July 25, 2014

Mr. Mike Mah, PE, PTOE
City of Chandler
975 East Armstrong Way
Chandler, AZ 85225

Re: Downtown Parking Study Update
Carl Walker, Inc. Project #S1-2014-02

Dear Mr. Mah,

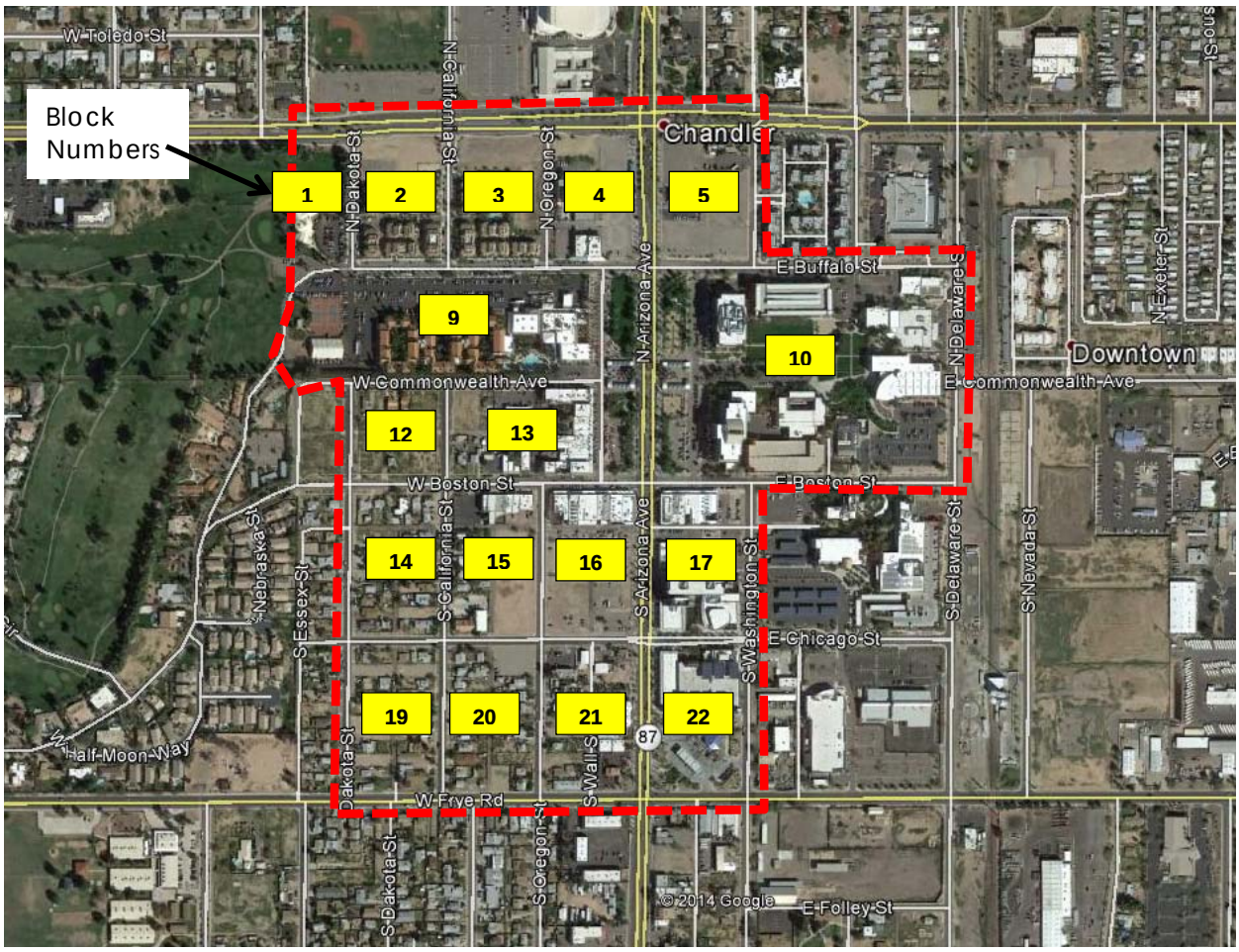
This letter/report presents an update of the Downtown Chandler Parking Study completed in 2008. The field work and data collection for the 2008 report was conducted in November 2007. This letter/report compares the current parking utilization with the data collected in 2007. Because the study areas for the original study and this update are different, the 2007 data shown in this update covers only the blocks included in the 2014 update. However, it is beneficial to have familiarity with the 2008 report before reviewing the information in this update.

The scope of services for the 2008 study was more comprehensive than this 2014 update. The 2008 report included recommendations concerning parking management and operations strategies for the municipal parking system. In addition, the 2008 study included stakeholder input sessions designed to gather public input concerning the community's goals for the parking system. The recommended management and operations strategies were crafted to support those goals. The recommendations from the 2008 report are attached as an appendix. This update focuses on parking supply, parking occupancy levels, turnover and duration, and parking demand.

