slightly lower than today, resulting in reduced parking demand. This reduction in parking demand is anticipated to be most prevalent in Oshawa's Intensification Areas.

In addition to alternative modes of transportation improvements and emerging macro-level trends, the widespread adoption of autonomous vehicles can potentially have a significant impact on parking demand. While the exact magnitude is uncertain, the latest industry research suggests that parking demand will likely be reduced.

Given the reduced parking demand projections, parking facilities should be designed and constructed in a manner that allows for an easy conversion to an alternative land use should future parking demand be significantly lower than today. For example, the ceiling height in traditional parking structures are lower than the ceilings in some offices and shopping malls. Other design considerations that would need to be accounted include increased loading capacity (parking loads are generally the lowest when compared to other land uses), more windows, different column spacing, grading and slope, and pedestrian access.

### **4.3 Standards and Regulations Review**

Oshawa's primary strategy for managing private parking supply is through the parking requirements specified in Zoning By-law # 60-94 (Z.B.L.). This section proposes new residential parking requirements, assesses the existing parking exemption zone, and considers revisions to the requested residential parking standards.

#### **4.3.1 Residential Parking Requirements**

Oshawa currently has one set of parking requirements for the entire City. By reviewing the parking requirements of the comparator municipalities, many municipalities were determined to have a second set of parking requirements for Intensification Areas. Given the higher population and employment density targets, as well as the transit-oriented development in these areas, a development located in an Intensification Area is anticipated to generate lower parking demand than a similar development located elsewhere in the city. Oshawa's parking standards are envisioned to be designed in the following manner:

- **Rest of City:** general Citywide parking requirements similar to the current ZBL # 60-94 requirements; and,
- **Intensification Areas:** reduced parking requirements tailored to areas targeted for high employment and population density. In Oshawa, these Intensification Areas include the U.G.C. the future T.H., and the I.C.

New residential parking requirements are proposed in this section based on an in-depth review of Oshawa's existing parking requirements, comparator municipality parking requirements, I.T.E. and U.L.I. parking requirements, parking demand spot surveys, and parking demand surveys completed as part of justification studies. Oshawa's existing and proposed residential parking requirements summarized in **Exhibit 4-2**. Detailed analysis for each residential land use is presented in Technical Memorandum 3.

### Exhibit 4-2: Residential Parking Requirement Summary

Land Use	Existing Requirement (Spaces)	Rest of City Proposed Requirement (Spaces)	Intensification Area Proposed Requirement (Spaces)
Single Detached Semi-Detached Street Townhouse	2.00 per unit	2.00 per unit for residents 0.00 per unit for visitors	Not permitted
Duplex	1.00 per unit	1.00 per unit for residents 0.00 per unit for visitors	Not permitted
Block Townhouse	1.65 per unit for residents 0.35 per unit for visitors	1.65 per unit for residents 0.35 per unit for visitors	0.80 per unit for residents 0.20 per unit for visitors
Accessory Apartment	1.00 per unit (plus the residential requirement)	1.00 per unit (plus the residential requirement)	1.00 per unit (plus the residential requirement)
Condominium / Apartment*	1.75 per unit	1.00 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors	0.50 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors
Bed and Breakfast	2.00 plus 1.00 per traveller bedroom	2.00 plus 1.00 per traveller bedroom	2.00 plus 1.00 per traveller bedroom
Group Home	1.00 per 3 residents	1.00 per 3 residents	1.00 per 3 residents
Lodging House	1.00 plus 1.00 per 2 lodging units	1.00 plus 1.00 per 2 lodging units	1.00 plus 1.00 per 2 lodging units
Senior Citizen Apartment	0.50 per unit	0.45 per unit for residents 0.05 per unit for visitors	0.27 per unit for residents 0.03 per unit for visitors
Nursing Home	1.00 per 4 beds	1.00 per 4 beds	1.00 per 4 beds
Retirement Home	0.38 per unit	0.30 per unit for residents 0.15 per unit for visitors	0.30 per unit for residents 0.15 per unit for visitors
Student Housing (New Land Use)	N/A	0.20 per bed for residents 0.05 per bed for visitors	0.20 per bed for residents 0.05 per bed for visitors
University Residence	0.50 per bed	0.20 per bed for residents 0.05 per bed for visitors	0.20 per bed for residents 0.05 per bed for visitors
Other Residential	1.00 per unit	1.00 per unit for residents	1.00 per unit for residents

Land Use	Existing Requirement (Spaces)	Rest of City Proposed Requirement (Spaces)	Intensification Area Proposed Requirement (Spaces)
(1 or 2 Dwellings)		0.00 per unit for visitors	0.00 per unit for visitors
Other Residential (3+ Dwellings)	1.00 per unit for residents 0.00 per unit for visitors	1.00 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors	0.50 per unit plus 0.25 per bedroom after the first 0.25 per unit for visitors

\*Note: A review of the comparator municipality zoning by-law requirements revealed that none of the municipalities recognize dens or bachelor units. Given this finding, the Oshawa is recommended to treat bachelor apartment and den parking requirements similar to the manner in which they are treated in other policy areas: bachelor apartments can be considered as one-bedroom units, and dens are intended to be considered an additional bedroom.

### **4.3.2 Exemption Zone**

Parking exemption zones are intended to promote new developments in targeted areas. However, care must be taken to ensure that the municipal parking system can accommodate the growth in parking demand with minimal private parking supply increases.

In Oshawa, parking requirements for the U.G.C. are tailored through the non-residential parking exemption zone with reduced parking requirements for select residential land uses.

Given that no parking supply issues are projected within the 2031 horizon, the exemption zone can be supported by the existing municipal parking system. Oshawa is recommended to collect parking supply and demand every 2-3 years to monitor parking utilization. When the system wide parking utilization is observed to approach effective capacity (85% utilization), Oshawa should reconsider lifting the exemption zone.

### **4.3.3 Residential Parking Consideration**

#### **Residential Parking Demand**

As determined through Phase 1 of the public and stakeholder consultation, many Oshawa families are living in multi-generational households due to the rising cost of land. The residents of these households typically own multiple vehicles and in some cases experience difficulty in fitting all vehicles on the driveways.

Many Southern Ontario municipalities have successfully adopted on-street permit parking systems including Toronto, St. Catharines, and Clarington, which is intended to provide additional parking opportunities to these types of households.

