

**Canmore Town Centre  
Parking Study**



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Town of Canmore

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## 1.0 INTRODUCTION

### 1.1 BACKGROUND

The Town of Canmore is located in the Bow Valley within Alberta's Canadian Rocky Mountains, located approximately 80 kilometers west of Calgary and adjacent to Banff National Park in Alberta, Canada. Both the town and surrounding areas are popular destinations for the broad range of summer and winter recreational amenities offered, attracting visitors from other Alberta areas, nearby provinces, and visitors from international cities. Summer is considered the peak period between the different seasons.

Visitation of Banff National Park is estimated to be growing at nearly 10% annually due to increased awareness of the region's attractions and a weakened Canadian currency. The Town's local amenities, including Market Thursdays, attract visitors and locals to the Town Centre for a broad range of activities during the summer peak. As the popularity of the area grows, local municipalities such as Canmore are experiencing ever increasing traffic volumes and visitors to the Town. In addition, new developments in the town's surrounding areas are increasing the Town's local population. With the physical constraints within the Bow Valley, developable land is significantly limited. As such, typical practices of widening roadways, increasing vehicular parking areas and expanding transportation infrastructure are not sustainable practices.

Several previous parking assessments of the Town Centre and Gateway District have been conducted in 1998, 2001 and in 2007 with differing areas of focus. In 2001, a parking assessment was conducted as part of the Town's Transportation Master Plan (TMP) Update assessing current parking needs and forecasting future demand as the population increases and land uses change within the Town Centre.

The more recent 2007 *Town of Canmore Town Centre/Gateway Parking Study*, conducted by Bunt & Associates, expanded upon the parking assessment from the 2001 TMP Update and included a detailed evaluation of public on-street, public off-street, and private off-street parking occupancy and parking demand levels including occupation, duration and turnover rates. The 2007 study also reviewed current bylaws related to parking, and evaluated several potential sites within the study area for a future parking structure. The 2007 study determined a need to accommodate approximately 200 more parking stalls over the following 4-6 years within the Town Centre through the construction of a parkade structure, and a second parkade structure capable of accommodating an additional 500 parking stalls in the following 9-11 years as the Town's population reaches 30,000 residents. The 2007 study re-iterated the various transportation demand management (TDM) measures discussed in the 2001 TMP Update, including:

- Parking Pricing, consisting primarily of paid parking in the Town Centre,

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- Establishment of a Parking Ceiling, capping the parking supply within the Town Centre by amending bylaws and/or utilizing the roadway capacity to establish vehicular limits,
- Application of Shared Parking, which may re-purpose underutilized on-site parking from one land use to accommodate peak parking demand created by another adjoining land use,
- Provision of parking areas for bicycles and support facilities for cyclists, to encourage modal change and reduce vehicle dependency for short trips and trips related to employment,
- Parking management, to reduce spillover parking from commercial areas into residential areas,
- Implementation of intercept parking lots, to reduce vehicular traffic within the Town Centre and encourage alternative travel modes,
- Improved enforcement, to address vehicles exceeding current parking restrictions,
- Development of preferential parking, to provide priority to users associated with specific Town Centre activities,
- Cash-in-lieu of parking system.

The Town Centre within Canmore becomes the focal point of these various factors and through these studies. For the purposes of this study, the Town Centre's physical boundaries are generally defined as 10<sup>th</sup> Street to the north, 8<sup>th</sup> Avenue to the west (inclusive of the area along 8<sup>th</sup> Street between River Road and 8<sup>th</sup> Avenue), 7<sup>th</sup> Street to the south, and 6<sup>th</sup> Avenue to the east (inclusive of the area on 7<sup>th</sup> Street east of 6<sup>th</sup> Avenue). This study area is similar to the area evaluated in the 2007 Parking Study with several notable exceptions:

- The 2007 Parking Study included an assessment of private off-street parking areas. This study did not include private off-street parking areas.
- The 2007 Parking Study did not include 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue or 8<sup>th</sup> Avenue north of 10<sup>th</sup> Street or 7<sup>th</sup> Street. This study included 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between Mallard Alley (11<sup>th</sup> Street) and 10<sup>th</sup> Street as well as 7<sup>th</sup> Street from the river to 8<sup>th</sup> Avenue.
- The 2007 Parking Study did not include an assessment of bicycle parking or pedestrian parking. This study includes inventory and demand data of pedestrian and bicycle amenities within the Town Centre.
- The 2007 Parking Study evaluated approximately a 12-hour period, from 8:00 AM to 8:00 PM, on a Friday and Saturday during the Summer period. This study evaluated approximately an 8 hour period, from 8:00 AM to 5:00 PM, on a typical weekday, a

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Market Thursday and a typical weekend day, and a longer 12 hour period of 8:00 AM to 8:00 PM over a long weekend day.

**Figure 1.1** illustrates the Town Centre and study area evaluated in this study.

The Town Centre offers employment to local and regional residents and hosts a broad range of businesses frequented by visitors and locals. A regional transit service was introduced in Winter 2012 and a local transit service was added in Fall 2016, with the intended goals of alleviating some of the transportation congestion and providing greater modal options. The Town has also undertaken several bicycle and pedestrian infrastructure improvements to support local demand for alternatives to vehicle usage, further reducing some traffic loads within the Town Centre.

Despite these steps, parking within the Town Centre is perceived as limited by visitors, Town staff, downtown businesses and residents during popular seasons. The Town of Canmore retained the Stantec Team (Stantec and its sub-consultant Mobycon, hereafter referred to collectively as “Stantec” in this report) to undertake an updated parking study of public parking areas within the Town Centre to ascertain current parking supply relative to demand and parking behaviors. As part of this study, Stantec also reviewed and assessed current bicycle and pedestrian “parking” demands relative to available infrastructure. Based on the results of the study, Stantec has developed an implementation strategy for several options for the Town’s consideration for the management of vehicular, bicycle and pedestrian parking infrastructure within the Town Centre.

## 1.2 STUDY OBJECTIVES

The objectives of this parking study of public parking within the Town Centre are as follows:

- Document the available public parking supply within the Town Centre and current parking constraints. As noted previously, the Town Centre’s boundaries for the purposes of this study are generally defined by 10<sup>th</sup> Street to the north, 8<sup>th</sup> Avenue to the west (inclusive of the area along 8<sup>th</sup> Street between River Road and 8<sup>th</sup> Avenue), 7<sup>th</sup> Street to the south, and 6<sup>th</sup> Avenue to the east (inclusive of the area on 7<sup>th</sup> Street east of 6<sup>th</sup> Avenue).
- Document parking demand within the Town Centre over 4 periods – a long weekend day over the summer, a typical summer weekend day, a typical weekday, and a Market Thursday. Data collected should include both vehicular, pedestrian and cyclist parking demand within the Town Centre.
- Determine how vehicular parking stalls are currently used and occupied, specifically focusing on parking turnover, duration and peak period identification, over each of the 4 periods. Compare these results to the previous 2007 Parking Study to evaluate how parking behaviours may have been changed since the previous study.



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- Identify and recommend potential mitigation approaches for the management of the Town Centre parking infrastructure to inform the development of an Integrated Parking Management Plan.

It should be noted that parking demand can vary from day-to-day and between different peak periods, and can be dependent on a wide variety of external factors. It is assumed in this report that the observed practices and behaviors are characteristic of the typical periods they each represent.

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## Figure 1.1 Study Area

### 1.3 STUDY AREA AND PERIODS

As noted previously in Figure 1.1, the proposed study area generally consisted of the Town Centre. Specifically within the Town Centre, the following roadways and areas offering public parking are noted as follows:

- 10<sup>th</sup> Street on-street parking, from the 10<sup>th</sup> Street bridge immediately east of 6<sup>th</sup> Avenue to 8<sup>th</sup> Avenue
- 9<sup>th</sup> Street on-street parking between 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue
- 8<sup>th</sup> Street on-street parking from Spring Creek Drive to River Road
- 7<sup>th</sup> Street on-street parking from 8<sup>th</sup> Avenue to the area east of 6<sup>th</sup> Avenue
- 6<sup>th</sup> Avenue from Mallard Alley (11<sup>th</sup> Street) to 7<sup>th</sup> Street
- 7<sup>th</sup> Avenue from 10<sup>th</sup> Street to 7<sup>th</sup> Street
- 8<sup>th</sup> Avenue from 10<sup>th</sup> Street to 7<sup>th</sup> Street
- Public parking lots on 9<sup>th</sup> Street between 8<sup>th</sup> Avenue and 7<sup>th</sup> Avenue (referred to as the 9<sup>th</sup> Street Lot in this report)
- Public parking lots north of 7<sup>th</sup> Street between 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue (referred to as the 7<sup>th</sup> Street Lot in this report)

As noted previously, the study periods for data collection were defined as:

- A long weekend day
  - Saturday, July 2, 2016
- A typical weekend day
  - Saturday, August 20, 2016
- A typical weekday
  - Wednesday, August 24, 2016
- A Market Thursday
  - Thursday, August 25, 2016

#### 1.3.1 Comparisons to Previous Parking Studies

As noted previously in Section 1.1, on-street public parking along the roadways evaluated in this study includes expanded areas within the Town Centre compared to the 2007 Parking Study. Most notably, this study includes 7<sup>th</sup> Street from the river west to 8<sup>th</sup> Street and portions of 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street, where adjoining land uses include residential uses. However this study does not include any private off-street parking areas, which were included in the 2007 Parking Study. The 2007 Parking Study conducted data collection on Friday July 20, 2007 and Saturday July 21, 2007, but also included the Gateway Area and additional private parking within this area.

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The 2007 Parking Study and other past studies also focused data collection during the summer peak periods, though specific dates have varied between all the studies. This is consistent with this study, with additional data collection undertaken in this study on a Market Thursday and a long weekend day. In the 1998 parking study, data collection occurred on a Thursday and Saturday in late August 1998, and was limited only peak hours though businesses in the area are generally open from 9:00am to 5:00pm. As part of the 2001 TMP update, parking data collection occurred at a similar time of year, on Friday August 25, 2000 and Saturday August 26, 2000. Collectively, while the specific data collection dates have varied between these previous studies and this study, they all represent the peak summer period when activity within the Town of Canmore is greater than other times of the year.

Weather was determined to be a key factor that could potentially impact any observed parking demand, and can be unpredictable during the summer months in Alberta. On the dates selected above, weather conditions were generally clear and sunny for the duration of the data collection period, with the notable exception of Thursday August 25 when late afternoon rains resulted in data collection terminating at 4:00pm. It should also be noted that between the Saturday July 2 and Saturday August 20 data collection dates, the Town modified the parking restrictions within the 9<sup>th</sup> Street Parking Lots. Specifically, a 4-hour time limit was imposed in two of the free parking lots. Therefore an additional analysis conducted in this study was to evaluate if any parking behavioral changes occurred as a result of this change.

It should also be noted that 11<sup>th</sup> Street between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue was initially included within the study area, and data was collected on Saturday July 2. The data revealed nearly no activity on this roadway, and the roadway is marked as “No Parking” between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. Subsequent discussions with the Town indicated this roadway could therefore be removed from the study area and further analysis. Therefore 11<sup>th</sup> Street was removed from the study area. Characteristics of each corridor and the data collected are provided in the subsequent sections of this report.

On-street parking usage is presented in this report on a corridor basis. On-street parking usage is detailed on a “per block” basis for 10<sup>th</sup> Street, 9<sup>th</sup> Street, 8<sup>th</sup> Street and 7<sup>th</sup> Street in the Appendix. For the 7<sup>th</sup> Street Parking Lots and 9<sup>th</sup> Street Parking Lots, parking information is presented for each parking lot area collectively rather than the separate lots within each area. This approach was taken given the proximity of the individual lots relative to each other and the expectation that a vehicle looking for a parking stall in one lot would consider the adjoining lots and regard the lots as indistinguishable from each other.

As the study areas differ between this study and the 2007 Parking Study, analysis results are presented in two formats. To compare inventory, demand and occupancy results from this study with the 2007 Parking Study, a separate evaluation was conducted that excluded the data collected along 7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street. In addition, private parking areas and the Gateway Area from the 2007 Parking Study were excluded.

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In addition, parking inventory, demand and occupancy results from the full study area (inclusive of 7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street) are also presented in this report. These additional areas were evaluated at the request of the Town as part of this study's methodology.

### 1.4 STUDY AREA CHARACTERISTICS

Characteristics of each of the study areas are as follows:

**10<sup>th</sup> Street, between the bridge and 8<sup>th</sup> Avenue** offers on-street parking on both sides of the roadway, with mostly residential developments and a few commercial businesses along the north side, and commercial businesses along the south side. Bicycle parking is offered on the south side of 10<sup>th</sup> Street near 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. Benches are also offered along the south side of 10<sup>th</sup> Street near 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue, as well as on the north side near 8<sup>th</sup> Avenue. 10<sup>th</sup> Street offers one of the two bridge crossings to Railway Avenue, which offers direct connectivity to Highway 1. Intersections along 10<sup>th</sup> Street within the study area are all unsignalized, and wayfinding signage is offered along 10<sup>th</sup> Street to nearby Downtown free public parking lots. Space for approximately 76 parking stalls were measured along this roadway within the study area.

**9<sup>th</sup> Street, between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue** is a narrow one-way (eastbound) roadway between 7<sup>th</sup> Avenue and 6<sup>th</sup> Avenue with on-street parking provided on the south side between 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue, and no public parking between 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. Businesses fronting 10<sup>th</sup> Street and 8<sup>th</sup> Street largely back on to 9<sup>th</sup> Street. Benches and bicycle parking spaces are provided along 9<sup>th</sup> Street. 9<sup>th</sup> Street provides access to free public parking lots located between 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. Space for approximately 19 parking stalls were measured along this roadway within the study area. For consistency with the previous 2007 Parking Study, the parking stalls along this roadway were considered off-street parking.

**8<sup>th</sup> Street, between the bridge and River Road** is two-way roadway that offers on-street parking on both sides of the roadway. Benches and bicycle parking is offered all along 8<sup>th</sup> Street between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. In addition, in-street patios and bicycle corrals are offered along this roadway in several locations, reducing the available parking inventory. Due to varying conditions along the roadway, the specific number of parking stalls that have been impacted by this infrastructure could not be quantified. Between 8<sup>th</sup> Avenue and the bridge, mostly commercial businesses front both sides of the roadway. West of 8<sup>th</sup> Avenue includes a large on-street parking area that was also included in this study. Similar to 10<sup>th</sup> Street, the 8<sup>th</sup> Street bridge also connects to Railway Avenue, providing access to the area from Highway 1. Signalized intersections are located at 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue. Generally, pedestrian and cycling activity is highest along 8<sup>th</sup> Street relative to the other roadways and areas evaluated in this study. Space for approximately 154 parking stalls were measured along this roadway within the study area.

