

## APPENDIX A

### Parking Inventory Analysis – Existing Conditions

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In every downtown the issue of parking is central to stakeholders as they plan for the downtown's on-going economic success. The need to understand both the perception *and* reality of parking is essential if a comprehensive and successful parking management strategy is to be developed and implemented. This section focuses on establishment of a clear understanding of the reality of current parking dynamics in Downtown Spokane.

#### A. PURPOSE OF THE PARKING INVENTORY ANALYSIS

The purpose of a parking utilization study is to derive a comprehensive and detailed understanding of actual use dynamics and access characteristics associated with parking in the downtown. Important elements of this section include:

- (1) Development of a data template for all parking in the study area, denoting all parking stalls, by time stay type, for on and off-street facilities.
- (2) A complete survey of parking use over two “typical days.” This included a single Thursday and Saturday in May 2004.
- (3) Analysis of parking utilization and turnover that included:
  - a. Quantification of total study area parking inventory.
  - b. Hourly occupancy counts (10:30 a.m. – 9:30 p.m.) for on and off-street inventory.
  - c. Parking turnover analysis (on and off-street).
  - d. Parking duration of stay analysis (on and off-street).
  - e. Time stay abuse analysis.
  - f. Loading and Passenger Zone utilization analysis.
- (4) Identification of parking surpluses and constraints in the parking supply.

In short, the purpose of the parking utilization study was to produce a succinct analysis of existing parking dynamics in Downtown Spokane that can be employed over time to support and inform decision-making related to development and parking.<sup>1</sup>

#### B. STUDY AREA

The parking inventory study area was determined in the initial project scoping process. Two study zones were defined, the South and North Study Zones. **Figures 1 & 2** provide a detailed visual map of the study zones with the sub zones for which data was analyzed (in the South Study area). The boundaries of the South and North Study Zones were developed in consultation with the DSP and the PSC prior to initiation of the data gathering effort.

The South Study Zone is a large area of the downtown generally comprised of the parking area bounded by Spokane Falls Boulevard (on the north), Third Avenue (on the south), Cedar (on the west) and Division (on the east).

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<sup>1</sup> Copies of all data templates have been provided to the Downtown Spokane Partnership for future use. The data templates incorporate hourly parking counts for every stall, by block face and publicly accessible garage, in the study area.

Figure 1: South Study Area w/ Sub Zones

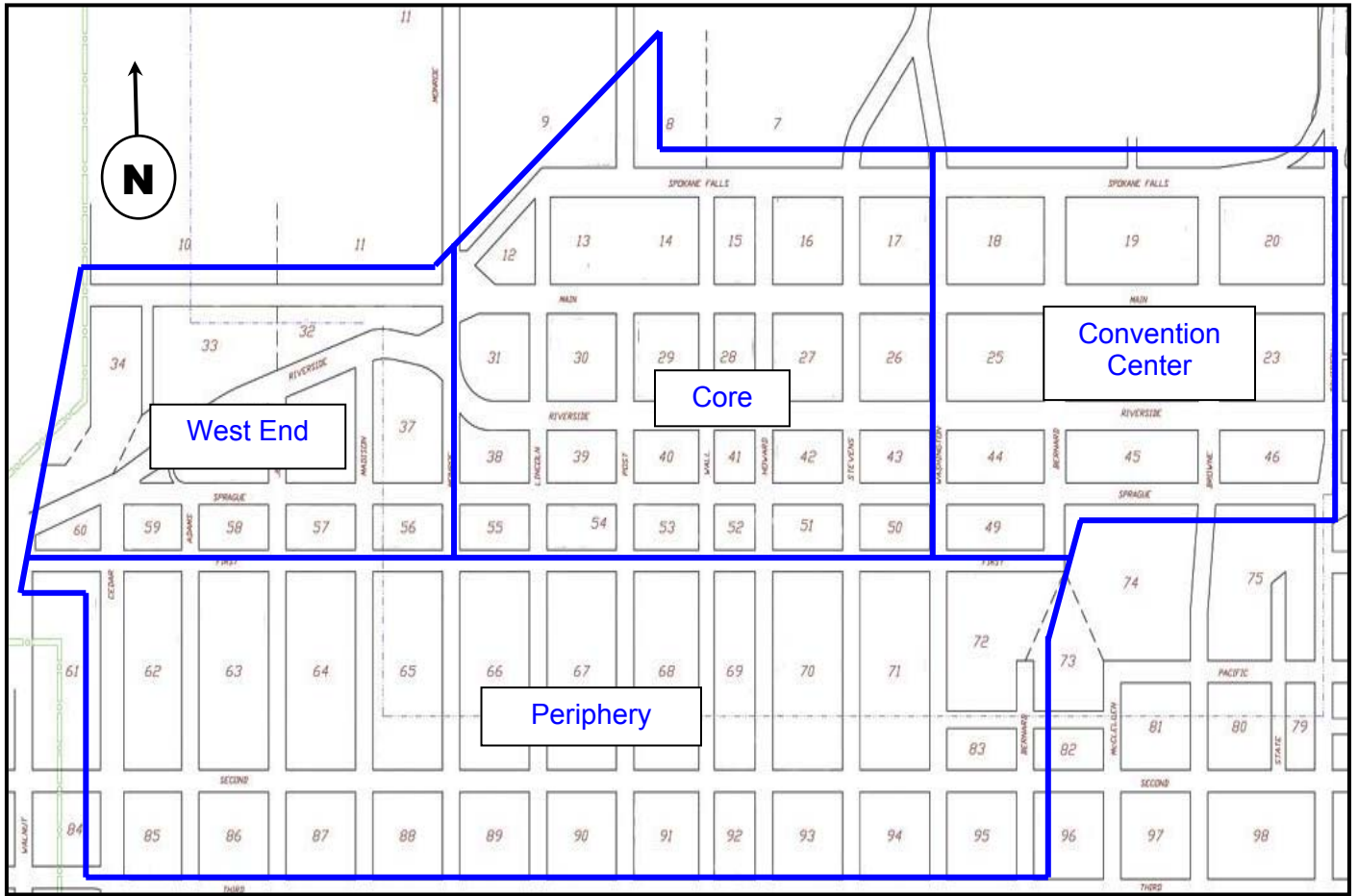


Figure 2: North Study Area



The North Study Zone is generally comprised of the parking area bounded by Cedar and Post (on the west and east, respectively) and Mallon and Bridge (on the North and South, respectively).

### **C. METHODOLOGY**

Melvin Mark Development Company (MMDC), Nelson/Nygaard (N/N) and Robinson Research (RR) conducted the capacity/utilization and turnover inventory on two separate days, Thursday, May 20, 2004 and Saturday, May 22, 2004. The survey days were selected in consultation with the DSP, the City and the PSC. Overall, both days displayed consistent parking activity in all sectors of the downtown. The Thursday parking inventory was conducted between 10:30 a.m. and 9:30 p.m. The Saturday parking inventory was conducted between 11:30 a.m. and 10:30 p.m.

The project team's methodological approach to gathering parking utilization/capacity/turnover data began with a physical compilation of all public parking assets (on and off-street) within the study area and the activity zones. This physical assessment was conducted in advance of the survey days and documented all parking by location and type. This was used to create a data template necessary to conduct the utilization assessment.

The survey itself involved an hourly accounting of each occupied on-street parking stall in the study area using the last four digits of the parked vehicle's license plate. All public off-street facilities were similarly documented. "Publicly available" parking stalls in private parking facilities were assessed for capacity only. They were not surveyed for turnover or duration given that time stay limitations in these lots were not in place. In addition, private facilities were only surveyed during hours when they were posted and available for actual public use.

The first level of data analysis for each study area (South and North) combined all parking data for the larger study area. Due to the size of the South Study Zone, a more detailed analysis of the data was then conducted. This led to development of four distinct parking "activity" zones within the South Study Zone area for which inventory data was sorted and analyzed.<sup>2</sup> These "sub zones" are identified on the Figure 1 South Study Zone boundary map. These data collection zones are reflective of the PSC's understanding of current parking activity and land use densities in the downtown. These zones allowed for a more comprehensive look at parking patterns, trends and surpluses/deficits in the downtown.

### **D. INVENTORY OF PARKING - SOUTH STUDY ZONE (WEEKDAY)**

Data findings for the South Study Zone will be presented here from five perspectives. This will include:

- Entire study area. Data findings for the entire South Study Zone, which analyzes parking activity as it occurs throughout the entire study area. Findings from this perspective may understate high activity areas within the downtown as periphery area data is combined with data from higher activity zones.
- Core Zone. Data findings for the Core Zone of the downtown. Findings from this perspective present a clear picture of on and off-street utilization in the commercial core of the downtown.

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<sup>2</sup> See Section IV of this report for further discussion of zones.

- Convention Center Zone. Data will be presented for parking activity in the eastern end of the downtown, which incorporates on and off-street parking use adjacent to the convention center.
- West End Zone. Data will be presented for parking activity in the western sector of the downtown.
- Periphery Zone. Data will be presented for parking activity in the southern most sector of the downtown.

**1. Data Findings - Entire Study Zone**

*A. Composition of the Supply*

The South Study Zone maintains a total of **8,878** parking stalls. MMDC conducted actual hourly counts of 7,421 of these stalls (or 84% of the total supply).<sup>3</sup> Of surveyed stalls, 1,965 stalls were located on-street and 5,456 were located in 29 off-street lots/garages.<sup>4</sup> **Table 1** presents a breakout of the surveyed parking supply in the South Study Zone. Detailed graphs illustrating usage for this study zone are provided as **Graph A** at the end of this chapter.

**TABLE 1  
SOUTH STUDY ZONE: COMPOSITION OF SURVEYED PARKING SUPPLY**

South Study Area Parking Stall Breakout		
<i>On-Street Meters by Type</i>	<b>Number of Stalls</b>	<b>% of Total On-Street Stalls</b>
<b>0.25</b>	35	2%
<b>0.5</b>	107	5%
<b>1</b>	398	20%
<b>1.5</b>	23	1%
<b>2</b>	920	47%
<b>3</b>	231	12%
<b>6</b>	0	-
<b>10</b>	251	13%
<b>Sub-Total On-Street Parking Stalls</b>	1,965	100%
<b>Off-Street Parking Stalls (Sub-Total)</b>	5,456	
<b>Total Surveyed Supply</b>	7,421	

Overall, the South Study Zone maintains a high percentage of 2.0 hour parking stalls, nearly half the on-street supply (47%) is made up of these types of stalls. One-hour stalls make up approximately 20% of the on-street supply. Interestingly, nearly seven percent of on-street stalls are for stays of 30-minutes or less (142 total stalls).

*B. Use of On-Street Metered Supply*

*On-street* parking in the study zone operates with a “dual peak” hour. As **Table 2**, below, indicates the mid-day peak hour for parking demand in this zone occurs between 11:30 a.m. – 12:30 p.m. At that time, 61.5% of all on-street parking stalls in the zone are occupied. During

<sup>3</sup> MMDC was able to survey 100% of all on-street stalls and 79% of all off-street stalls available for public use (5,456 of 6,913).