Based on the background document review, Oshawa has already considered an on-street residential parking permit system and decided against its implementation. Reasons cited include difficulties with on-street parking bans to facilitate snow clearing activities and mixed feedback received from residents.

Given the continued feedback received regarding insufficient parking opportunities at residential developments, Oshawa could reconsider the permit system. Should Oshawa reconsider the residential parking permit system, further investigation would be required to finalize the program details. Note that residents of new developments would not be permitted to purchase on-street residential parking permits. The program is intended to relieve the parking supply issues of existing developments where the parking supply is not sufficient to meet the growing parking demand.

#### **Residential Garage Dimensions**

As requested during the Development Services / Community Services stakeholder meeting, Oshawa's residential garage dimensions were reviewed since the existing size (3.0m width and 5.75m length) is considered too small to fit many personal pick-up trucks.

The sizes of common pick-up trucks are displayed in **Exhibit 4-3**.

**Exhibit 4-3: Pick-up Truck Dimensions**

Truck	Height (m)	Width (m)	Length (m)
Ford F-150	1.93	2.03	5.84
Chevrolet Silverado 1500	1.95	2.06	5.98
GMC Sierra 1500	1.92	2.06	5.98
Ram 1500	1.97	2.09	5.98
Toyota Tundra	1.94	2.03	6.06
Nissan Titan	1.93	2.03	5.79
<b>Average</b>	<b>1.94</b>	<b>2.05</b>	<b>5.94</b>

As displayed in **Exhibit 4-3**, the length of all common pick-up trucks exceeds the existing Oshawa garage dimension of 5.75m.

In addition to examining pick-up truck dimensions, the comparator municipality parking garage dimensions requirements were also reviewed, the results of which are summarized in **Exhibit 4-4**.

**Exhibit 4-4: Comparator Municipality Garage Dimension Requirements**

Municipality	Width (m)	Length (m)
Whitby	3.0	6.2
Pickering	-	-
Ajax	3.1	6.5
St. Catharines	3.5	5.2
Peterborough	-	-
Kingston	-	-
Guelph	3.0	6.0
Barrie	-	-
Burlington	3.0	6.0
Oshawa	3.0	5.75
<b>Average</b>	<b>3.12</b>	<b>5.98</b>

As displayed in **Exhibit 4-4**, the average comparator municipality parking garage length is 5.98m.

Based on these findings, Oshawa is recommended to increase their garage dimensions to 6.2m, which is in line with Whitby’s requirements and is sufficient in size to fit the common pick-up trucks.

## Parking Space Location

As requested during the Development Services / Community Services stakeholder meeting, Oshawa’s parking space location requirements were reviewed. Oshawa’s current residential requirement as per the Zoning By-laws is:

*Any interior side yard or rear yard and any front yard or exterior side yard for block townhouses directly in front of a private garage, provided that no part of any parking area is located closer than 3.0m to any street line.*

The comparator municipality parking space location requirements were reviewed and compared to Oshawa’s. No consistent trend was observed when reviewing the comparator municipality requirements. Therefore, given that no issues were identified with Oshawa’s requirements, the existing requirements are recommended to be maintained.

## 4.4 Transportation Demand Management

Transportation demand management (T.D.M.) initiatives influence travel behaviour by improving and promoting alternative modes of transportation. This improves transportation system efficiency and helps manage parking demand by decreasing the volume of single occupancy vehicles on roads and in parking lots. These initiatives take many forms, including policies, programs, services, and products to influence why, when, where, and how people travel.

The provision of adequate bicycle parking, and shower and change facilities is an important element in the promotion of bicycle use. More bicycle trips will typically reduce the number or growth of vehicle trips and tends to lead to a more sustainable pattern of urban travel. As a method of promoting cycling, Oshawa is recommended to adopt the bicycle parking requirements outlined in **Exhibit 4-5**.

**Exhibit 4-5: Recommended Bicycle Parking Standards**

Land Use	Parking Type	Intensification Area	Rest of City
Commercial including restaurants	Short-term	0.25 spaces/100 m <sup>2</sup> GFA	0.20 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.08 spaces/100 m <sup>2</sup> GFA
General Office	Short-term	0.15 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
	Long-term	0.13 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
Medical Office	Short-term	0.12 spaces/100 m <sup>2</sup> GFA	0.10 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.08 spaces/100 m <sup>2</sup> GFA
Multi-unit Residential	Short-term	0.10 spaces/unit	0.07 spaces/unit
	Long-term	0.68 spaces/unit	0.55 spaces/unit
Post-Secondary School	Short-term	0.60 spaces/100 m <sup>2</sup> GFA	0.40 spaces/100 m <sup>2</sup> GFA
	Long-term	0.10 spaces/100 m <sup>2</sup> GFA	0.05 spaces/100 m <sup>2</sup> GFA

Additionally, the following shower and change facilities requirements are recommended for non-residential developments requiring long-term bicycle parking spaces:

- 2 if 5 to 60 long-term bicycle parking spaces are required;
- 4 if 61 to 120 long-term bicycle parking spaces are required;
- 6 if 121 to 180 long-term bicycle parking spaces are required; and
- 8 if more than 180 long-term bicycle parking spaces are required.

### **Parking Supply Reductions**

The T.D.M. review identifies strategies private developers can adopt to manage the parking demand generated by a proposed development. This section identifies various strategies available to developers and provides guidelines related to their impacts on parking demand, further details are outlined in Technical Memorandum 3. Oshawa is recommended to consider the following T.D.M. strategies:

- **Bicycle Parking:** Adopt a 1 vehicle parking space reduction for every 5 bicycle parking spaces provided beyond the required minimum, up to a max vehicle parking space reduction of 10%.
- **Carshare:** Adopt a 4 vehicle parking space reduction for every carshare vehicle and space provided up to a maximum reduction of 12 spaces.
- **Shared Parking:** Develop shared parking guidelines where parking occupancy rates are provided for AM, midday, PM, and evening.
- **Unbundled Parking:** Consider providing up to a 5% parking requirement reduction (high density residential developments only).
- **Off-site Parking:** Consider allowing developers to meet a small portion of the parking requirement off-site.



## 5 Financial Review

This section examines the historical financial performance of Oshawa’s parking system and develops a preferred parking price Scenario aimed at achieving long term financial sustainability. The complete *Task 5: Financial Review* analysis and findings can be found in Technical Memorandum 4, which is located in Appendix D.