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**7<sup>th</sup> Street, between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue**, is two-way roadway with on-street parking provided on both the north and south sides of the roadway. No bicycle parking is provided within this area, and benches are provided only at the 6<sup>th</sup> Avenue intersection. The south side of the roadway is primarily residential, and north side is mostly mixed use of office, specialty services, residential and adjoining surface parking lot areas with limited active frontage area. A public parking lot area is located between 7<sup>th</sup> Street and 8<sup>th</sup> Street, and between 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue, with access provided from an alley as well as 7<sup>th</sup> Street. Parking is also allowed on 7<sup>th</sup> Street east of 6<sup>th</sup> Avenue, and was included in this analysis. This section of 7<sup>th</sup> Street is a gravel roadway. Space for approximately 76 parking stalls were measured along this roadway within the study area. Collectively, 7<sup>th</sup> Street between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue provides opportunities for overflow parking from the 7<sup>th</sup> Street Parking Lots and a reasonable walking distance to the more active frontage areas along 8<sup>th</sup> Street.

**6<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street**, is a two-way roadway with scattered on-street parking on both sides of the roadway. For the most part, curb extensions define on-street parking areas along the corridor. Benches and bicycle parking areas are offered along 6<sup>th</sup> Avenue. Between 11<sup>th</sup> Street and 10<sup>th</sup> Street, on-street parking is also offered on both sides of the roadway, and was therefore also included in this study. Space for approximately 39 parking stalls were measured along this roadway within the study area.

**7<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street**, is also a two-way roadway with similar characteristics as 6<sup>th</sup> Avenue. On-street parking is offered on both sides of the roadway, with benches and bicycle parking along the corridor. Space for approximately 45 parking stalls were measured along this roadway within the study area. During Market Thursdays, a portion of 7<sup>th</sup> Avenue near the Civic Centre Plaza is closed to accommodate market activities, impacting the available parking supply along 7<sup>th</sup> Avenue and nearby areas. The impacts of Market Thursdays to the available parking inventory could not be quantified as varying factors such as the number of vendors on a particular day may impact the physical space required for the event. In addition, a variety of weekend events near the Civic Centre may also impact the available parking inventory along 7<sup>th</sup> Avenue.

**8<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street**, is a two-way roadway with on-street parking on both sides of the roadway. 8<sup>th</sup> Avenue serves as a boundary between residential areas and the Town Centre. Benches and bicycle parking is also offered on both sides of the roadway. Space for approximately 34 parking stalls were measured along this roadway within the study area.

**The 7<sup>th</sup> Street Parking Lots** are located between 7<sup>th</sup> Street (to the south), 8<sup>th</sup> Street (to the north), 6<sup>th</sup> Avenue (to the east) and 7<sup>th</sup> Avenue (to the west), with access provided through an alley between 7<sup>th</sup> Street and 8<sup>th</sup> Street as well as from 7<sup>th</sup> Street. Space for approximately 152 parking stalls are provided in this area through marked stalls. Parking demand can exceed the available parking supply within the lot with vehicles using unmarked areas to park.

**The 9<sup>th</sup> Street Parking Lots** are located on both sides of 9<sup>th</sup> Street between 8<sup>th</sup> Avenue and 7<sup>th</sup> Avenue. Access provided through an alley between 9<sup>th</sup> Street and 8<sup>th</sup> Street as well as from 9<sup>th</sup>

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Street. Regional transit services provide additional connectivity to this parking area. Space for approximately 154 parking stalls are provided in this area through marked stalls. Parking demand can exceed the available parking supply within the lot with vehicles using unmarked areas to park. As indicated previously, a portion of this parking area was modified from unrestricted (all-day) parking to 4-hour parking over the course of this study, affecting all data collection conducted on Saturday August 20, 2016, Wednesday August 24, 2016 and Thursday August 25, 2016.

Collectively, a total of 749 public parking stalls were identified within this study's expanded inventory area and were included in this analysis. As noted previously, a smaller study area (excluding 7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street) was also evaluated to compare with the parking supply identified for this area in the 2007 Parking Study. **Table 1.1** provides a comparison of the parking inventories from the 1998, 2000, 2007 and this 2016 parking study. It should be noted that the parking inventory estimates for the study years shown are based on parking behaviours at the time of data collection. Factors such as spacing between parked vehicles and the mix of different size vehicles and vehicle types can impact the observed parking inventory estimate, as the on-street parking areas evaluated in this study consist of parking lanes that are not delineated into parking stalls. Therefore the number of parked vehicles that can be accommodated may differ from day to day based on roadway conditions even if the available physical space has not changed. Through discussions with Town staff, it is our understanding that the available on-street parking lane space has decreased over the study periods with some increases to off-street parking areas. Therefore for the purposes of this study, the total available parking supply for the narrowed study area was considered flat from previous years.

It should also be noted that analysis and inventory of private parking stalls within the study area was not included in the scope of this study and excluded from the 2007 Parking Study inventory for comparative purposes.

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Table 1.1: Public Parking Inventory Change in the Canmore Town Centre					
Study Period	1998 Parking Study	2000 Parking Study	2007 Parking Study	2016 Parking Study (narrowed study area)	2016 Parking Study (full study area)
On-Street Public Parking Inventory <sup>1</sup>	325	-	411	379	424
Off-Street Public Parking Inventory	248	273	259	325	325

<sup>1</sup> Parking Inventories are approximate. As the on-street parking areas are not designated parking stalls, variations due to vehicle types, lengths and spacing between vehicles may impact the available inventory. For consistency with the 2007 Parking Study, parking along 9<sup>th</sup> Street was included in the off-street public parking inventory.

As noted in the Town of Canmore's *Town Centre Parking and Traffic Management Strategy*, 2015, the consensus is that the available supply of vehicular parking within the Town Centre has largely been optimized. However it should be noted that the Town of Canmore approved CAP 1634, Parking Strategy Implementation, in April 2017 that is expected to further optimize parking in the 700 block of Veteran's Way to add an additional 22 parking stalls as well as additional stalls on 6<sup>th</sup> Avenue.

Comparatively, the population with the Town of Canmore has also been changing. Between 1998 and 2007, the population of Canmore increased by approximately 24%. Between 2007 and 2016, the population further increased by 16%. Traffic volumes on major roadways in the area also increased during this time period. Between 2007 and 2016, traffic volumes on the Trans-Canada Highway increased by approximately 50.9%<sup>1</sup>, while traffic volumes on Highway 742 increased by approximately 144%<sup>1</sup>.

At the time of this study as well as the 2007 Parking Study, all public parking offered in the Town Centre is free-of-charge, with varying time restrictions. **Figure 1.2** illustrates the current parking restrictions and practices within the study area. In the 2007 Parking Study, 85% occupancy was considered "practical occupancy" and a level of peak efficiency based on the Institute of Transportation Engineers (ITE) *Transportation Planning Handbook*, 1992. For the purposes of this analysis, this threshold was modified to a target range of 70 – 85%. This metric was used in lieu of 100% as full occupancy and 85% for practical occupancy as the number of parking spaces (supply) was estimated based on roadway measurements and parking patterns since on-street parking stalls are not marked, and to account for variations in spacing between vehicles that may alter the available parking supply.

Parking patterns for these study areas were cataloged into 3 categories:

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<sup>1</sup> Based on Alberta Transportation traffic count stations within the area



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- Percentage of vehicles that were observed to be parked for less than 2 hours
- Percentage of vehicles that were observed to be parked for between 2 – 4 hours
- Percentage of vehicles that were observed to be parked for over 4 hours
  - A subset of this duration was also noted to document the percentage of vehicles that exceeded 4 hours to also exceed 6 hours. The rationale for analysis of this subset is to (1) document vehicles that may be attributed to workers or residents within Canmore and Banff that may be occupying a parking stall in either the 7<sup>th</sup> Street or 9<sup>th</sup> Street Parking Lots, using on-street parking to park excess vehicles or underutilizing private parking within their private property. It should be noted that in areas with unrestricted parking, these vehicles are parked legally, but parking stall turnover is severely limited. Imposing a time restriction to unrestricted parking areas could create a possible behaviour change (modal change) and/or more turnover of a parking stall within the Town Centre.

Pedestrian activity within the study area was both quantitatively and qualitatively assessed. Specifically, areas of peak bicycle and pedestrian activity were documented as well as instances where a demand for infrastructure was not met. For example, pedestrians observed sitting on grassy areas, on rocks or other objects, or standing next to fully occupied benches and sitting areas were documented. In addition, bicycles leaning/chained on posts, signs, fences or other objects in areas where either existing bike racks were full or no bike racks are provided was also documented. Both sets of data provided guidance as to where existing demand may necessitate the need for either new or expanded infrastructure.

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### Figure 1.2 Current Parking Restrictions

## 2.0 PARKING BEHAVIOR

Parking occupancy is presented in the following section for each study street and parking lot. The percentage occupancy shown is of the number of vehicles counted to be occupying a parking space to the total number of available parking spaces. The parking duration is a measure of how long vehicles have occupied a parking stall. All 4 data collection periods are illustrated together for each roadway to compare occupancy periods and durations.

**Table 2.1** summarizes population changes within the Town through the previous parking studies and this study. It was beyond the scope of this study to evaluate correlations between residential population type and parking occupancy or duration, but it is acknowledged that this may be one of several factors influencing parking behaviours within the Town. Numerous other factors such as vehicle ownership (% ownership as well as number of vehicles), size and age of households, socio-economic factors, number of annual visitors to the area and seasonal weather conditions are examples of other influences on parking behaviours.

Table 2.1: Population Changes in Canmore				
Year	Permanent Population	% Growth	Permanent Residents	Non-Permanent Residents
1998	9,711	-	-	-
2000	10,517	8.3%	84.4%	15.6%
2006	11,599	10.3%	69.4%	30.6%
2016	13,900	19.8%	77.1%	22.9%

### 2.1 PARKING OCCUPANCY

Parking occupancies for each roadway and public parking lot were averaged for each study period and are summarized in **Figure 2.1 – Figure 2.9**. The results generally indicate that the long weekend Saturday and the Market Thursday resulted in higher overall parking occupancies for both on-street and public off-street areas compared to a typical weekday and typical weekend day.

Direct comparisons between this data and previous parking studies is limited to on-street public parking and off-street public parking only, as these previous studies included private off-street parking areas in the parking occupancy and duration assessments and this study's scope only included the off-street public parking areas. The 2001 TMP Update and 2007 Parking Study compared to this study's results are provided in **Table 2.2**, with occupancies based on the peak hour of the day. It should be noted that the 2001 TMP Update's data collection was limited to approximately 8:00 am to 5:00 pm, while the 2007 parking study and this study collected data into the evening hours. However in all three studies, the peak period was identified as approximately the noon time period, and the results reported in Table 2.1 are representative of peak hour only activity. Direct comparisons between the previous studies and this study for parking occupancy levels throughout the day was not feasible as previous studies combined data for public and private parking areas and this study did not include inventory of private parking areas.

As noted previously, this study also included several roadway sections that were not part of the study areas of previous parking studies (7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street). Therefore these extraneous areas were removed from the analysis to create more comparable results to previous studies, and are referred to as the "narrowed study area" in Table 2.1. The "full study area" identified in Table 2.2 is inclusive of 7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street. It should be noted that study periods differed in this study compared to previous studies, and this study also evaluated two additional periods – Market Thursdays and a long-weekend day. These additional periods are noted in Table 2.2.

Based on discussions with Town staff, tour buses are often observed loading and unloading along the south side of 10<sup>th</sup> Street in the 10-minute loading zone located north of the surface parking lot. While this activity was not specifically observed during the data collection periods, it is noted in this report for its impacts to parking demand and occupancy levels.

As noted previously, previous studies did not include a review of bicycle and pedestrian infrastructure and their usage within the Town Centre. Usage of cyclist and pedestrian infrastructure within the study area was evaluated qualitatively through observed behaviour. Bicycles attached to benches, trees, posts, fences and other types of infrastructure were deemed an indication of unmet demand resulting from either a shortage or lack of appropriate bicycle parking infrastructure. Similarly, unmet pedestrian demand was measured by observing pedestrians standing in areas where existing benches were full, and pedestrians standing or

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leaning against objects such as rocks, walls, fences or sitting on the ground in areas with no pedestrian benches. The results of the bicycle and pedestrian infrastructure review indicate unmet demand conditions during all study periods, and particularly along 8<sup>th</sup> Street.

<b>Table 2.2: On-Street Parking Occupancy in the Canmore Town Centre (Peak Period)</b>				
<b>Study Period</b>	<b>2001 TMP Update</b>	<b>2007 Parking Study</b>	<b>2016 Parking Study (narrowed study area)</b>	<b>2016 Parking Study (full study area)</b>
On-Street Peak Hour Parking Occupancy (Typical Weekday)	71.1%	65.0%	74.1%	61.7%
On-Street Peak Hour Parking Occupancy (Market Thursday)	-	-	85.8%	75.0%
On-Street Peak Hour Parking Occupancy (Typical Weekend Day)	69.9%	63.0%	78.6%	62.8%
On-Street Peak Hour Parking Occupancy (Long Weekend Day)	-	-	80.7%	66.2%
Off-Street Peak Hour Parking Occupancy (Typical Weekday)		68.7%	85.2% <sup>2</sup>	85.2% <sup>2</sup>
Off-Street Peak Hour Parking Occupancy (Market Thursday)	-	-	99.1% <sup>2</sup>	99.1% <sup>2</sup>
Off-Street Peak Hour Parking Occupancy (Typical Weekend Day)		59.8%	95.3% <sup>2</sup>	95.3% <sup>2</sup>
Off-Street Peak Hour Parking Occupancy (Long Weekend Day)	-	-	100.6% <sup>1 2</sup>	100.6% <sup>1 2</sup>

<sup>1</sup> Occupancy exceeds 100% due to vehicles parking in unmarked parking stall areas.

<sup>2</sup> Off-Street parking areas are the same between the 2016 full parking study area and 2016 narrowed parking study area.

