BURNSIDE

Phase 2 Report
Strategic Parking Management Study

Town of Grimsby

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April 2024
300055974.0000

Distribution List

No. of Hard Copies	PDF	Email	Organization Name
0	Yes	Yes	Town of Grimsby

Record of Revisions

Revision	Date	Description
0	December 4, 2023	Initial Submission to Town of Grimsby
1	January 28, 2023	Second Submission to Town of Grimsby
2	April 17, 2024	Third Submission to Town of Grimsby

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1.0 Introduction

The Town of Grimsby (Town) is a fast-growing community located in the Regional Municipality of Niagara. With a historic and attractive downtown and nestled along the shores of Lake Ontario, the Town has attracted tourists to visit, businesses to operate, and residents that can call the Town their home.

With the growth that has occurred, the Town's two busiest commercial areas, Downtown Grimsby, and Grimsby-on-the-Lake, have experienced increased pressures on their transportation system, more specifically increased auto traffic in need of parking. The Town has identified the need to undertake a parking management strategy to address existing and anticipated parking issues and leverage opportunities to enhance their parking management system, which includes infrastructure, policies, and programs.

2.0 Purpose

The Grimsby Parking Management Strategy's needs and opportunities assessment was documented in the Phase 1 Report. By distinguishing between "needs" and "opportunities", the assessment delved into the fundamental requirements that must be met to ensure a comprehensive parking framework, while also recognizing the untapped potential for innovative solutions. This assessment established the foundational requirements that strengthen the parking strategy's development.

This Phase 2 Report documents the recommendations which includes a set of parking management strategies and an implementation plan. These recommendations considered the following policy framework established in Phase 1:

- Support economic development;
- Support ongoing and anticipated development;
- Provide optimal and strategically located parking supply;
- Support sustainable modes of transportation;
- Ensure financial sustainability;
- Ensure efficient distribution and utilization of parking;
- Ensure effective communication with users.

3.0 Summary of Phase 1

Phase 1 of the parking management study for the Town of Grimsby was a step aimed at understanding the existing framework and identifying the needs and opportunities for enhancing the parking system. This phase set the groundwork for developing recommendations in Phase 2.

The initial component of Phase 1 involved a comprehensive review of the current parking system. This included an analysis of existing by-laws, regulations, and policies governing parking within the Town. The focus was on understanding policy framework, identifying any limitations, inconsistencies, or areas for improvement.

A critical aspect of Phase 1 was the collection of parking data over an extended period. This data collection process was designed to capture a wide array of information, including but not limited to:

- Parking occupancy and turnover rates;
- Duration of parking;
- Peak and off-peak parking usage patterns;
- Spatial distribution of parking demand;
- Parking ownership (e.g., private versus public) and their utilization.

This data collection provided a quantitative basis for understanding the current parking pressures in the Town.

To supplement the data-driven approach, Phase 1 also included a significant public engagement component. Engaging with key stakeholders – businesses, residents, and Council – was crucial for gaining a qualitative understanding of the parking issues and concerns.

Based on the data collection and engagement, the main issue to address in the Downtown Study Area is the need to optimize the existing parking supply. For example, during the data collection, when the Balsam Lot reached 87% occupancy at 2:00 p.m., the Elizabeth Lot was at 43% occupancy. Although drivers were most likely looking for parking in the Balsam Lot, there was ample opportunity to park in the Elizabeth Lot. The Phase 2 Report should address barriers to parking in these less utilized lots and address solutions to ensure optimal use of these two lots.

The main issue to address in the Grimsby-on-the-Lake Study Area is the use of the visitor spaces in NNSCC289. The use of these spaces has been a point of contention for business owners and the condominium boards.

Other parking needs that were established in both study areas included the need to balance the parking needs between visitors and employees, accommodate for high-turnover trips, and support deliveries. Finally, the Phase 2 Report should address future parking needs by conducting parking demand forecasting to ensure the Town has the appropriate plans in place to accommodate for future demand.

4.0 Future Parking Conditions

Future parking demand and supply from new developments were forecasted for the 2030 and 2041 horizon years. Generally, this methodology involves estimating the additional employment within the study areas, forecasting the parking demand based on commercial land uses, and adding the parking demand onto the existing parking conditions collected for this study. The methodology used to determine the forecasts is outlined below:

1. Future additional employment in the study areas from commercial developments were estimated using forecasts from the Town of Grimsby's Development Charges Background Study (2020) or "DC Background Study". Employment forecasts were measured in non-residential gross floor area (e.g., commercial GFA). This assumes that developments in other land uses can provide sufficient parking to meet future demand.

2. The commercial parking demand for commercial land use was forecasted based on the employment estimates using the Institute of Transportation Engineers (ITE) Parking Generation Manual. This commercial parking demand includes the demand from all users including visitors and employees.

3. Because private developments supply private parking, the future commercial parking supply was forecasted using parking rates from the Town's zoning by-law. If the forecasted commercial parking demand exceeds the commercial parking supply, this demand becomes municipal demand.

Although the additional population and employment forecasts identified in the DC Background Study were between the years 2020 and 2031 and between the years 2020 and 2041, the assessment assumed that the parking demand generated from the additional developments could be added onto the 2023 existing conditions year. This assumption provides more conservative estimates and fairly assumes that there is a lag between developments being completed and developments being fully occupied.

The methodology and assumptions are detailed in **Appendix A**.

In summary, in the Downtown Study Area, by 2030 there is sufficient supply to meet the anticipated demand. By 2041, mitigation may be needed to ensure adequate parking supply based on current regulations. In the Grimsby-on-the-Lake Study Area, by 2041 there is sufficient supply to meet anticipated demand for short duration trips (e.g., trips less than three hours). More supply is required for long duration trips.

5.0 Downtown Grimsby Recommendations

This section documents the recommendations for the Downtown Grimsby Study Area.

5.1 Operational Recommendations

5.1.1 Introduce 2-Hour Parking Limits on Balsam Lot and Main Lot

To continue to provide high levels of service for visitors to Downtown Grimsby and to encourage turnover, a two-hour parking limit at Balsam Lot and Main Lot is recommended between 8:00 a.m. and 6:00 p.m. This regulation would shift long-term parking demand to other parking areas within the Downtown allowing more supply for short-term visitors.

Data collection conducted during the first phase of this study showed that 65% of parked vehicles stayed in municipal spaces in the Balsam Lot within two hours. Data collection showed that 70% of parked vehicles stayed in publicly operated spaces (privately-owned or municipally-owned) in the Main Lot within two hours. Between the Main Lot and Balsam Lot, this two-hour limit would shift approximately 90 vehicles during the peak hour to other parking areas of the Town. Based on the data collection, there were approximately 213 spaces available for long-term parking within the Downtown area within reasonable walking distance of the commercial core (e.g., Main Street between Ontario Street and Christie Street).

To understand reasonable walking distances, research from the National Parking Association was conducted and service levels were defined as summarized in **Table 1**.

Table 1: Walking Levels of Service to Parking Facilities[1]

Parking Type	A	B	C	D
Climate Controlled	1,000 ft (304.8 m)	2,400 ft (731.5 m)	3,800 ft (1,158.2 m)	5,200 ft (1,585.0 m)
Outdoor/Covered	500 ft (152.4 m)	1,000 ft (304.8 m)	1,500 ft (457.2 m)	2,000 ft (609.6 m)
Outdoor/Uncovered	400 ft (121.9 m)	800 ft (243.8 m)	1,200 ft (365.8 m)	1,600 ft (487.7 m)
Through Surface Lot	350 ft (106.7 m)	700 ft (213.4 m)	1,050 ft (320.0 m)	1,400 ft (426.7 m)
Inside Parking Facility	300 ft (91.4 m)	600 ft (182.9 m)	900 ft (274.3 m)	1,200 ft (365.8 m)

[1] Smith, Mary, “How Far Should Parkers Have to Walk?”, National Parking Association, May 2008

For the purposes of this study, if the walking distance from a parking space (on-street or in a surface lot) to the commercial core was greater than 500 m, the space would not count towards the municipal parking supply as it would be considered LOS E or LOS F under the Outdoor/Uncovered Parking Type. The commercial core was defined as Main Street between Ontario Street and Christie Street in the Downtown Study Area. Using this defined level of service, all parking spaces within the Downtown Grimsby Study Area are considered as having adequate levels of service to the core commercial area.

These 213 spaces include on-street parking spaces that have 16-hour parking limits; thus, Ontario Street, Adelaide Street, Elm Street, Main Street, and Doran Avenue were not included in that count. The 213 spaces also include off-street parking lots including the Elizabeth Lot and the Lions Pool Lot.

Prior to implementation, the Town should consider a focused advertising and marketing campaign on social media and other outlets to inform the public about this change and to indicate areas where there are no timed parking restrictions. This can act as an educational campaign as well notifying the public about areas to park that are less popular but within reasonable walking distance to the core.

The Town can consider continually monitoring parking utilization and turnover within and outside of the 8:00 a.m. and 6:00 p.m. period. Using this information, the Town can assess if the period should change.

5.1.2 Additional Parking Supply Using Existing Resources

Additional short-term parking supply can be provided in Downtown Grimsby by implementing the following initiatives:

- Expanding parking sharing agreements to all businesses that own parking spaces in the Downtown core such as in the Main Lot and Balsam Lot. Utilization surveys indicated that Balsam Lot's privately-owned parking spaces had low levels of utilization, suggesting that employees may not require all these spaces that are dedicated to them. The peak utilization for privately-owned space in the Balsam Lot was 39%.
- Dedicating up to 25% of parking spaces in the Library Lot as "shared spaces" between visitors to the Library and visitors visiting Downtown. Utilization surveys indicated that this parking lot had low levels of utilization throughout the day and can accommodate additional demand. The peak utilization for Library Lot spaces was 47%.

To promote an efficient and cost-effective system for the Downtown, the Town can consider expanding their municipal supply through the provision of agreements with other private owners located within the Downtown Study Area. Based on business consultation, low utilization was observed in other privately-owned areas where parking

surveys were not conducted. This strategy is cost-effective as it allows the Town to expand their supply, if needed, without the expense of additional parking structures as joint agreements are usually much cheaper than the construction and operational costs associated with parking structures. This strategy is also an efficient use of existing space, as these privately-owned spaces are not efficiently utilized.

5.1.3 Special Parking Zones

To accommodate deliveries to businesses, one commercial loading zone can be considered in the Main Lot and one commercial loading zone can be considered in the Balsam Lot. These commercial loading zones should be able to accommodate medium-sized delivery vehicles. The Town can consider facilitating discussions with business owners and couriers through an Off-Peak Delivery Program.

An Off-Peak Delivery Program is designed to shift the delivery of goods and packages to times of lower traffic and pedestrian activity. The primary aim is to alleviate congestion and optimize parking availability for customers, particularly in areas with high commercial activity and limited parking spaces. Deliveries are scheduled during hours identified as off-peak, typically early mornings, late evenings, or other times when customer traffic is minimal. Businesses are required to coordinate internally to ensure that staff or designated personnel are available to receive goods during these off-peak windows.

By avoiding peak business hours, the program significantly reduces traffic congestion and related disruptions in commercial areas. Customers have better access to parking, as delivery vehicles do not occupy parking spaces during peak business times. Delivery vehicles often encounter less traffic during off-peak hours, potentially leading to faster delivery times and increased efficiency. This program ran as a pilot program at the Region of Peel with much success. Data showed that retailers shifted 23% of deliveries to off-peak hours and as a result, the average trip time decreased by 17%[2].

