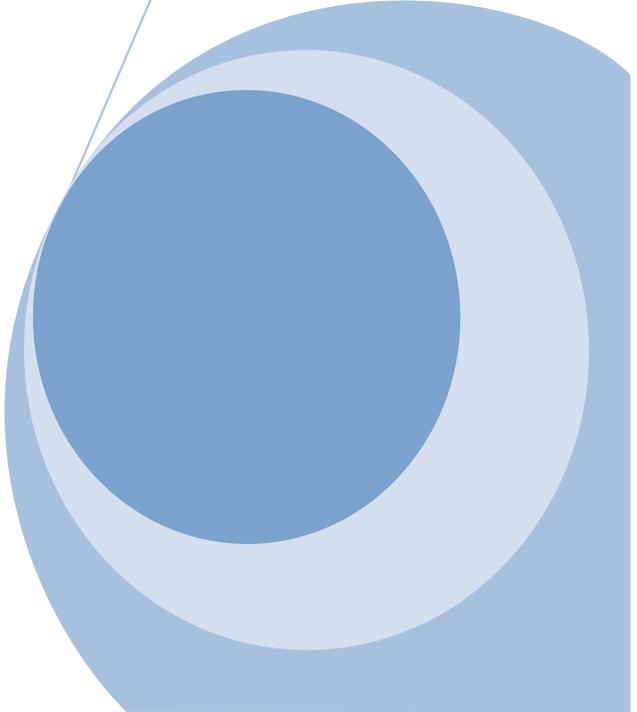


Accessible Parking Activity – Snapshot Summary

As part of: Downtown Parking Strategy Study
for Stratford Ontario



D Sorbara Parking & Systems Consulting
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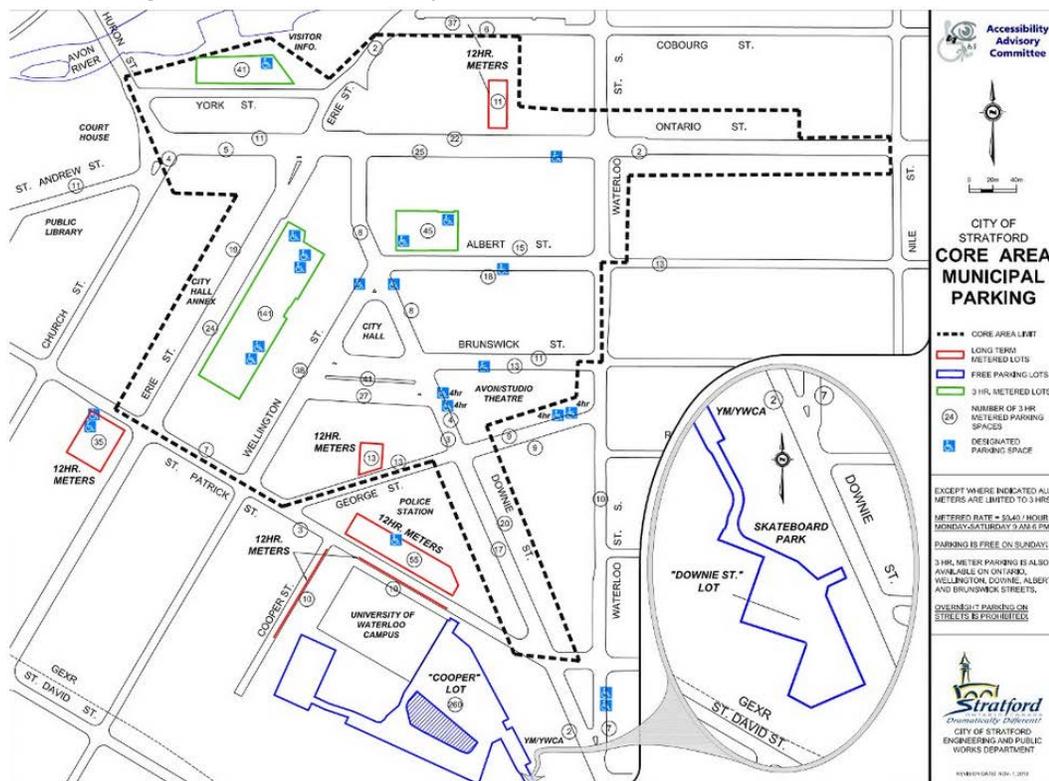
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Accessible Parking Space Activity

Approach to Parking Demand Analysis

As a follow up to a question in our parking management Strategy project, the parking activity metrics specific to the accessible parking stalls are shown here. The four days of field surveys provided the study with a number of parking metrics on the use of on- and off-street municipal parking space in the downtown. Through the study design we are able to look specifically at any time of space (on or off-street). To review, the diagram below shows the spatial distribution of accessible stalls in the downtown.