<sup>4</sup> MMDC conducted a detailed physical inventory of off-street parking locations in the downtown. Within the South study zone, MMDC identified 62 total lots/garages available to general public parking. Additional lots exist within the zone, but are not available to general public use.

this peak hour of demand, 757 stalls are empty and available for use in the South Study Zone. Another “evening peak” occurs between 6:30 p.m. – 7:30 p.m. when the on-street supply reaches 62% occupancy, most likely representative of a build up of patrons visiting evening activities associated with restaurants and entertainment. At the evening peak, 746 stalls on-street stalls are empty and available for use within the study area.

**TABLE 2**  
**SOUTH STUDY ZONE: ON-STREET PARKING SUMMARY**

On-Street Parking (1,965 total stalls)		10:30 – 11:30 a.m.	11:30 – 12:30 p.m. PEAK	12:30 – 1:30 p.m.	1:30 – 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m. PEAK	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Metered (1,714 stalls)	Stalls Occupied by Hour	777	968	926	838	717	817	948	1,049	1,057	938	739
10 hour (251 stalls)	Stalls Occupied by Hour	87	120	127	122	103	112	110	80	81	56	38
	% Stalls Occupied by Hour →	48.4%	61.5%	60.1%	55.1%	47.0%	53.0%	59.4%	61.5%	62.0%	53.4%	41.5%
	Empty Stalls Available by Hour	1,014	757	785	883	1,042	924	797	756	746	915	1,150

**C. General Characteristics of Use – On-Street Metered Supply**

Over the course of the entire study day (i.e., 10:30 a.m. to 9:30 p.m.), approximately 6,235 unique license plates were recorded using the 1,965 metered parking stalls within the study zone.<sup>5</sup> These vehicles logged a total of 9,768 parked hours. If only the period between 10:30 a.m. and 5:30 p.m. is considered (i.e., hours during which enforcement is in effect), 3,846 unique license plates were recorded (or 62% of all vehicles recorded).

The average duration of stay for a vehicle parked at a meter during hours of enforcement was 1 hour and 32 minutes (1.56 hours). As such, over the course of an 8-hour day, a metered stall will turn just over five times (8 hour day/1.56 hours duration = 5.1 turns). If the intended use for a meter is one hour, then the stall should turn 8 times over an eight-hour period. If the intended use for a meter is two hour parking then turnover should be no less than four turns over an eight-hour period. Given that the majority of metered stalls in the district allow for time stays of two hours or more, turnover in the *larger* study zone is generally efficient.

Interestingly, time stay violations occur in nearly 16.0% of the stalls surveyed. Stated differently, more than one in ten patrons overstays the posted limit for the stall they are using. This is a very high rate for time stay violations and could be the result of several factors that will be considered later in this section (see Section 2, C, below).

<sup>5</sup> It is important to note that this does not represent all vehicles in the downtown on May 20, 2004 as license plate numbers were not recorded in off-street facilities or at un-metered parking stalls and the study did not capture use prior to 10:30 a.m. The unique vehicle total allows us to calculate turnover.

Table 3, below, summarizes the characteristics of use for the study zone.

**TABLE 3  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles (entire study day)	6,235
Number of total vehicle hours (total hours that cars parked in the study zone)	9,768
Number of unique vehicles (10:30 a.m. – 5:30 p.m.)	3,846
Average duration per unique vehicle (entire study day)	1.57 hrs (1 hour and 34 minutes)
Average duration per unique vehicle during enforcement period (10:30 a.m. – 5:30 p.m.)	1.56 hrs (1 hour and 32 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	5.1 times
% of all vehicles violating the posted time stay	15.9%

*D. Use of Off-Street Supply*

The *off-street* supply of parking reaches peak capacity between 1:30 p.m. and 2:30 p.m. Use of the facilities remains constant between the hours of 10:30 a.m. and 3:30 p.m., exceeding 60% occupancy in each of those hours, which is consistent with patterns for commuter parking typical of off-street use in other urban areas.

**TABLE 4  
SOUTH STUDY ZONE OFF-STREET PARKING SUMMARY<sup>6</sup>**

Off-Street Parking		10:30 – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m.	1:30 – 2:30 p.m. PEAK	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
29 lots/garages (5,456 total stalls)	Stalls Occupied	3330	3399	3558	3577	3465	3153	2622	1731	1534	1357	1160
	% Stalls Occupied by Hour	61.0%	62.3%	65.2%	65.6%	63.5%	57.8%	48.1%	31.7%	28.1%	24.9%	21.3%
	Empty Stalls Available By Hour	2126	2057	1898	1879	1991	2303	2834	3725	3922	4099	4296

As Table 4, above, indicates the off-street supply reaches 65.6% of capacity at the peak hour. As such, at the peak hour of demand 1,879 stalls are empty and available for use off-street in the South Study Zone.

<sup>6</sup> MMDC has usage data for each individual off-street lot/garage surveyed. Through agreement with property owners of these facilities, MMDC has grouped the data together to assure confidentiality of use.

E. Use of the Combined Supply (On and Off-Street)

When both on and off-street supplies are combined, the peak hour for parking in the South Study Zone occurs between 12:30 p.m. and 1:30 p.m. During this peak hour 63.8% of the parking supply is occupied, leaving approximately 2,683 empty parking stalls available for use. **Table 5** below, summarizes the use characteristics of the combined parking supply.

**TABLE 5**  
**SOUTH STUDY ZONE: COMBINED ON & OFF-STREET PARKING AREA SUMMARY**

COMBINED AREA TOTAL (7,421 Stalls)		10:30. – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m. PEAK	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
On-street (1,965 stalls)	Stalls Occupied	951	1,208	1,180	1,082	923	1,041	1,168	1,209	1,219	1,050	815
Off-street (5,456 stalls)		3330	3399	3558	3577	3465	3153	2622	1731	1534	1357	1160
Combined occupied stalls		4281	4607	4738	4659	4388	4194	3790	2940	2753	2407	1975
	% Stalls Occupied by Hour	57.7%	62.1%	63.8%	62.8%	59.1%	56.5%	51.1%	39.6%	37.1%	32.4%	26.6%
	Empty Stalls Available by Hour	3140	2814	2683	2762	3033	3227	3631	4481	4668	5014	5446

F. General Conclusions for the Combined South Study Zone

The South Study Zone operates with a convenient surplus of parking during its peak hours of operation. As such, surpluses of parking exist in both the on-street and off-street supply within the boundaries of the entire study zone. Turnover is efficient in the larger context of stalls designated for stays of two hours or more, which represents the majority of parking in the study area. However, the high percentage of time stay violations indicates that the overall mix of time stay designations (i.e., stays of less than 1.5 hours) may not be appropriate to serve the average duration of stay for patrons utilizing the zone.

In general, the South Study Zone appears to have adequate capacity to meet current and future levels of demand.

**2. Data Findings – Core Parking Zone**

For purposes of this analysis, MMDC defined the Core Zone as the area comprised of parking located between Spokane Falls Boulevard (north), First Avenue (south), Monroe (west) and Washington (east). **Figure 3**, below, provides a map of this study zone.

**Figure 3  
Core Zone Boundaries**



**A. Composition of the Supply**

MMDC surveyed a total of 3,795 stalls in the Core Zone. Of surveyed stalls, 486 stalls were located on-street and 3,309 were located in nine off-street lots/garages. **Table 6** presents a breakout of the surveyed parking supply in the Core Zone. Detailed graphs illustrating usage for this study zone are provided as **Graph B** at the end of this chapter.

**TABLE 6  
CORE ZONE: COMPOSITION OF THE PARKING SUPPLY**

Core Zone Parking Stall Breakout		
<i>On-Street Meters by Type</i>	Number of Stalls	% of Total On-Street Stalls
0.25	27	6%
0.5	65	13%
1	299	62%
1.5	23	4%
2	72	15%
3	0	0%
6	0	0%
10	0	0%
<b>Sub-Total On-Street Parking Stalls</b>	486	100%
<b>Off-Street Parking Stalls (Sub-Total)</b>	3,309	
<b>TOTAL Core Zone Parking Supply</b>	3,795	

Overall, the Core Zone maintains a high percentage of 1.0 hour parking stalls, with over 62% of the on-street supply made up of these types of stalls. This is consistent with an operating intent to support high turnover in an area supportive of ground level retail and short-term visits. A number of stalls (102 stalls or 19%) are dedicated to stays of 30 minutes or less. The remainder of the zone (95 total stalls) provides a mix of 1.5 – 2.0 hour parking meters.

B. Use of On-Street Metered Supply

Consistent with results from the entire South Study Zone (see above), *on-street* parking in the Core Zone operates with a “dual peak” hour. As **Table 7**, below, indicates the “mid-day peak hour” for parking demand in this zone occurs between 11:30 a.m. – 12:30 p.m. At that time, 84.4% of all on-street parking stalls in the zone are occupied, which is close to the parking industry “optimum” standard of 85%. During this peak hour of demand, only 76 on-street stalls are empty and available for use in the Core Zone.

**TABLE 7  
CORE ZONE: ON-STREET PARKING SUMMARY**

On-Street Parking CORE ZONE		10:30. – 11:30 a.m.	11:30 – 12:30 p.m. PEAK	12:30 – 1:30 p.m.	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m. PEAK	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Metered (486 stalls)	Stalls Occupied by Hour	302	410	363	347	303	359	409	436	399	368	298
	% Stalls Occupied by Hour	62.1%	84.4%	74.7%	71.4%	62.3%	73.9%	84.2%	89.7%	82.1%	75.7%	61.3%
	Empty Stalls Available by Hour	184	76	123	139	183	127	77	50	87	118	188

Another “evening peak” occurs between 5:30 p.m. – 6:30 p.m. when the on-street supply reaches 89.7% occupancy, which exceeds the industry standard of 85% occupancy for a facility that is “effectively full” or at “optimum utilization” for retail customer uses. At this hour, only 50 on-street stalls are empty and available for customer use.

Using 85% occupancy as the generally accepted industry standard for optimum utilization of a parking supply, the *on-street* system in the Core Zone operates at a deficit of approximately 23 stalls, the number of stalls necessary to bring the system to an operating capacity of 85 percent.

C. General Characteristics of Use – On-Street Metered Supply

Over the course of the entire study day (i.e., 10:30 a.m. to 9:30 p.m.), approximately 2,604 unique license plates were recorded using the 486 metered parking stalls within the Core Zone. This represents 42% of all unique vehicles recorded during the study day. If only the period between 10:30 a.m. and 5:30 p.m. is considered (i.e., hours during which enforcement is in effect), 1,704 unique license plates were recorded (or 44% of all vehicles recorded during enforcement hours).

The average duration of stay for a vehicle parked at a meter during hours of enforcement was 1 hour and 28 minutes (1.46 hours). As such, over the course of an 8-hour day, a metered stall will turn approximately 5.5 times. Given that the majority of parking in the Core Zone is one hour parking, the intended turnover rate for the zone would be closer to eight turns a day. At 5.5 turns, the Core Zone is not operating as intended.