To accommodate high turnover parking for visitors and courier deliveries, two flexible 20-minute parking spaces can be considered on Main Street West between Ontario Street and Christie Street. One can be located on the north side of Main Street West and one can be located on the south side. These flexible high turnover parking spaces can be implemented as a pilot program. Consultation from visitors, residents, and business owners should be conducted one year after implementation to understand the benefits.

[2] Region of Peel. “After-hour deliveries help reduce traffic jams”, https://www.peelregion.ca/articles/2019/delivery-trucks-reduce-traffic.asp (Accessed November 30, 2023)

If, through the Downtown Reimagined project, parking is removed along Main Street, these high turnover parking spaces should not be added along Main Street. Instead, the focus should be to enhance the pedestrian connectivity between Main Street and the Balsam Lot and Main Lot, which is further detailed later in this Report.

5.1.4 Accommodation of Employee Parking

To accommodate the businesses along Main Street that have limited parking, paid employee permits can be considered for the Balsam Lot and Main Lot. Details regarding this employee permit system are recommended below:

- Employees can park between 8:00 a.m. to 6:00 p.m. by-passing the proposed two-hour parking limits in the Balsam Lot and Main Lot.
- The employee permit can be renewed every month and is available to purchase two weeks ahead of the start of the month.
- The cost of purchasing an employee permit should at least cover the cost of maintenance and operations such as plowing, painting, and enforcement. Other costs to consider include administering, producing, and mailing out the parking permits. A cost of $40 to $80 + HST per employee permit is recommended. However, costs should be subject to change based on maintenance and administration.
- Permits should be used on a “first-come-first-served” basis. Therefore, permit holders do not get a guaranteed spot.
- The business should apply on behalf of the employee.

The Town can consider allocating a set proportion of the parking supply in the Main Lot and Balsam Lot for permits, such as capping the number of available permits at a specific percentage, such as 25% of the total available spaces in these lots. During the application process, the Town can consider a priority framework such as allocating the maximum number of permits for each business to two per business then providing the rest on a first-come-first-served basis or a lottery system.

These permits would be subject to the proposed expanded shared parking agreements in the Main Lot and Balsam Lot.

5.2 Pedestrian Accommodation and Connectivity

5.2.1 Activating Alleyways for Pedestrian Use

The Town can “activate alleyways” by collaborating with business owners and designate specific alleyways for pedestrian use.

A list of amenities that would improve these alleyways include:

- **Lighting:** Well-lit alleyways provide safety and ensure pedestrian comfort during both the daytime and evening time.
- **Artwork:** Art and murals beautify the space which promotes active transportation.
- **Canopies:** Canopies can provide shade and shelter from adverse weather conditions. They can also create an intimate space further formalizing the area.
- **Plants:** Plants are another way to improve the attractiveness of the alleyway while improving air quality.
- **Furniture:** Furniture such as benches, chairs, and tables provide a resting area for pedestrians. They can also incorporate the use of bike racks to promote cycling.
- **Formalizing Identity:** Formalizing names of alleyways or landmarks within them, alleyways would form a sense of identity. Names create recognition which would promote their use as a shared, pedestrian-friendly space.

An alleyway conversion was completed in 2011 in the City of Los Angeles. This alleyway was named the East Cahuenga Alley and cost $800,000. The alleyway was designed by Los Angeles engineers, the business improvement district, and several other local business owners. This alleyway was part of a larger concept for a Walkable Alley network. A before and after picture of the alleyway is shown in **Figure 5-1**.

Figure 5-1: East Cahuenga Alley – Before and After (Source: Design East of LA Brea[3])

[3] Design East of LA Brea. “East Cahuenga Alley Tour”, August 6, 2012, https://designeastoflabrea.blogspot.com/2012/08/east-cahuenga-alley-tour-august-14.html (Accessed November 30, 2023)

A more local example is provided in Beamsville, Ontario where the creation of a mural was organized by the Downtown Bench Beamsville BIA. The mural covers both sides of the alleyway between two buildings along King Street. One of the main goals of this mural was transforming this unused alleyway into an experience that provides value to visitors. The mural is shown in **Figure 5-2**.

These projects would be collaborative projects between business owners and there should be shared costs between the Downtown Improvement Area Association and Chamber of Commerce. These projects are mutually beneficial between the Town and the businesses. Upgraded pedestrian environments contribute to a more attractive and welcoming downtown, which can draw more visitors and customers to businesses. Well-designed pedestrian amenities reduce risks and enhance safety for individuals walking in downtown areas.

Figure 5-2: Beamsville Mural (Source: Niagara This Week[4])

5.2.2 Accessibility

For the purposes of improving accessible parking:

- The current supply of accessible parking spaces should be maintained in the Balsam Lot and Main Lot.
- One additional accessible parking space close to Main Street West should be incorporated in the Main Lot and the Balsam Lot.
- The location of the accessible parking space should also consider direct connectivity using future activated alleyways.
- Depending on proximity and connectivity, either a municipal space or a proposed future municipally-operated private space should be considered.
- Exterior paths between the Main Lot and Balsam Lot and Main Street West should be reviewed to ensure sufficient levels of accessibility. The review should incorporate the guidelines regarding Accessible Exterior Paths of Travel in the Design of Public Spaces Standard of the Accessibility for Ontarians with Disabilities Act (AODA).

[4]Fearns, Nick. "Beamsville mural brings colour to alleyway", October 9, 2020, https://www.niagarathisweek.com/news/beamsville-mural-brings-colour-to-alleyway/article_4fee135c-5346-5377-b08f-1d6440646aaf.html (Accessed November 30, 2023)

5.2.3 Reduced Parking along Main Street

To support the development of complete downtowns, the on-street parking supply along Main Street West can be considered for reduction or elimination. Based on the data collected, the existing parking supply can accommodate for the removal of these spaces. However, the Town is anticipated, based on these recommendations, to have a more influential role in parking management through securing parking agreements with multiple business owners to enhance parking supply. This provides additional assurance that the parking supply would be adequate enough to support the reduction of parking spaces along Main Street.

Main Street would then be allowed to incorporate streetscape elements such as patio space, more landscaping, and wider pedestrian paths for improved pedestrian comfort.

5.3 Design Review of Municipal Lots

A review of all downtown municipal parking lots and Library Lot can be considered to assess if the parking supply can be optimized. This review can incorporate the following:

- Parking spaces should be designed to promote safe and efficient pedestrian movements from the parking space to the transportation network. These design elements should include lighting, pedestrian surface treatment (e.g., markings, sidewalks, pathways, etc.), and signage.
- Lighting plays an important role in maintaining nighttime comfort, provides safe conditions and a sense of security which is important for pedestrian comfort.
- Landscaping and beautification of the municipal lots should be considered to enhance pedestrian comfort which is along the same theme as the recommendation to “activate” the alleyways between the lots and Main Street.
- Surface parking lots should consider the use of low-impact development practices such as permeable pavement and rain gardens to align with sustainability best practices.

5.4 Additional Parking Infrastructure

5.4.1 Parking Supply

Future parking demand was estimated based on available information provided by the Town and several assumptions as part of the calculations. Details are provided in **Appendix A**. Factors that were assumed to increase parking demand over the next 10 and 20 years included general increase in visitors due to enhanced attractiveness of the Downtown and future demand due to increased employment.

The purpose of the forecasts was to determine future parking deficiencies in the Downtown Study Area. To determine these deficiencies, two service levels were defined, one for utilization and one for walk distance. A service level for utilization indicates the maximum target utilization within the Downtown Study Area. A parking utilization threshold represents the point at which a parking facility's capacity is actively used by parked vehicles, usually expressed as a percentage. Exceeding an 85% utilization rate indicates that parking resources are nearing maximum capacity. This can lead to challenges like difficulties in finding parking, increased congestion, reduced accessibility, heightened illegal parking, negative perceptions, economic setbacks for local businesses, and environmental impacts due to prolonged search and congestion.

Providing a parking supply that just meets the future parking demand would mean that the parking utilization would be 100%, exceeding the threshold. To ensure appropriate service levels, an 85% threshold is set as the target. This is captured by the future parking supply where the municipal parking supply target is lowered by 15% to represent the target threshold.

To accurately calculate potential future deficiencies, it is crucial to consider walk distances. If a parking space is significantly far from a destination, it cannot be considered as parking for that destination. To define service levels, research from the National Parking Association was conducted and service levels were defined as summarized in **Table 5-2**.

Table 5-2: Walking Levels of Service to Parking Facilities[5]

Parking Type	A	B	C	D
Climate Controlled	1,000 ft (304.8 m)	2,400 ft (731.5 m)	3,800 ft (1,158.2 m)	5,200 ft (1,585.0 m)
Outdoor/Covered	500 ft (152.4 m)	1,000 ft (304.8 m)	1,500 ft (457.2 m)	2,000 ft (609.6 m)
Outdoor/Uncovered	400 ft (121.9 m)	800 ft (243.8 m)	1,200 ft (365.8 m)	1,600 ft (487.7 m)
Through Surface Lot	350 ft (106.7 m)	700 ft (213.4 m)	1,050 ft (320.0 m)	1,400 ft (426.7 m)
Inside Parking Facility	300 ft (91.4 m)	600 ft (182.9 m)	900 ft (274.3 m)	1,200 ft (365.8 m)

For the purposes of this study, if the walking distance from a parking space (on-street or in a surface lot) to the commercial core was greater than 500 m, the space would not count towards the municipal parking supply as it would be considered LOS E or LOS F under the Outdoor/Uncovered Parking Type. The commercial core was defined as Main Street between Ontario Street and Christie Street in the Downtown Study Area. Using

[5] Smith, Mary, "How Far Should Parkers Have to Walk?", National Parking Association, May 2008

this defined level of service, all parking spaces within the Downtown Grimsby Study Area are considered as having adequate levels of service to the core commercial area.

Two forecast scenarios were developed to determine a range of parking needs. These scenarios involve the amount of commercial development allocated to the Downtown Main-Street Zone. The Town's zoning by-law also states that in the Downtown Main-Street Zone (DMS):

- Changes from one commercial use to another commercial use within an existing building are exempt from any increase in parking requirements.
- Expansion of an existing commercial use and expansion of the floor area in an existing building is exempt from any increase in parking requirements, provided there is no decrease in existing parking supply where the proposed uses would not otherwise meet the parking requirements.
- Within new buildings, only 80% of the typical commercial parking requirements shall be required.

These two scenarios are differentiated by the proportion of commercial GFA allocated to new commercial buildings or expansion of existing commercial use. In Scenario 1, all commercial buildings were assumed to be new commercial buildings; therefore, would be providing 80% of the commercial parking requirements. In Scenario 2, no commercial buildings were assumed to be new commercial buildings and thus would all be expansions. Therefore, in this scenario, no additional commercial parking would be provided in the DMS zone. Scenario 2 is a "worst-case" parking scenario.

Based on the forecasts, by 2030, if no action is taken by the Town, there should be sufficient supply within the Downtown Study Area. By 2041, if no action is taken by the Town, there would be approximately an eight-space deficiency (Scenario 1) to a 202-space deficiency (Scenario 2).