### 5.1 Historical Financial Performance

Oshawa’s historical parking revenues and expenditures between 2014 and 2018 are illustrated in **Exhibit 5-1**.

#### Exhibit 5-1: Historical Revenues and Expenditures

2014-2018 Financial Summary (Inclusive of Fines)				
Year	Total Revenue	Total Expenditures	Surplus/ (Deficit)	Revenue/ Expense Ratio
2014	\$3,610,405	\$2,159,536	\$1,450,869	1.67
2015	\$3,774,767	\$3,945,837	\$(171,070)	0.96
2016	\$3,775,803	\$3,890,886	\$(115,083)	0.97
2017	\$3,805,342	\$4,756,518	\$(951,176)	0.80
2018	\$3,702,337	\$3,599,691	\$102,646	1.03
<b>Total</b>	<b>\$18,668,654</b>	<b>\$18,352,467</b>	<b>\$316,187</b>	<b>1.02</b>

Based on **Exhibit 5-1**, the following is observed:

- Over the 5-year review period, the parking system generated \$18.66 million in revenue, with \$18.35 million in expenditures, resulting in an overall net surplus of \$316,000 and a revenue/expense ratio of 1.02.
- However, while overall healthy, expenditures surpassed revenues for 3 out of 5 years resulting in annual deficits between \$171,000 and \$958,000. In 2014 and 2018, the parking system experienced a surplus of \$1.45 million and \$102,000, respectively; and,
- Annual revenues were observed to fluctuate by \$194,000, while expenditures fluctuated more significantly (by \$2.59 million).

An examination of the historical financial performance of Oshawa’s parking operations indicates that financial sustainability was achieved over the 5 year review period, largely due to the substantial surplus in 2014. However, if it were not for the surplus in 2014, it is expected that the parking system would have operated at a loss due to large investments in capital projects.

Future capital projects such as targeted structural repairs, life cycle safety upgrades, parking lot reconstruction are included in the parking price optimization assessment in Section 5.5.

## 5.2 Municipal Comparison

### 5.2.1 Hourly, Daily, and Permit Parking

To evaluate the appropriateness of Oshawa’s parking prices, and to inform the parking price optimization Scenarios, the comparator municipality parking prices were examined. These prices are outlined in **Exhibit 5-2**.

**Exhibit 5-2: Parking Price Comparison (Excluding H.S.T.)**

Municipality	Permits (Monthly)		Hourly		Daily Limit
	Minimum	Maximum	Minimum	Maximum	
Whitby	\$80.00	\$100.00	\$1.00	\$1.50	\$7.00
Pickering	-	-	-	-	-
Ajax	-	-	-	-	-
St. Catharines	\$65.00	\$100.00	\$1.50	\$1.50	\$12.00
Clarington	\$39.55	\$39.55	-	-	-
Peterborough	\$42.00	\$90.00	\$1.25	\$1.50	\$10.50
Kingston	\$88.50	\$132.75	\$1.50	\$2.00	\$3.00
Guelph	\$67.80	\$158.20	\$2.00	\$2.00	-
Barrie	\$60.00	\$85.00	\$1.00	\$1.25	\$5.50
Burlington	\$83.00	\$132.00	\$1.75	\$1.75	\$5.25
Oshawa	\$73.00	\$87.00	\$1.25	\$1.25	\$12.50
<b>Average</b>	<b>\$66.54</b>	<b>\$102.72</b>	<b>\$1.41</b>	<b>\$1.59</b>	<b>\$7.96</b>

As illustrated in **Exhibit 5-2**, Oshawa’s permit parking prices are within the average of the comparator municipality prices. Additionally, the hourly parking rates are slightly lower than the average of comparator municipalities while the daily maximum rate is higher. These results indicate that Oshawa’s hourly parking rate could be considered below market rate and an increase could be appropriate.

While the parking price assessment in this section provides an overview of how the parking prices in Oshawa compare to similar municipalities, a more detailed assessment of Oshawa’s parking finances is provided in Section 5.5.

### 5.2.2 Free Parking Operations Comparison

Currently, parking is free in Oshawa after 6 p.m. on weekdays and during weekends. Note that parking in Parkade 3 is only free after 9 p.m. on weekdays.

Oshawa’s free parking practices were determined to generally be in line with the comparator municipalities, which are mostly in effect weekday evenings and weekends. It is important to note that Pickering and Ajax, which are also located in Durham Region, provide free parking throughout the city seven days per week, while Whitby generally offers free parking at the same times as Oshawa.

### 5.2.3 Parking Fines Comparison

Parking regulations and restrictions in Oshawa are governed by Parking By-Law 24-2011. Parking fines range from \$30 for an *expired parking meter* violation to \$300 for an *accessible parking* violation

In general, Oshawa's parking fines are observed to be in line with the average of the comparator municipality fines. Some fines are slightly higher in Oshawa, while other fines are slightly lower. Based on this review, Oshawa's parking fines are considered appropriate and recommended to be maintained for the near future.

## 5.3 Financial Best Practices Review

This section provides an overview of potential financial strategies that can be implemented to promote various parking operations. These strategies are aimed at creating a more efficient parking system by promoting underutilized lots, alternative modes of transportation, and parking at times outside of the peak period.

**Variable Parking Rates (Location Based Pricing):** Variable parking prices is a strategy that allows municipalities to promote increased parking utilization in traditionally underutilized locations while managing the demand in the more popular locations. The strategy involves setting higher parking prices in locations known to experience high parking demand while providing lower prices at less popular locations.

**Dynamic Parking Rates (Time and Location based Pricing):** Through the dynamic pricing strategy, higher parking prices are adopted during the periods of peak parking demand than the other periods. This strategy is intended to serve as a transportation demand management measure to control parking demand during peak periods.

**Performance-Based Pricing (Demand, Time, and Location Based Pricing):**

Under performance-based pricing, the price of parking is automatically adjusted based on observed parking demand to maintain a desired utilization. The parking system automatically increases the price of parking if utilization is determined to approach or exceed the desired limit. Performance based pricing requires parking technology capable of automatically tracking occupancy in real time.

**Linking Parking Permit Prices to Transit Passes:** A strategy used to encourage transit as a mode of transportation is to set monthly parking permit prices higher than monthly transit passes. Currently, Durham Region Transit offers a monthly Presto pass at a rate of \$117 while parking permits cost between \$73 and \$87. In other words, driving and parking in Oshawa could be considered more affordable than transit.