The new 330 space City Hall Parking Structure was constructed following the 2008 report along with the 130,000 s.f. office space, studio, and adjacent art gallery. The new Fire Department Administration building was also completed following the 2008 parking study. However, the new Fire Department Administration is not included in the 2014 study area. Forty-eight new on-street parking spaces were added along both sides of Arizona Avenue in the core of the downtown area.

The study area for this update is shown in Figure 1, on the next page. The new area is smaller in size than the study area in the 2008 report. However, the block numbers shown in Figure 1 correspond with the block numbers used in the 2008 report. The resulting numbering scheme is not entirely sequential.

Figure 1 – 2014 Update Study Area



EXISTING PARKING UTILIZATION

Parking utilization surveys of the on-street and off-street parking spaces in the study were conducted on three consecutive days as follows:

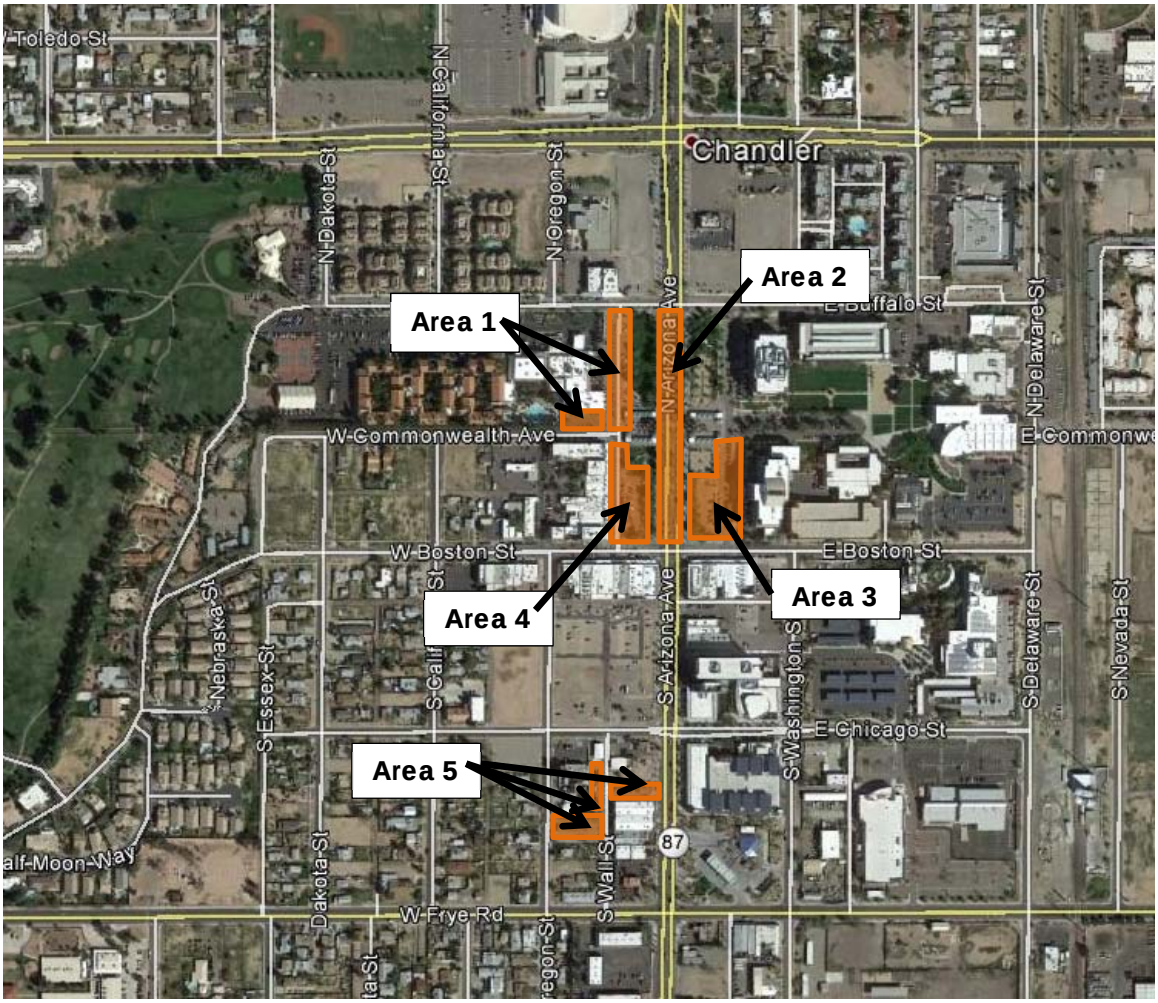
- Thursday June 12, 2014 — 8:00 am through 4:00 pm
- Friday June 13, 2014 — 4:00 pm through 10:00 pm
- Saturday June 14, 2014 — 10:00 am through 10:00 pm

The utilization surveys included: 1) occupancy counts conducted every two hours, and 2) turnover and duration surveys conducted every half-hour for a sampling of spaces.