Scenario 2 assumes that in the Downtown Main-Street (DMS) zone, new commercial development will be expansions of existing buildings, and therefore, no new private parking spaces are required. Through the parking management study, several recommendations were made regarding shared parking using parking agreements between the Town and private owners. This would increase the supply of municipal spaces. Shared parking agreements with private owners with private parking spaces in the Balsam Lot and Main Lot would add approximately 65 spaces to the municipal supply. This number was calculated using the number of private spaces in the Balsam and Main Lots minus the number of used private spaces (presumably from employees) based on the data collection conducted for this study. The remainder provided an estimate of the number of municipal spaces left for the public.

Additionally, optimizing the existing lots would also increase the supply of municipal spaces. The Town conducted a preliminary estimate of the number of spaces this could add to the municipal supply. These estimates include:

- 30 additional spaces in the Balsam Lot;
- 20 additional spaces in the Elizabeth Lot;
- 20 additional spaces in the Lions Pool Parking Lot.

If the Town expands their control over the municipal parking supply with the use of joint parking agreements and optimization of existing lots, this could add approximately 135 spaces. This would reduce the parking deficiency to 67 spaces. It is unlikely that 100% of the commercial developments within the DMS zone would be expansions of existing buildings. Strategies that increase Town control over the municipal supply would be close to eliminating parking deficiencies by 2041. However, a slight parking deficiency may still occur by 2041 if a higher proportion of commercial development is through expansion of existing buildings in the Downtown Main-Street zones.

The forecasts indicate that deficiencies may start occurring post-2030. The assessment indicates that the Town can mitigate these deficiencies by optimizing existing lots and expanding parking sharing agreements to address potential parking efficiencies. The Town can then consider additional parking infrastructure such as a parking structure post-2030 through additional data collection. However, it is important to note that a parking structure is not a simple solution. There are high costs associated with land acquisition, construction, operation, design, and contingency. Although considered as part of the strategy, a parking structure is not recommended at this time.

5.4.2 Electric Vehicle Charging Stations

One additional dual electric vehicle charging station in Downtown Grimsby is recommended in the Elizabeth Lot and the Lions Pool Lot. Four total electric vehicle charging stations would accommodate for existing and anticipated short-term demand for charging. Typically, these charging stations are installed in pairs due to the electrical configuration and cost of implementation. These lots are available for long-term parking needs as opposed to the proposed two-hour parking limits at the Main Lot and Balsam Lot. Typically, chargers for public-use provide Level 2 charging speeds which would not be significant over a 2-hour period.

In the long-term, the Town can consider expanding EV charging stations within the Elizabeth Lot and Lions Pool Lot which would encourage the longer-term parking role of these two lots. The Town can consider leasing public parking spaces to be used for electric vehicle charging to third-party vendors.

6.0 Grimsby-on-the-Lake Recommendations

This section documents the recommendations for the Grimsby-on-the-Lake Study Area.

6.1 Operational Recommendations

6.1.1 Accommodation of Employee Parking

To temporarily accommodate the businesses along Winston Road that have limited parking, especially for the businesses located in Condominium Board NNSCC289, paid employee permits can be provided along Place Polonaise Road and Hunter Road. Details regarding this employee permit are recommended below:

- Employees can park all day while by-passing time limits and restrictions.
- The employee permit can be renewed every month and is available to purchase two weeks ahead of the start of the month.
- The cost of purchasing an employee permit should at least cover the cost of maintenance and operations such as plowing, painting, and enforcement. Other costs to consider include administering, producing, and mailing out the parking permits. A cost of $40 to $80 + HST per employee permit is recommended. However, costs should be subject to change based on maintenance and administration.
- The business should apply on behalf of the employee.

The Town can consider allocating a set proportion of the parking supply along Place Polonaise Drive and Hunter Road for permits, such as capping the number of available permits at a specific percentage, such as 25% of the total available spaces in these lots. During the application process, the Town can consider a priority framework such as allocating the maximum number of permits for each business to two per business then providing the rest on a first-come-first-served basis.

Recognizing that the number of permits may not be able to accommodate all employees' needs, the Town can consider encouraging the use of carpooling from Winston Road, west of Hunter Road where there is currently a 16-hour parking limit. In the future, once additional surface parking is built, the Town should re-consider allocating the permits to the new surface lot.

6.1.2 Special Parking Zones

To accommodate high turnover parking for visitors and courier deliveries, two 20-minute parking spaces should be considered on Winston Road between Hunter Road and Place Polonaise Road. One can be located on the north side of Winston Road and one can be located on the south side. These high turnover parking spaces can be implemented as

a pilot program. Consultation from visitors, residents, and business owners should be conducted one year after implementation to understand the benefits.

6.2 Signage at NNCEC270 and NNSCC289

6.2.1 Overview

During the first phase of the study, current parking signage at NNSCC289 was identified as one source of confusion contributing to issues and concerns with visitor parking. The condominium boards in GOTL are shown in **Figure 6-1**. Further investigation and consultation with the Town's Planning Department, residents, and other stakeholders were required to understand the history and parking situation for the Town. Through these investigations, the original intent of the parking on the south side of Esplanade Lane is outlined below:

- One space per commercial unit and one space per residential unit was allocated, parcelized, and owned by those specific units.
- All the visitor spaces on the south side of Esplanade Lane were to be shared by the residential and commercial units within that mixed-use condominium building located in NNSCC289.
- All parcels of tied land to the common elements including parking spaces located within the common element are to be shared by both the commercial and residential units within all the condominium corporations. These include the mixed-use commercial and residential units on Winston Road, the mid-rise residential structure on Esplanade Lane, and all the townhomes on Waterview Lane, Walters Lane, Esplanade Lane, and Pierre Trudeau Lane.

Owned parking spaces and shared visitor parking spaces at NNSCC289 are shown in **Figure 6-2**.

Figure 6-1: Condominium Boards in Grimsby-on-the-Lake

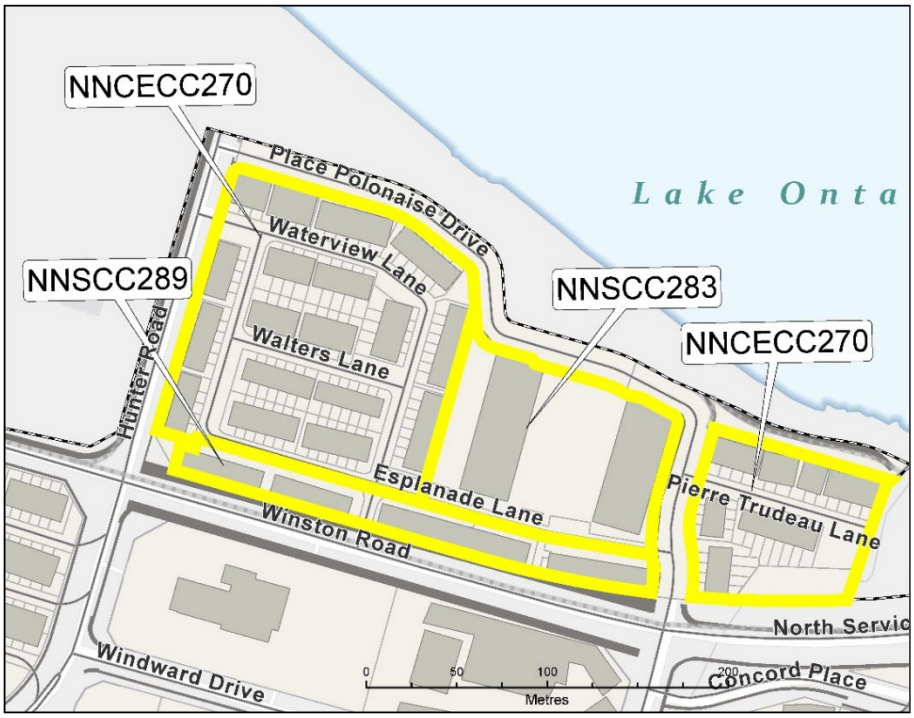
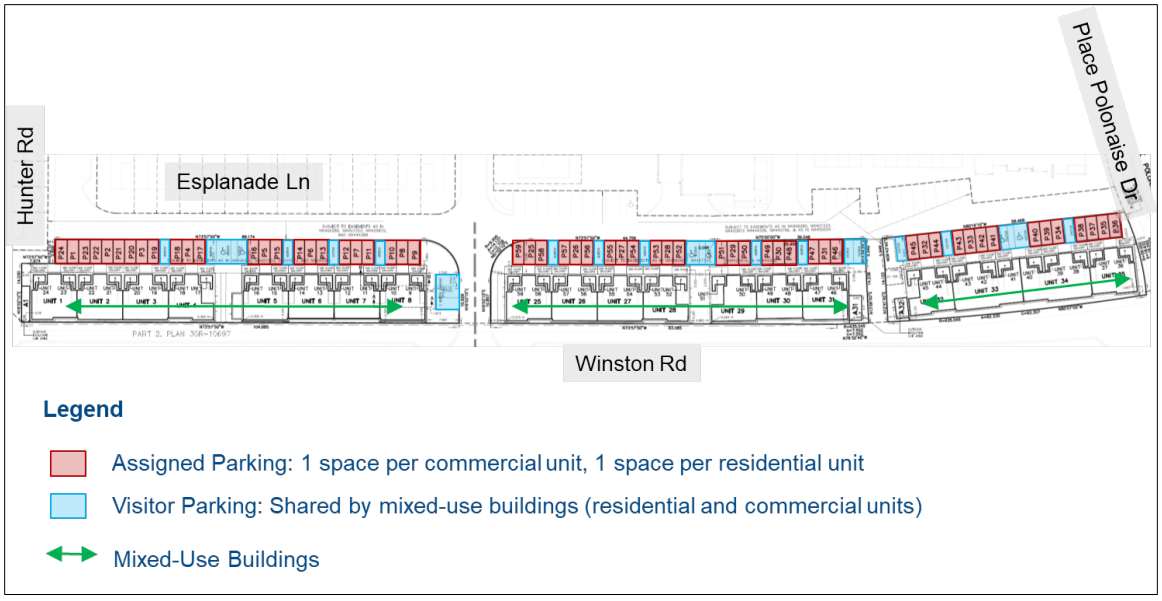


Figure 6-2: Owned and Shared Parking Spaces



6.2.2 Strategies

The Town can consider collaborating with the Condominium Board NNCEC270 and Condominium Board NNSCC289 to provide clearer signage that delineates between residential visitor parking and business parking. Additionally, the Town can consider providing parking and by-law enforcement on private property to assist the condominium boards and reduce confusion. It is important to note that if a private enforcement by-law is created by the Town, there would be signage requirements that would have to be followed by the property owner if they require private parking enforcement.

Existing signage that is displayed close to the entrance of the Esplanade Lot is shown in **Figure 6-3**. Existing signage that is displayed periodically throughout the Esplanade Lot is shown in **Figure 6-4**. More clarity should be provided regarding which space is for businesses and which space is for residential visitors. Reducing signage clutter should be a consideration.

Figure 6-3: Existing Entryway Signage at Esplanade Lot

Figure 6-4: Visitor Parking Sign

6.3 Strategic Recommendations

6.3.1 Collaborations with All Condominium Boards

Due to the current constraints of the parking system in Grimsby-on-the-Lake, the Town should consider working with all condominium boards (NNSCC289, NNSCCC283, NNCECC270) to ensure all visitor parking spaces are allocated and utilized properly. The recommendations regarding employee parking permit and additional parking supply are anticipated to mitigate these concerns once implemented.