## 5.4 Public Private Partnerships

Oshawa could consider a partnership with a private sector client to help support the construction and operation of future parking facilities.

P3s form an agreement between government agencies and private-sector entities that are used to finance, build, operate, or maintain a project, such as a highway (Highway 407 ETR), or in the City of Oshawa’s case a parking facility. Depending on how the partnership is structured, the private entity typically completes construction and owns, operates, and maintains the development for a predefined period with the intent of recovering the costs and generating a profit through user fees. Once the pre-agreed period has passed, the private entity transfers the parking facility’s ownership to the City. Contracts are normally long-term, lasting up to 40 years or longer.

## 5.5 Parking Price Optimization

A parking price optimization model that projects financial operations to the year 2031 was completed to test the financial sustainability of existing prices, and to explore other possible pricing plans. The goal of this exercise is to arrive at a parking price plan that achieves financial sustainability and is affordable for users.

Five parking price scenarios were developed and evaluated, which are summarized in **Exhibit 5-3**.

### Exhibit 5-3: Evaluated Parking Price Plans

Scenario	Permits	Transient
1	No change from current	No change from current
2	10% increase every 5 years	\$0.25 increase every 5 years
3	15% increase every 5 years	\$0.50 increase every 5 years
4	20% increase every 5 years	\$0.75 increase every 5 years
5	25% increase every 5 years	\$1.00 increase every 5 years

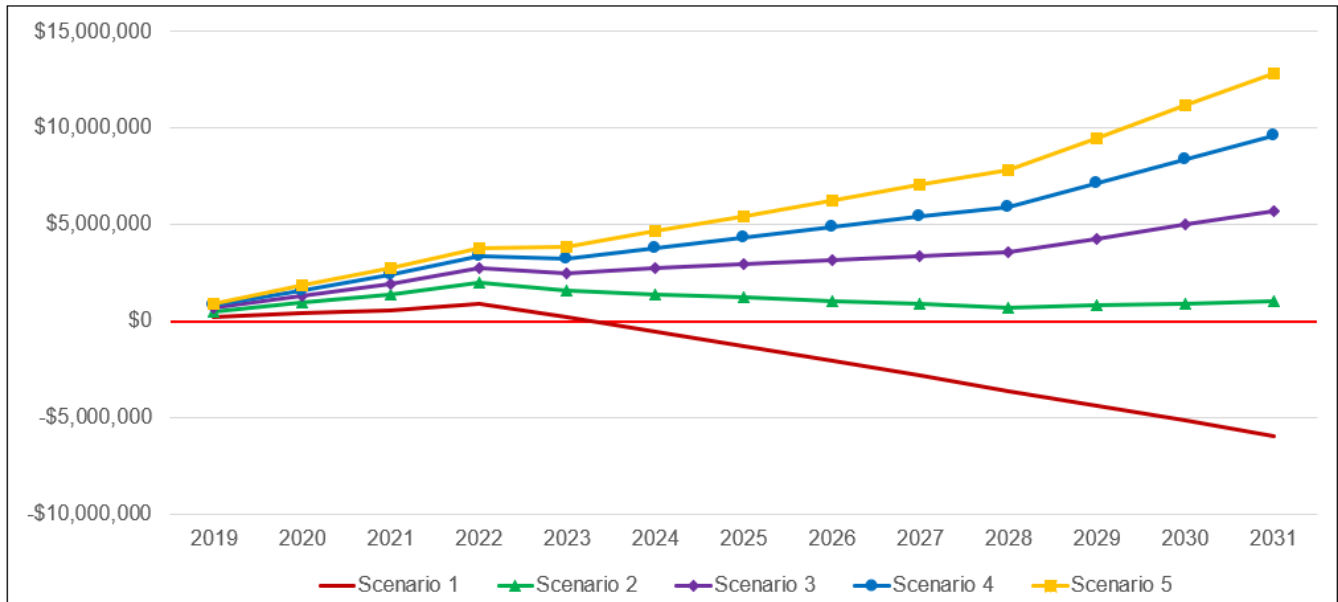
All parking rate increases are presented in present day dollars.

A series of revenue and expense assumptions were adopted to project future financial operations. These assumptions have been confirmed by City of Oshawa staff and are documented in Appendix D.

#### 5.5.1 Parking Operation Projections

The financial performance of each scenario was projected to the 2031 horizon year using the discussed assumptions and inputs. The annual cumulative net position is displayed in **Exhibit 5-4** for all price scenarios.

**Exhibit 5-4: Reserve Fund Projections (Scenario 1-5)**



As illustrated in **Exhibit 5-4**, the 2031 net position for the 5 Scenarios is projected to be:

- Scenario 1 (Do Nothing): \$-5,966,468;
- Scenario 2: \$1,039,255;
- Scenario 3: \$5,722,210;
- Scenario 4: \$9,633,508; and,
- Scenario 5: \$12,829,905

Based on these results, Oshawa’s parking operations are not anticipated to be financially sustainable if parking prices are not increased, as indicated by the deficit under Scenario 1 (Do Nothing). Adopting Scenarios 2, 3, 4, or 5 is projected to achieve financial sustainability.

**5.5.2 Recommended Parking Price Plan**

The operational goal is not to maximize revenue, but rather to set parking prices at a point that manages parking demand while meeting Oshawa’s parking needs. Based on this objective, Oshawa is recommended to consider adopting the Scenario 2 parking price plan. Under Scenario 2, the net position at the end of the projection period (2031) is anticipated to be approximately \$1,039,255, which provides funding for unexpected parking related expenses. By the year 2031, permit pricing will have increased by 33% and transient prices by \$0.75. Note that these increases are comparable with inflation.

**Exhibit 5-5** provides an overview of permit and transient parking prices.

**Exhibit 5-5: Scenario 2 Parking Prices by Time Period**

Parking Type	Current Cost	2019	2024	2029-2031
Monthly Permit (Lot 16 & 19)	\$73.00	\$80.30	\$88.33	\$97.16
Monthly Permit (Parkades)	\$87.00	\$95.70	\$105.27	\$115.80
Transient (Hourly and Daily)	\$1.25	\$1.50	\$1.75	\$2.00
Transient Daily Maximum	\$12.50	\$15.00	\$17.50	\$20.00

If significant parking expenses arise that are not included in this analysis, Oshawa is recommended to update the financial assessment. The Scenario resulting with the lowest cumulative surplus is recommended to be adopted.