This may be a direct reflection of the high rate of time stay violations that occur in the Core Zone. Violations are at nearly 21.0% of all stalls surveyed. Stated differently, one in five

patrons parked on-street in the Core Zone overstay the posted limit for the stall they are using. The question for the City regarding the Core Zone is whether the 1-hour meter (and the 30-minute meter) is the optimum time stay “mix” or whether a meter stay that more closely reflects observed customer behavior in the zone (i.e., an actual average stay of 1.46 hours) is necessary.

**Table 8**, below, summarizes usage characteristics of the Core Zone.

**TABLE 8  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles (entire study day)	2,604
Number of total vehicle hours (total hours that cars parked in the study zone)	3,994
Number of unique vehicles (10:30 a.m. – 5:30 p.m.)	1,704
Average duration per unique vehicle (entire study day)	1.53 hrs (1 hour and 32 minutes)
Average duration per unique vehicle during enforcement period (10:30 a.m. – 5:30 p.m.)	1.46 hrs (1 hour and 28 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	5.5 times
% of all vehicles violating the posted time stay	20.7%

*D. Use of Off-Street Supply*

The *off-street* supply of parking in the Core Zone reaches peak capacity between 1:30 p.m. and 2:30 p.m. This is consistent with the pattern of off-street usage for the entire South Study Zone. As **Table 9**, below, indicates the off-street supply reaches 66.7% of capacity at the peak hour. As such, at the peak hour of demand 1,102 off-street stalls are empty and available for use in the Core Zone.

*E. Use of the Combined Supply (On and Off-Street)*

When both on and off-street supplies are combined, the peak hour for parking in the Core Zone occurs between 1:30 p.m. and 2:30 p.m., an hour later than the peak for the entire South Study Zone. During the Core Zone peak hour, 67.3% of the parking supply is occupied, leaving approximately 1,241 empty parking stalls available for use. **Table 10**, below, summarizes the use characteristics of the combined parking supply.

**TABLE 9  
CORE ZONE OFF-STREET PARKING SUMMARY**

Off-Street Parking		10:30 - 11:30 a.m.	11:30 - 12:30 p.m.	12:30 - 1:30 p.m.	1:30 - 2:30 p.m. PEAK	2:30 - 3:30 p.m.	3:30 - 4:30 p.m.	4:30 - 5:30 p.m.	5:30 - 6:30 p.m.	6:30 - 7:30 p.m.	7:30 - 8:30 p.m.	8:30 - 9:30 p.m.
8 lots/garages (3,309 total stalls)	Stalls Occupied	1,939	2,045	2,167	2,207	2,131	1,937	1,626	1,112	907	872	721
	% Stalls Occupied by Hour	58.6%	61.8%	65.5%	66.7%	64.4%	58.5%	49.1%	33.6%	27.4%	26.4%	21.8%
	Empty Stalls Available By Hour	1,370	1,264	1,142	1,102	1,178	1,372	1,683	2,197	2,402	2,437	2,588

**TABLE 10  
CORE ZONE: COMBINED ON & OFF-STREET PARKING AREA SUMMARY**

TOTAL (3,795 Stalls)		10:30 - 11:30 a.m.	11:30 - 12:30 p.m.	12:30 - 1:30 p.m.	1:30 - 2:30 p.m. PEAK	2:30 - 3:30 p.m.	3:30 - 4:30 p.m.	4:30 - 5:30 p.m.	5:30 - 6:30 p.m.	6:30 - 7:30 p.m.	7:30 - 8:30 p.m.	8:30 - 9:30 p.m.
On-street (486 stalls)	Stalls Occupied	302	410	363	347	303	359	409	436	399	368	298
Off-street (3,309 stalls)		1,939	2,045	2,167	2,207	2,131	1,937	1,626	1,112	907	872	721
Combined occupied stalls		2,241	2,455	2,530	2,554	2,434	2,296	2,035	1,548	1,306	1,240	1,019
	% Stalls Occupied by Hour	59.1%	64.7%	66.7%	67.3%	64.1%	60.5%	53.6%	40.8%	34.4%	32.7%	26.9%
	Empty Stalls Available by Hour	1,554	1,340	1,265	1,241	1,361	1,499	1,760	2,247	2,219	2,285	2,506

**F. General Conclusions for the Combined Core Zone**

The Core Zone operates with a small deficit of parking *on-street* (i.e., approximately 23 stalls). However, a substantial surplus of parking exists in publicly available off-street lots and garages located within the zone. This would suggest a need for better communicating the availability of the off-street supply to patrons of the Core Zone (i.e., wayfinding, signage and/or pricing).

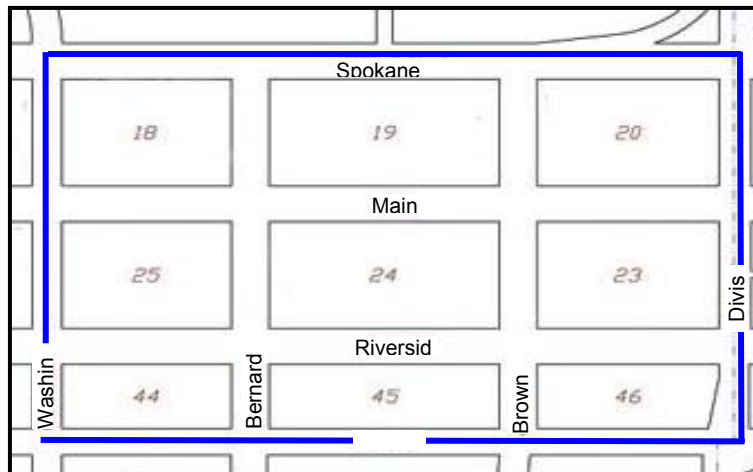
On-street turnover (at a rate of 5.5) is currently less efficient than the intended turnover ratio for a one-hour meter (i.e., 8.0). The high percentage of time stay violations indicates that patrons desire an opportunity to park on-street for visits closer to 1.5 hours.

In general, the Core Zone appears to have an adequate capacity of parking to meet current and future levels of demand. More focused systems for directing patrons to available supply will need to be designed and implemented.

### 3. Data Findings – Convention Center Zone

For purposes of this analysis, MMDC defined the Convention Center Zone as the area comprised of parking located between Spokane Falls Boulevard (north), First Avenue (south), Washington (west) and Division (east). **Figure 4**, below, provides a map of this study zone.

**Figure 4**  
**Convention Center Zone**



#### A. *Composition of the Supply*

MMDC surveyed a total of 1,188 stalls in the Convention Center Zone. Of surveyed stalls, 329 stalls were located on-street and 859 were located in eight off-street lots/garages. **Table 11** presents a breakout of the surveyed parking supply in the Convention Center Zone. Detailed graphs illustrating usage for this study zone are provided as **Graph C** at the end of this chapter.

**TABLE 11**  
**CONVENTION CENTER ZONE: COMPOSITION OF THE PARKING SUPPLY**

Convention Center Zone Study Area Parking Stall Breakout		
<i>On-Street Meters by Type</i>	Number of Stalls	% of Total On-Street Stalls
0.25	3	1%
0.5	5	2%
1	41	12%
1.5	0	0%
2	179	54%
3	50	15%
6	0	0%
10	51	16%

<b>Sub-Total On-Street Parking Stalls</b>	329	100%
<b>Off-Street Parking Stalls (Sub-Total)</b>	859	
<b>TOTAL Convention Center Zone Parking Supply</b>	1,188	

Overall, the Convention Center Zone maintains a high percentage of 2-hour parking stalls, with approximately 54% of the on-street supply made up of these types of stalls. An additional 101 stalls are evenly divided between 3-hour (50 stalls/15%) and 10-hours (51 stalls/16%). The remainder of the zone (48 total stalls) provides a mix of 15-minute, 30-minute and 1-hour parking meters.

**B. Use of On-Street Metered Supply**

Consistent with results from the entire South Study Zone and Core Zone (see above), *on-street* parking in the Convention Center Zone operates with a “dual peak” hour. As **Table 12**, below, indicates the “mid-day peak hour” for parking demand in this zone occurs between 12:30 p.m. – 1:30 p.m., one hour later than the on-street peak for the entire South Study area.

**TABLE 12  
CONVENTION CENTER ZONE: ON-STREET PARKING SUMMARY**

On-Street Parking		10:30. – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m. <b>PEAK</b>	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m. <b>PEAK</b>	8:30 – 9:30 p.m.
<b>Metered (329 stalls)</b>	<b>Stalls Occupied by Hour</b>	137	193	<b>209</b>	159	138	176	175	180	187	<b>192</b>	129
	<b>% Stalls Occupied by Hour</b>	41.6%	58.7%	<b>63.5%</b>	48.3%	41.9%	53.5%	53.2%	54.7%	56.8%	<b>58.4%</b>	39.2%
	<b>Empty Stalls Available by Hour</b>	192	136	<b>120</b>	170	191	153	154	149	142	<b>137</b>	200

At the mid-day peak, 63.5% of all on-street parking stalls in the zone are occupied. During this peak hour of demand, 120 on-street stalls are empty and available for use in the Convention Center Zone.

Another “evening peak” occurs between 7:30 p.m. – 8:30 p.m. when the *on-street* supply reaches 58.4% occupancy. At this hour, 137 on-street stalls are empty and available for customer use. Interestingly, the zone actually shows a gradual increase in parking usage beginning at 3:30 p.m. and continues to the 7:30 - 8:30 p.m. evening peak. This is likely due to the number of restaurants/pubs in the eastern end of the zone.

**C. General Characteristics of Use – On-Street Metered Supply**

Over the course of the entire study day (i.e., 10:30 a.m. to 9:30 p.m.), approximately 891 unique license plates were recorded using the 329 metered parking stalls within the Convention Center Zone. This represents 14% of all unique vehicles recorded during the study day. If only the period between 10:30 a.m. and 5:30 p.m. is considered (i.e., hours during which enforcement is

in effect), 555 unique license plates were recorded (also 14% of all vehicles recorded during enforcement hours).

The average duration of stay for a vehicle parked at a meter during hours of enforcement was 1 hour and 38 minutes (1.64 hours). As such, over the course of an 8-hour day, a metered stall will turn approximately 4.9 times. Given that the majority of parking in the Convention Center Zone is 2-hour parking, the intended turnover rate for the zone would be in the range of 4.0. At 4.9 turns, the Convention Center Zone is operating within its intended parameters.

Nevertheless, as with the Core Zone, a high rate of time stay violations is evident in this zone. Violations are at 13.5% of all stalls surveyed. Stated differently, nearly one in seven patrons parked on-street in the Convention Center Zone overstays the posted limit for the stall they are using. Given peak occupancies of less than 65%, it does not appear that time stay violations are jeopardizing or constraining customer access to on-street stalls. **Table 13**, below, summarizes the characteristics of use for the Convention Center Zone.

**TABLE 13  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles (entire study day)	891
Number of total vehicle hours (total hours that cars parked in the study zone)	1,550
Number of unique vehicles (10:30 a.m. – 5:30 p.m.)	555
Average duration per unique vehicle (entire study day)	1.74 hrs (1 hour and 44 minutes)
Average duration per unique vehicle during enforcement period (10:30 a.m. – 5:30 p.m.)	1.64 hrs (1 hour and 38 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	4.9 times
% of all vehicles violating the posted time stay	13.5%

*D. Use of Off-Street Supply*

The *off-street* supply of parking in the Convention Center Zone reaches peak capacity between 1:30 p.m. and 2:30 p.m. This is consistent with the pattern of off-street usage for the entire South Study Zone. As **Table 14**, below, indicates the off-street supply reaches 67.4% of capacity at the peak hour. As such, at the peak hour of demand 280 stalls are empty and available for use off-street in the Convention Center Zone. The majority of these stalls are located on surface parking lots.