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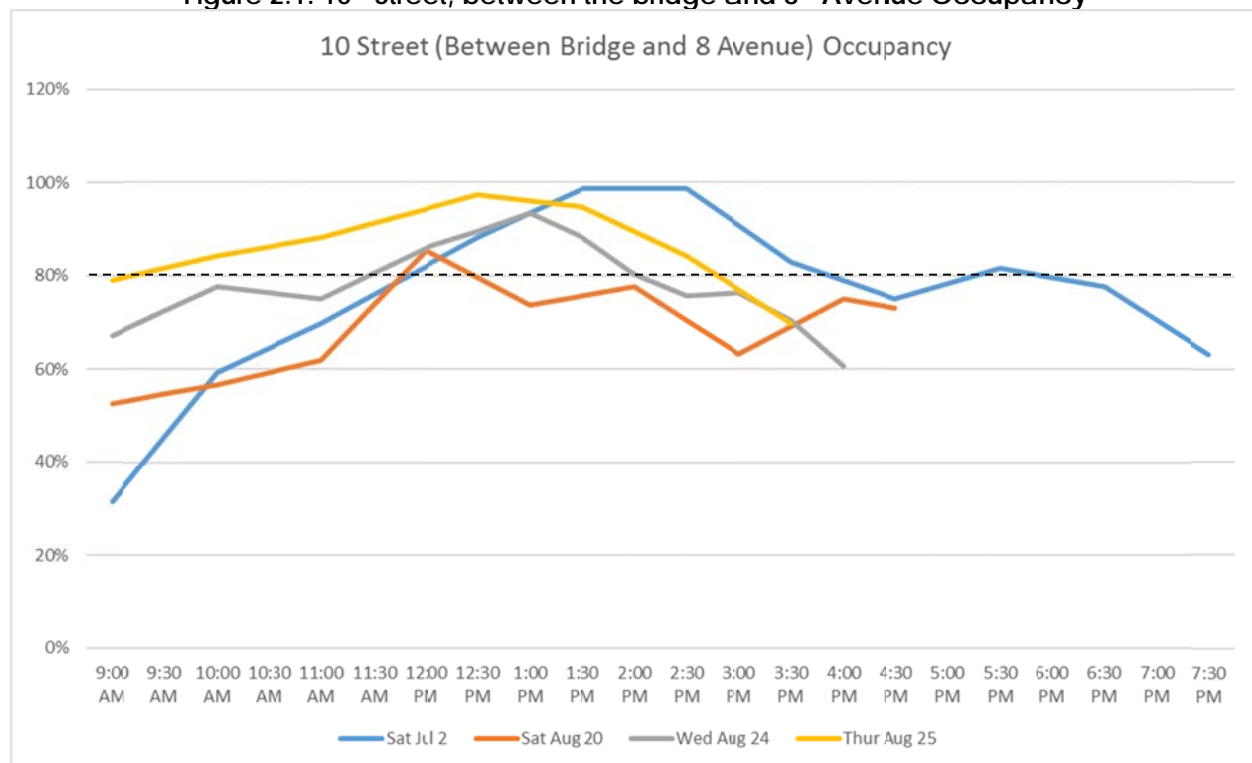
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Comparing Table 1.1 (parking inventory) and Table 2.2 (parking occupancy), several conclusions can be reached:

- The decrease in on-street parking inventory is approximately proportionate to the increase in parking occupancy for the typical weekday period, suggesting weekday on-street parking demand levels are relatively flat from 2007 to 2016.
- On-street parking occupancy for the typical weekend day has increased from 2007 to 2016.
- Despite increases to the off-street parking inventory from 2007 to 2016, parking occupancy has disproportionately increased for the typical weekday and typical weekend day. For both of these analysis periods, occupancy has reached capacity.
- Market Thursdays and the long weekend day represent periods of higher parking occupancy levels for both on-street and off-street parking, with occupancy levels reaching capacity.

Figures 2.1 – 2.9 provide occupancy levels throughout the day on a per-block basis during each of the study periods. As noted previously, this data could not be compared to the occupancy levels from previous parking studies as previous studies included private parking areas, whereas this study did not. As noted previously, a target range of 70 – 85% was considered the practical occupancy threshold for the purposes of this study, and is noted as a dashed line on Figures 2.1 – Figure 2.9.

**Figure 2.1: 10<sup>th</sup> Street, between the bridge and 8<sup>th</sup> Avenue Occupancy**



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Figure 2.2: 9<sup>th</sup> Street, between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue Occupancy

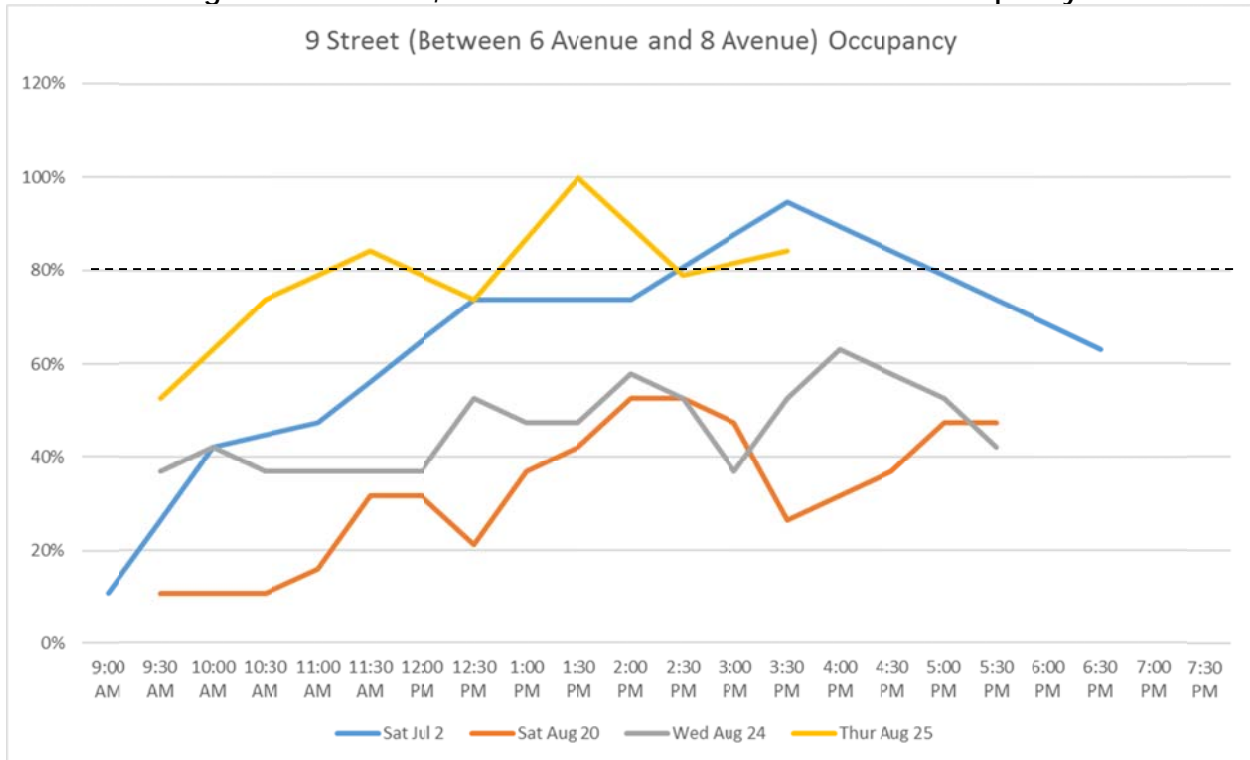
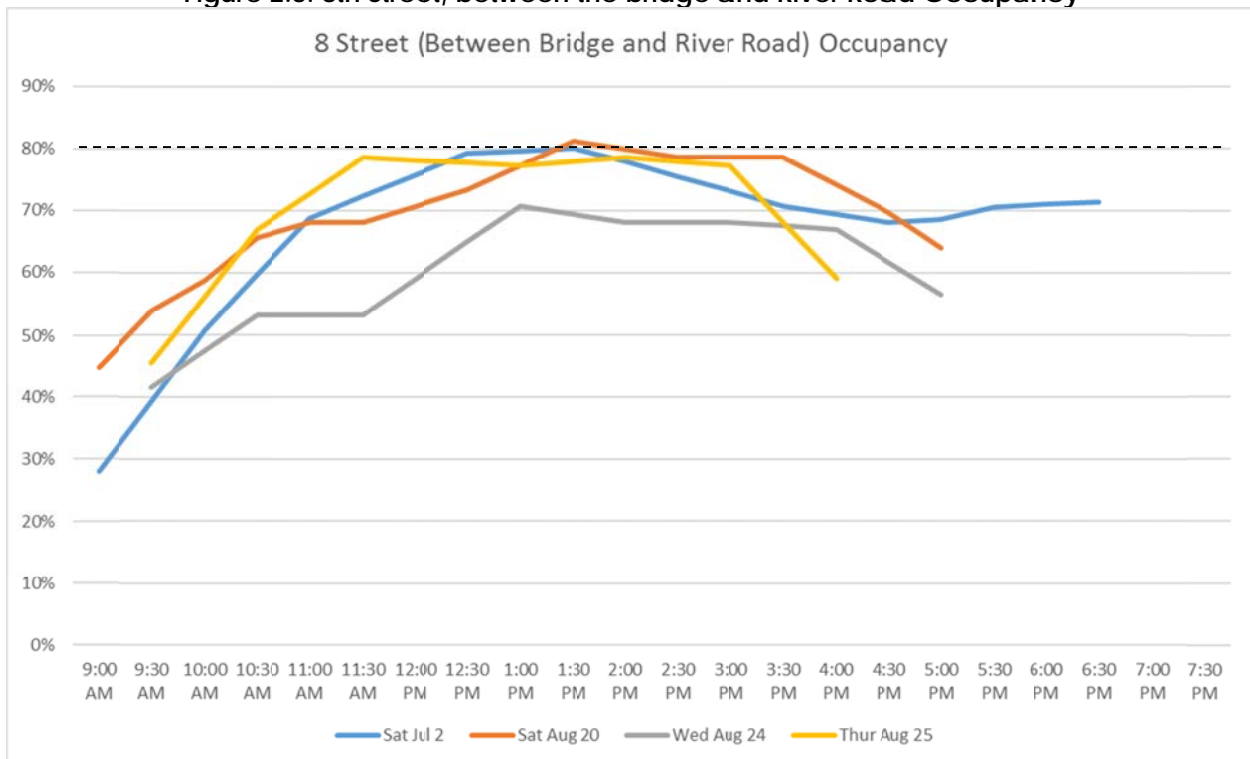


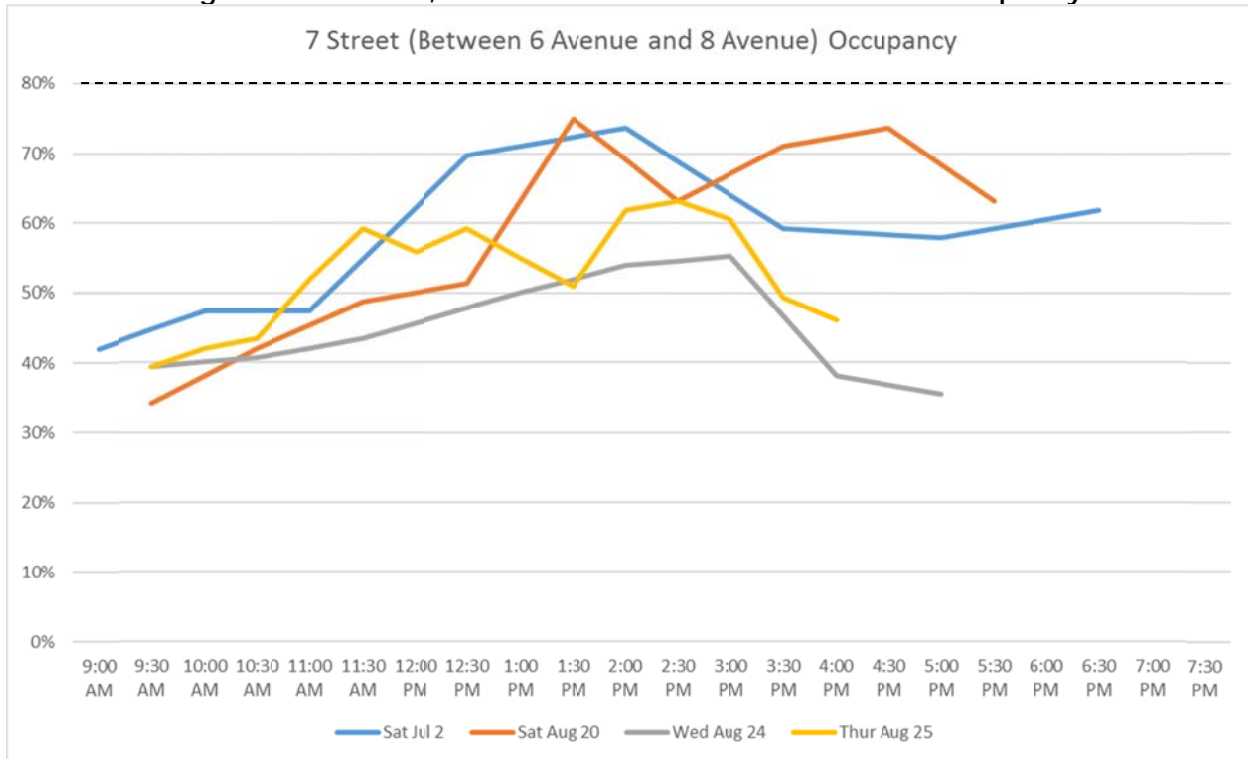
Figure 2.3: 8<sup>th</sup> Street, between the bridge and River Road Occupancy



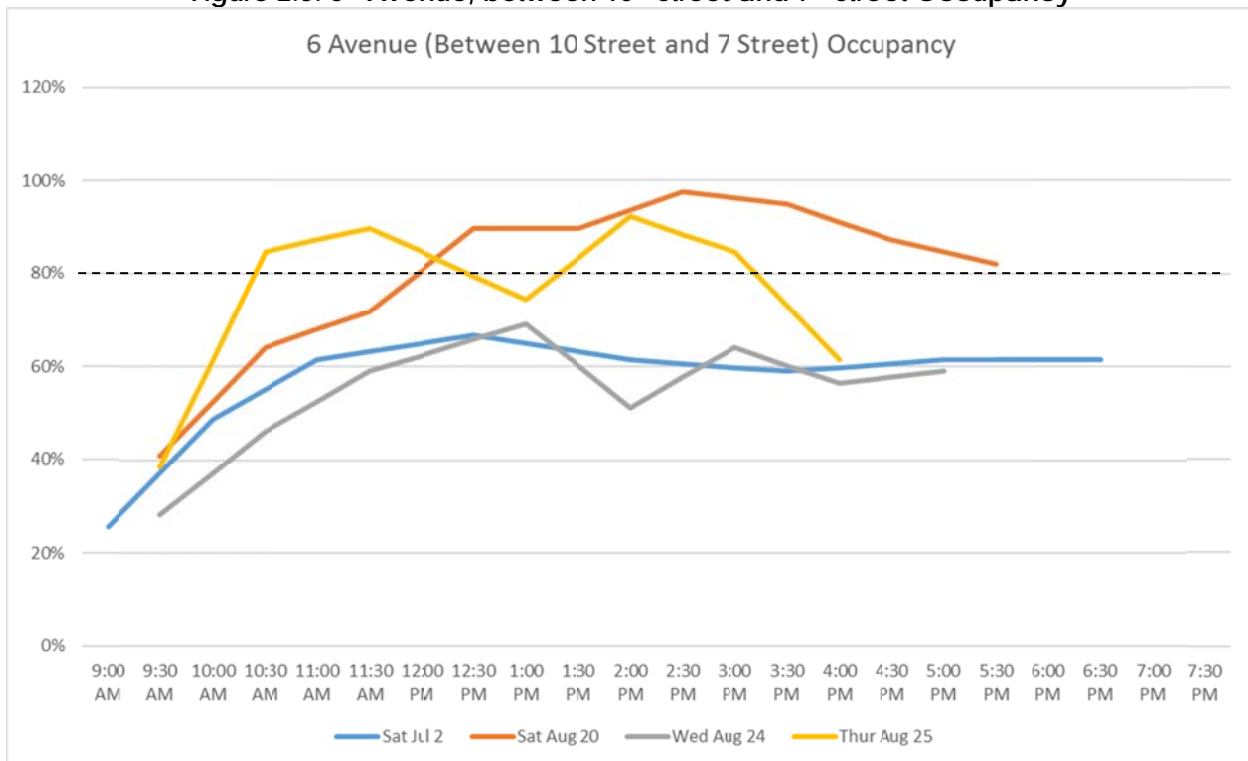
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**Figure 2.4: 7<sup>th</sup> Street, between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue Occupancy**