Note that on-street parking in the Oshawa U.G.C. has been free during the on-going COVID-19 pandemic. In other words, the revenue collected in 2020 is expected to be less than projected. Depending on the impact’s magnitude, the financial sustainability of the recommended Scenario 2 may be at risk. Oshawa is recommended to evaluate revenue collected in 2020 and 2021, and if necessary, adopt a slightly larger price increase to achieve financial sustainability.

## 6 Cash-in-lieu (C.I.L.) of Parking Program Review

This section examines the feasibility of a Cash-in-Lieu of Parking Program (C.I.L.) in Oshawa’s U.G.C. The analysis uses current parking requirements and development forecasts to estimate program uptake, which is then combined with the proposed CIL rate to understand the potential revenue that the program could generate. The program’s potential revenue is then compared with the construction and land costs for parking facilities to evaluate the program’s feasibility. The complete C.I.L. feasibility review can be found in Appendix D.

### 6.1 Purpose and Legal Framework

The purpose of C.I.L. is to grant developers with an exemption from meeting the Zoning By-law parking requirements in exchange for a payment. The payment collected is then used by the municipality to construct a strategically located parking facility intended to supplement the exempt spaces. Section 40 of the Ontario Planning Act authorizes municipalities to enter into this kind of agreement.

### 6.2 Existing Exemption Zone

Oshawa’s exemption zone impacts the feasibility of a C.I.L. of parking program since it allows developers to construct non-residential developments with no on-site parking. The parking requirements of some residential land uses are also reduced, further impacting the feasibility of a C.I.L program.

### 6.3 Development Forecast Review

To understand the amount of anticipated development in Oshawa, the 2018 Durham Region Development Charges Background Study (D.C.B.S.) population and employment forecasts were reviewed. **Exhibit 6-1** summarizes the U.G.C.s projected residential and non-residential growth by 2031.

#### **Exhibit 6-1: Housing Unit and Non-residential GFA Forecast**

Type	2018 - 2031 Growth	P.P.U./S.F.E	Total Units/G.F.A. (ft <sup>2</sup> )
Population	1,269	1.705	744
Employment	1,580	400	632,000

Source: IBI Group based on 2019 Oshawa D.C.B.S. and 2018 Durham Region D.C.B.S.

### 6.4 Forecast Potential Program Uptake

Given the parking exemption for non-residential units in the U.G.C., this exercise was carried out exclusively for residential development using a parking ratio of 1 parking space per unit. An additional 744 residential parking spaces are projected by the 2031 planning horizon.

Based on the 15% update rate and the projected 744 residential parking spaces, approximately 110 parking spaces are anticipated to be applied for C.I.L. of parking.

## 6.5 Establish a Cash in Lieu Rate

Municipalities generally set the C.I.L. of parking rate based on the cost of construction a parking space or based on the cost of construction plus the cost to acquire land. An analysis of construction and land costs in Oshawa was completed.

### 6.5.1 Parking Space Valuation

A review of both parking construction and land costs in the Greater Toronto Area (G.T.A.) was completed to inform an appropriate C.I.L. rate. Parking construction costs in the G.T.A. are outlined in **Exhibit 6-2**.

#### Exhibit 6-2: Parking Construction Cost Ranges in the G.T.A.

Type	Price Per ft <sup>2</sup>		Cost of Parking Space (400 ft <sup>2</sup> )	
	Low	High	Low	High
Surface Parking	\$ 8	\$ 20	\$ 3,200	\$ 8,000
Freestanding Parking Garages (above grade)	\$ 75	\$ 110	\$ 30,000	\$ 44,000
Underground Parking Garages	\$ 115	\$ 160	\$ 46,000	\$ 64,000

Source: Altus Group Construction Cost Guide, 2019

Future municipal parking facilities are anticipated to be either above or below grade structures, given that surface parking lots are not in line with intensification policies.

To determine the average price per acre, land sales in Oshawa were examined between 2014 and 2019 using the Marsh Reports. The average price of land per acre was determined to be approximately \$850,000 (approximately \$20 per square feet).

### 6.5.2 Cash in Lieu of Parking Formula

The recommended C.I.L. rate can be calculated based on the following formula.

$$C.I.L. Rate = ((Construction Cost + (Land Value \times Area)) \times Share Factor$$

A share factor of 40% is recommended to be applied to the total construction cost and land value per space to provide an incentive for developers to participate in the program. This share factor is based on the comparator municipalities and is at the higher end of the range.

Using the C.I.L. formula, the potential revenue that could be generated by 2031 was calculated and is illustrated in **Exhibit 6-3**. Note that the P.I.L. rate was multiplied by 110 spaces (previously estimated program uptake).



**Exhibit 6-3: C.I.L. Charge and Overall Revenue Generation**

Type	Formula	C.I.L. Per Space (Rounded)	Potential Revenue
Above Grade Parking Structure	$CIL = ((\$30,000 + (\$20*400)) * 0.4$	\$15,000	\$1,650,000
Underground Parking Garages	$CIL = ((46,000 + (\$20*400)) * 0.4$	\$21,500	\$2,365,500

**6.6 Revenue Generation Compared to Parking Facility Costs**

Using the inputs and assumptions outlined in Section 6.5.1, the high-level cost of an aboveground and underground parking facility was estimated. Facility costs are compared with the potential maximum revenue that the C.I.L. could generate to determine program feasibility. A sensitivity analysis was also completed to demonstrate the required program uptake necessary to fund a parking facility. Note that this estimate does not include facility operating and maintenance expenses.

The scenarios are based on a site size of 0.7 acres and a facility that includes 100 parking spaces, in the form of a three-storey parking structure. It is important to note that the smallest Parkade in Oshawa has 396 spaces, and a 100-space parking garage is small in comparison. **Exhibit 6-4** illustrates the findings of the required rates to support the construction of these facilities.