It is interesting to note that utilization of off-street lots in the Convention Center Zone remains very consistent between the hours of 10:30 a.m. and 4:30 p.m., remaining in the range of approximately 61% - 67%. This is consistent with off-street parking operations serving commuter uses.

**TABLE 14  
CONVENTION CENTER ZONE OFF-STREET PARKING SUMMARY**

Off-Street Parking		10:30 - 11:30 a.m.	11:30 - 12:30 p.m.	12:30 - 1:30 p.m. PEAK	1:30 - 2:30 p.m.	2:30 - 3:30 p.m.	3:30 - 4:30 p.m.	4:30 - 5:30 p.m.	5:30 - 6:30 p.m.	6:30 - 7:30 p.m.	7:30 - 8:30 p.m.	8:30 - 9:30 p.m.
8 lots/garages (859 total stalls)	Stalls Occupied	572	570	570	<b>579</b>	529	515	400	182	192	149	132
	% Stalls Occupied by Hour	66.6%	66.4%	66.4%	<b>67.4%</b>	61.6%	60.0%	46.6%	21.2%	22.4%	17.3%	15.4%
	Empty Stalls Available By Hour	287	289	289	<b>280</b>	330	344	459	677	667	710	727

*E. Use of the Combined Supply (On and Off-Street)*

When both on and off-street supplies are combined, the peak hour for parking in the Convention Center Zone occurs between 12:30 a.m. and 1:30 p.m., consistent with the peak for the entire South Study Zone. During the Convention Center Zone peak hour 65.6% of the parking supply is occupied, leaving approximately 409 empty parking stalls available for use. **Table 15**, below, summarizes the use characteristics of the combined parking supply.

*F. General Conclusions for the Combined Convention Center Zone*

The Convention Center Zone operates with a convenient surplus of parking during its peak hours of operation. As such, surpluses of parking exist in both the on-street and off-street supply within the boundaries of this study zone. It is important to note, however, that the majority of the available supply of off-street parking in this zone is on surface parking lots. As such, development of these sites would likely result in a net loss of supply unless policies, programs and strategies were in place to assure that existing demand is somehow accommodated as new development occurs.

**TABLE 15  
CONVENTION CENTER ZONE: COMBINED ON & OFF-STREET PARKING AREA  
SUMMARY**

TOTAL (1,188 Stalls)		10:30. – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m. PEAK	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
On-street (329 stalls)	Stalls Occupied	137	193	209	159	138	176	175	180	187	192	129
Off-street (859 stalls)		572	570	570	579	529	515	400	182	192	149	132
Combined occupied stalls		709	763	779	738	667	691	575	362	379	341	261
	% Stalls Occupied by Hour	59.7%	64.2%	65.6%	62.1%	56.1%	58.2%	48.4%	30.5%	31.9%	28.7%	22.0%
	Empty Stalls Available by Hour	479	425	409	450	521	497	613	826	539	577	657

Turnover in this zone is efficient in the larger context of stalls designated for stays of two hours or more, which represents the majority of parking in the study area. On-street turnover (at a rate of 4.9) is currently in excess of the intended turnover ratio for a 2-hour meter (i.e. 4.0 turns). The zone does maintain a high percentage of time stay violations, though this does not appear, as yet, to have had an effect on customer access to available stalls.

Given that the majority of the available supply of off-street parking in this zone is on surface parking lots, a large “surplus” of parking exists in the near term to accommodate new demand and growth within the district. However, future loss of surface parking to redevelopment could create conflicts/constraints between existing and future commercial, residential and convention/cultural uses. Expectations about responsibility for creating new supply in the future should be discussed.

#### 4. Data Findings – West End Zone

For purposes of this analysis, MMDC defined the West End Zone as the area comprised of parking located between Spokane Falls Boulevard (north), First Avenue (south), Monroe (east) and Cedar (west).

Figure 4, below, provides a map of this study zone.

##### A. Composition of the Supply

MMDC surveyed a total of 583 stalls in the West End Zone. Of surveyed stalls, 365 stalls were located on-street and 218 were located in three off-street lots. **Table 16** presents a breakout of the surveyed parking supply in the West End Zone. Detailed graphs illustrating usage for this study zone are provided as **Graph D** at the end of this chapter.

**Figure 4 West End Zone Boundaries**



Overall, nearly half (48%) of the on-street parking in the West End Zone is comprised of 2-hour parking stalls. Another 159 stalls are divided between 3-hour (60 stalls/16%) and 10-hour stalls (99 stalls/27%). The remainder of the zone (32 total stalls) provides a mix of 15-minute, 30-minute and 1-hour parking meters.

**TABLE 16  
WEST END ZONE: COMPOSITION OF THE PARKING SUPPLY**

West End Zone Area Parking Stall Breakout		
On-Street Meters by Type	Number of Stalls	% of Total On-Street Stalls
0.25	1	<1%
0.5	7	2%
1	24	7%
1.5	0	0%
2	174	48%
3	60	16%
6	0	0%
10	99	27%
<b>Sub-Total On-Street Parking Stalls</b>	<b>365</b>	<b>100%</b>
<b>Off-Street Parking Stalls (Sub-Total)</b>	<b>218</b>	
<b>TOTAL West End Zone Parking Supply</b>	<b>583</b>	

**B. Use of On-Street Metered Supply**

On-street parking in the West End Zone operates similar to the Core Zone with a “dual peak” hour and consistently high occupancy. As **Table 17**, below, indicates the “mid-day peak hour” for parking demand in this zone occurs between 11:30 a.m. – 12:30 p.m. At that time, 84.4% of all on-street parking stalls in the zone are occupied. This is the same as the Core Zone during the same peak hour, which is operating near an 85% optimum utilization for on-street parking. During the midday peak hour of demand, only 57 on-street stalls are empty and available for use in the West End Zone.

The “evening peak” occurs between 4:30 p.m. – 5:30 p.m., an hour earlier than in the Core Zone. At this time the on-street supply reaches 80.5% occupancy, leaving 71 stalls empty and available for customer use. Another occupancy spike occurs between 6:30 p.m. and 7:30 p.m. when 79.2% of the supply is occupied.

Overall, on-street parking in the West End Zone remains active throughout the day and into the evening.

**TABLE 17  
WEST END ZONE: ON-STREET PARKING SUMMARY**

On-Street Parking		10:30. – 11:30 a.m.	11:30 – 12:30 p.m. PEAK	12:30 – 1:30 p.m.	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m. PEAK	5:30 – 6:30 p.m.	6:30 – 7:30 p.m. USAGE SPIKE	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Metered (365 stalls)	Stalls Occupied by Hour	218	308	280	287	241	215	294	238	289	225	211
	% Stalls Occupied by Hour	59.7%	84.4%	76.7%	78.6%	66.0%	58.9%	80.5%	65.2%	79.2%	61.6%	57.8%
	Empty Stalls Available by Hour	147	57	85	78	124	150	71	127	76	140	154

**C. General Characteristics of Use – On-Street Metered Supply**

Over the course of the entire study day (i.e., 10:30 a.m. to 9:30 p.m.), approximately 1,185 unique license plates were recorded using the 365 metered parking stalls within the West End Zone. This represents 19% of all unique vehicles recorded during the study day. If only the period between 10:30 a.m. and 5:30 p.m. is considered (i.e., hours during which enforcement is in effect), 642 unique license plates were recorded (or 17% of all vehicles recorded during enforcement hours). **Table 18**, below, summarizes the characteristics of use for the West End Zone.

The average duration of stay for a vehicle parked at a meter during hours of enforcement was 1 hour and 34 minutes (or 1.56 hours). As such, over the course of an 8-hour day, a metered stall will turn approximately 5.1 times. Given that the majority of parking in the West End Zone is 2 hour parking, the intended turnover rate for the zone is 4.0. At 5.1 turns, the West End Zone is operating as intended.

Of note is that time stay violations in the West End Zone are the lowest recorded for any zone evaluated. Violations were recorded at 9.0% of all stalls surveyed. As with the Convention Center Zone, it does not appear that time stay violations are limiting patron access to on-street parking.

**TABLE 18  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles (entire study day)	1,185
Number of total vehicle hours (total hours that cars parked in the study zone)	1,660
Number of unique vehicles (10:30 a.m. – 5:30 p.m.)	642
Average duration per unique vehicle (entire study day)	1.40 hrs (1 hour and 24 minutes)
Average duration per unique vehicle during enforcement period (10:30 a.m. – 5:30 p.m.)	1.56 hrs (1 hour and 34 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	5.1 times
% of all vehicles violating the posted time stay	9.0%

*D. Use of Off-Street Supply*

The *off-street* supply of parking in the West End Zone reaches peak capacity between 12:30 a.m. and 1:30 p.m. The West End Zone peak occurs an hour earlier than that of the entire South Study Zone.

As **Table 19**, below, indicates the off-street supply reaches 55.5% of capacity at the peak hour. As such, at the peak hour of demand 97 stalls are empty and available for patron use off-street in the West End Zone.

**TABLE 19  
WEST END ZONE: OFF-STREET PARKING SUMMARY**

Off-Street Parking		10:30 - 11:30 a.m.	11:30 - 12:30 p.m.	12:30 - 1:30 p.m. PEAK	1:30 - 2:30 p.m.	2:30 - 3:30 p.m.	3:30 - 4:30 p.m.	4:30 - 5:30 p.m.	5:30 - 6:30 p.m.	6:30 - 7:30 p.m.	7:30 - 8:30 p.m.	8:30 - 9:30 p.m.
<b>WEST END ZONE</b>												
3 lots/garages (218 total stalls)	Stalls Occupied	104	110	121	119	113	101	77	70	69	66	53
	% Stalls Occupied by Hour	47.7%	50.5%	55.5%	54.6%	51.8%	46.3%	35.3%	32.1%	31.7%	30.3%	24.3%
	Empty Stalls Available By Hour	114	108	97	99	105	117	141	148	149	152	165

*E. Use of the Combined Supply (on and off-street)*

When both on and off-street supplies are combined, the West End Zone demonstrates the highest peak hour occupancy of any zone analyzed. Also, the West End Zone displays a dual peak hour for parking for combined supply. A midday peak of 71.7% occupancy occurs between 11:30 a.m. and 12:30 p.m., leaving 165 available stalls. The evening peak occurs between 4:30 p.m. and 5:30 p.m. (63.6% with 212 available stalls) and spikes once again at

61.4% between 6:30 p.m. and 7:30 p.m. **Table 20**, below, summarizes the use characteristics of the combined parking supply.