6.3.2 Additional Data Utilization Surveys

Once the Casablanca Waterfront project is constructed, it is anticipated that the waterfront will become a destination for Town residents and tourists. As the area becomes more popular, parking patterns is anticipated to change, and the Town should consider conducting another parking utilization survey to understand these changing travel patterns. It is anticipated that Place Polonaise Drive and Hunter Road will attract more parking users.

6.3.3 Electric Vehicle Charging at the Waterfront

Once the parking utilization survey is complete, to support the idea of the waterfront as a destination for tourists, one dual electric vehicle charging station is recommended to be installed adjacent to the waterfront either on-street or on future off-street lots connected

to the waterfront. This would mitigate range anxiety from tourists that own electric vehicles and want to be ensured that they can charge their vehicle while visiting. A potential funding source for these electric vehicle charging stations would be using the Town's Community Benefits Charge which is a revenue tool for municipalities to fund growth and build complete communities.

6.4 Additional Parking Infrastructure

Future parking demand was estimated based on available information provided by the Town and several assumptions as part of the calculations. Details are provided in **Appendix A**. Factors that were assumed to increase parking demand over the next 10 and 20 years included general increase in visitors due to enhanced attractiveness of GOTL, future demand due to increased employment, and future demand due to the Casablanca Waterfront Project. The assessment assumed an increase of 43 municipal spaces provided within a potential development project (398 North Service Road).

The purpose of the forecasts was to determine future parking deficiencies in the GOTL Study Area. To determine these deficiencies, two service levels were defined. One for utilization and one for walk distance. These service levels are further detailed in **Section 5.4.1**. A service level for utilization indicates the maximum target utilization within the GOTL Study Area. A parking utilization threshold represents the point at which a parking facility's capacity is actively used by parked vehicles, usually expressed as a percentage. Exceeding an 85% utilization rate indicates that parking resources are nearing maximum capacity.

For the purposes of this study, if the walking distance from a parking space (on-street or in a surface lot) to the commercial core was greater than 500 m, the space would not count towards the municipal parking supply as it would be considered LOS E or LOS F under the Outdoor/Uncovered Parking Type. The commercial core was defined as Winston Road between Hunter Road and Place Polonaise Drive. Using this defined level of service, the following parking spaces and associated demand were not considered as part of the municipal supply or demand for the purposes of visiting the core commercial area:

- Winston Road, 500 m west of Hunter Road/North Service Road;
- Oakes Road North Leash-Free Dog Park.

Based on the forecasts, by 2030 and by 2040, there is adequate supply to meet the anticipated demand during the peak hour. However, parking supply dedicated to long-term daily visitor parking is absent within the GOTL Study Area. Long-term daily parking within a reasonable walking distance (e.g., LOS A to LOS D) of the commercial core of GOTL is located along Winston Road, between Hunter Road and 500 m west of Hunter Road. This road segment provides parking with 16-hour parking limits. Other

streets within reasonable walking distance of the commercial core have a three-hour parking limit.

Between the year 2030 and 2041, it is anticipated that Winston Road, west of Hunter Road, will be well-utilized leaving little room for long-term daily parking.

Providing a mix of both long-term (e.g., daily) parking needs and short-term (e.g., zero to three hours) parking needs is recommended in the GOTL Study Area. Providing a range of parking options offers several benefits:

- **Addresses diverse user needs:** Different users have varying parking requirements based on the nature of their visit to an area. For instance, employees or visitors that want to visit multiple locations may need longer-term parking, while other visitors may be visiting for fast-food dining which requires shorter-term parking.
- **Reduces congestion:** If longer-term parking is not provided, visitors may feel the need to move their vehicle frequently, which can cause congestion and safety concerns as drivers are focused on looking for a new place to park.

Unlike the GOTL Study Area, the Downtown Study Area offers a mix of short-term and long-term parking to satisfy customer needs. To diversify the supply, a surface lot within the GOTL Study Area is recommended to offer this longer-term parking option to visitors. The Town can consider the implementation of paid parking to recover costs of construction, operation, and design, as well as to control parking demand. Possible parking locations are shown in **Figure 6-5**.

Figure 6-5: Potential Surface Lot Locations within GOTL

7.0 Town-Wide Recommendations

Town-wide recommendations not specific to a particular study area are outlined below.

7.1 User Information

7.1.1 Online Mapping

Online mapping of the on-street and off-street parking supply should be considered on the Town's webpage to provide users more information. These online maps should be included in physical pamphlets that can be distributed to visitors through visitor kiosks, information boards, or permanent sign stands. Alternatively, these pamphlets can be provided to local businesses to distribute to customers.

7.1.2 Wayfinding Strategy

A wayfinding strategy should be considered in Downtown Grimsby that includes signage that directs users to all municipal parking lots. Signage and wayfinding should be developed as a family with a singular theme and brand aligned with the Town's existing branding. The design development process shall include decisions from municipal staff, BIA area businesses, and public consultation. Design elements should include style/theme (e.g., modern, cultural, or historical), logo, colour, material, mapping, and messaging.

The wayfinding strategy should be developed incorporating the following:

1. Analysis of existing signage.

2. Wayfinding signage and gateway signage goals and strategies.

3. Analysis of case studies of similar municipalities.

4. Development of suggested signage family as a basis to develop detailed signage plans.

5. Identification of critical information to include on each signage type for considered implementation.

6. Development of detailed signage considering (logo, accessibility, cartography, etc.).

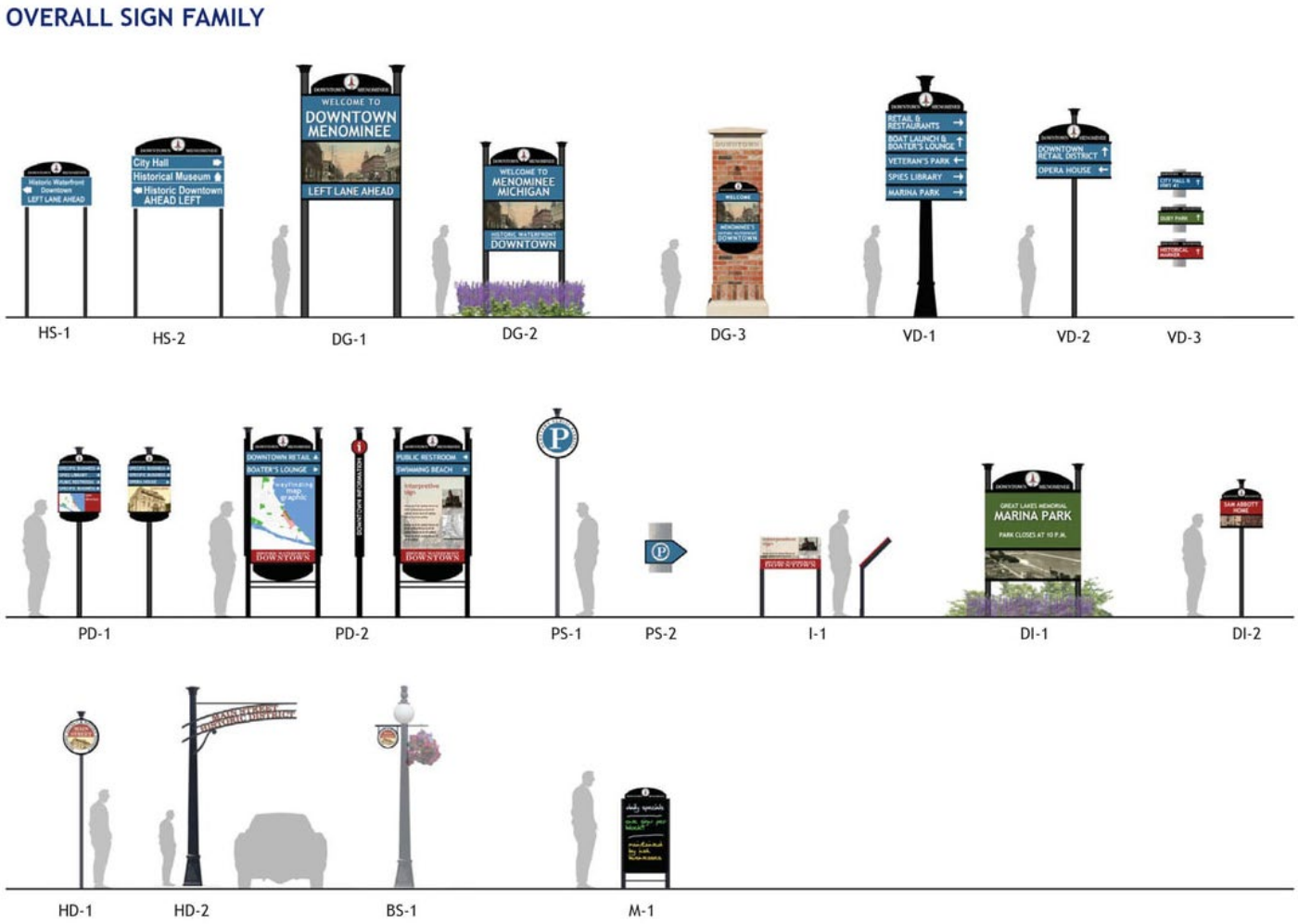
The wayfinding strategy should identify a hierarchy of signs to add clarity to readers. A hierarchical structure ensures that pertinent information is prominently featured, facilitating quick comprehension, and reducing cognitive load for users. An example is highlighted in **Figure 7-1**. Additionally, signs should be created as a sign family to

ensure coherence and effectiveness in the wayfinding system. A consistent sign family means that signage across different locations and contexts follows a standardized design approach, incorporating uniform elements such as colors, fonts, symbols, and layout. This ensures that the signs enhance user familiarity and recognition, reinforces the Town's brand identity and visual identity, and supports efficient wayfinding. An example of a sign family is shown in **Figure 7-2**. The Town can consider hiring a consultant (e.g., landscape architecture services) to conduct this wayfinding strategy in consultation with the Town's Public Works Department and Parks Department to incorporate parking and trail wayfinding.

Figure 7-1: Hierarchy of Signs Example (Source: City of Hamilton[6])

[6] City of Hamilton. "Confederation Park Branding Strategy", September 2022, https://www.hamilton.ca/sites/default/files/2022-09/park-confederation-branding-wayfinding.pdf (Accessed November 30, 2023)

Figure 7-2: Sign Family (Source: SRP Design Studio[7])



[7] SRP Design Studio. "Wayfinding Signage", http://www.srpdesignstudio.com/wayfinding-signage.html (Accessed November 30, 2023)

7.2 Policies

7.2.1 Cash-in-Lieu Policy

The purpose of a Cash-in-Lieu Policy would allow for relief from the parking provision of the Zoning By-law, by providing proponents of the development the option of making cash payment to the Town. One of the primary purposes for providing this relief is to incentivize and foster development in intensification areas such as the Downtown and GOTL to help achieve the Town's economic development objectives.

These funds can be used for the following purposes:

- Improvement or expansion of municipal parking infrastructure (e.g., parking lots).
- Micromobility options (e.g., shared e-scooter or e-bicycles). This option was used in the City of Hamilton to set up and operate shared micromobility to offset parking demand and promote sustainable modes of transportation.

To develop the Cash-in-Lieu Policy, the current estimate of land costs should be appraised or collected, which can be done through a realtor. The formula to determine the amount is typically the construction cost of a surface parking space/multi-level parking structure plus the land cost per parking space multiplied by the size of each parking space including space required for aisles and driveways.