**Figure 2.5: 6<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street Occupancy**





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Figure 2.6: 7<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street Occupancy

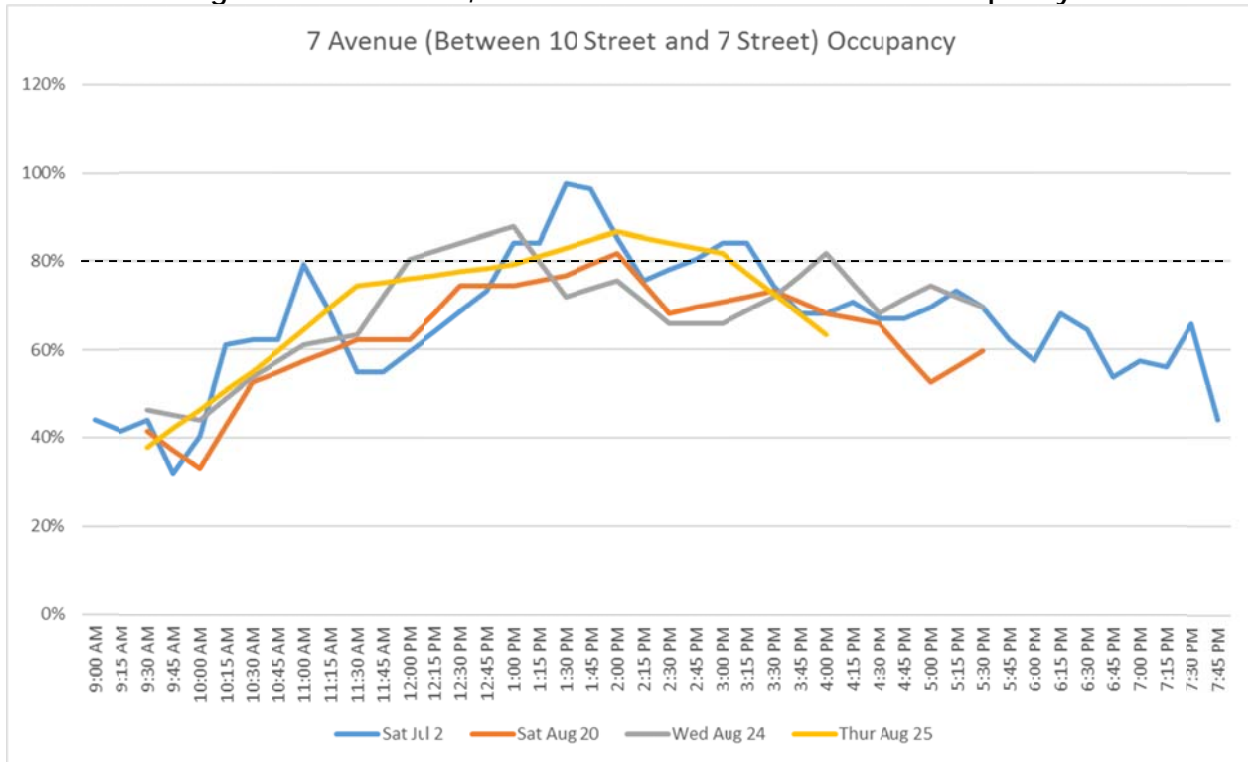
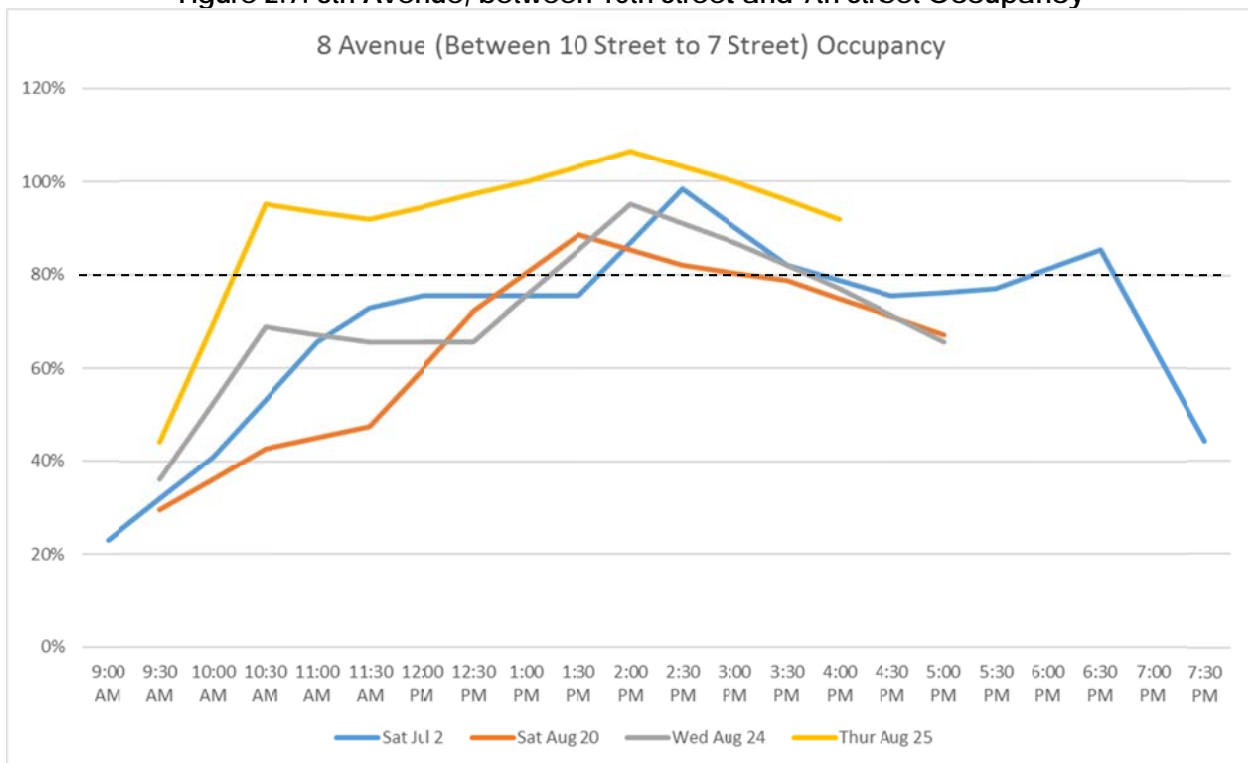


Figure 2.7: 8<sup>th</sup> Avenue, between 10<sup>th</sup> Street and 7<sup>th</sup> Street Occupancy



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Figure 2.8: 7<sup>th</sup> Street Parking Lot Occupancy

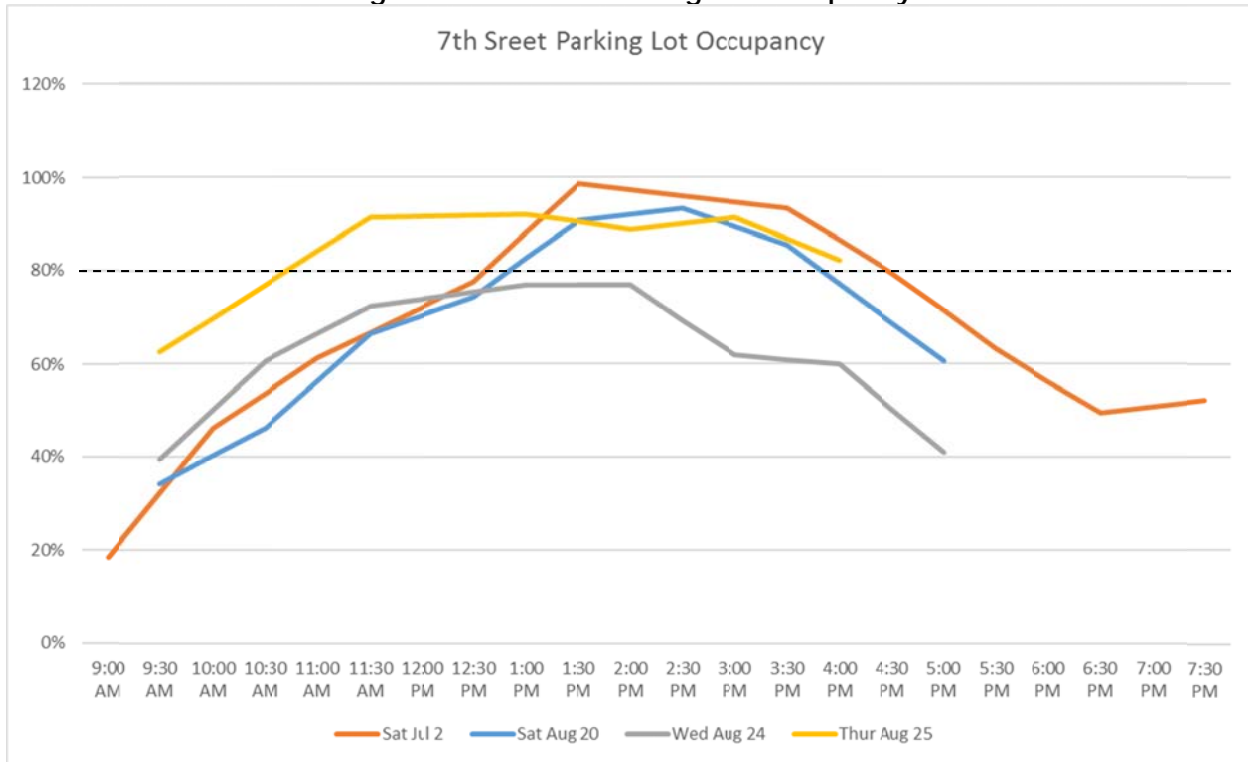
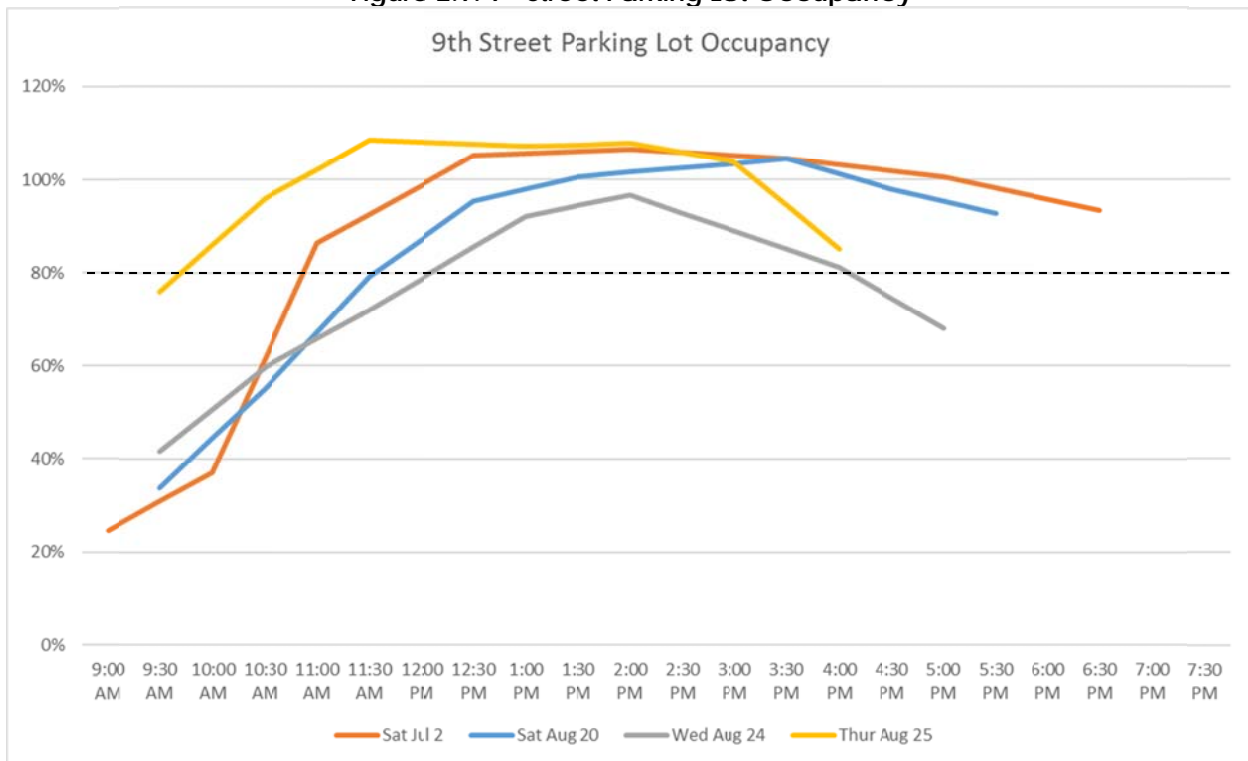


Figure 2.9: 9<sup>th</sup> Street Parking Lot Occupancy



## 2.2 PARKING DURATION

The 2001 TMP Update and 2007 Parking Study evaluated average parking duration for on-street public parking areas. As noted previously, this study evaluated an expanded area from previously studies – namely 7<sup>th</sup> Street and 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue between 10<sup>th</sup> Street and 11<sup>th</sup> Street. These areas were excluded from the parking duration analysis to create a comparable data set to previous parking studies. **Table 2.3** provides a comparison between the 2001 TMP Update, 2007 Parking Study and this study.