The Evidence Base

Parking activity data was collected on four days between July 20th 2015 and July 29th 2015 and a Monday and Wednesday the week of December 8th 2015 in the downtown. The objective was to examine the parking activity in on these days by collecting Licence plate turnover/duration of stay data from 9:00 am to about 6:00 pm each sample survey day. Licence plate surveys require that plate numbers be recorded at a regular interval along specified routes throughout the study areas. In this way, estimates of parking accumulation and duration of stay of each parker within the study areas can be measured.

Prime diagnostic measures were reported in order to relate parking supply to parking demand generated in our Study Area. These diagnostic measures are:

- **Volume** of parkers,
- **Optimal Use**,
- **Turnover of Space** – average number of vehicles attracted on average to one space,
- **Duration** of stay or the customer mix, and
- **Average & Peak Occupancy** of space over the course of the day.

These measures were quantified from the surveys. Specifically the following extract shown parking industry standard metrics that serve to evaluate performance. The number of accessible spaces are roughly 20 not including those on the free Cooper lot. These spaces vary because the study design does not report on spaces that are never used during the survey period that we observed.

	Summer		December		Confidence Limits (Range due to Sampling)			
	Mon	Wed	Mon	Wed	Average	Plus/Minus	Low	High
NUMBER OF SPACES	10	7	21	19				
RATINGS	23	42	20	17	25	9.7	10	41
OCCUPANCY @ Peak	5	6	8	6	6	1.1	5	8
AVG STAY (Minutes)	107	123	81	70	95	21	62	129
TURNOVER (Vol/Cap)	3.4	3.2	5.3	6.0	4.5	1.2	2.5	6.4
VOLUME	17	19	42	36	29	11	11	46
AVERAGE OCCUPANCY	3	4	14	15	9	5	4	14
AVERAGE OCCUPANCY (%)	31%	55%	67%	76%	57%	17%	41%	74%

Measure of Optimal Use of Parking Space – KPI Ratings

This metric that will be discussed is one that indicates the overall efficiency of parking space utilization. The metric – key performance index space optimization – integrates the following metrics:

- Duration of stay;
- Average occupancy of space;
- Turnover of space which synthesizes duration of stay and volume of demand; and
- Length of survey period.

The metric is expressed as a percent and a high value indicates that the parking space is currently attracting parking demand at its maximum level given current duration of stay and turnover characteristics. The metric is computed for every on-street and off-street parking facility and serves to point to areas of the study area where a high optimal value points to some form of remedial strategy to better serve the demand.

Specific to accessible stalls in our inventory, the rating ranges widely from a 10 to 41 percent. The higher the number the more optimal its use. We concluded that given the strict scope of the user type on these spaces, the accessible stalls were well used but not intensely used.

Occupancy at Peak

Not a relevant metric since most of the inventory on the street at least is a capacity of one space. The range of 5 vehicles to 8 vehicles at peak reflect relatively low use of these spaces at the peak hour of the day in terms of attraction. From a geographic perspective the image below shows the popularity of the off-street accessible stalls on the Erie Lot as critical to our customers.

The number of vehicles attracted to the parking space divided by the peak occupancy ranges from 2.5 to 6.4 per parking space and reflects high intensity and a sizable number of short stay visitors. The reason that the number of spaces is different over the course of the four days is that we only report on that space if it attracted a vehicle over the course of the day.

Distribution of Volume

The geographic distribution of volume over the course of the four survey days shown here underscores the role of the inventory of accessible spaces on the Erie Lot as a vital service to this customer. The range of volume (11 to 46 vehicles) on 20 spaces is reflective of good volume intensity to space available.