A Reserve Fund should be set up to hold the funds. The Cash-in-Lieu Policy should specify that:

- The Policy is to be implemented with discretion from the Town and is meant to be an exception to the rule granted by the Town. It is not a right for all proponents of developments to use.
- The Policy can be applied for all or part of the parking spaces required by the Zoning By-law.

To administer the Cash-in-Lieu Policy, a Town Parking Committee can be established which can oversee the fund. This can involve Town staff in Public Works, Planning and Development, Building, By-law, and Finance.

7.2.2 Private Enforcement By-law

The Town can consider offering a service to private owners by which parking officers would attend to the private property at the owner's request to ticket a vehicle. The Town would need enough by-law enforcement officers to be staffed to undertake this initiative. In other jurisdictions, a private enforcement by-law requires the private property owner to place specific signage that states that this is private property, and unauthorized vehicles can be ticketed, tagged, or subject to fines. The signs typically reference the private

enforcement by-law. This would extend the Town's role in enforcing parking not only in municipal spaces but also in certain private spaces.

This private enforcement by-law aims to address challenges encountered in GOTL, particularly in the shared visitor parking of NNSCC289, where there appears to be some confusion among visitors regarding the appropriate use of these spaces. This approach would also respond to concerns expressed by business owners that introducing additional regulations, such as the three-hour parking limit in Balsam, could result in public parking demand spilling over into private spaces.

7.3 Operational Recommendations

7.3.1 Providing Parking Enforcement Services

The Town can consider ensuring there are sufficient municipal by-law enforcement officers that can handle by-law violations, parking enforcement on municipal spaces, and parking enforcement on private property to complement the proposed private enforcement by-law.

7.3.2 Enhance Systematic and Random Enforcement

The data collection conducted for this study indicated that there were areas along Main Street where vehicles were parked illegally. The data collection also indicated that vehicles were parked longer than the minimum parking duration for Main Street, Ontario Street, and Winston Road. The Town can consider investing in the time and resources to conduct more random enforcement and systematic enforcement (based on data collection and analysis to identify areas of poor compliance). The time periods for systematic enforcement are recommended to be during the weekday mid-day and weekend mid-day which are higher demand periods for the Downtown and GOTL Study Areas based on data collection and site visits.

7.3.3 Staffing Needs

To implement, monitor, and update the recommendations of this study, one additional full-time equivalent (FTE) is recommended. The duties could include the following:

- Implement and manage the employee parking permitting program.
- Coordinate between private owners and key Town staff members the implementation of the shared parking agreements.
- Identify areas that require enhanced parking enforcement and coordinate with by-law officers.
- Coordinate the creation and maintenance of physical and online mapping.
- Coordinate meetings and provide information to the Town Parking Committee that oversees the cash-in-lieu reserve fund.

- Assist in strategic parking studies such as the Parking Standards Review, future electric vehicle charging demand needs, and future parking data utilization studies.
- Reply to parking-related concerns from the public.

7.4 Strategic Recommendations

7.4.1 Additional Parking Supply

The Town can also consider partnering with new development projects to provide public parking facilities. The focus of the location of these potential developments should be closer to the Downtown core. This can lessen the spaces required for the parking structure. The Township can identify re-development projects that are in the early planning stages and hold discussions with the applicants. Cost sharing with the developers is an option given that other incentives are provided such as additional density or height and a reduction in the private parking requirements.

7.4.2 Parking Standards Update

A parking standards review, and update can be considered to capture the current trends in Grimsby, as well as best practices in parking standards such as exploring reduced parking minimums, implementation of parking maximums, bicycle parking standards, and EV-ready equipment in new builds. This review can be conducted as a collaborative effort between the Public Works Department and the Planning Department. The Town is anticipating a full review of their zoning by-law in a few years, subject to their Official Plan update, which provides an opportune time to conduct the parking standards review.

There are also opportunities through this study to ensure that all land uses and appropriate definitions are captured in the parking standards. The following workplan is proposed:

- Background review of industry parking standard trends and best practices.
- Review of the Town's existing parking standards.
- Data collection (spot surveys) for several land uses.
- Analysis of new parking rates for vehicles, bicycles, accessible parking, electric vehicles.
- Consultation with Town staff, developers, the public, and other stakeholders.
- Final recommendations regarding land uses, land use definitions, and parking standards.

Until the parking standards update is complete, residential, and non-residential (e.g., retail, office) parking provisions are recommended to be provided, and parking reductions is recommended to only be offered by Town staff strategically through the use of a framework, as detailed in the next section.

7.4.3 Interim Parking Reductions Framework

An interim parking reductions framework is recommended until a parking standards review is complete. This framework can allow Town staff to decide if developers can opt for cash-in-lieu of providing the full requirement of parking spaces required by the Town's zoning by-law. This approach offers strategic flexibility in parking provisions while promoting efficient use of space and promoting sustainable modes of transportation. The framework can consider:

- **Proximity to transit:** Developments can demonstrate accessibility to public transit options or future public transit options (e.g., Grimsby GO Station) within a reasonable distance, such as within 800 m.
- **Walkability and Cycling Infrastructure:** Town staff can consider reductions in areas where population and employment centres are in close proximity and there are adequate levels of safe and comfortable walking and cycling infrastructure. The existing transportation mode share of the area should be considered in the assessment to understand existing travel patterns.
- **Travel Demand Management:** Town staff can consider reductions if the development provides car-sharing opportunities or offers residents a free PRESTO card.
- **Affordable Housing:** Town staff can consider reductions if developments include affordable housing units.

The areas that would generally align with these guidelines would be the intensification areas of GOTL and the Downtown.

7.4.4 Electric Vehicle Charging Stations

One recommendation from this study was to implement additional municipal electric vehicle infrastructure. Town staff can monitor the additional electric vehicle stations, if implemented, to understand their demand and plan for additional EV charging stations if needed. This is to support the anticipated growth in EV adoption in the future. The Town can consider leasing public parking spaces to be used for electric vehicle charging to third-party vendors.

7.4.5 Sensor Technology

In-ground parking sensors monitor individual parking spaces by relaying occupancy status to a cloud server. This technology would allow Town staff to view parking utilization in real-time throughout the day to monitor the need for enforcement activities and understanding demand fluctuations throughout the day for informed decision making such as the implementation of paid parking. Sensor technology can also provide user information by allowing users to view real-time parking availability.

Once parking demand in the Downtown and Grimsby-on-the-Lake has developed to a point where pricing can be considered (e.g., 85% utilization along most of the core parking areas multiple hours of the day), sensor technology should also be considered to manage their use. This would provide informed data for enforcement and elasticity of demand which can inform pricing strategies.

Although there are several other parking-related technologies available, parking sensors are particularly recommended due to their ability to provide real-time availability data along main commercial streets. This capability not only facilitates more informed enforcement but also opens possibilities for future implementation of pricing strategies.

7.5 Data Collection and Further Study

Due to the dynamic changes that are anticipated to occur in GOTL and the Downtown, annual or bi-annual parking data collection is recommended which focuses on the higher utilized parking areas such as on Winston Road in GOTL and Balsam Lot and Main Lot in the Downtown. As previously mentioned, it is recommended that frequent parking data collection be extended to the Casablanca Waterfront Project area once it is fully completed.

Another comprehensive review of the parking management study should be considered by 2030.

8.0 Town's Role in Parking Management

The overall recommendation from this study is that the Town can consider a more active role in parking management. The Downtown and Grimsby-on-the-Lake Study Areas are popular destinations for visitors, and it is anticipated that these Study Areas will grow in popularity over the coming years with continued future development and the completion of the Casablanca Waterfront. By ensuring that there is adequate supply, the parking supply has the appropriate turnover, and that the private and public parking supply is optimized, the Town's role in parking management is crucial.

The recommendations above ensures that the Town takes a more active approach through strategies such as:

- Operating and maintaining private parking spaces, in strategic locations, through joint agreements.
- Encouraging visitors that some parking spaces farther away are still in reasonable walking distance through enhancing the public realm and pedestrian connectivity.
- Controlling the number of and providing employee parking permits.
- Providing the Town with a tool to implement cash-in-lieu if developers ask for parking reductions.
- Maintaining a healthy supply of municipal or municipally operated parking spaces to complement private parking spaces.
- Broadening enforcement capabilities to private spaces.

9.0 Implementation Plan

The implementation plan which consists of the phasing and cost considerations are shown in **Table 9-1** for Downtown Grimsby, **Table 9-2** for Grimsby-on-the-Lake, and **Table 9-3** for Town-wide recommendations. Further information regarding cost estimates for parking infrastructure is detailed in **Appendix B**.

Table 9-1: Downtown Grimsby Implementation Plan

ID	Recommendation	Phasing	Cost Considerations
1	Introduce 2-hour parking limits on Main Lot and Balsam Lot.	By 2030	-
2	Expand shared parking agreements with private owners in Balsam Lot and Main Lot.	By 2030	-
3	Optimize the number of parking spaces in the existing municipal lots (e.g., Balsam Lot, Main Lot, Elizabeth Lot, and Lions Pool Lot) through a design review.	By 2030	$1,400 to $3,100 per parking space depending on the extent of the design, rehabilitation, and repair. $17,000 - $25,000 per parking space for a surface lot. See **Appendix B** for more information.
4	Conduct and implement wayfinding strategy to optimize use of existing municipal spaces.	By 2030	-
5	Implement two high turnover spaces along Main Street as a one-year pilot program.	By 2030	-
6	Implement two accessible parking spaces along Main Street or in the Main Lot and Balsam Lot close to and accessible to Main Street.	By 2030	-
7	Consider facilitating an Off-Peak Delivery Program between couriers and businesses.	By 2030	-
8	Implement long-term (daily) employee parking permits in Main Lot and Balsam Lot, subject to shared parking agreements.	By 2030	-
9	Activate alleyways for pedestrian use and enhance pedestrian connectivity.	By 2030	-
10	Two additional dual electric vehicle charging stations. One in the Lions Pool Lot and one in the Elizabeth Lot.	By 2030	$20,000 for two dual electrical charging stations.
11	Seek opportunities with upcoming development projects to provide public parking facilities.	By 2030	-
12	Consider expansion of shared parking agreements with other private owners and the Library.	By 2041	-
13	Reconsider need for additional parking infrastructure (e.g., parking structure) after another round of parking data collection.	By 2041	$44,000 to $61,000 per parking space for an above-ground structure. See **Appendix B** for cost estimates of a parking structure.

Table 9-2: Grimsby-on-the-Lake Implementation Plan

ID	Recommendation	Phasing	Cost Considerations
14	Implement long-term (daily) employee parking permits along Hunter Road and Place Polonaise Drive.	By 2030	Staff resources to implement, monitor, and enforce permit program.
15	Implement two high turnover spaces along Winston Road as a one-year pilot project.	By 2030	-
16	Clarify signage at the condominium boards and collaborate with the condominium boards to ensure the confusing regarding visitor parking is minimized.	By 2030	-
17	Construct a surface lot to diversify the mix of short-term and long-term public parking supply. Consider implementation of paid parking as a means of cost recovery.	By 2030	$17,000 to $25,000 per parking space for a surface lot. See **Appendix B** for cost estimate of a surface lot. $10,000 per Pay and Display Parking Machine.
18	Conduct data utilization surveys after the completion of the Casablanca Waterfront Project.	By 2030	$12,000 for one weekday, one weekend, and an additional survey if required.
19	Based on the utilization surveys, install electric vehicle charging stations near the waterfront.	By 2041	$10,000 for one dual electric vehicle charging station.
20	Consider changing the location of the employee parking permits to the new proposed surface lot.	By 2041	-

Table 9-3: Town-Wide Implementation Plan

ID	Recommendation	Phasing	Cost Considerations
21	Provide physical and online mapping for user information.	By 2030	-
22	Conduct wayfinding strategy for Downtown and Grimsby-on-the-Lake.	By 2030	$50,000 for strategic studies.
23	Establish a Cash-in-Lieu Policy.	By 2030	-
24	Establish a private enforcement by-law.	By 2030	-
25	Increase operations of by-law enforcement to provide parking enforcement on municipal spaces and private spaces through the private enforcement by-law.	By 2030	-
26	Increase staff resources related to parking management.	By 2030	Subject to Town consideration.