It should be noted that the 2001 TMP Update only evaluated parking durations between 9:00am and 5:00pm, the 2007 parking study evaluated parking durations into the evening hours, and this study extended into the evening hours on the long weekend day only. Therefore parking durations from the 2007 parking study may include the influence of evening activities within the Town Centre. In addition, due to varying data collection techniques between the different studies, parking durations reported should be considered more broadly as a trending pattern rather than the specific differences in minutes. The results of the analysis suggest a steady increase in average parking durations between the three studies on typical weekdays, and a relatively flat parking duration pattern on typical weekend days. Coupled with the parking occupancy data, this indicates that on typical weekdays, while occupancy levels remained relatively flat the average parking duration has been steadily increasing. On typical weekend days, occupancy levels have increased however the parking duration has remained relatively the same. In addition, on-street parking durations for Market Thursday and a long weekend day are greater than a typical weekday and typical weekend day.

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Table 2.3: On-Street Parking Duration Change in the Canmore Town Centre		
Study Period	Weekday On-Street Parking Duration <sup>1</sup>	Weekend On-Street Parking Duration <sup>1</sup>
2001 TMP Update	65 minutes	63 minutes
2007 Parking Study	69 minutes	73 minutes
2016 Parking Study (narrowed study area)	80 minutes	74 minutes
	Market Thursday On-Street Parking Duration	Long Weekend On-Street Parking Duration
2016 Parking Study (narrowed study area)	87 minutes	74 minutes

<sup>1</sup> 9<sup>th</sup> Street was categorized as off-street parking to be consistent with the previous 2007 Parking Study, and therefore not included in the parking duration assessment.

It should be noted that while the 2007 Parking Study included a license plate survey to determine the percentage of residents and non-residents using on-street parking, this level of detail was outside of the scope of this study and not one of the intended focuses of this study. However, as part of the Town of Canmore's *Town Centre Parking and Traffic Management Strategy*, 2015, stakeholder engagement events and workshops were held that suggest locals still make up a significant portion of Town Centre visitors on busy weekends.

It should also be noted that through 2016, approximately 128 parking violation tickets were issued within the 2-hour parking areas. As of December 2016, approximately 13 parking violation tickets have been issued to vehicles in the new 4-hour parking areas. Historical data from 2007 and 2001 was not available at the time of this report to compare with other parking studies and not included in their respective reports. Parking violations are not indicative of parking duration trends, but rather an indication of whether the financial disincentives outweigh the incentives for committing a violation. Coupled together however, this data can be used to qualitatively assess the effectiveness of the current enforcement strategy.

**Table 2.4 – Table 2.12** summarize the parking durations for each roadway and public parking lot within the study area for each of the 4 study periods, and include the expanded study areas. Due to the shorter block lengths, 6<sup>th</sup> Avenue, 7<sup>th</sup> Avenue and 8<sup>th</sup> Avenue parking durations are summarized for the entire length of the study area (7<sup>th</sup> Street to 11<sup>th</sup> Street).

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Table 2.4 – 10th Street Parking Duration

Day	10 Street	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6 <sup>1</sup>	> 6 <sup>1</sup>
<b>Sat, July 2, 2016</b>	East of 6th Avenue <sup>1</sup>	41%	26%	7%	26%
	6th Avenue to 7th Avenue	87%	11%	1%	1%
	7th Avenue to 8th Avenue	90%	7%	1%	3%
	<b>10th Street Total</b>	<b>85%</b>	<b>10%</b>	<b>1%</b>	<b>3%</b>
<b>Sat, Aug 20, 2016</b>	East of 6th Avenue <sup>1</sup>	64%	18%	7%	11%
	6th Avenue to 7th Avenue	96%	3%	0%	1%
	7th Avenue to 8th Avenue	88%	6%	0%	6%
	<b>10th Street Total</b>	<b>90%</b>	<b>6%</b>	<b>1%</b>	<b>4%</b>
<b>Wed, Aug 24, 2016</b>	East of 6th Avenue <sup>1</sup>	55%	24%	13%	8%
	6th Avenue to 7th Avenue	82%	15%	0%	3%
	7th Avenue to 8th Avenue	72%	10%	3%	15%
	<b>10th Street Total</b>	<b>74%</b>	<b>15%</b>	<b>3%</b>	<b>8%</b>
<b>Thurs, Aug 25, 2016</b>	East of 6th Avenue <sup>1</sup>	68%	8%	4%	20%
	6th Avenue to 7th Avenue	96%	2%	0%	2%
	7th Avenue to 8th Avenue	78%	9%	1%	12%
	<b>10th Street Total</b>	<b>86%</b>	<b>5%</b>	<b>1%</b>	<b>8%</b>
<b>10 Street Total</b>	Saturday, July 2, 2016	85%	10%	1%	3%
	Saturday, Aug 20, 2016	90%	6%	1%	4%
	Wednesday, Aug 24, 2016	74%	15%	3%	8%
	Thursday, Aug 25, 2016	86%	5%	1%	8%

<sup>1</sup> Parking along the north side of 10<sup>th</sup> Street (and on both sides east of 6<sup>th</sup> Avenue) is largely unrestricted parking; therefore a higher percentage of vehicles parking for longer durations is not unexpected.

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Table 2.5 – 9th Street Parking Duration

9 Street (6 Avenue to 7 Avenue)	Parking Duration (Hours)			
	< 2	2 - 4	4 - 6	> 6
Saturday, July 2, 2016	74%	12%	6%	8%
Saturday, Aug 20, 2016	89%	9%	2%	0%
Wednesday, Aug 24, 2016	80%	10%	5%	5%
Thursday, Aug 25, 2016	70%	20%	2%	9%

Table 2.6 – 8th Street Parking Duration

Day	8 Street	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>Sat, July 2, 2016</b>	East of 6th Avenue	98%	2%	0%	0%
	6th Avenue to 7th Avenue	95%	5%	0%	0%
	7th Avenue to 8th Avenue	95%	4%	1%	0%
	West of 8th Avenue <sup>1</sup>	79%	10%	4%	6%
	<b>8th Street Total</b>	<b>94%</b>	<b>5%</b>	<b>1%</b>	<b>1%</b>
<b>Sat, Aug 20, 2016</b>	East of 6th Avenue	95%	5%	0%	0%
	6th Avenue to 7th Avenue	95%	4%	0%	1%
	7th Avenue to 8th Avenue	94%	5%	1%	0%
	West of 8th Avenue <sup>1</sup>	77%	8%	1%	14%
	<b>8th Street Total</b>	<b>92%</b>	<b>5%</b>	<b>0%</b>	<b>2%</b>
<b>Wed, Aug 24, 2016</b>	East of 6th Avenue	98%	2%	0%	0%
	6th Avenue to 7th Avenue	97%	3%	0%	0%
	7th Avenue to 8th Avenue	94%	6%	0%	0%
	West of 8th Avenue <sup>1</sup>	61%	17%	5%	17%
	<b>8th Street Total</b>	<b>92%</b>	<b>5%</b>	<b>1%</b>	<b>2%</b>
<b>Thurs, Aug 25, 2016</b>	East of 6th Avenue	91%	9%	1%	0%
	6th Avenue to 7th Avenue	94%	5%	0%	1%
	7th Avenue to 8th Avenue	94%	6%	1%	0%
	West of 8th Avenue <sup>1</sup>	63%	13%	8%	16%
	<b>8th Street Total</b>	<b>88%</b>	<b>7%</b>	<b>2%</b>	<b>3%</b>
<b>8th Street Total</b>	Saturday, July 2, 2016	94%	5%	1%	1%
	Saturday, Aug 20, 2016	92%	5%	0%	2%
	Wednesday, Aug 24, 2016	92%	5%	1%	2%
	Thursday, Aug 25, 2016	88%	7%	2%	3%

<sup>1</sup> Parking along 8th Street west of 8th Avenue is largely unrestricted parking; therefore a higher percentage of vehicles parking for longer durations is not unexpected.

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Table 2.7 – 7th Street Parking Duration

Day	7 Street	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6 <sup>1</sup>	> 6 <sup>1</sup>
Sat, July 2, 2016	East of 6th Avenue	60%	0%	0%	40%
	6th Avenue to 7th Avenue	88%	4%	3%	6%
	7th Avenue to 8th Avenue	70%	6%	2%	21%
	<b>7th Street Total</b>	<b>81%</b>	<b>4%</b>	<b>2%</b>	<b>12%</b>
Sat, Aug 20, 2016	East of 6th Avenue	68%	19%	6%	6%
	6th Avenue to 7th Avenue	80%	14%	1%	6%
	7th Avenue to 8th Avenue	63%	22%	7%	7%
	<b>7th Street Total</b>	<b>72%</b>	<b>17%</b>	<b>4%</b>	<b>6%</b>
Wed, Aug 24, 2016	East of 6th Avenue	40%	30%	20%	10%
	6th Avenue to 7th Avenue	67%	15%	2%	15%
	7th Avenue to 8th Avenue	55%	13%	11%	21%
	<b>7th Street Total</b>	<b>60%</b>	<b>16%</b>	<b>7%</b>	<b>17%</b>
Thurs, Aug 25, 2016	East of 6th Avenue	74%	21%	0%	5%
	6th Avenue to 7th Avenue	91%	9%	0%	0%
	7th Avenue to 8th Avenue	73%	11%	0%	16%
	<b>7th Street Total</b>	<b>84%</b>	<b>11%</b>	<b>0%</b>	<b>6%</b>
<b>7th Street Total</b>	Saturday, July 2, 2016	81%	4%	2%	12%
	Saturday, Aug 20, 2016	72%	17%	4%	6%
	Wednesday, Aug 24, 2016	60%	16%	7%	17%
	Thursday, Aug 25, 2016	84%	11%	0%	6%

<sup>1</sup> Parking along the 7<sup>th</sup> Street is largely unrestricted parking; therefore a higher percentage of vehicles parking for longer durations is not unexpected.

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**Table 2.8 – 6th Avenue Parking Duration**

Day	6 Avenue	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>6th Avenue Total</b>	Saturday, July 2, 2016	95%	2%	1%	2%
	Saturday, Aug 20, 2016	92%	5%	2%	1%
	Wednesday, Aug 24, 2016	95%	5%	0%	0%
	Thursday, Aug 25, 2016	94%	5%	1%	0%

**Table 2.9 – 7th Avenue Parking Duration**

Day	7 Street	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>7th Avenue Total</b>	Saturday, July 2, 2016	95%	4%	1%	1%
	Saturday, Aug 20, 2016	96%	3%	1%	0%
	Wednesday, Aug 24, 2016	92%	4%	0%	3%
	Thursday, Aug 25, 2016	70%	14%	3%	13%

**Table 2.10 – 8th Avenue Parking Duration**

Day	8 Avenue	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>8th Avenue Total</b>	Saturday, July 2, 2016	88%	8%	3%	1%
	Saturday, Aug 20, 2016	97%	2%	1%	0%
	Wednesday, Aug 24, 2016	86%	10%	2%	2%
	Thursday, Aug 25, 2016	84%	12%	3%	2%



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**Table 2.11 – 7th Street Parking Lot Parking Duration**

Day	7 Street Parking Lot	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>7th Street Parking Lot Total</b>	Sat, July 2, 2016	86%	7%	2%	6%
	Sat, Aug 20, 2016	75%	16%	3%	6%
	Wed, Aug 24, 2016	66%	11%	6%	17%
	Thurs, Aug 25, 2016	68%	9%	8%	16%

**Table 2.12 – 9th Street Parking Lot Parking Duration**

Day	9 Street Parking Lot	Parking Duration (Hours)			
		< 2	2 - 4	4 - 6	> 6
<b>9th Street Parking Lot Total</b>	Sat, July 2, 2016	75%	14%	3%	7%
	Sat, Aug 20, 2016	80%	11%	6%	4%
	Wed, Aug 24, 2016	66%	21%	7%	6%
	Thurs, Aug 25, 2016	73%	14%	3%	10%

### 3.0 SUMMARY OF FINDINGS

Collectively evaluating all 4 periods of data collection results in the following overall observations:

- On-street parking occupancy rates on Market Thursday was generally higher than the Saturday long weekend, typical Saturday and typical weekday. Market Thursday parking occupancy rates for public off-street parking areas are comparable to rates seen on a long weekend day and indicate at-capacity levels at both on-street and public off-street parking areas. On-Street parking durations on a Market Thursday are longer than a typical weekday, typical weekend day, and a long weekend day.
- Comparing the typical weekday from this study to previous studies, parking occupancy levels have held relatively stable between 2007 and 2016 for on-street parking areas and parking durations have steadily been increasing (15.9% increase, from 69 minutes to 80 minutes). Despite the parking inventory increase in public off-street parking, occupancy levels increased disproportionately in these areas. This suggests a strong increase in parking demand at public off-street areas and stable on-street parking demand.
- On a typical weekend day, occupancy levels have increased in on-street and public off-street parking areas and are approaching capacity conditions (assumed as a range of 70 – 85% in this study for on-street parking). On-street parking durations on a typical weekend day have held steady between 2007 and 2016. This suggests increased parking demand on a typical weekend day with consistent activity duration for Downtown patrons.
- Parking occupancy levels for a long weekend day indicate at-capacity conditions at on-street and public off-street parking areas. Parking durations at on-street parking areas on a long weekend are consistent with a typical weekend day. This suggests while parking demand is higher on a long weekend day compared to a typical weekend day, activity durations for Downtown patrons are relatively consistent.
- Weekday parking durations have been steadily increasing since the 2001 TMP Update and 2007 Parking Study to this study. While a parking turnover assessment was not included in this analysis, anecdotally, longer parking durations would suggest a lower overall parking turnover rate. However this may also suggest Downtown patrons perceive an increased value is spending time in Downtown and may be engaging in more activity than previous study periods. It should be noted that the 2007 Parking Study included evening hours, however the 2001 TMP Update did not. This study included evening hours for the long weekend day only.

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- Long term parking (exceeding 4 or 6 hours) was relatively the same before and after the imposition of a 4-hour parking limit in the 7<sup>th</sup> Street Parking Lots. This could be a result of drivers unaware of the changed conditions and/or limited enforcement activities during periods of data collection.
- Long term parking (exceeding 4 or 6 hours) was approximately 10% within the 7<sup>th</sup> Street and 9<sup>th</sup> Street Parking Lot areas. As a result, using the supply information of 306 parking stalls between the two lots, approximately 30-31 parking stalls have limited parking turnover. Periods of overcapacity (exceeding 85%) could be reduced if long-term parking stalls could have an increased turnover rate.
- Pedestrian and cycling demands along 8<sup>th</sup> Street exceed available capacity. Overcapacity was addressed during the study periods by users attaching bicycles to trees, benches and poles, and pedestrians were observed leaning on walls, sitting on bench arm rests, rocks and the grass.
- Long-term parking is most prevalent along 10<sup>th</sup> Street and 7<sup>th</sup> Street, adjacent to residential dwelling units. However these sections of roadway currently offer unrestricted parking.
- As vehicle occupancy rates were not collected as part of this or previous studies and multi-modal usage was not included in previous studies, it cannot be determined if the increased parking supply has resulted in more people within the Town Centre. In addition, as pedestrian and cycling activity levels were not previously included in parking studies, it cannot be determined if current levels have changed. Any increases resulting from the increased parking supply may be offset by the longer average parking duration levels.