Total Time Spent

The geographic distribution of total time spent over the course of the four survey days shown here underscores the role of the Erie Lot. It also

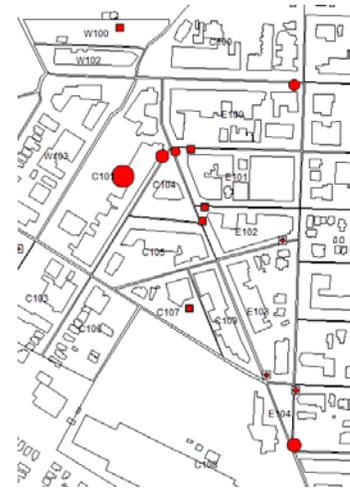


Figure 1: Volume Distribution

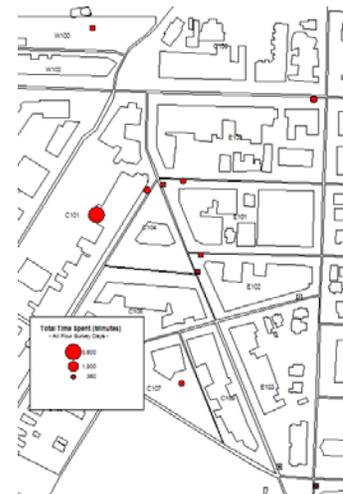


Figure 2: Distribution of Total Time Spent (Minutes)

Overstaying the Time Limit

Three hour parking restriction is being abused. This geographic distribution of those overstaying three hours of duration on shown here. Remember that the time restriction for off-street space (Erie & York and Police Lots) is not the same as the on-street's three hour limit. Thus the only segment on-street that appears to attract longer than three hour parkers is on Albert Street near the municipal facility.

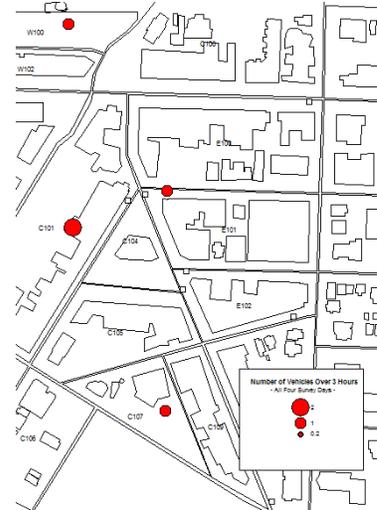


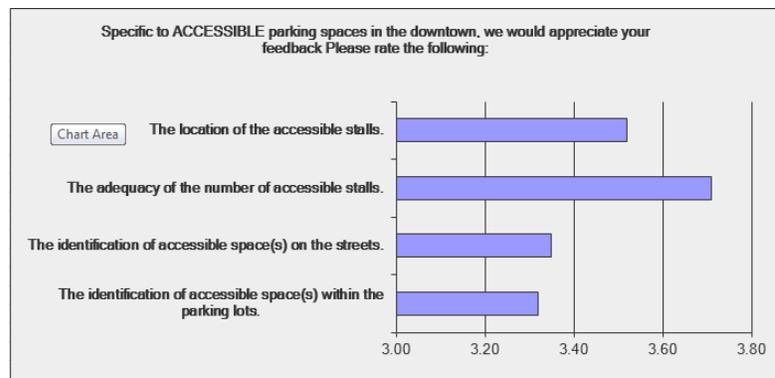
Figure 3: Distribution of Longer than 3 Hours Stay

Average & Peak Occupancy of Space

The 40 to 74 percent average occupancy of accessible space is reflective again a good demand for the service. Compare this range with on-street's 55 to 75 percent and off-street's 60 to 74 percent. The pattern of occupancy is similar to that of the other customer service products here in the downtown.

Operations Specific to Accessible Parking Service

Several questions online surveys probed people's ranking of what was important to them in terms of accessible parking operations. Two primary challenges it seems is the number of accessible stalls and their location. Not many indicated a cost issue or lack of signage.



Stratford markets accessible stalls on the street with blue topped parking meters and pavement markings and that is fairly common in the parking industry.

Off-street spaces are normally identified through pavement markings and there are the odd municipalities that leave metered parking posts there while there may be a pay and display operation.

Conclusions

In terms of a parking strategy, we clearly will be consulting the focus group and determine how we can best approach the issues of adequacy and the location of these stalls. A short-list of action items specific to accessible parking is:

- Evaluate location and geometry of existing and future accessible spaces in the downtown
- Achieve a ratio of 2 accessible spaces for each block face where practical (and safe) to do so
- Re-image through paint and refreshed stall markings current and planned accessible parking spaces in the downtown

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- Begin to work through how technology that might be introduced in the parking strategy for future operations can seamlessly accommodate accessible space customers (pay by cell, reservations of space online, monthly permits on-street, etc)

June 2016

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