ID	Recommendation	Phasing	Cost Considerations
27	Strategic parking reductions offered to development projects based on a framework.	By 2030	-
28	Parking Standards Review Update, in conjunction with the zoning by-law update.	By 2030	$150,000
29	Update to Strategic Parking Management Study.	By 2030	$80,000
30	Review the demand of additional electric vehicle charging stations and implement a strategy to implement more EV stations to accommodate future demand.	By 2041	-
31	Monitor the need for sensor technology.	By 2041	$50,000 for 50 sensors along Main Street and Winston Road, and implementation.

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Appendix A

Future Parking Demand and Supply

R.J. Burnside & Associates Limited 6990 Creditview Road, Unit 2 Mississauga ON L5N 8R9 CANADA
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Appendix A: Future Parking Forecasting

Date: April 17, 2024 **Project No.:** 300055974.000

Project Name: Grimsby Strategic Parking Management Study

Client Name: Town of Grimsby

To: Town of Grimsby

From: R.J. Burnside & Associates Limited

1.0 Future Parking Demand and Supply

Future parking demand and supply from new developments were forecasted for the 2030 and 2041 horizon years. Generally, this methodology involves estimating the additional employment within the study areas, forecasting the parking demand based on commercial land uses, and adding the parking demand onto the existing parking conditions collected for this study. The methodology used to determine the forecasts is outlined below:

1. Future additional employment in the study areas from commercial developments were estimated using forecasts from the Town of Grimsby's Development Charges Background Study (2020) or "DC Background Study". Employment forecasts were measured in non-residential gross floor area (e.g., commercial GFA). This assumes that developments in other land uses can provide sufficient parking to meet future demand.

2. The commercial parking demand for commercial land uses was forecasted based on the employment estimates using the Institute of Transportation Engineers (ITE) Parking Generation Manual. This commercial parking demand includes the demand from all users including visitors and employees.

3. Because private developments supply private parking, the future commercial parking supply was forecasted using parking rates from the Town's zoning by-law. If the forecasted commercial parking demand exceeds the commercial parking supply, this demand becomes municipal demand.

Although the additional population and employment forecasts identified in the DC Background Study were between the years 2020 and 2031 and between the years 2020 and 2041, the assessment assumed that the parking demand generated from the additional developments could be added onto the 2023 existing conditions year. This assumption provides more

conservative estimates and fairly assumes that there is a lag between developments being completed and developments being fully occupied.

The methodology and assumptions are detailed below.

2.0 Population and Employment Forecasts

2.1 Land Use Forecasts for Town of Grimsby

The future commercial employment forecasts from 2020 to the 2030 and 2041 horizon years are outlined in **Table 1** and **Table 2** based on the Town's DC Background Study (2020).

Table 1: Commercial GFA Forecast to 2030

	Commercial GFA (ft^2)
2020 to 2030	283,300

Table 2: Commercial Forecast to 2041

	Commercial GFA (ft^2)
2020 to 2041	554,600

2.2 Land Use Forecasts for the Downtown and Grimsby-on-the-Lake Study Areas

A proportion of the commercial land use forecasts for Grimsby-on-the-Lake (GOTL) and Downtown were allocated to the study areas based on area. The Township's zoning by-law contains several commercial-related zone classes including, but not limited to:

- Convenience Commercial
- Service Commercial
- Marine Commercial
- Neighborhood Commercial

Additionally, several commercial land uses are permitted in the Downtown Main-Street (DMS), Downtown-Intensification (DI), and Transitional Residential Multiple Commercial (TRMC).

The area of each zone class related to the commercial land use within the study areas were estimated using ESRI's ArcMap, a Geographic Information Systems mapping software, and the shapefile for the zoning areas in the Township. A summary of the commercial areas is provided in **Table 3**.

Table 3: Non-Residential Areas per Zone Class

	Town	Downtown	GOTL
CC	49,794	1,162	0

	Town	Downtown	GOTL
SC	398,020	1,974	46,711
MC	50,661	0	0
NC	86,978	0	0
DMS	105,074	95,048	10,025
DI	103,849	46,668	0
Total	**794,376**	**144,853**	**56,736**

Using these area estimates, the following percentages were calculated:

- 18% to the Downtown Study Area
- 7% to the GOTL Study Area

This calculation assumes that commercial developments would be evenly distributed across the Town. However, recognizing that part of Grimsby-on-the-Lake and the Downtown are classified as “Major Intensification Areas” in the Town’s Official Plan, it was assumed that a higher proportion of commercial would be allocated to the two study areas relative to the rest of the Town. This assumption increases the proportion of commercial GFA allocated to the two study areas. These assumptions are outlined below:

- 20% to the Downtown Study Area
- 10% to the GOTL Study Area

Based on these assumptions, the increase in non-residential development between 2023 and 2030 and 2023 and 2041 in the Study Areas is summarized in **Table 4**.

Table 4: Increase Commercial Development by 2030 and 2041

	Downtown	GOTL
2023 to 2031	56,660	28,330
2023 to 2041	110,920	55,460

3.0 Commercial Parking Demand (New Developments)

The Institute of Transportation Engineers (ITE) provides parking demand estimates for various land uses. It is unknown at this time exactly what specific land uses will be developed in the future. For the purposes of this forecast, it was assumed that the future commercial developments will be primarily retail related.

In the two study areas, the weekday peak demand was modelled. According to the data collection conducted for the Downtown Study Area, the weekday parking demand was higher than on the weekend.

Based on these assumptions, additional commercial parking demand from new developments was calculated for the 2030 and 2041 horizon years. The parking demand for the “Shopping” land use of the ITE Parking General Manual was used to estimate demand which has the following formulas:

$P = 2.80(x) - 0.14$, for shopping areas less than 40,000 ft^2 (Land Use Code 822)
$P = 3.11(x)$ for shopping areas greater than 40,000 ft^2 (Land Use Code 821)

Where P represents peak parking demand in vehicles
X represents gross floor area in 1,000 ft^2

The 2023 to 2030 and 2023 to 2041 future parking demand is summarized in **Table 5**.

Table 5: Future Additional Parking Demand for 2030 and 2041

	Downtown	GOTL
2023 to 2031	177	78
2023 to 2041	345	171

4.0 Commercial Parking Supply (New Developments)

The private parking supply was estimated using the parking requirements defined in the Town's zoning by-law. These parking requirements differ between different land uses. The retail requirement is one space per 28 m^2 or one space per 0.00331 ft^2.

The Town's zoning by-law also states that in the Downtown Main-Street Zone (DMS):

- Changes from one commercial use to another commercial use within an existing building are exempt from any increase in parking requirements.
- Expansion of an existing commercial use and expansion of the floor area in an existing building is exempt from any increase in parking requirements, provided there is no decrease in existing parking supply where the proposed uses would not otherwise meet the parking requirements.
- Within new buildings, only 80% of the typical commercial parking requirements shall be required.

To understand how much commercial GFA will be allocated to the DMS zones, the proportion of DMS area to the commercial area within each study area was calculated. This percentage is provided below:

- 66% in the Downtown Study Area
- 18% in the GOTL Study Area

To estimate the future supply, two scenarios were developed. These two scenarios are differentiated by the proportion of commercial GFA allocated to new commercial buildings or expansion of existing commercial use. In Scenario 1, all commercial buildings were assumed to be new commercial buildings; therefore, would be providing 80% of the commercial parking requirements. In Scenario 2, no commercial buildings were assumed to be new commercial buildings and thus would all be expansions. Therefore, in this scenario, no additional commercial parking would be provided in the DMS zone. Scenario 2 is a "worst-case" parking scenario.

Based on these assumptions, the 2030 future additional commercial parking supply is summarized in **Table 6**.

Table 6: 2023 to 2030 Future Commercial Parking Supply

	Downtown	GOTL
Scenario 1 – 100% New Buildings	163	91
Scenario 2 – 0% New Buildings	65	77

The 2041 future additional commercial parking supply is summarized in **Table 7**.

Table 7: 2023 to 2041 Future Commercial Parking Supply

	Downtown	GOTL
Scenario 1 – 100% New Buildings	320	178
Scenario 2 – 0% New Buildings	127	152

5.0 Parking Surplus/Deficiencies (New Developments)

Based on the parking demand forecasts from the new commercial developments and the estimated future parking supply, the parking surplus and deficiencies were calculated for each scenario. A surplus would mean that the private parking in the commercial developments would be able to accommodate the forecasted commercial demand. A deficiency would mean that the private parking in the commercial developments would not be able to accommodate the forecasted commercial demand and thus would rely on the municipal supply. A summary of the 2030 commercial parking surplus/deficiency is shown in **Table 8**.

Table 8: 2030 Future Commercial Parking Supply Surplus/Deficiency

	Downtown	GOTL
Scenario 1 – 100% New Buildings	14 space deficiency	13 space surplus
Scenario 2 – 0% New Buildings	112 space deficiency	1 space deficiency

A summary of the 2041 commercial parking surplus/deficiency is shown in **Table 9**.

Table 9: 2041 Future Commercial Parking Supply Surplus/Deficiency

	Downtown	GOTL
Scenario 1 – 100% New Buildings	25 space deficiency	7 space surplus
Scenario 2 – 0% New Buildings	218 space deficiency	19 space deficiency

Any commercial demand that could not be accommodated by the commercial supply was assumed to become municipal demand.

6.0 Casablanca Waterfront Demand and Supply

In GOTL, the parking demand for the "Park" land use was used to estimate the parking demand from the Casablanca Waterfront Project. The parking demand for the "Park" land use has the following formula:

$$P = 0.62(x) + 18.48 \text{ (Land Use Code 411)}$$

Where P represents peak parking demand in vehicles
X represents acres of park area

The Casablanca Waterfront was measured at approximately 15 acres. The peak parking demand was calculated to be 28 vehicles.

The Town, at the time of this study, is reviewing the development application for 398 North Service Road which is in GOTL. The development may be providing up to 43 public parking spaces in the GOTL Study Area.

7.0 Increased Attraction and Growth

A per annum growth factor to 2031 and 2041 was applied to the existing parking demand. This was based on the following considerations:

- Downtown development of GOTL and the Downtown is anticipated to attract more visitors with initiatives such as Downtown Reimagined and the Casablanca Waterfront.
- General growth of the Town and adjacent municipalities is anticipated to increase the parking demand within the two study areas.

To estimate this growth, traffic count data from the GOTL and future forecasts from the Town of Grimsby's Downtown Traffic Study (2023) was assessed. The analysis of the traffic growth rate in the study area is correlated to future parking demand as it provides an indication of vehicular activity in the area. This vehicular activity was assumed to be proportional to the parking demand. In the future, as the Town continues to invest in more non-automobile transportation infrastructure such as cycling and pedestrian facilities, future parking demand may decrease.