### 4.0 METRICS AND PARKING MANAGEMENT

#### 4.1 TARGET OCCUPANCY

Parking use is highest when a business is busiest, and where parking is closest to the use. This can create periods of high parking use, and localize this demand in specific areas of the Town Centre. Depending on the available parking supply within that area, demand may or may not be adequately met. Additional parking may be available within a reasonable walking distance, but usage of these additional areas can depend on whether users are aware of the additional supply and willing to walk to their intended destination.

On an area wide basis, parking use was found to not exceed capacity in both the 2007 Bunt study and this study, as illustrated in **Figure 4.1** and **Figure 4.2**. On a location-by-location basis, average parking use during the peak season is within the ideal utilization range 35% of the time during business hours (nearly 3 hours of business hours). This frequency compares the peak activity levels for each corridor and the 7<sup>th</sup> Street and 10<sup>th</sup> Street parking lots relative to one another.

In evaluating specific corridors within the Town Centre and the public parking lots on 7<sup>th</sup> Street and 10<sup>th</sup> Street, parking was noted as exceeding capacity at varying frequencies, as illustrated in **Figure 4.3**. On average, individual corridors and the public parking lots on 7<sup>th</sup> Street and 10<sup>th</sup> Street were found to exceed capacity approximately 21% of the time (over 1 ½ hours of business hours). Therefore, while adequate parking was available within the Town Centre *as a whole* during the business hours of 9am – 5pm, the areas with available capacity were not ideal to the desired destinations of residents, workers, visitors and shoppers. For the areas exceeding capacity, this peak occupancy occurs at times of maximum traffic congestion. When parking is near or at capacity, circulating traffic adds to already congested roadways. This impact can be significant as there is a non-linear relationship between traffic volume and delay that occurs during peak times. That is to say even small increases in traffic can have outsized effects on congestion.

Further, when parking is not available for customers, the customer experience is negatively affected. When businesses and staff cannot find parking, it impacts efficiency. Though parking is readily available the vast majority of time and within a reasonable walking distance from the desired location, a perceived lack of parking availability during peak periods leaves a lasting impression on residents and visitors and can impact the Town Centre as a whole. It is therefore recommended that parking management strategies target peak periods to ensure parking availability while also focusing on increasing usage or re-purposing parking supply in underutilized areas.

Parking, and the roadways connecting parking space, represent the single largest use of public space in the Town Centre. This parking space is underutilized during the majority of business hours, approximately 44% of the time (approximately 3 ½ hours of business hours). Parking space

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is expensive, and impacts the potential of a town centre. Excessive parking requirements can stifle new development and redevelopment of existing spaces. Both BOWDA and the BRZ have confirmed that current parking requirements and policy are negatively impacting development in the Town Centre. In addition to encouraging business development that decreases reliance on automobile centric development, policies should focus on encouraging growth in parking sharing and off-peak parking use.

Data collection for this study occurred during peak season, and are not representative of parking use during the remainder of the year. To develop an approximate yearly average, traffic volume data within the area was reviewed on a month-by-month basis. Based on these comparisons, seasonal adjustment factors were developed and applied to the peak season data to approximate average parking use. Based on the seasonal adjustment factors, the months of July and August (when data collection occurred) were estimated to be approximately 49% higher than the yearly average. Therefore, when considering parking demand levels adjusted to yearly averages, parking use within the ideal utilization range drops to 0%.

Vibrant and sustainable town centres have a common theme – they attract many people, a large portion of people are locals, and people are encouraged to stay for longer periods. Fundamental to facilitating ‘people’ is provision of space outside of business for ‘people parking’. Plazas, patios, parks, wide sidewalks, bicycle parking, and benches are examples of uses of space that attract people to the Town Centre. Further, use of road space to accommodate residents and visitors travelling by bus, foot and bicycle both reduces parking demand *and* congestion.

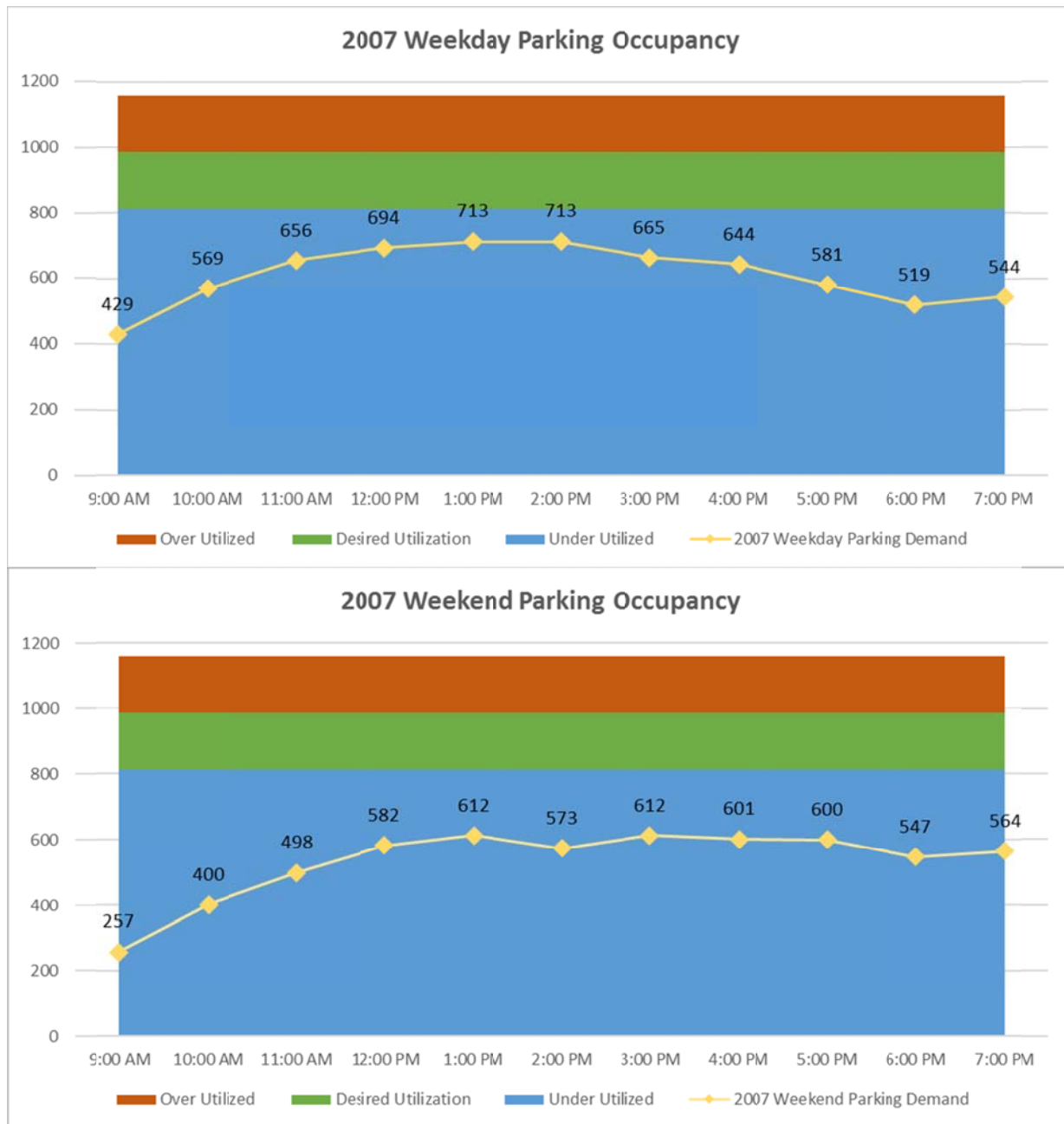
It is recommended that parking management planning encourage more efficient use of space in the Town Centre through a reduction in parking underutilization. The parking utilization rates from the 2007 Bunt study illustrated in Figure 4.1 illustrate an hourly breakdown of parking use within the Town Centre. On an area wide basis, the 2007 Bunt study results indicate that parking utilization rates were generally below the 85% threshold and only occasionally exceeded capacity.

The parking utilization rates calculated in this study illustrated in Figure 4.2 provide an hourly breakdown of parking use within the Town Centre. The peak activity period for each corridor and the 7<sup>th</sup> Street and 10<sup>th</sup> Street public parking lots were provided earlier in Figure 2.1 – 2.9. The parking use by area, as shown in Figure 4.3, illustrates how localized demand varies based on the surrounding uses. A further breakdown of the data from this study on a corridor-by-corridor basis is also included in Figure 4.3. As a note, the 2007 Bunt study results are representative of 8am – 7pm, while the results from this study are representative of 9am – 5pm.

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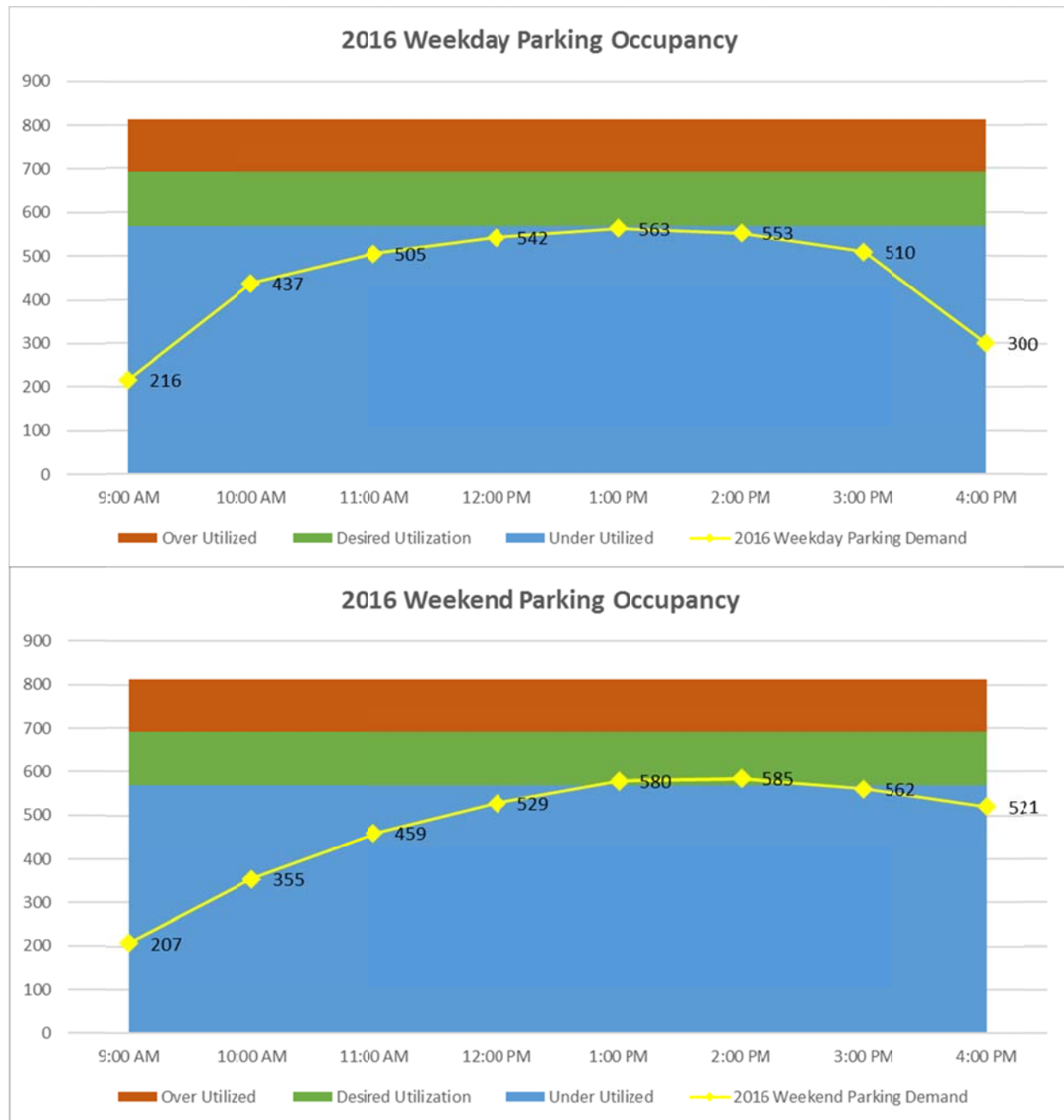
Figure 4.1: 2007 Parking Utilization – Average Peak Season Day (Hourly Breakdown)



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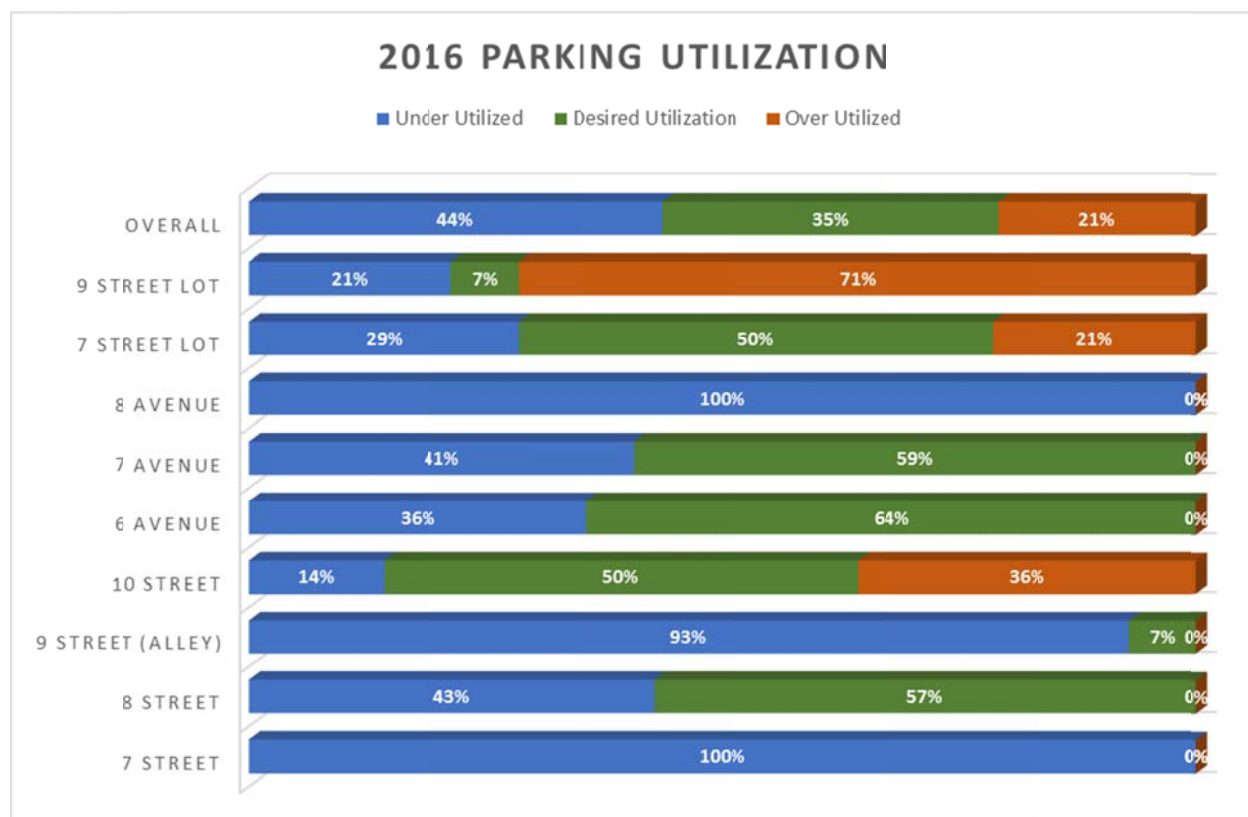
Figure 4.2: 2016 Parking Utilization – Average Peak Season Day (Hourly Breakdown)



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Figure 4.3: 2016 Parking Utilization – Average Peak Season (Daily Utilization)



The above utilization levels are based on data collected during the peak (summer) season periods in 2007 and 2016. During non-peak periods of the year, parking demand levels are expected to decline. As no data collection occurred in either the 2007 or 2016 study over the remainder of the year, parking demand was estimated through a comparison of month-to-month total traffic volumes within the area. Details of the seasonal adjustment factors to parking demand are provided in **Appendix B**.