**TABLE 20**  
**WEST END ZONE: COMBINED ON & OFF-STREET PARKING AREA SUMMARY**

TOTAL (583 Stalls)		10:30. – 11:30 a.m.	11:30 – 12:30 p.m. PEAK	12:30 – 1:30 p.m.	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m. PEAK	5:30 – 6:30 p.m.	6:30 – 7:30 p.m. USAGE SPIKE	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
On-street (365 stalls)	Stalls Occupied	218	308	280	287	241	215	294	238	289	225	211
Off-street (218 stalls)		104	110	121	119	113	101	77	70	69	66	53
Combined occupied stalls		322	418	401	406	354	316	371	308	358	291	264
	% Stalls Occupied by Hour	55.2%	71.7%	68.8%	69.6%	60.7%	54.2%	63.6%	52.8%	61.4%	49.9%	45.3%
	Empty Stalls Available by Hour	261	165	182	177	229	267	212	275	225	292	319

*F. General Conclusions for the Combined West End Zone*

The West End Zone operates at the highest level of activity in the downtown and displays the highest peak hour occupancy for its combined supply of on and off-street parking. An adequate surplus of parking is available on-street and in publicly available off-street lots and garages located within the zone.

On-street turnover (at a rate of 5.1) is supportive of an intended turnover ratio for a 2-hour meter (i.e. 8.0 turns). The low percentage of time stay violations indicates that the mix of parking in the area is supportive of, and consistent with, patron demand (currently at 1.56 hours per visit).

In general, the West End Zone appears to have an adequate capacity of parking to meet current and future levels of demand.

**5. Data Findings – Periphery Zone**

For purposes of this analysis, MMDC defined the Periphery as the large area comprised of parking located between First Avenue (north), Third Avenue (south), Division (east) and Cedar (west). **Figure 5**, below, provides a map of this study zone.

**Figure 5  
Periphery Zone Boundaries**



**A. Composition of the Supply**

MMDC surveyed a total of 1,737 stalls in the Periphery Zone. Of surveyed stalls, 757 stalls were located on-street and 980 were located in eight off-street lots. **Table 21** presents a breakout of the surveyed parking supply in the Periphery Zone. Detailed graphs illustrating usage for this study zone are provided as **Graph E** at the end of this chapter.

**TABLE 21  
PERIPHERY ZONE: COMPOSITION OF THE PARKING SUPPLY**

Periphery Zone Study Area Parking Stall Breakout		
<i>On-Street Meters by Type</i>	<b>Number of Stalls</b>	<b>% of Total On-Street Stalls</b>
<b>0.25</b>	3	0%
<b>0.5</b>	30	4%
<b>1</b>	34	4%
<b>1.5</b>	0	0%
<b>2</b>	468	62%
<b>3</b>	121	16%
<b>6</b>	0	0%
<b>10</b>	101	13%
<b>Sub-Total On-Street Parking Stalls</b>	757	100%
<b>Off-Street Parking Stalls (Sub-Total)</b>	980	
<b>TOTAL Periphery Zone Parking Supply</b>	1,737	

Overall, the majority of the on-street parking in the Periphery End Zone is comprised of 2-hour parking stalls, accounting for 62% of the supply. Another 333 stalls are divided between 3-hour (121 stalls/16%) and 10-hour stalls (101 stalls/13%). The remainder of the zone (67 total stalls) provides a mix of 15-minute, 30-minute and 1-hour parking meters.

**B. Use of On-Street Metered Supply**

*On-street* parking in the Periphery Zone generates a modest “dual peak” hour, with the highest peak of the day occurring at the evening peak. As **Table 22**, below, indicates the “mid-day peak hour” for parking demand in this zone occurs between 12:30 a.m. – 1:30 p.m. At that time, only 37.6% of all on-street parking stalls in the zone are occupied. During the midday peak hour of demand, only 472 on-street stalls are empty and available for use in the Periphery Zone. The “evening peak” occurs between 5:30 p.m. – 6:30 p.m. At this time the on-street supply reaches 42.1% occupancy, leaving 438 stalls empty and available for patron use.

Overall, on-street parking in the Periphery is substantially underutilized throughout the day and into the evening.

**TABLE 22  
PERIPHERY ZONE: ON-STREET PARKING SUMMARY**

On-Street Parking PERIPHERY ZONE		10:30. – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m. <b>PEAK</b>	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m. <b>PEAK</b>	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Metered (757 stalls)	Stalls Occupied by Hour	262	248	285	255	210	258	245	319	306	229	148
	% Stalls Occupied by Hour	34.6%	32.8%	37.6%	33.7%	27.7%	34.1%	32.4%	42.1%	40.4%	30.3%	19.6%
	Empty Stalls Available by Hour	495	509	472	502	547	499	512	438	451	528	609

*C. General Characteristics of Use – On-Street Metered Supply*

Over the course of the entire study day (i.e., 10:30 a.m. to 9:30 p.m.), approximately 1,496 unique license plates were recorded using the 757 metered parking stalls within the Periphery Zone. This represents 24% of all unique vehicles recorded during the study day. If only the period between 10:30 a.m. and 5:30 p.m. is considered (i.e., hours during which enforcement is in effect), 913 unique license plates were recorded (or 23% of all vehicles recorded during enforcement hours).

The average duration of stay for a vehicle parked at a meter during hours of enforcement was 1 hour and 39 minutes (1.65 hours). As such, over the course of an 8-hour day, a metered stall will turn approximately 4.8 times. Given that the majority of parking in the Periphery Zone is 2-hour parking, the intended turnover rate for the zone is 4.0. At 4.8 turns, the Periphery Zone is operating as intended.

Time stay violations in the Periphery Zone were recorded at 12.7% of all stalls surveyed, meaning one in eight patrons overstay the posted time stay for use of their stall. However, as with the West End and Convention Center Zones, it does not appear that time stay violations are limiting patron access for on-street parking. **Table 23**, below, summarizes the characteristics of use for the Periphery Zone.

**TABLE 23  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles (entire study day)	1,496
Number of total vehicle hours (total hours that cars parked in the study zone)	2,433

Number of unique vehicles (10:30 a.m. – 5:30 p.m.)	913
Average duration per unique vehicle (entire study day)	1.63 hrs (1 hour and 38 minutes)
Average duration per unique vehicle during enforcement period (10:30 a.m. – 5:30 p.m.)	1.65 hrs (1 hour and 39 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	4.8 times
% of all vehicles violating the posted time stay	12.7%

*D. Use of Off-Street Supply*

The *off-street* supply of parking in the Periphery Zone reaches peak capacity between 10:30 a.m. and 11:30 p.m. The Periphery Zone peak occurs a full three hours earlier than that of the average for the entire South Study Zone. The pattern of use also stays consistently in the high 60% range until 3:30 p.m. Like the Convention Center Zone, discussed above, this pattern is consistent with use of these lots by employee commute parkers.

As **Table 24**, next page, indicates the off-street supply reaches 67.1% of capacity at the peak hour. As such, at the peak hour of demand 322 stalls are empty and available for use off-street in the Periphery Zone.

**TABLE 24  
PERIPHERY ZONE OFF-STREET PARKING SUMMARY**

Off-Street Parking		10:30 – 11:30 a.m. PEAK	11:30 – 12:30 p.m.	12:30 – 1:30 p.m.	1:30 – 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
PERIPHERY ZONE												
8 lots/garages (980 total stalls)	Stalls Occupied	658	630	651	623	643	553	488	354	361	265	248
	% Stalls Occupied by Hour	67.1%	64.3%	66.4%	63.6%	65.6%	56.4%	49.8%	36.1%	36.8%	27.0%	25.3%
	Empty Stalls Available By Hour	322	350	329	357	337	427	492	626	619	715	732

*E. Use of the Combined Supply (on and off-street)*

When both on and off-street supplies are combined, the peak hour for parking in the Periphery Zone occurs between 12:30 a.m. and 1:30 p.m., consistent with the peak for the entire South Study Zone. During the Periphery Zone peak hour 53.9% of the parking supply is occupied, leaving approximately 801 empty parking stalls available for use. **Table 25**, below, summarizes the use characteristics of the combined parking supply.

**TABLE 25  
PERIPHERY ZONE: COMBINED ON & OFF-STREET PARKING AREA SUMMARY**

<b>TOTAL (1,737 Stalls)</b>		<b>10:30. – 11:30 a.m.</b>	<b>11:30 – 12:30 p.m.</b>	<b>12:30 – 1:30 p.m. PEAK</b>	<b>1:30 - 2:30 p.m.</b>	<b>2:30 – 3:30 p.m.</b>	<b>3:30 – 4:30 p.m.</b>	<b>4:30 – 5:30 p.m.</b>	<b>5:30 – 6:30 p.m.</b>	<b>6:30 – 7:30 p.m.</b>	<b>7:30 – 8:30 p.m.</b>	<b>8:30 – 9:30 p.m.</b>
<b>On-street (757 stalls)</b>	<b>Stalls Occupied</b>	262	248	<b>285</b>	255	210	258	245	319	306	229	148
<b>Off-street (980 stalls)</b>		658	630	<b>651</b>	623	643	553	488	354	361	265	248
<b>Combined occupied stalls</b>		920	878	<b>936</b>	878	853	811	733	673	667	494	396
	<b>% Stalls Occupied by Hour</b>	53.0%	50.5%	<b>53.9%</b>	50.5%	49.1%	46.7%	42.2%	38.7%	38.4%	28.4%	22.8%
	<b>Empty Stalls Available by Hour</b>	817	859	<b>801</b>	859	884	926	1,004	1,064	800	973	1,071

*F. General Conclusions for the Combined Periphery Zone*

The Periphery Zone operates at the lowest level of activity in the downtown. A large surplus of parking exists on-street in the peak hours (between 438 and 472 stalls) while a moderate supply (322 stalls) of publicly accessible off-street parking is available.

On-street turnover (at a rate of 4.8) is supportive of an intended turnover ratio for a 2-hour meter (i.e. 8.0). Time stay violations (at 12.7%) are high but do not appear to have had an impact on the availability of on-street parking. The low percentage of time stay violations indicates that the mix of parking in the area is supportive of, and consistent with, patron demand (current at approximately 1.56 hours per visit).

In general, the Periphery Zone appears to have an adequate capacity of parking to meet current and future levels of demand. Like the Convention Center Zone, off-street parking surplus is on surface parking lots, which would need to be monitored and managed as development on such sites occurs.

**6. Summary - South Study Zone**

Data findings for the South Study Area can be summarized as follows.

- Overall occupancy of the South Study Area reaches a peak capacity of 63.8% in the peak hour (i.e., 12:30 p.m. – 1:30 p.m.).
- At the peak hour, the downtown maintains an available supply of approximately 2,683 on and off-street parking stalls.
- The *on-street* parking systems in the Core and West End Zones operate with high turnover and utilization. The Core Zone reaches 89.7% occupancy at its maximum peak hour and the West End reaches 84.4%.