A growth rate was calculated along Windward Drive, 160 m east of North Service Road, between the year 2016 and 2019. This is shown in **Table 10**.

Table 10: Growth Rate Along Windward Drive, 160 m East of North Service Road (2016 to 2019)

Location	Segment	Count Year	Total Count	Growth Rate Per Annum
Windward Drive	160 m east of North Service Road	2016	2,532	

Location	Segment	Count Year	Total Count	Growth Rate Per Annum
Windward Drive	160 m east of North Service Road	2019	2,732	2.6%

A growth rate was calculated at 651 Winston Road between the year 2019 and 2022. This is shown in **Table 11**.

Table 11: Growth Rate at 651 Winston Road (2019 to 2022)

Location	Segment	Count Year	Total Count	Growth Rate Per Annum
651 Winston Road		2019	855	
651 Winston Road		2022	1,017	6.0%

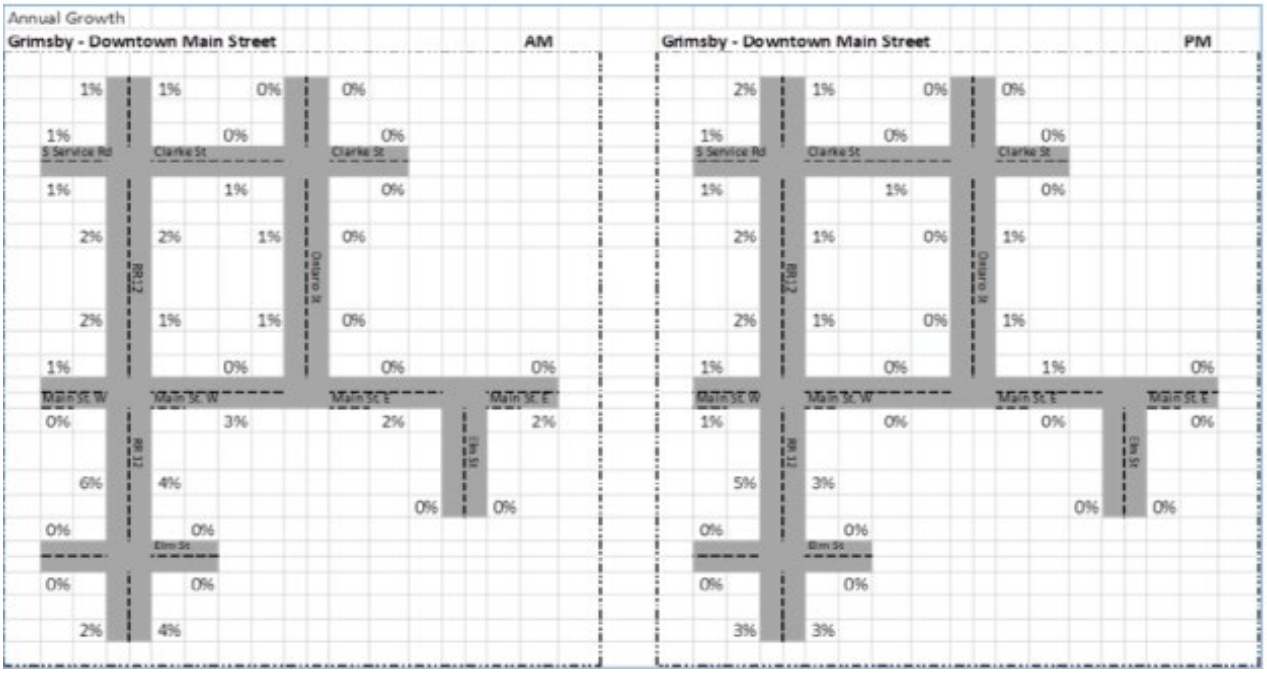
A growth rate was calculated at the intersection of North Service Road and Winston Road between the year 2020 and 2022. This is shown in **Table 12**.

Table 12: Growth Rate at North Service Road and Winston Road (2020 to 2022)

Location	Segment	Count Year	Total Count	Growth Rate Per Annum
North Service Road/Winston Road		2020	1,164	
North Service Road/Winston Road		2022	1,171	0.0%

Growth rates for the AM and PM peak hour that were derived from the Niagara Regional EMME model were used in the Town's Downtown Traffic Study. The growth rates from 2023 to 2041 are shown in **Figure 1**.

Figure 1: Traffic Growth Rates (2023 to 2041)



Source: Town of Grimsby's Downtown Traffic Study (2023)

The historic growth rates calculated from the various counts in GOTL ranged from 0% per year to 6.0% per year. Additionally future forecasted traffic growth in the Downtown ranged from 0% per year to 6.0% per year in the peak direction. More consideration for traffic growth along the two main corridors, which are Winston Road and Main Street, was given to derive appropriate attraction growth rates for the study areas. Based on these values and Burnside's experience in downtown travel demand growth, a growth rate of 2% per annum was used to capture the anticipated growth in attraction from downtown development initiatives.

8.0 Service Levels

8.1 Utilization

A parking utilization threshold represents the point at which a parking facility's capacity is actively used by parked vehicles, usually expressed as a percentage. Exceeding an 85% utilization rate indicates that parking resources are nearing maximum capacity. This can lead to challenges like difficulties in finding parking, increased congestion, reduced accessibility, heightened illegal parking, negative perceptions, economic setbacks for local businesses, and environmental impacts due to prolonged search and congestion.

Providing a parking supply that just meets the future parking demand would mean that the parking utilization would be 100%, exceeding the threshold. To ensure appropriate service

levels, an 85% threshold is set as the target. This is captured by the future parking supply where the municipal parking supply target is lowered by 15% to represent the target threshold.

8.2 Walk Distance

To accurately calculate potential future deficiencies in the two study areas, it is crucial to consider walk distances. If a parking space is significantly far from a destination, it cannot be considered as parking for that destination.

To define service levels, research from the National Parking Association was conducted and service levels were defined as summarized in **Table 13**.

Table 13: Walking Levels of Service to Parking Facilities[1]

Parking Type	A	B	C	D
Climate Controlled	1,000 ft (304.8 m)	2,400 ft (731.5 m)	3,800 ft (1,158.2 m)	5,200 ft (1,585.0 m)
Outdoor/Covered	500 ft (152.4 m)	1,000 ft (304.8 m)	1,500 ft (457.2 m)	2,000 ft (609.6 m)
Outdoor/Uncovered	400 ft (121.9 m)	800 ft (243.8 m)	1,200 ft (365.8 m)	1,600 ft (487.7 m)
Through Surface Lot	350 ft (106.7 m)	700 ft (213.4 m)	1,050 ft (320.0 m)	1,400 ft (426.7 m)
Inside Parking Facility	300 ft (91.4 m)	600 ft (182.9 m)	900 ft (274.3 m)	1,200 ft (365.8 m)

For the purposes of this study, if the walking distance from a parking space (on-street or in a surface lot) to the commercial core was greater than 500 m, the space would not count towards the municipal parking supply as it would be considered LOS E or LOS F under the Outdoor/Uncovered Parking Type. The commercial core was defined as Main Street between Ontario Street and Christie Street in the Downtown Study Area and Winston Road between Hunter Road and Place Polonaise Drive in the GOTL Study Area.

Using this defined level of service, all parking spaces within the Downtown Grimsby Study Area are considered as having adequate levels of service to the core commercial area.

The following parking spaces and associated demand were not considered as part of the municipal supply or demand for the purposes of visiting the core commercial area:

- Winston Road, 500 m west of Hunter Road/North Service Road.
- Oakes Road North Leash-Free Dog Park.

[1] Smith, Mary, “How Far Should Parkers Have to Walk?”, National Parking Association, May 2008

9.0 Future Parking Demand and Supply Summary

9.1 2030 Horizon Year

The 2030 parking demand is summarized in **Table 14**.

Table 14: 2030 Parking Demand – Scenario 1

	Downtown	GOTL
Existing peak weekday demand	333	66
Increased attraction (2023 to 2030)[1]	50	10
Additional municipal demand (new commercial development and park demand)	14	0
Casablanca Waterfront Parking Demand	0	28
Total 2030 Parking Demand	**397**	**104**

[1]Based on 2% growth rate as outlined in **Section 7.0**.

The 2030 parking demand is summarized in **Table 15**.

Table 15: 2030 Parking Demand – Scenario 2

	Downtown	GOTL
Existing peak weekday demand	333	66
Increased attraction (2023 to 2030)[1]	50	10
Additional municipal demand (new commercial development and park demand)	112	1
Casablanca Waterfront Parking Demand	0	28
Total 2030 Parking Demand	**495**	**105**

[1]Based on 2% growth rate as outlined in **Section 7.0**.

The 2030 parking supply is summarized in **Table 16**.

Table 16: 2030 Parking Supply

	Downtown	GOTL
Existing municipal supply	580	136
Public parking from 398 North Service Road	0	43
Total 2030 Parking Supply	**580**	**179**
85% Service Level on Municipal Supply	**493**	**152**

A summary of the 2030 parking demand and supply is provided in **Table 17**.

Table 17: Summary of the 2030 Parking Demand and Supply

	Downtown	GOTL
2030 Parking Demand[1] – (Scenario 1 to Scenario 2)	397 to 495	104 to 105

	Downtown	GOTL
2030 Parking Supply Based on 85% Municipal Service Level[2]	493	152
Deficiency/Surplus	**96 space surplus to 2 space deficiency**	**47 space surplus to 48 space surplus**

1. Includes forecasted demand for municipal spaces plus spillover demand from private commercial developments and Casablanca Waterfront.

9.2 2041 Horizon Year

The 2041 parking demand is summarized in **Table 18**.

Table 18: 2041 Parking Demand – Scenario 1

	Downtown	GOTL
Existing peak weekday demand	333	66
Increased attraction (2023 to 2041)[1]	143	28
Additional municipal demand (new commercial development and park demand)	25	28
Casablanca Waterfront Parking Demand	0	0
Total 2030 Parking Demand	**501**	**122**

[1]Based on 2% growth rate as outlined in **Section 7.0**.

The 2041 parking demand is summarized in **Table 19**.

Table 19: 2041 Parking Demand – Scenario 2

	Downtown	GOTL
Existing peak weekday demand	333	66
Increased attraction (2023 to 2041)[1]	143	28
Additional municipal demand (new commercial development and park demand)	218	19
Casablanca Waterfront Parking Demand	0	28
Total 2030 Parking Demand	**695**	**142**

[1]Based on 2% growth rate as outlined in **Section 7.0**.

The 2041 parking supply is summarized in **Table 20**.

Table 20: 2041 Parking Supply

	Downtown	GOTL
Existing municipal supply	580	136
Public parking from 398 North Service Road	0	43
Total 2041 Parking Supply	**580**	**179**
85% Service Level on Municipal Supply	**493**	**152**

A summary of the 2041 parking demand and supply is provided in **Table 21**.

Table 21: Summary of the 2041 Parking Demand and Supply

	Downtown	GOTL
2041 Parking Demand[1] – (Scenario 1 to Scenario 2)	501 to 695	122 to 142
2030 Parking Supply Based on 85% Municipal Service Level[2]	493	152
Deficiency/Surplus (Scenario 1 to Scenario 2)	**8 space deficiency to 202 space deficiency**	**30 space surplus to 10 space surplus**

1. Includes forecasted demand for municipal spaces plus spillover demand from private commercial developments and Casablanca Waterfront.