Recommended target metrics are shown below in **Figure 4.4**. For comparison purposes, the 2016 peak season and seasonally adjusted parking demand levels are also illustrated. The seasonally adjusted parking demand suggests the majority of parking remains underutilized during the remaining periods of the year.

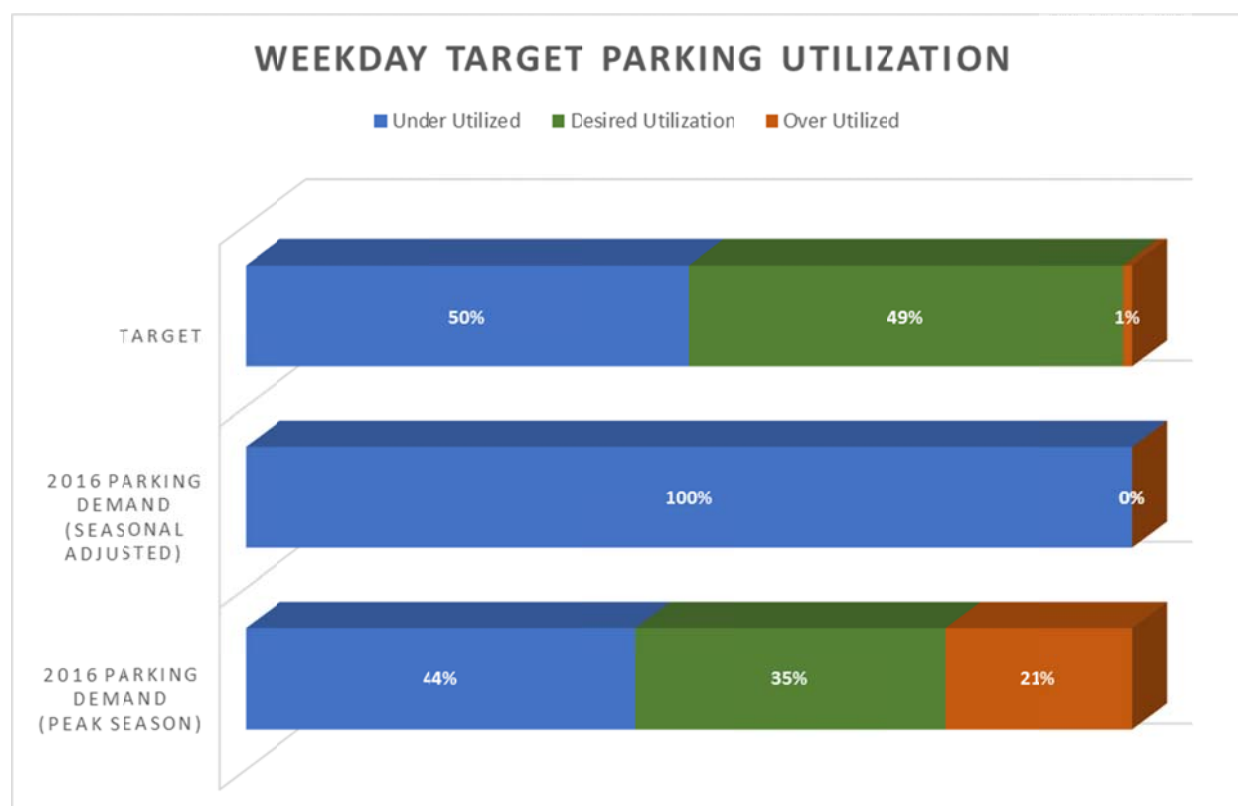
It should be noted that meeting this target will mean that on some days of the year, parking will still be more than 85% utilized.



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Figure 4.4: Target Parking Utilization – Daily Average, Year Round



## 4.2 USERS GROUPS

Users groups expected to utilize the parking areas within the Town Centre generally fall into three categories, based on generalized characteristics:

1. Downtown Residents
  - a. Generally have a high desire to park close to their dwelling unit
  - b. Generally consider having parking as an "assumed right", with an expectation that public on-street parking should be available for their own use
  - c. Ability to modify modal shift is high
  - d. Parking stall turnover is categorized as minimal and unpredictable
  - e. Parking duration can vary significantly
  - f. May own more vehicles on an individual and/or per household basis than parking stalls assumed by bylaw, as no historical disincentive has existed. However the 2007 parking study suggested that the bylaw was creating an oversupply in Canmore, indicating this condition may not be applicable here.
- 2.

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3. Local Downtown Visitors / Shoppers
  - a. Generally have a high desire to park close to their destination
  - b. Mixed willingness to pay for convenience.
  - c. Ability to modify travel mode is mixed
  - d. Parking stall turnover is regular and predictable
  - e. Parking duration can vary significantly, and is generally under four hours
4. Employees / Workers / Business Owners
  - a. Have a desire to park close to their employment location
  - b. Generally consider parking as a “necessity”
  - c. Some indication of willingness to pay for passes for convenient unrestricted parking.
  - d. Ability to modify behaviours such as parking location is considered high
  - e. Ability to modify modal shift is mixed to high
  - f. Occupation of parking zone will follow labour shifts, with some continued occupation after labour shift if linked trips occur
  - g. Parking stall turnover is categorized as minimal and somewhat predictable.
5. Town Visitors / Tourists
  - a. Generally have a moderate desire to park closer to their intended destination, but could be modified and likely to tolerate some reasonable walking distances
  - b. Generally consider parking as a “commodity”
  - c. Have a moderate willingness to pay for parking if viewed as a reasonable rate and convenient and secure to their desired area.
  - d. Ability to modify modal shift is mixed, and may be highly user group driven.
  - e. Occupation of parking zone will generally follow Town Centre area activities, such as business hours or special events

Development of potential mitigation measures requires an understanding of the Town’s overall goals and striking a balance between the needs of the various user groups. Modifications that do not consider the needs of users or overly accommodate a specific user group may not achieve the desired outcome, and may have a negative effect. It is important to note how the different user groups are connected. Residents and workers rely on the economic vitality of their community to sustain their lifestyle. Maintaining an attractive and safe environment with thriving businesses will draw more visitors to the area, furthering the economic vitality. As an Integrated Parking Management Plan is developed, it will be critical to consider how approaches will directly and indirectly impact user groups through this complex relationship.

### 4.3 PARKING MANAGEMENT APPROACHES

Effective parking management incorporates a number of different approaches. It is important that the approaches a municipality select result in outcomes that are consistent with community values, and vision. To that end, the following list of recommended approaches has been informed by the Municipal Development Plan, 2017; the *Integrated Transportation Plan*,

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December 2014; and the Town of Canmore's *Strategic Plan 2016 – 2018*. It is recommended that this list of approaches inform an Integrated Parking Management Plan which would be developed in through community engagement as a next step in the planning process. This plan would include a level of detail sufficient for implementation of initiatives and changes to policy, and to inform capital and operating budgets.

### 4.3.1 Alternative Transportation

For a substantial portion of part-time and full-time residents, and overnight visitors, walking, cycling and taking local transit are efficient, convenient and comfortable options. Alternative transport reduces parking demand *and* reduces congestion while allowing for significant growth in the number of people accommodated in the same space. As a parking and traffic management strategy, encouraging alternative transport is so effective that it is prioritized in each of Canmore's guiding documents. While touched on in this report, the strategies to encourage alternative transport are covered in detail in the Integrated Transportation Plan and the Bow Valley Regional Transit Commission strategic plans. It is recommended those detailed plans be incorporated by reference into the Integrated Parking Management Plan.

### 4.3.2 Parking Regulation

Regulations that favour higher-value uses such as service vehicles, deliveries, customers and differently-abled persons should be supported. This may require re-designation of existing parking areas within the Town Centre based on area needs.

### 4.3.3 Time-Restricted Parking

During the data collection process, it was observed that users of on-street parking were occasionally confused over the specific time-restrictions associated with the block and/or parking stall. This was recorded qualitatively as team members were frequently asked by drivers what the restriction was associated with their parking stall. Vehicles were also observed parking in a stall, the driver exiting the vehicle to read the parking sign, and then returning to the vehicle to relocate to another parking stall.

Creating a uniform, time restriction for on-street parking may reduce driver confusion, however may incentivize drivers to occupy parking stalls for longer periods than initially planned if the time duration is too lengthy. This can be addressed through combination with other strategies such as parking pricing. Conversely, too short of a time-restriction can impact customers who typically visit shopping districts for up to four hours. Too short of restrictions may result in a greater number of infractions, challenging for enforcement, further negatively impacting customer experience.

It should be noted that a uniform time-restricted parking strategy does not necessarily mean all parking stalls should be treated the same. Understanding the desired locations of the user groups, coupled with modifying some parking practices, can be used to develop an appropriate time-restricted strategy. For example, parking on the north side of 10<sup>th</sup> Street and

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the south side of 7<sup>th</sup> Street may be highly desirable for nearby residents, however residents along both roadways have private parking available along the parallel facilities of 5<sup>th</sup> Avenue and 11<sup>th</sup> Street. The data collected over the 4 study periods on 10<sup>th</sup> Street and 7<sup>th</sup> Street indicate a relatively high number of vehicles parked for longer durations, and relatively low number of high-turnover, and both roadways are within reasonable walking distances to the Town Centre. In addition, the 7<sup>th</sup> Street and 9<sup>th</sup> Street Parking Lots are also located within reasonable walking distances to the businesses in the Town Centre, and supported by transit services.

In highly desirable areas, a 4-hour time restriction would be appropriate to maximize shopper and visitor experiences to the Town Centre, encourage higher parking stall turnover and also discouraging long-term parking. Accommodations for longer term parking could be focused on the periphery of the Town Centre where high turnover is less critical.

### 4.3.4 Parking Decal Program

Parking decal programs have widely been used across North America as means of allow specific users to park in designated areas, securing their parking area while restricting it from others. In a parking decal program, on-street public parking along roadways or blocks of roadways are designated into parking zones. Signage is implemented in each area indicating the zone name / number, hours of operation, and parking limitations. Vehicles desiring to park within that zone or park for greater than a specific time period within that zone are required to display a pre-paid decal indicating they are authorized by the local municipality to do so. Parking decal programs can also be used to incentivize a local population to rely first on their own private parking areas such as a private garage or driveway before relying on the supply of public parking stalls, and can discourage excess vehicle ownership. Zones can be used to both protect areas for local residents only (discouraging tourists and employees from parking on residential streets) and/or to increase parking turnover in areas intended for tourists but currently used by other groups such as residents and employees for longer-term parking.

The primary benefit of the parking decal program within the Town Centre is to accommodate long-term on-street parking to only those residents that have limited alternative private parking stalls. As noted in the study results, a relatively high percentage of vehicles parking along 7<sup>th</sup> Street and 10<sup>th</sup> Street exceeded a 4-hour duration, limiting parking stall turnover. A decal program can also encourage users to utilize their available private parking first before considering a more desirable public parking stall.

In preparation for the parking decal program, the Town should explore potential bylaw changes that may be required to support the program. Stakeholder engagement with other departments including enforcement, residents and businesses to discuss the proposed program should be conducted. Vendors for decals should be contacted for pricing structures as well as signage design, and an internal assessment should be conducted for the necessary supportive staffing requirements to administer the program. Collectively, the Town may use this information to develop a business case to Council for the proposed Parking Decal Program. It is assumed

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that up to 8 months may be required to determine the feasibility of the Program, presentation and approval by Council. A pilot project could be implemented as early as late 2017.

Upon implementation, the Town should consider a monitoring program to evaluate both the effectiveness and participation levels for the program.

### 4.3.5 Short-Term and Long-Term Parking Areas

Accommodations for some “long-term” parking areas within a reasonable walking distance to the Town Centre are likely to continue to be required. Generally, “long-term” parking should be located furthest from prime areas. For example, potential considerations may include the south side of 7<sup>th</sup> Street, the central lots in the BMO parking lot and the parking lot behind Panago on 10<sup>th</sup> Street. Further public engagement and stakeholder discussions through the Integrated Parking Management Plan should be conducted to identify potential areas. Implementation of the long-term parking area could be accomplished through appropriate signage and public awareness campaigns. Enforcement of all parking restrictions should be conducted with a 30-day warning period to patrons to utilize the designated long-term parking zone.

As discussed previously, parking use within the peak season compared to the off-peak season can vary significantly. Given the importance of the peak season to local businesses, flexibility to parking standards and regulations should be considered to ensure adequate supply and target metrics can be achieved.

### 4.3.6 Paid Parking

As noted previously, all public parking within the Town Centre is currently “free”, however as noted in numerous previous parking studies and supplementary studies, “free parking” is a misnomer. As highlighted in the 2007 Parking Study, the cost of free parking is typically incorporated into either the development costs (additional development costs associated with bylaw compliance) through higher storefront rents, or higher property taxes, resulting in increased product costs that are ultimately passed onto the consumer. It was beyond the scope of this study to evaluate the appropriate pricing structure for a paid parking program.