- While on-street occupancies are high in the Core and West End Zones, both zones have low utilization of *off-street* facilities. Off-street facilities in the Core Zone do not exceed peak hour utilization in the mid-60% range, while off-street facilities surveyed in the West End Zone do not exceed the mid-50% range. At its highest peak hour, the Core Zone maintains a minimum of 1,102 available off-street stalls. This relationship underscores the need for a better system of wayfinding/signage, communication, lighting/landscaping and pricing that draws patrons into off-street facilities.
- Time stay violations are high in the downtown study area. This is particularly evident in the Core Zone. The situation in the Core Zone is likely the result of the high number of 1-hour meters (and 30-minute meters) in the zone, which is out of sync with a patron's average time stay of approximately 1.5 hours. A review and reconsideration of the mix of time stay allowances in the Core Zone is recommended.
- It appears that the available supply of parking in the peak hours is adequate to accommodate current and future levels of demand.
- A large portion of available off-street supply is located on surface parking lots. Managing this surplus of parking as demand increases will impact decisions regarding future parking development requirements (for both the private and public sectors) as surface facilities in the study area redevelop into desired new uses.

#### **E. INVENTORY OF PARKING - NORTH STUDY ZONE (WEEKDAY)**

The North Study Zone is generally comprised of the parking area bounded by Cedar and Post (on the west and east, respectively) and Mallon and Bridge (on the North and South, respectively). **Figure 6** provides a visual map of this study zone. The boundaries of the North Study Zone were developed in consultation with the DSP and the PSC prior to initiation of the data gathering effort. A single "typical day" was surveyed each hour over an eleven-hour period (10:30 a.m. – 9:30 p.m.). The survey day selected was Thursday, May 20, 2004.

**Figure 6  
North Study Zone**



**1. Data Findings – North Study Zone**

**A. Composition of the Supply**

The North Study Zone maintains a total of 899 parking stalls within the study boundaries. Of those stalls 454 stalls are located on street and 445 are located in off-street lots. **Table 26** presents a breakout of the parking supply in the North Study Zone.

**TABLE 26  
COMPOSITION OF THE PARKING SUPPLY – NORTH STUDY ZONE**

North Study Area Parking Stall Breakout	
<i>On-Street Meters by Type</i>	Number of Stalls
0.25	2
0.5	5
1	18
1.5	0
2	79
3	57
6	143 <sup>7</sup>
10	150
<b>Sub-Total On-Street Parking Stalls</b>	<b>454</b>
<b>Off-Street Parking Stalls (Sub-Total)</b>	<b>445</b>
<b>TOTAL North Zone Parking Supply</b>	<b>899</b>

<sup>7</sup> Six hour stalls are actually 143 metered spaces on a surface lot across the street from the Courthouse. MMDC treated these stalls as “on-street” because we were able to track turnover and duration.

*B. Use of on-street metered supply*

The character of metered parking operates somewhat differently than the off-street system. As **Table 27**, below, indicates the peak hour for parking demand in this zone occurs between 1:30 p.m. – 2:30 p.m. At that time, 61.2% of all on-street parking stalls in the zone are occupied. Viewed another way, at the peak hour of demand 176 stalls are empty and available for use in the North Study Zone. **Table 27** also summarizes the use of passenger loading zones (PLZ) and commercial loading zones (CLZ) in the study zone. Survey data indicates low use of the two PLZ stalls and moderate use of the three CLZ in the study zone.

**TABLE 27  
ON-STREET PARKING STALL SUMMARY – 454 TOTAL STALLS**

On-Street Parking (454 total stalls)		10:30 – 11:30 a.m.	11:30 – 12:30 p.m.	12:30 – 1:30 p.m.	1:30 – 2:30 p.m. PEAK	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Metered (304 stalls)	Stalls Occupied by Hour	182	149	138	188	166	135	53	55	83	80	58
10 hour (158 stalls)	Stalls Occupied by Hour	75	73	70	90	85	56	43	50	46	45	38
	% Stalls Occupied by Hour	56.6%	48.9%	45.8%	61.2%	55.3%	42.1%	21.1%	23.1%	28.4%	27.5%	21.1%
	Empty Stalls Available by Hour	197	232	246	176	203	263	358	349	325	329	358
PLZ 2 Zones	Usage by Hour	1	0	0	1	0	0	0	0	0	0	0
CLZ 3 Zones	Usage by Hour	0	0	2	0	1	0	0	0	1	1	1

*C. Use of off-street supply*

The off-street supply of parking reaches peak capacity between 10:30 a.m. and 11:30 a.m. As **Table 28**, below, indicates the off-street supply reaches 65.6% of capacity at the peak hour. As such, at the peak hour of demand 153 stalls are empty and available for use in the North Study Zone.

**TABLE 28  
OFF-STREET PARKING STALL SUMMARY – 445 TOTAL STALLS**

Off-Street Parking (445 total stalls)		10:30 – 11:30 a.m. PEAK	11:30 – 12:30 p.m.	12:30 – 1:30 p.m.	1:30 – 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
Lot 327 (108 stalls)	Stalls Occupied	33	23	28	32	26	19	8	10	4	4	4
Lot 323 (25 stalls)		12	7	4	9	11	8	11	2	0	0	1
Lot 323 (32 stalls)		24	23	21	18	15	8	12	3	5	5	3
Lot 333 (60 stalls)		45	41	37	36	40	37	38	6	3	2	0
Lot 334 (100 stalls)		85	83	80	80	74	63	59	19	17	15	5
Lot 335 (120 stalls)		93	106	95	86	91	74	77	68	66	54	5
	% Stalls Occupied by Hour	65.6%	63.6%	59.6%	58.7%	57.8%	47.0%	46.1%	24.3%	21.3%	18.0%	4.0%
	Empty Stalls Available By Hour	153	162	180	184	188	236	240	337	350	365	427

*D. Use of the combined supply*

When both on and off-street supplies are combined, the peak hour for parking in the North Study Zone occurs between 10:30 a.m. and 11:30 a.m. During this peak hour 61.1% of the parking supply is occupied, leaving approximately 350 empty parking stalls available for use. **Table 29**, below, summarizes the use characteristics of the combined parking supply.

**2. General Characteristics of Use – On street/Metered Parking**

Over the course of the study day, approximately 790 unique license plates were recorded using metered parking stalls. These vehicles logged a total of 1,288 hours parked in the study zone. The average duration of stay for a vehicle parked at a meter was 1 hour and 38 minutes (or 1.63 hours). As such, over the course of an 8-hour day, a metered stall will turn over approximately five times. Given that the majority of metered stalls in the district allow for time stays of two hours or more, turnover in the zone is efficient. This is supported by the very low rate of time stay violations recorded in the zone over the course of the study day. Only 2.6% of vehicles parked in the study zone were recorded violating the posted time stay at their parking stall. **Table 30**, below, summarizes the characteristics of use for the study zone.

**TABLE 29  
COMBINED ON & OFF STREET PARKING AREA SUMMARY – 899 STALLS**

TOTAL (899 Stalls)		10:30. – 11:30 a.m. PEAK	11:30 – 12:30 p.m.	12:30 – 1:30 p.m.	1:30 - 2:30 p.m.	2:30 – 3:30 p.m.	3:30 – 4:30 p.m.	4:30 – 5:30 p.m.	5:30 – 6:30 p.m.	6:30 – 7:30 p.m.	7:30 – 8:30 p.m.	8:30 – 9:30 p.m.
On-street (454 stalls)	Stalls Occupied	257	222	208	278	251	191	96	105	129	125	96
Off-street (445 stalls)		292	283	265	261	257	209	205	108	95	80	18
Combined occupied stalls		549	505	473	539	508	400	301	213	224	205	114
	% Stalls Occupied by Hour	61.1%	56.2%	52.6%	60.0%	56.5%	44.5%	33.5%	23.7%	24.9%	22.8%	12.7%
	Empty Stalls Available by Hour	350	394	426	360	391	499	598	686	675	694	785

**TABLE 30  
GENERAL CHARACTERISTICS OF USE - METERED STALLS**

USE CHARACTERISTIC	DATA FINDING
Number of unique vehicles	790
Number of total vehicle hours (total hours cars parked in the study zone)	1,288
Average duration per unique vehicle	1.63 hrs (1 hour and 38 minutes)
Turnover (number of cars to use a single occupied stall over an 8 hour period)	4.9 times
% of all vehicles violating the posted time stay	2.6%

### 3. Summary – North Study Zone

The North Study Zone operates with a convenient surplus of parking during its peak hours of operation. Adequate parking is available for both on-street and off-street access. Turnover is efficient and time stay designations in the zone are appropriate to serve the average duration of stay for patrons utilizing the zone. Parking violations (or abuse of time stays) is not significant in the district.

In general, the North Zone appears to have adequate capacity to meet current and future levels of demand.

## F. FORECASTING – IMPACTS TO THE SUPPLY

To facilitate future discussions regarding the parking supply, the consultant team developed a trend analysis to track growth in peak hour parking stall demand at two different levels of annual demand growth – 3 percent and 5 percent.<sup>8</sup>

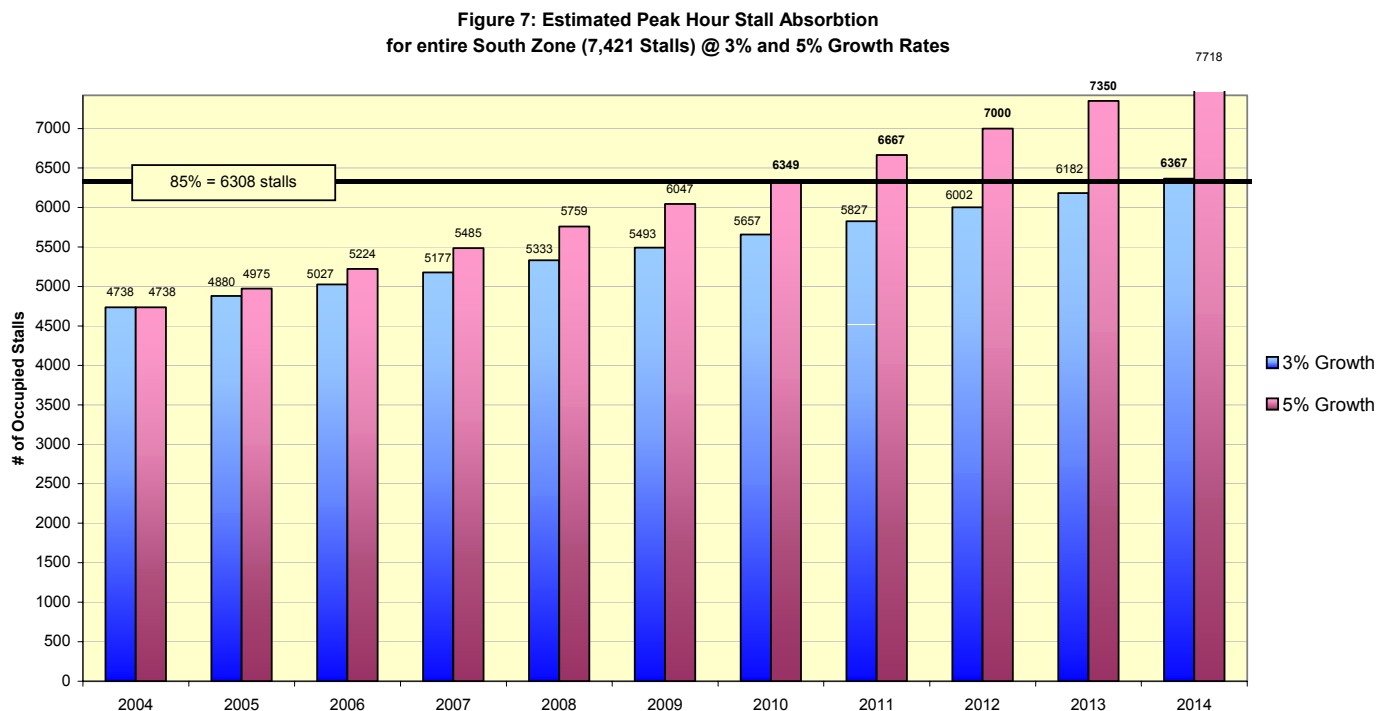
To facilitate this exercise, the consultant team initiated the analysis using the following assumptions:

1. All existing publicly available parking in the downtown will remain in place, both on and off-street.
2. Stall demand generated at this time will not account for future new development.
3. 85 percent occupancy is considered optimum operating efficiency within a parking inventory.