10.0 Potential Mitigation Measures

The future parking forecast has identified a parking deficiency of 202 spaces by 2041 in the Downtown area in Scenario 2. This scenario assumes that in the Downtown Main-Street (DMS) zone, new commercial development will be expansions of existing buildings, and therefore, no new private parking spaces are required. Through the parking management study, several recommendations were made regarding shared parking using parking agreements between the Town and private owners. This would increase the supply of municipal spaces. Joint parking agreements with private owners with private parking spaces in the Balsam Lot and Main Lot would add approximately 65 spaces to the municipal supply. This number was calculated using the number of private spaces in the Balsam and Main Lots minus the number of used private spaces (presumably from employees) based on the data collection conducted for this study. The remainder provided an estimate of the number of municipal spaces left for the public.

Additionally, optimizing the existing lots would also increase the supply of municipal spaces. The Town conducted a preliminary estimate of the number of spaces this could add to the municipal supply. These estimates include:

- 30 additional spaces in the Balsam Lot
- 20 additional spaces in the Elizabeth Lot
- 20 additional spaces in the Lions Pool Parking Lot

If the Town expands their control over the municipal parking supply with the use of joint parking agreements and optimization of existing lots, this could add approximately 135 spaces. This would reduce the parking deficiency to 67 spaces. It is unlikely that 100% of the commercial developments within the DMS zone would be expansions of existing buildings. Strategies that increase Town control over the municipal supply would be close to eliminating parking deficiencies by 2041. However, a slight parking deficiency may still occur by 2041 if a higher proportion of commercial development is through expansion of existing buildings in the Downtown Main-Street zones.

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Appendix B

Parking Infrastructure Cost Considerations

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Appendix B: Parking Infrastructure Cost Considerations

Date: April 17, 2024 **Project No.:** 300055974.000

Project Name: Grimsby Strategic Parking Management Study

Client Name: Town of Grimsby

To: Town of Grimsby

From: R.J. Burnside & Associates Limited

1.0 Overview

The purpose of this memorandum is to provide capital cost estimates and cost considerations for a surface lot and a parking structure. These costs include land acquisition, construction costs, and design and contingency costs. Three hypothetical parking structures were assessed for costs, a 100-space parking structure, a 150-space parking structure, and a 200-space parking structure. Two hypothetical surface lots were assessed for costs, a 50-space surface lot and a 100-space surface lot. A low and a high range were developed for each type of parking infrastructure. It is important to note that these costs are estimates and they can change based on land availability and the rising cost of construction materials.

Additionally, cost estimates for a design review of existing lots are provided based on benchmarks from other municipalities.

2.0 Parking Structure

2.1 Land Acquisition Costs

To obtain an approximate property requirement, a few benchmark locations were obtained as shown in **Table 1**.

Table 1: Benchmark Locations for Parking Structures

Parking Structure	Spaces	Site Area (m^2)	m^2 per space of Site Area
300 Church Street, Oakville	285	2,080	7.3
414 Locust Street, Burlington	339	3,400	10.0

Parking Structure	Spaces	Site Area (m^2)	m^2 per space of Site Area
146 MacDonell Street, Guelph	334	3,000	9.0
110 MacDonell Street, Guelph	551	3,700	6.7
		Average	**8.3**

Two scenarios were developed for this assessment: a low-cost scenario ('low scenario') and a high-costing scenario ('high scenario'). The two scenarios used the average benchmarked value of m^2 per space, which is 8.3 m^2 per space, and the high-costing scenario used the highest benchmarked value in the benchmarking assessment which is 10.0 m^2 per space. The estimate site area requirement is shown in **Table 2**.

Table 2: Estimated Site Area

Parking Structure	Site Area Required – Low Scenario (m^2)	Site Area Required – High Scenario (m^2)
100 spaces	830	1,000
150 spaces	1,245	1,500
200 spaces	1,660	2,000

It is important to note that parking structures can be designed in multiple ways and the site area required may change subject to its final design.

To calculate the land acquisition cost, a $250 per m^2 rate was used. This rate is based on Burnside's recent experience in similar municipalities. As another benchmark, the City of Oshawa Parking Study (2021) used a $212.80 per m^2 rate for property acquisition costs. The estimate of land acquisition costs associated with the three hypothetical parking structures is shown in **Table 3**.

Table 3: Estimated Land Acquisition

Parking Structure	Land Acquisition Cost – Low Scenario	Land Acquisition Cost – High Scenario
100-space Parking Structure	$207,500	$250,000
150-space Parking Structure	$311,250	$375,000
200-space Parking Structure	$415,000	$500,000

2.2 Construction Cost

To calculate the capital cost of the hypothetical parking structures, an estimated cost per space was used for the low costing scenario and high costing scenario. Many sources have been used to derive an appropriate rate. These are summarized in **Table 4**.

Table 4: Estimated Cost Per Space

Source	Estimated Cost Per Space	Notes
Downtown Guelph Parking Master Plan (2023)	$55,000 per space	Includes land acquisition and construction.

Source	Estimated Cost Per Space	Notes
Brampton Parking Plan (2022)	Low: $17,230.95 per space High: $23,496.75 per space	Construction cost only.
City of Oshawa Parking Study (2021)	Low: $30,000 per space High: $44,000 per space	Construction cost only.

Over the past few years, the cost of construction has increased as indicated by Statistic Canada's Building Construction price indexes. For the purposes of this assessment, a construction benchmark cost of $32,000 per space was used for this assessment for the low scenario and $45,000 per space was used for the high scenario.

Assuming these rates, the cost estimate of each of the hypothetical parking structures was calculated. These construction costs are summarized in **Table 5**.

Table 5: Construction Costs

Parking Structure	Construction Cost – Low Scenario	Construction Cost – High Scenario
100-space Parking Structure	$3,200,000	$4,500,000
150-space Parking Structure	$4,800,000	$6,750,000
200-space Parking Structure	$6,400,000	$9,000,000

2.3 Design and Contingency

For the purposes of this assessment, a 15% design cost and a 15% contingency cost is assumed.

2.4 Summary of Costs

A summary of parking structure cost estimates for the low-cost scenario is shown in **Table 6**. These costs equate to approximately $44,300 per parking space.

Table 6: Summary of Parking Structure Cost Estimates (Low-Cost Scenario)

	100-Space Parking Structure	150-Space Parking Structure	200-Space Parking Structure
Land Acquisition	$207,500	$311,250	$415,000
Construction	$3,200,000	$4,800,000	$6,400,000
Design (15%) and Contingency (15%)	$1,022,250	$1,533,375	$2,044,500
Total	**$4,429,750**	**$6,644,625**	**$8,859,500**

A summary of parking structure cost estimates for the high-cost scenario is shown in **Table 7**. These costs equate to approximately $61,750 per parking space.

Table 7: Summary of Parking Structure Cost Estimates (High-Cost Scenario)

	100-Space Parking Structure	150-Space Parking Structure	200-Space Parking Structure
Land Acquisition	$250,000	$375,000	$500,000
Construction	$4,500,000	$6,750,000	$9,000,000
Design (15%) and Contingency (15%)	$1,425,000	$2,137,500	$2,850,000
Total	**$6,175,000**	**$9,262,500**	**$12,350,000**

3.0 Surface Lot

3.1 Land Acquisition Costs

To obtain an approximate property requirement, a few benchmark locations were obtained in downtown Grimsby as shown in **Table 8**.

Table 8: Benchmark Locations for Surface Lots

Surface Lot	Spaces	Site Area (m^2)	m^2 per space of Site Area
Main Lot – Lot 5 off Christie Street	30	825	27.5
Elizabeth Lot Including Driveway	30	1065	35.5
Library Lot	24	1050	43.75
		Average	**35.6**

To calculate land acquisition costs, a benchmark value of 35 m^2 per space was used. The estimate site area is shown in **Table 9**.

Table 9: Estimated Site Area

Surface Lot	Site Area Required (m2)
50-space Surface Lot	1,750
100-space Surface Lot	3,500

To calculate the land acquisition cost, a $250 per m^2 rate was used. The estimate of land acquisition costs associated with the two hypothetical surface lots is shown in **Table 10**.

Table 10: Estimated Land Acquisition

Parking Structure	Land Acquisition Cost
50-space Surface Lot	$437,500
100-space Surface Lot	$875,000

3.2 Construction Cost

To calculate the capital cost of the hypothetical surface lots, an estimated cost per space was used for the low costing scenario and high costing scenario. The 2023 Canadian Cost Guide by Altus Group was used as the primary source. Based on this guide, in the Greater Toronto Area (GTA) the construction cost of a surface lot is $129 per m^2 on the low end and $301 per m^2 on the high end. Low-cost and high-cost scenarios were developed. It is important to note that because the Town of Grimsby is located outside the GTA, expected costs would most likely be closer to the low-cost estimates. The construction costs are summarized in **Table 11**.

Table 11: Construction Costs

Surface Lot	Construction Cost – Low Scenario	Construction Cost – High Scenario
50-space Surface Lot	$225,750	$526,750
100-space Surface Lot	$451,500	$1,053,500

3.3 Design and Contingency

For the purposes of this assessment, a 15% design cost and a 15% contingency cost is assumed.

3.4 Summary of Costs

A summary of surface lot cost estimates for the low-cost scenario is shown in **Table 12**. These costs equate to approximately $17,244 per parking space.

Table 12: Summary of Surface Lot Cost Estimates (Low-Cost Scenario)

	50-space Surface Lot	100-space Surface Lot
Land Acquisition	$437,500	$875,000
Construction	$225,750	$451,500
Design (15%) and Contingency (15%)	$198,975	$397,950
Total	**$862,225**	**$1,724,450**

A summary of parking structure cost estimates for the high-cost scenario is shown in **Table 13**. These costs equate to approximately $25,070 per parking space.

Table 13: Summary of Surface Lot Cost Estimates (High-Cost Scenario)

	50-space Surface Lot	100-space Surface Lot
Land Acquisition	$437,500	$875,000
Construction	$526,750	$1,053,500
Design (15%) and Contingency (15%)	$289,275	$578,550
Total	**$1,253,525**	**$2,507,050**

4.0 Design Review

A literature review was conducted to gather costs regarding surface parking lot re-design, repair, and rehabilitation. The results of the literature review are shown in **Table 14**.

Table 14: Benchmark Costs for Parking Lot Design, Rehabilitation, and Repair

Project Description	Location	Cost	Spaces	Cost per Space	Source
Pete Palangio Parking Lot Rehabilitation[1]	North Bay	$627,450	200	$3,137.25	2024 Capital Budget
Lot 1 Rehabilitation	City of Thorold	$150,000	63	$2,380.95	2019 Capital Budget
Lot 3 Downtown Parking Lot Design	City of Thorold	$75,000	54	$1,388.89	2019 Capital Budget
Lot 4 Repair	City of Thorold	$100,000	35	$2,857.14	2019 Capital Budget

[1]The project is to provide lighting, drainage, grading, and new asphalt for Pete Palangio arena parking lot. The budget in 2024 includes costs associated with engineering and the rehabilitation of the entire parking lot including asphalt, lot drainage, lighting, general grading, and correction of negative grading around the building perimeter.

Based on these benchmark costs, design, rehabilitation, and repair costs can vary between $1,400 per parking space and $3,100 per parking space.

R.J. Burnside & Associates Limited