The introduction of paid parking either Town-wide or in specific areas may create changes in parking behaviours and patterns. The intent of a paid parking program is to discourage misuse of timed parking areas (typically appearing as vehicles moving from one zone to another as time limitations are reached). Ultimately this can lead to premium parking stalls having a greater availability and higher turnover rate, creating a significant benefit to local businesses.

Consideration should also be made for the intent of paid parking. The intended goal of paid parking is to reduce parking demand levels to approximately 70 – 85% and to limit this usage to those individuals who desire convenience and are willing to pay for it as part of the experience of visiting Canmore’s Town Centre during peak times.

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While modal changes may occur, it may also create burdens in unpaid parking areas such as residential neighbourhoods as users attempt to avoid the parking fees. This consequence can be addressed by providing designated all-day parking areas, and implementing neighborhood parking management approaches.

Consideration should be made for the specific per unit of time pricing strategy. Paid parking inherently assigns a value to the limited public parking spaces but may also result in users traveling to other destinations. In other words, if a demand-based value was created for a parking stall, and the result of a paid parking program is a reduced demand, then the assumed value would no longer be valid. A balance must be achieved for a fair and reasonable pricing strategy. An underutilized paid parking stall will ultimately generate less revenue, but still require the same maintenance investment as a fully utilized parking stall. In addition, reliance on parking revenues for operating / maintenance budgets by the Town could become subject to surpluses and shortfalls as annual revenues may vary.

Paid parking also requires capital investment by the Town in equipment for both collection and enforcement. Equipment may also take away from the public realm space in paid parking zones. It was beyond the scope of this study to determine varying infrastructure costs associated with a paid parking program. Technology that adds convenience to a paid parking program should be evaluated.

Overall, accommodation for approximately 749 public parking stalls were identified within the Town Centre. As noted in the data collection, occupancy levels varied throughout the day, and therefore parking revenues would also vary. If for example a \$1 per 60 minutes parking fee was imposed between 8am and 7pm, assuming an 85% maximum occupancy for a 2-hour period and a minimum 30% occupancy, and assuming a bell curve of occupancy, daily revenue streams could be approximately \$4,900. However it should be noted that revenue estimation is highly dependent on a number of factors, beyond the data that was collected as part of this study. A more detailed financial review of paid parking is provided in the *2016 Parking Recommendations (Indigo)* report.

In addition to the pricing structure, considerations should be made for the logistical implementation of paid parking in the Town Centre. For example, the implementation of paid parking on only portions of the Town Centre while keeping other areas as free parking may result in increased traffic volumes through the free areas, as patrons search first for free parking and rely on paid parking as a last resort. This consideration was also highlighted in the *2016 Parking Recommendations (Indigo)* study commissioned by the Town of Canmore as part of their review generation estimates.

When implementing a paid parking program, it is recommended that the Town consider the following:

- Implement paid parking for all on-street public parking in 2018 and 2019 while maintaining reduced fares in the surface parking lots. The intent of this two-tier pricing

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structure would be to incentivize usage of the parking lot first and reduce unnecessary traffic circulation on roadways from drivers searching for lower cost parking. Contact vendors to determine supply costs and administration costs as well as review appropriate bylaw changes, if any, required for a paid parking program.

- Coupled with the implementation of the parking decal program, allow decal holders to be exempt from paid parking in the designated decal zones.
- Consider a pilot project targeting 8<sup>th</sup> Street between 6<sup>th</sup> Avenue and 8<sup>th</sup> Avenue.
- Prepare a fare escalation program and schedule for how fares will increase over time. At a minimum this escalation program should be set to match local or national inflation rates. A more detailed escalation program would also factor in the lifecycle of infrastructure needs and internal program management costs.
- Establish the necessary funding structure to supplement the paid parking program, with a long-term (10+ year) goal of a self-sufficient paid parking program. Consider including the revenue generated by the parking decal program within this structure.
- Utilize net parking generated revenues to fund Downtown public realm enhancement projects and alternative transportation infrastructure. As noted previously in this study, pedestrian parking and bicycle infrastructure demand is exceeding the available inventory along 8<sup>th</sup> Street in several areas, and additional infrastructure may further encourage Downtown patrons to utilize non-vehicular travel modes where convenient.
- Allow businesses to validate parking for shoppers that used the parking lots to further encourage vehicle parking in those locations in lieu of on-street parking.

### 4.3.7 Residential Parking Management

Implementation of an Integrated Parking Management Plan may result in adverse effects on neighborhoods around the Town Centre. It is recommended that a strategy for managing residential parking impacts be developed as part of the Integrated Parking Management Plan and in advance of implementation of larger initiatives. Typical approaches to dealing with spillover include residential parking restrictions and associated pass programs for residents. It should be noted that these programs come with administrative and enforcement costs that must be considered as part of the plan.

### 4.3.8 Local Transit Services

To reduce the number of short, convenience trips made by residents, an enhanced local transit service to neighbouring communities could be offered to the Town Centre. A survey that included fare tolerance was conducted in 2014 prior to implementation of local transit service in Canmore, however the Town recommended caution in using these statistics due to the limited data collection period and number of other variables that may be impacting services. The



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service was offered with an introductory free period before a fare was implemented. Implementation of the fare was reported to have reduced ridership to 71% of the initial ridership levels, however the current free parking offered in the Town Centre may be viewed as the alternative choice to a fare-based transit service. It is recommended that the Town should consider a return to a free fare structure to increase transit ridership levels. Additional service lines connecting residential areas to popular destinations should be added following a similar approach. Intelligent Transportation Systems (ITS) such as real-time transit arrival time information should be considered for integration at existing transit stops to provide users with expected transit arrival time information. This system should also be integrated into a local transit application and available to users on their mobile devices.

Similar to the intercept parking lots concept, this option could be coupled with other measures such as paid parking, decal parking, removal of on-street parking and time-restricted parking to increase the attractiveness of the service. Local transit services may also be beneficial to area residents that do not have alternative travel modes or in other ways incapable of driving, cycling or walking. Specific transit ridership routes were beyond the scope of this study, and an area-wide analysis would be required to determine potential routes, ridership and headway factors.

### 4.3.9 Use of Public Space

As noted previously, parking and roadways represent the single largest use of public space in the Town Centre. Therefore, the underutilization of this public space, such as underutilized parking, has an adverse impact to the vibrancy and attractiveness of the Town Centre to local residents and visitors. By achieving the intended parking utilization goals, opportunities can be created to more efficiently use this valuable town asset to benefit the community, businesses and visitor experience. The intent of the implementation of the measures outlined in this report is to efficiently manage vehicular traffic and parking within the Town Centre to more manageable levels, while also encouraging multi-modal travel with supportive pedestrian and bicycle parking infrastructure within the area. The longer-term impact of these programs to the Town Centre may be shorter durations where parking occupancy meets or exceeds the comfortable 85% occupancy threshold and reduced average occupancy rates as an increasing number of Downtown patrons utilize alternative travel modes for their day-to-day needs. Achieving the target utilization rates outlined in this report can be achieved through several general approaches:

- Increase parking utilization in underutilized areas through re-consideration of how parking could be re-purposed;
- Increase parking utilization in underutilized areas by encouraging businesses that may have higher activity periods during off-peak periods;
- Decrease parking utilization in overutilized areas through multi-modal infrastructure and services, measures to reduce vehicle dependency (such as timed parking, paid parking



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and other management practices discussed previously) and re-directing vehicular traffic to underutilized parking areas.

Practices to encourage shared parking between uses within the Town Centre can have a measurable impact to underutilization and overutilization rates and directly impact how public spaces can be maximized in their use. As new developments are proposed and opportunities for redevelopment arise, a thorough review of the parking requirements should be conducted to evaluate their impact to the Town's target parking utilization goals (noted in Figure 4.5). Mitigation strategies may be required to address how shortfalls to these parking goals can be managed through the use of TDM measures and other considerations.

As a result of these changes, there may be opportunities and a need to remove some on-street vehicular parking areas to provide additional public realm spaces for the increased pedestrian and cyclist demands. For any parking stalls removed from within the Town Centre, it is recommended that it be replaced with additional cycling infrastructure to accommodate and further encourage multi-modal travel.

### 4.3.10 Smart Growth / Strategic Densification

As illustrated in Figure 4.3, parking utilization rates along specific corridors vary significantly. Smart growth strategies that encourage densification and shared parking practices along corridors with highly underutilized parking should be encouraged.

### 4.3.11 Wayfinding and Education

As noted in this study, adequate supply is available within the Town Centre as a whole, even during time periods of peak demand on specific corridors and locations. Wayfinding and education measures to encourage diversion of traffic to underutilized areas may reduce traffic congestion and driver frustration. This re-routing strategy may also encourage visitors and shoppers to explore other areas of the Town Centre they may not otherwise experience.

### 4.3.12 Intercept Parking Lots

Intercept parking lots, located in close proximity to the Town Centre or coupled with shuttle or transit services, have previously been considered by the Town. With new development areas planned within and around the Town, the local population could potentially double. As discussed previously, the traffic volumes on the Trans-Canada Highway and Highway 742 have significantly increased between 2007 and 2016. Collectively this indicates ever-increasing potential for vehicular and people traffic into the Town Centre. Based on current parking occupancy levels, these additional parking demands cannot be accommodated within the Town Centre. As new development projects are undertaken, it is recommended that intercept lots be incorporated into the development plan, along with direct pedestrian and cycling connections to the Town Centre suitable for all season use. In addition, additional transit services

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including private shuttle services should be incorporated into the development area to provide connectivity from intercept lots to the Town Centre.

As part of the Railway Avenue Corridor conceptual plan project (currently underway), it is recommended that opportunities be explored to incorporate intercept lots along the corridor with pedestrian, cyclist and transit connectivity. Additional intercept lot(s) adjacent to the Trans-Canada Highway should also be considered to reduce vehicle demand in the Town Centre associated with increased visitor traffic. Local transit / shuttle services could connect these areas to the Town Centre to further mitigate parking demand levels. Intelligent Transportation Systems (ITS) such as advanced and dynamic signage should also be explored to quantify available parking stalls in various lots and direct traffic to the free intercept parking lots.

In addition, user groups such as workers and visitors could be directed to use these lots (location(s) undetermined) if free transit services with minimal headway factors were offered. Transit vehicles could make a loop entering and exiting the Town Centre via 10<sup>th</sup> Street with a stop near the regional bus stop at the 7<sup>th</sup> Street Parking Lot, and ultimately returning to the intercept lot. Coupled with other measures such as paid parking, decal parking, removal of on-street parking and time-restricted parking may increase the attractiveness of this option. Ridership estimates and service costs associated with this option were beyond the scope of this study.

### 4.3.13 Additional Pedestrian and Bicycle Parking Infrastructure

As noted in the results of the study, additional pedestrian infrastructure (benches) and cycling infrastructure was identified as being required throughout the Town Centre to meet current demand levels, most notably along 8<sup>th</sup> Street, 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue. It is assumed that some of the current infrastructure is being utilized by workers within the Town Centre. As the current infrastructure is placed within high desire lines for visitors, adding Class I, Class II or other secure bicycle infrastructure along the alley between 8<sup>th</sup> Street and 9<sup>th</sup> Street and between 8<sup>th</sup> Street and 7<sup>th</sup> Street and directing employees to use these areas may increase the availability of bicycle parking along 8<sup>th</sup> Street for visitors. Additional seating spaces along 8<sup>th</sup> Street, 6<sup>th</sup> Avenue and 7<sup>th</sup> Avenue could be secured through the eventual removal of a small number of on-street parking stalls.

### 4.3.14 Delineated On-Street Parking Stalls

Coupled with the uniform parking strategy is a recommendation to delineate on-street parking stall spaces to optimize the number of on-street parking stalls and discourage parking by RVs and larger vehicles that may limit the available parking supply. The delineation of on-street parking stalls should include an allocation of approximately 10% per street for compact vehicle parking. This strategy can further optimize the number of on-street parking spaces from current supply levels. In addition, dedicated parking stalls associated with ridesharing services should be considered if such services are planned for the Town. These types of services may become

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more popular if other mitigation measures such as Parking Decal Programs and Paid Parking (see subsequent sections of this report) reduce vehicle ownership rates among residents.

### 4.3.15 Parkade Structure

A parkade structure was discussed in the 1998 Town Centre Enhancement Plan and may be a consideration should all other proposed measures fail to achieve the desired modal changes and parking utilization within the Town Centre. A parkade structure may increase the downtown parking supply by about 12% to 14% but would result in increased underutilization of parking outside of peak times or the majority of business hours. Annualized cost for a parking structure may be in the range of \$900,000 to \$1.1M per year (including societal, environmental, and economic costs) or roughly \$150 to \$200 per household annually. Currently, the cash-in-lieu system is not resulting in the funds required to allow the Town to make a parking structure a reality.

In addition to the operation/maintenance, capital and borrowing costs associated with a parking structure, there would be a resultant increase in vehicle travel demand with additional parking that will result in increased congestion and pollution from the existing surface parking lot. As traffic becomes concentrated at parkade accesses, local roadways and intersections may become overwhelmed during typical peak arrival and departure time periods. The resulting congestion would have negative impact to the community, businesses and visitor experience and undermine many of the longer term goals of the Town. As noted earlier, both the 2007 Bunt study and this study identified that parking is 100% underutilized on an area wide basis. Therefore, the addition of more parking stalls within the Town Centre does not address an existing concern (lack of parking supply). As noted in the corridor-by-corridor parking utilization rates, the imbalance of under-utilized and over-utilized parking is a localized concern that requires a more targeted strategy.

As parkade structures may potentially have a 50-year lifecycle, consideration should be given to the potential technological advances within transportation such as autonomous and connected vehicles that may impact vehicle utilization and ownership levels and how supporting structures are designed. Other initiatives outlined may be more effective at addressing peak and off-peak parking management and be more aligned with community values, vision and goals.

### 5.0 INTEGRATED PARKING MANAGEMENT PLAN

It is recommended that the Town of Canmore develop an Integrated Parking Management Plan through community engagement. Through this process, initiatives and policy would be developed in sufficient detail, prioritized, and conditioned in a strategic way that ensures a successful program rollout and results in the utilization targets outlined in this document.

The scope of the Integrated Parking Management Plan could include:

- Engagement and work-shopping with the community and key stakeholders to tailor approaches to best address concerns while ensuring targets are met;
- Development of policy in sufficient detail to incorporate into updates of various land use and parking bylaws;
- Development of initiatives and outline of projects to a sufficient level of detail to allow for implementation and budget planning.

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Appendix A: Raw Parking Data  
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### APPENDIX A: RAW PARKING DATA

## APPENDIX B: SEASONAL ADJUSTMENT FACTORS