By holding assumption (1) and (2) constant, base level demand (or status quo) for parking was calculated.<sup>9</sup>

### 1. Growth Forecast Scenarios – South Zone Study Area

**Figure 7**, next page, baselines current peak hour demand for the entire South Zone study area. As illustrated, the 2004 supply reaches a peak hour occupancy of 63.8 percent, based on 2004



<sup>8</sup> Percentage growth estimates are arbitrary for purposes of illustrating the impact of different levels of demand growth on the downtown parking supply.

<sup>9</sup> Over the course of the next several years it is likely that changes will occur in the downtown that can and will impact the parking supply and how it is used. This can include increases/decreases to the supply itself; demand created by

parking inventory data. At this point in time 4,738 parking stalls in the downtown are occupied and 2,683 stalls are empty and available. The figure then trends the absorption of occupied parking for the ensuing ten years at either 3 percent (low) or 5 percent (high) growth in demand, tracking occupancy against an 85% optimum occupancy standard.

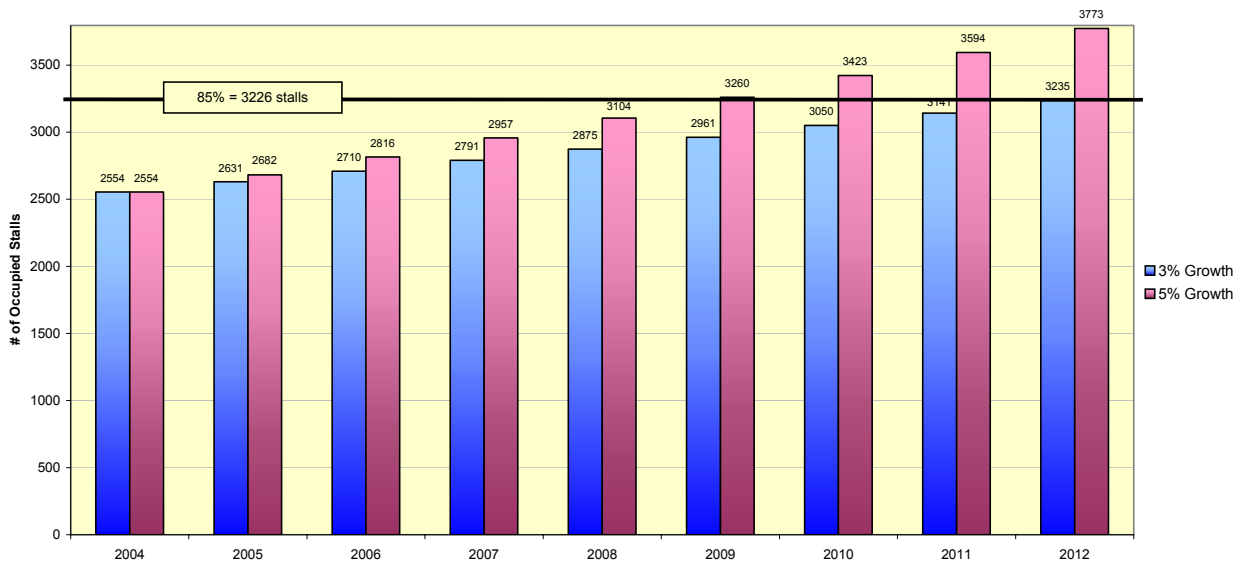
This exercise provides a glimpse of how the entire supply might transition into a constrained situation over time. Using the low growth scenario (3 percent annual absorption), downtown Spokane surpasses the 85 percent threshold in 2014. In contrast, under the high growth scenario (5 percent annual absorption), the downtown surpasses 85 percent occupancy in 2011. If parking demand grows at 3 percent annually, the rate of peak hour stall absorption averages about 163 stalls per year over ten years. At 5 percent, available peak parking stalls are absorbed at an average rate of 268 stalls per year over six years.

In short, when the supply exceeds 85 percent occupancy, the expectation would be that new supply or alternative access options would need to be developed to absorb new demand and maintain an optimum level of overall access.

## 2. Growth Forecast – Core Zone

A similar trend forecast was developed for the Core Zone, using both the 3 and 5 percent growth scenarios. The information displayed in **Figure 8**, below, illustrates possible stall absorption forecasts for the Core Zone.

**Figure 8: Estimated Peak Hour Stall Absorption for Core Zone (3,795 Stalls) @ 3% and 5% Growth Rates**



The zone begins with 2004 peak hour occupancy of 67.3 percent. Currently, 2,554 stalls are occupied during the peak hour, leaving 1,241 stalls available for public use. Under the low growth scenario (3 percent), peak hour stall absorption would occur at an average rate of 85 stalls per year. At this rate of growth in demand, the 85 percent threshold would be exceeded in

new development and/or parking and transportation demand management strategies designed to influence parking activity.

2012. At the high growth rate, peak hour stall absorption would occur at an average rate of 141 per year over a five-year period, exceeding the 85 percent threshold in 2009.

As with the analysis for the entire supply, when the supply in the Core Zone exceeds 85 percent occupancy, the expectation would be that new supply or alternative access options would need to be developed to absorb new demand and maintain an optimum level of overall access.

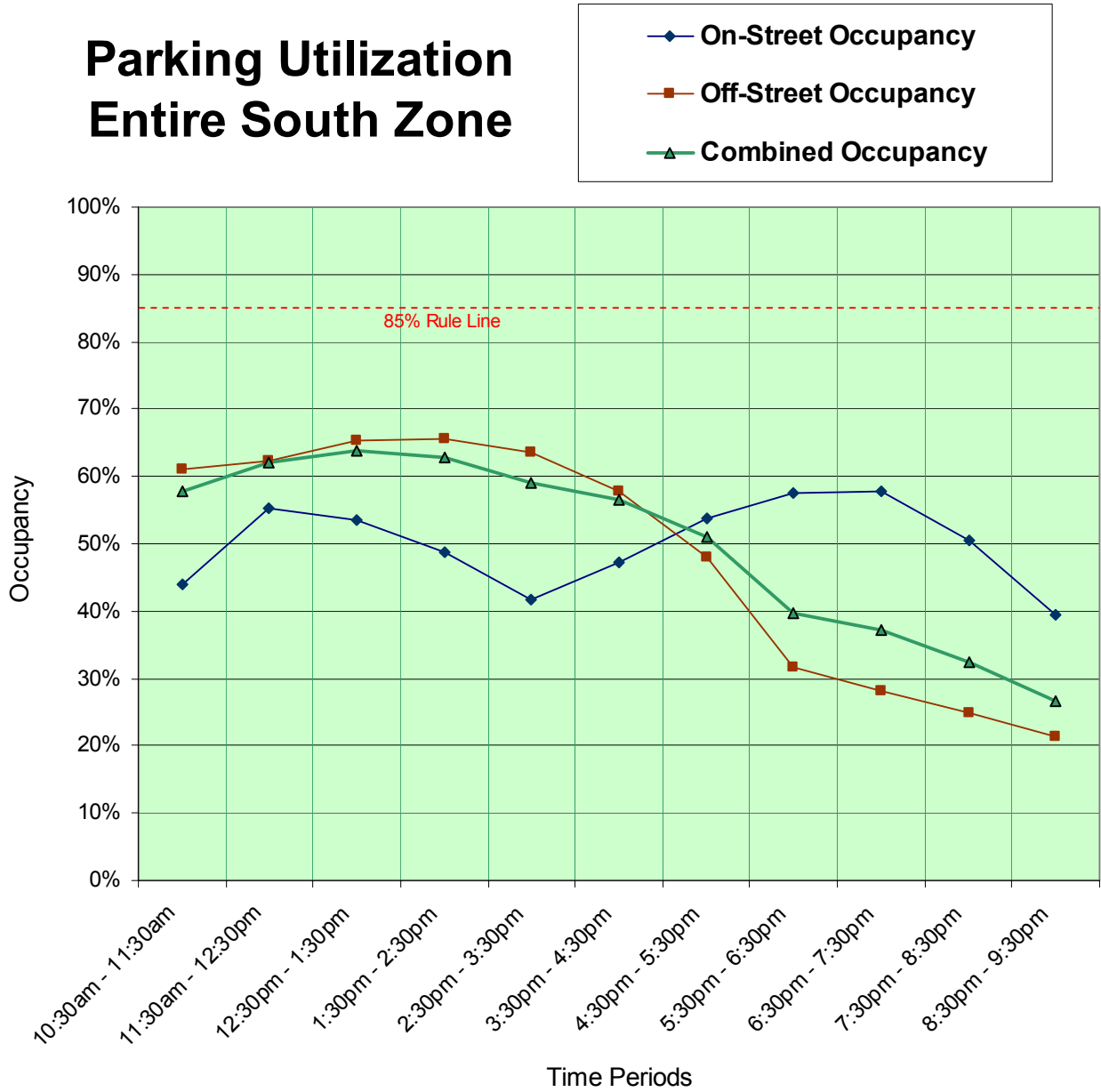
## **G. CONCLUSION**

It is apparent from the data inventories that downtown Spokane's parking supply has room to absorb parking demand. Surplus supply is available throughout the downtown in both the South and North study zones. Nonetheless, it is important to recognize that a large portion of the available parking is currently located on surface parking lots that are likely to develop at some point in the future, which would remove parking supply from existing users. This is particularly relevant in the South study zone.

The data inventory also clearly indicates that basic strategies for managing parking are necessary. More effective utilization of the supply will occur as signage programs, time stay mix refinements and coordination strategies are implemented. A range of recommended strategies to enhance the parking supply and improve parking management have been developed with this plan and are detailed in **Section IV** of this report.