### Exhibit 6-4: Parking Facility Costs and Required C.I.L. Rates

Three-Storey Structured Parking Garage Costs			Three-Storey Underground Parking Garage Costs		
	Low	High		Low	High
Land Cost*	\$600,000	800,000	Land Cost*	\$600,000	800,000
Number of Spots	110		Number of Spots	110	
Cost per spot	\$ 30,000	\$ 44,000	Cost per spot	\$ 46,000	\$ 64,000
<b>Cost of Development</b>	<b>\$ 3,900,000</b>	<b>\$ 5,640,000</b>	<b>Cost of Development</b>	<b>\$ 5,660,000</b>	<b>\$ 7,840,000</b>
<i>*Based on a .70 acre site</i>			<i>*Based on a .70 acre site</i>		
<b>Potential Charge Based on Different Participaton</b>			<b>Potential Charge Based on Different Participaton</b>		
2018 - 2031 Unit Growth	744		2018 - 2031 Unit Growth	744	
PIL Contributing Units (15%)	112		PIL Contributing Units (15%)	112	
<b>Required Charge/Unit</b>	<b>\$ 34,933</b>	<b>\$ 50,519</b>	<b>Required Charge/Unit</b>	<b>\$ 50,698</b>	<b>\$ 70,224</b>
2018 - 2031 Unit Growth	744		2018 - 2031 Unit Growth	744	
PIL Contributing Units (20%)	149		PIL Contributing Units (20%)	149	
<b>Required Charge/Unit</b>	<b>\$ 26,200</b>	<b>\$ 37,889</b>	<b>Required Charge/Unit</b>	<b>\$ 38,023</b>	<b>\$ 52,668</b>
2018 - 2031 Unit Growth	744		2018 - 2031 Unit Growth	744	
PIL Contributing Units (25%)	186		PIL Contributing Units (25%)	186	
<b>Required Charge/Unit</b>	<b>\$ 20,960</b>	<b>\$ 30,311</b>	<b>Required Charge/Unit</b>	<b>\$ 30,419</b>	<b>\$ 42,135</b>

For a three storey above grade parking structure, the combined construction and land costs range between \$3.9 million and \$5.64 million. At the low end, this exercise demonstrates that to fully fund the parking structure using a program uptake factor of 15%, the C.I.L. rate would have to be approximately \$35,000. At the high end of the construction cost range, the C.I.L. rate would have to be approximately \$50,500 to fully cover the 100-space parking structure.

For a three-storey underground parking garage, the combined construction and land costs range between \$5.66 million and \$7.84 million. At the low end, using the 15% uptake ratio, the C.I.L. rate would have to be set at approximately \$50,700 to fully fund the parking facility. At the high end, the C.I.L. rate would have to be set at \$70,200.

#### 6.7 Cash in Lieu of Parking Program Feasibility

A C.I.L. program in Oshawa is not considered feasible under the current policy framework. To generate sufficient revenue to fund a structured parking facility, the C.I.L. rate would be significantly larger than the rates offered by comparator municipalities and would likely be large enough to discourage program participation.

Setting the C.I.L. rate too high will discourage developers from participating in the program and further reduce the potential program uptake. The C.I.L. charge required to have an adequate return exceeds the 50% share factor of total parking facility costs that is the industry standard maximum. In addition, it is unlikely that the program would achieve a 15% uptake rate of total parking spots forecasted in the U.G.C.

## 6.8 Sensitivity Analysis: Program Feasibility with the Parking Exemption Zone Removed

A sensitivity analysis was completed to determine whether the C.I.L. program would be feasible if the U.G.C. parking exemption for non-residential development was removed.

As outlined in Section 6.3, non-residential space in the U.G.C. is estimated to grow by 632,000 ft<sup>2</sup> by 2031 (58,000 m<sup>2</sup>). **Exhibit 6-5** illustrates the resulting number of parking spots that could be generated from anticipated development, and the potential candidates for C.I.L. using an uptake rate of 15%.

### Exhibit 6-5: Non-residential Parking Space Forecast

Building Space Rounded (m <sup>2</sup> )	Parking Spaces Per 100 m <sup>2</sup>	Total Spaces	Potential
58,700	1.30	763	114

When combined with the potential residential program uptake, this results in a total of 224 parking spaces that could contribute to the C.I.L. by 2031. **Exhibit 6-6** illustrates the potential revenue that could be generated from the 224 parking spaces.

### Exhibit 6-6: Potential Program Revenue Generation Including Non-Residential

Type	Charge Per Space Rounded	Potential Uptake (15%)	Potential Revenue
Above Grade Parking Structure	\$15,000	224	\$3,360,000
Underground Parking Garages	\$21,500	224	\$4,816,000

This analysis demonstrates that the C.I.L. program revenue is still not anticipated to be enough to cover the construction cost of a hypothetical 100 space parking structure even if the exemption zone were lifted. As outlined in **Exhibit 6-4**, a 100 space above grade parking structure is projected to cost between \$3.6 and \$5.2 million, while a 100-space underground parking garage would cost between \$5.2 and \$7.2 million.

## 7 Public and Stakeholder Engagement

A key Study task is the engagement of stakeholders and the general public to identify, review, and consider their needs and concerns. IBI Group consulted the general public and stakeholder groups in two phases.

### 7.1 Phase 1 Consultation Activities

Phase 1 was conducted near the beginning of the study (Spring 2019) to obtain feedback regarding existing parking operations, knowledge of existing issues, and desired study outcomes. Phase 1 consisted of Public Information Centre #1 (P.I.C. #1), an online survey, and an online crowdsourced parking hotspot map. Additionally, the City of Oshawa hosted community outreach sessions in the Delpark Homes Recreation Centre, South Oshawa Recreation Centre, and Donevan Recreation Complex.

#### 7.1.1 Public Information Centre #1

P.I.C. #1, held on April 3, 2019 at the Civic Recreation Complex, was a “drop-in” open house format with presentation boards on display to help lead discussions. A formal presentation with a question and answer period was also held during the event. Attendees were encouraged to provide input and feedback.

A questionnaire was prepared and made available to stakeholders and the public in an online survey. The online survey received a total of 369 visitors, of which 144 visitors participated. Common themes identified by responders include the following:

- Respondents would **consider using transit or cycling** instead of driving, if service/infrastructure was improved;
- The majority of respondents believe **new subdivisions/developments should promote alternative modes of transportation** while minimizing parking space;
- **Parking standards** should vary based on the City Zone;
- **Residential parking** is generally easy to find;
- Respondents were split on **parking space sizes**, with most feeling they are either appropriately sized or too small;
- **Parking experiences** vary. Two issues are finding parking in the U.G.C. and a lack of overnight street parking;
- Support for **subsidizing municipal parking** is split;
- More than half of respondents **travel to the U.G.C. and park at least once per week**;
- **U.G.C. parking** is split between on-street and off-street parking;

- The **distance between a parking spot and destination** is preferred to be less than 400m (5 minutes);
- **U.G.C. parking prices** are currently suitable, with respondents split on supporting a **price increase to improve operations**; and
- **U.G.C. parking experiences** are mostly positive, but could be improved by greater flexibility for duration and payment methods.