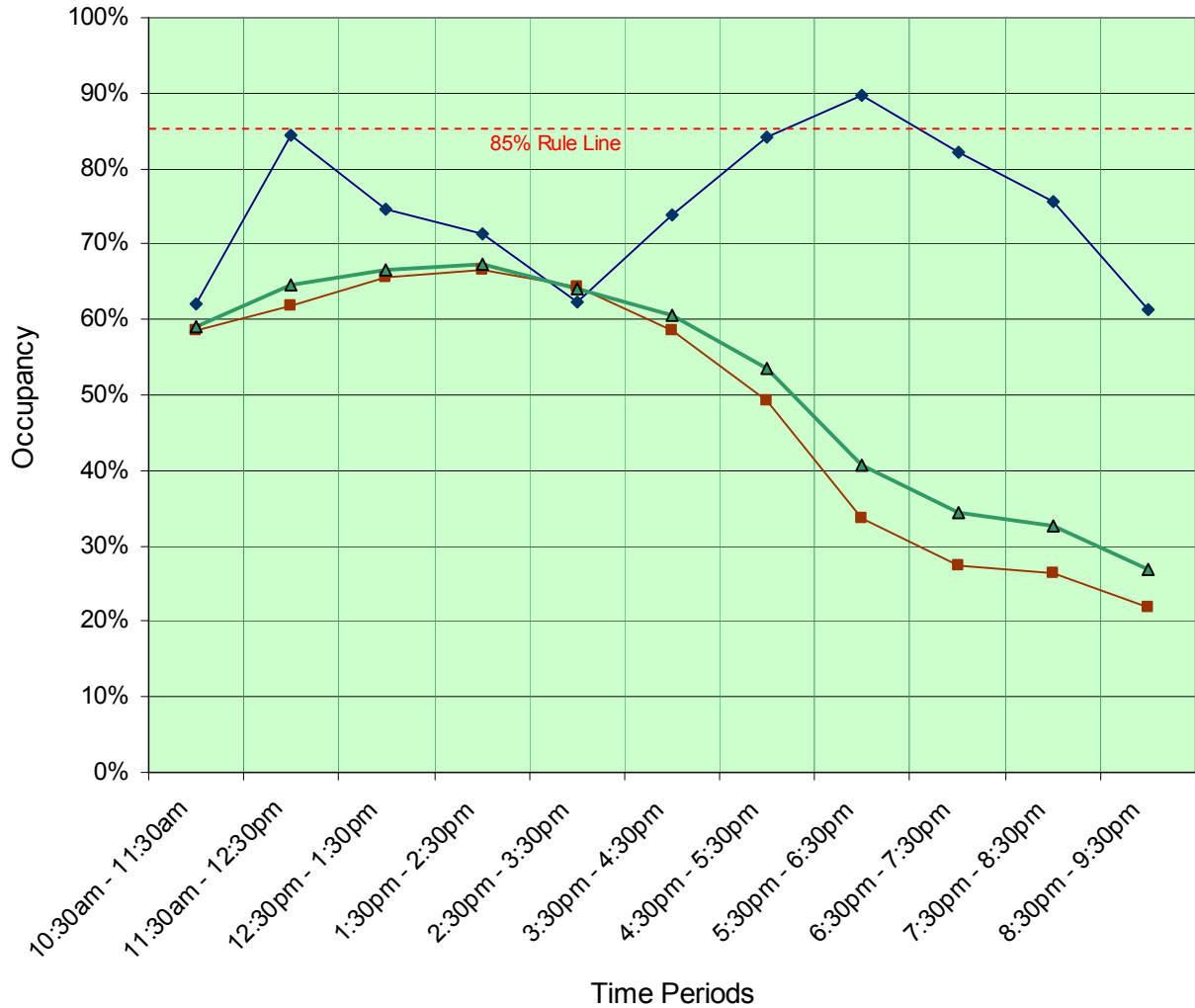
GRAPH A

# Parking Utilization Entire South Zone



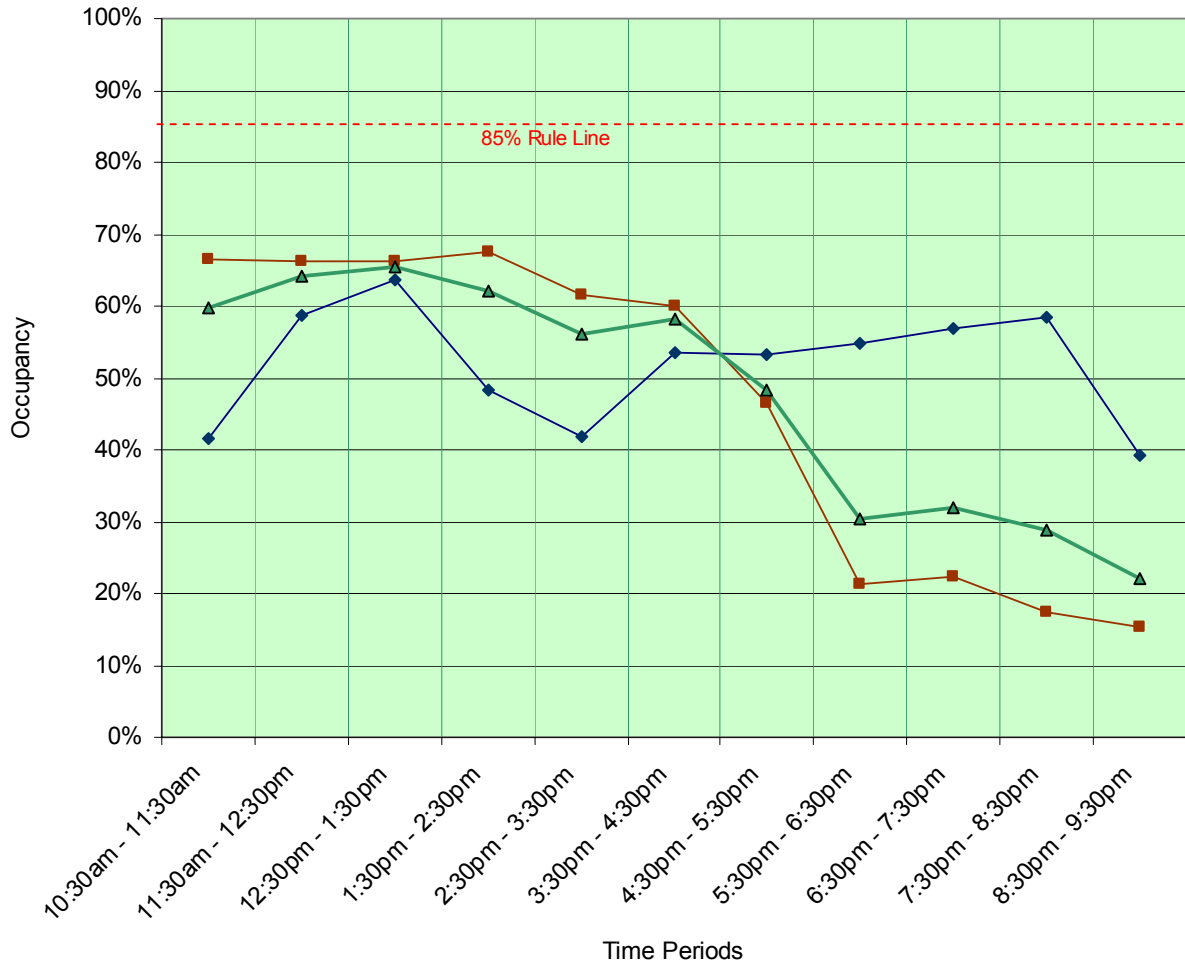
GRAPH B

# Parking Utilization Core Zone



GRAPH C

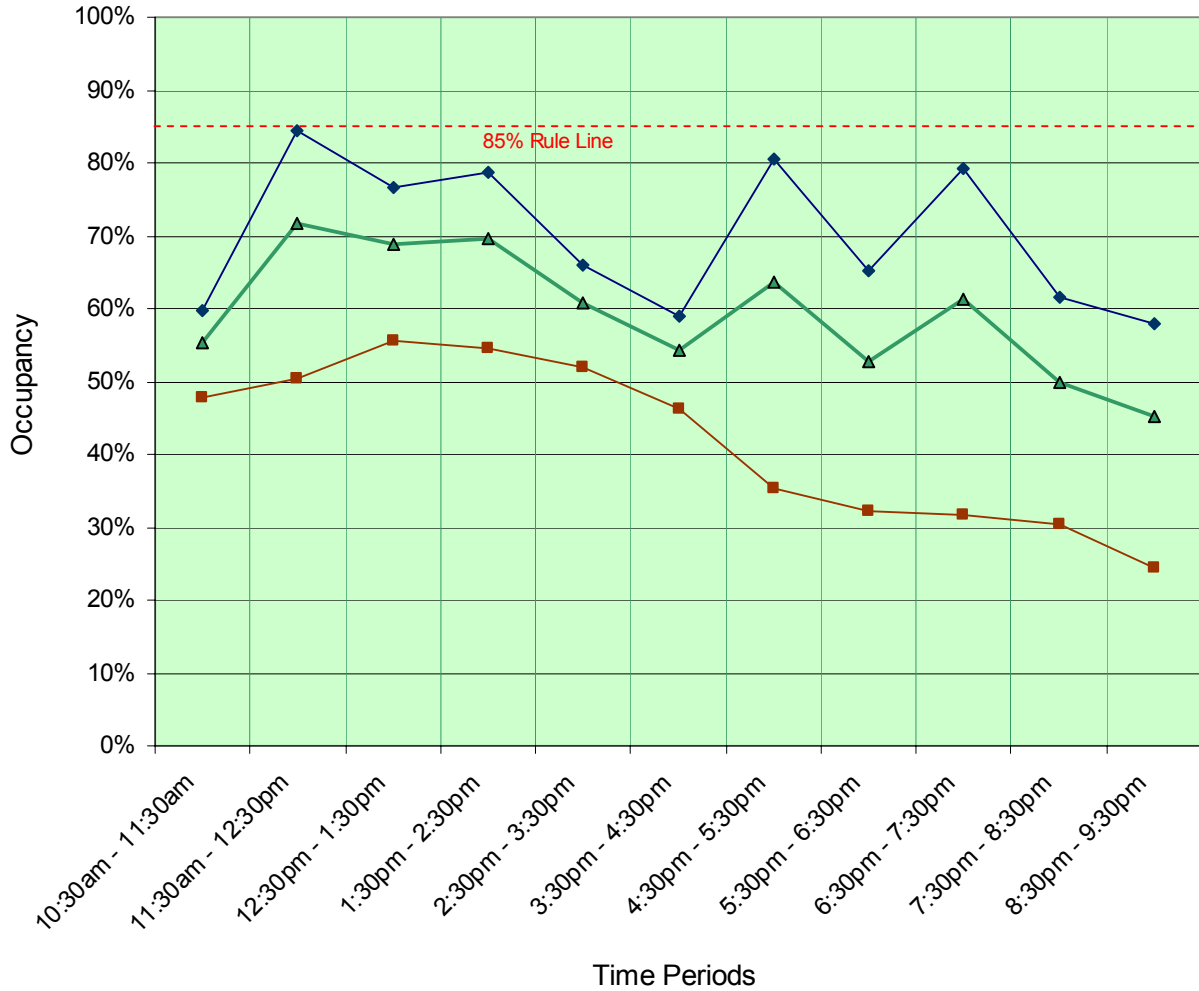
# Parking Utilization Convention Ctr. Zone



GRAPH D

# Parking Utilization West End Zone

- On-Street Occupancy
- Off-Street Occupancy
- Combined Occupancy



# Parking Utilization Periphery Zone