### 7.1.2 Online Crowdsourced Parking Hotspot Map

An online crowdsourced parking hotspot map was developed to collect location-specific issues. With sufficient responses, parking issue hot spots can be identified. Respondents generally indicated that:

- **Bicycle parking would be helpful** on Bagot Street and King Street East;
- **On-street parking is difficult to find** on Athol Street, Bond Street, and Grandview Street South. The Athol Street and Bond Street difficulties are supported by the existing conditions supply and demand assessment. Grandview Street South was outside of the parking survey study area;
- **Off-street parking is difficult to find** on Woodmount Street, Glovers Road, and Mary Street. Off-street parking utilization near Woodmount Street and Glovers Road is unknown due to these locations being outside of the parking survey study area. Parkade 3, which is located on Mary Street, has abundant capacity to accommodate additional demand. Parkade 3 was observed to operate at 30% utilization during the period of peak parking demand;
- **On-street parking should be limited to one side of Marion Avenue** to allow for easy emergency vehicles travel;
- On-street parking near **the corner of Muirfield Street and Cherrydown Drive** impede sight lines for vehicle turning maneuvers;
- **The 585 Ormond Street parking lot could be expanded** onto available lands; and
- **Buses parking in a no parking zone at 399 Central Park Boulevard** create a hazard for drivers turning on to the street.

### 7.1.3 Community Outreach

In addition to the formal methods of engagement completed as part of Phase 1, the City also hosted information tables at various locations throughout the City as part of a community outreach program. Some comments received at the events included:

- Parking spaces are too small, both length and width, for larger personal vehicles;
- There is not enough parking for your average home (single detached dwelling) - two car parking is not enough, as most households have three or more cars;
- The City should permit on street parking along side streets/smaller streets within residential areas for longer than 3 hours;
- City should retrofit and incorporate electric vehicle charging stations into on-street and off-street municipal parking; and,
- Overnight on-street parking in low-density residential neighbourhoods should require a permit.

## 7.2 Phase 2 Consultation Activities

Phase 2 was conducted near the end of the study (Fall 2020) to present the study's preliminary findings and recommendations. Members of the public and stakeholders were given an opportunity to provide feedback which was used to refine and finalize the conclusions and recommendations.

Due to the on-going COVID-19 pandemic, all Phase 2 consultation activities were completed virtually. Phase 2 consisted of the virtual P.I.C. #2, stakeholder meetings, and an online public survey.

### 7.2.1 Virtual Public Information Centre #2

The virtual P.I.C. #2 was held on October 16, 2020 and it consisted of a presentation outlining the preliminary study conclusions and recommendations followed by a questions and answer period. The preliminary recommendations were well received, and questions were generally centered around the following topics:

- How the 300-400 acceptable walking distance for the U.G.C. compares with the acceptable walking distance in a shopper centre environment?
  - Answer: acceptable walking distance is primarily a function of land use. The acceptable walking distance would therefore be the same give that both environments consist of commercial land uses.
- Can the existing parking prices be justified?
  - Answer: Yes, parking prices are set with the objective of achieving financial sustainability (parking revenues are sufficient to fund parking expense).

- Did the study consider widening residential driveways to help meet parking needs? Additionally, what is driving the recommended garage dimension increase.
  - Answer: A residential on-street parking permit system has been considered by Oshawa. This study is recommending Oshawa reconsider the program to help meet the residential parking needs in certain neighbourhoods. Garage dimensions was a request from the Development Services / Community Services meeting. The existing dimensions were determined to be too small to fit most personal trucks.
- Is a future parking supply expansion considered necessary and did the study consider the impacts of the future Bus Rapid Transit line?
  - Yes, the future conditions assessment accounted for the on-street parking supply losses resulting from the future Bus Rapid Transit line. Future parking system was determined to be able to meet Oshawa's future parking needs, therefore a supply expansion was not recommended.

The event was recorded and is planned to be uploaded to the study website for public consumption. A transcript outlining the full questions and answers is included in Appendix E.

## **7.2.2 Stakeholder Meetings**

Three stakeholder groups were consulted during Phase 2 including, Development Services / Community Services, Building Industry Liaison Team, and Durham Region Homes Builders. Similar to the v.P.I.C., the stakeholder meetings consisted of a presentation outlining the preliminary conclusions and recommendations, followed by a questions and answers period.

### **7.2.2.1 Development Services / Community Services**

The Development Services / Community Services meeting was held on September 15, 2020. The following presents a summary of the meeting discussion:

- The future conditions assessment can already be considered dated as new developments and projects have been accounted since the analysis completion.
  - Answer: The future conditions analysis was completed using the most recent data available at the time (summer 2019). While new developments are anticipated to continuously arise, the study recommends parking operation triggers that Oshawa staff can use to appropriately select when to implement parking strategies.

- Clarify that parking permit holders at Tribute Centre do not use daily parking, and this was accounted for in our analysis (664 total spaces available and currently 580 permit holders).
  - Answer: Parking permits are typically oversold since not all holders are expected to park at the same time. The permit holders were captured in the completed parking surveys and available capacity was observed in the parking structure.
- Can on-street parking permits be considered for residents? These programs are done elsewhere, and they benefit residents and create tax revenue.
  - Answer: We recommended an on-street residential parking permit program. However, the program was previously considered and not approved by Oshawa, so the recommendation was excluded.
- Is the recommended increase in parking space rate of 0.38 (residents and visitors combined) to 0.45 (based on LPAT study information) sufficient for *Retirement Homes*? Can 0.45 for residents + 0.15 for visitors be considered.
  - Answer: We feel justified noting that the recommended *Retirement Home* rate (0.45 spaces per unit) is sufficient to accommodate the needs of residents and visitors. The recommendation was based on parking surveys completed at retirements homes in Oshawa and based on the LPAT case study review.
- Concerned about size of townhouse garages. Too small for typical sized vehicles in Oshawa (pick-up trucks, SUVs). Not enough space in garage for accessibility, particularly with other items in garage (vacuums, tires, etc.).
  - The parking garage dimension review recommends increasing the length to 6.2m from the current 5.75m.

Meeting minutes outlining the full questions and answers are included in Appendix E.

#### **7.2.2.2 Building Industry Liaison Team and Durham Region Homes Builders**

The Building Industry Liaison Team and Durham Region Homes Builders stakeholders were consulted through a combined meeting held on October 15, 2020. The following presents a summary of the meeting discussion:

- Where do stacked and back to back townhouses fit on parking chart?
  - Answer: These land uses are classified as apartments.



- Did the study analysis include size of driveway and parking space widths?
  - Answer: Residential garage dimensions were included but driveways were not considered.
- How are bachelor apartments considered by the recommended parking requirements?
  - Answer: Bachelor apartments are considered 1-bedroom units.
- How are dens considered by the apartment parking requirements?
  - Answer: Dens are considered as an additional bedroom by other policies and should be considered as such for parking.

### 7.2.3 Online Public Survey

The online survey was active on Connect Oshawa between October 15 and October 29, 2020. The survey consisted of 11 questions related to proposed recommendations from this study and user demographics. A total of 23 responses were received from participants, the results of which are summarized below:

- 64% of respondents agree with the recommendation to better distribute parking demand throughout the Downtown parking system;
- 48% of respondents do not agree with the recommendation to reduce the maximum on-street parking from 3 hours to 2 hours in the U.G.C. (30% agreed, and 22% were unsure). This recommendation was proposed to accommodate the Special Event Parking Strategy, and to increase on-street turnover;
- 52% of respondents agreed with the Study's overarching objective of meeting future parking needs while promoting the use of modes of transportation other than personal vehicles;
- 52% of respondents agreed that Oshawa's existing minimum dimensions for parking spaces are appropriate;
- 96% of respondents agreed that parking operations should be financially sustainable;
- 64% of respondents would support a variable parking price structure to better distribute parking demand; and
- If Oshawa needs to increase parking revenues to fund operational or capital expenditures, the preferred strategies were to extend weekday paid parking periods past 6:00 p.m. (10 respondents), charge for parking on Saturdays (10 respondents), increase parking prices (9 respondents), and charge for parking on Sundays (4 respondents). Note that respondents were allowed to select multiple strategies.

The full results summary of the online public survey can be seen in Appendix E.

## 8 Conclusions and Recommendations

The study conclusions and recommendations presented throughout the Final Report are summarized in this section.

### 8.1 Conclusions

#### **Existing Parking Operations**

The U.G.C. parking system was observed to operate with a peak utilization of 60%. While system wide operations are below the 85-90% effective capacity threshold, there are some parking facilities that were observed to operate near or above effective capacity.

It is likely valid that some users perceive a shortage in parking with occasional difficulty in finding a spot at some of the busier parking facilities. However, sufficient parking opportunities were observed to be available within acceptable walking distance (300-400m). Therefore, the existing parking supply is considered sufficient to accommodate the existing parking demand. Strategies aimed at better distributing parking demand are considered appropriate.

#### **Future Parking Operations**

Similar to existing conditions, system wide operations are projected to remain below the 85-90% effective capacity threshold (72% utilization) with some parking facilities operating near or above effective capacity.

With the projected parking demand growth, more parking users are anticipated to experience difficulty in finding an available space than existing conditions. To manage the foreseen difficulties, measures aimed at better distributing parking demand are considered appropriate.

#### **Financial Review**

Over the 5-year review period from 2014-2018, Oshawa's parking system generated \$18.66 million in revenue, with \$18.35 million in expenditures, resulting in an overall net surplus of \$316,000 and a revenue/expense ratio of 1.02. While overall healthy, expenditures surpassed revenues for 3 out of 5 years. Were it not for the large surplus in 2014, it is expected that the parking system would have operated at a loss due to large investments in capital projects.

Oshawa is recommended to consider adopting the Scenario 2 parking price plan. Under Scenario 2, parking permit prices increase by 10% every 5 years and hourly prices increase by \$0.25 every 5 years. Note that these increases are comparable with inflation.

#### **Cash-in-Lieu of Parking**

Based on current land value and capital costs, the cost of constructing a 110-space parking structure is estimated to be between \$3,900,000 and \$5,640,000. The cost estimate increases to between \$5,660,000 and \$7,840,000 for a 110-space underground parking garage.

Based on Oshawa's population and employment projections and typical C.I.L. of parking rates, C.I.L. is projected to generate between \$1,650,000 and \$2,365,000 in revenue.

When comparing projected revenue to estimated parking structure costs, sufficient C.I.L. of parking revenue is not anticipated to be collected to fund a new parking facility. Therefore, the program is not considered feasible in Oshawa.

## 8.2 Recommendations

This section presents the study recommendations grouped into the three implementation timelines: short term (1 – 2 years), medium term (3 – 5 years), long term (6 – 10 years), and on-going. The recommended implementation plan is outlined in **Exhibit 8-1**.

**Exhibit 8-1: Parking Implementation Plan**

Recommendation	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Short Term (1 – 2 years)</b>											
Add a designated parking section to the Official Plan											
Adopt the Scenario 2 parking price plan											
Promote the upper levels of Parkades 1 and 3 as permit parking spaces											
Adopt the recommended parking vision statements and guiding principles											
Implement recommended special event parking strategy											
Develop a T.D.M. checklist using the recommended T.D.M. strategies											
Adopt the recommended bicycle parking requirements											
Adopt the recommended residential parking requirements											
Develop non-residential parking requirements											
<b>Medium Term (3 – 5 years)</b>											
Complete a parking wayfinding strategy to better distribute parking demand											
Re-evaluate an on-street residential permit parking program											
<b>Long Term (6 – 10 years)</b>											
Update parking policies using the developed framework (every 5 years)											

Recommendation	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>On-Going</b>											
Monitor parking demand through regular parking utilization surveys (every 2-3 years)											
Apply recommended parking triggers to identify appropriate strategies using the parking utilization survey findings											
Release additional parking permits are facilities with available capacity using the parking utilization survey findings											
Adjust variable parking prices to better distrusted parking demand using the parking utilization survey findings											
Maintain U.G.C. parking exemption zone, while re-evaluating the parking system’s ability to support the zone using the parking utilization survey findings											
Apply curbside decision-making framework when curbside regulation revisions are needed											