Turnover and Duration

The five sampled areas included in the turnover and duration surveys are shown in Figure 2.

Figure 2 – Turnover and Duration Survey Areas



The results of the Turnover and Duration surveys from the three days are presented in Table 1. Note that the Saturday results are split into two time periods, daytime and evening. Average turnover is calculated by dividing the total number of different vehicles observed in parking spaces by the number of parking spaces. Turnover represents the number of different vehicles using a parking space. For example, an average turnover rate of 2.0 means that an average space was used by two different vehicles during the survey period. Generally during the three days, Area 4 had the highest observed average turnover with rates of 3.0 to 4.2. As expected the average length of stay was generally shorter in Area 4 ranging from 1.4 hours to 1.9 hours.

The lowest turnover rates were recorded for Area 2 which encompasses the newly created on-street spaces along both sides of Arizona Avenue from Boston Street to Buffalo Street. Logically, Area 2 also had the longest average length of stays ranging from 2.9 hours to 3.9 hours. Area 5, near The Perch restaurant, had average turnover rates ranging from 2.0 to 3.3, and average length of stays ranging from 1.6 hours to 2.2 hours.

Table 1 – Turnover and Duration Survey Results Summary

		Thursday 6/12/14 - 8am to 4pm			Friday 6/13/14 - 4pm to 10pm		
	Surveyed Spaces	Vehicles Observed	Average Turnover	Average Length of Stay (hrs)	Vehicles Observed	Average Turnover	Average Length of Stay (hrs)
Area 1	53	127	2.4	2.0	168	3.2	1.9
Area 2	45	33	0.7	2.9	56	1.2	3.9
Area 3	62	139	2.2	1.9	180	2.9	1.7
Area 4	71	262	3.7	1.4	238	3.4	1.9
Area 5	28	91	3.3	1.8	72	2.6	2.2

		Saturday 6/14/14 - 10am to 4pm			Saturday 6/14/14 - 5:30pm to 10pm		
	Surveyed Spaces	Vehicles Observed	Average Turnover	Average Length of Stay (hrs)	Vehicles Observed	Average Turnover	Average Length of Stay (hrs)
Area 1	53	167	3.2	1.6	128	2.4	2.0
Area 2	45	62	1.4	3.1	40	0.9	3.7
Area 3	62	100	1.6	1.7	60	1.0	2.2
Area 4	71	300	4.2	1.5	214	3.0	1.6
Area 5	28	78	2.8	1.6	56	2.0	2.1

Parking Occupancy

Table 2, on the following page, summarizes the results of the occupancy surveys for the three survey days. Detailed information, including route maps used by the four surveyors, concerning the results are included as appendices. The detailed tabulations show some lots where the occupancy exceeds the capacity; only marked spaces are included in the capacity. Some vehicles were parked in unmarked spaces. In addition, some vehicles were observed parked in on-street no parking zones.

Table 2 also compares the results of the 2014 surveys with the results of the 2007 surveys. It is important to note that the 2014 surveys were conducted in June and the 2007 surveys were conducted during the generally busier time of November.

Thursday June 12, 2014
During the Thursday daytime survey period, the parking spaces, east of Arizona Avenue both on-street and off-street, had an average occupancy of about 41%. The peak occupancy was about 45%. Meanwhile, west of Arizona Avenue the parking spaces were about 26% occupied, with a peak recorded occupancy of 32%. During the 2007 Thursday daytime survey period the pattern was similar with the spaces east of Arizona about 56% occupied while the spaces west of Arizona Avenue were 31% occupied. It is likely that the percentage of occupied spaces east of Arizona Avenue during the 2014 survey are somewhat lower due in part because to the recent addition to the parking supply; the construction of the City Hall parking structure. In 2014 and 2007, the spaces west of Arizona Avenue had about the same general occupancy levels. Overall, the entire study area had occupancy levels about 10% lower in 2014 versus the 2007 surveys.

Friday June 13, 2014
During the Friday evening survey period the spaces west of Arizona Avenue were utilized more than the spaces east of Arizona Avenue. This is the reverse of the Thursday daytime pattern. The flipping of parking activity in the evening was also observed during the 2007 surveys. Overall the utilization of the parking spaces, both east and west of Arizona Avenue, had similar levels of average occupancy in 2007 and 2014. However, the peak occupancy for the entire study area in 2014 was about 10% lower than in 2007 during the Friday evening surveys.

Saturday June 14, 2014
On Saturday June 14, 2014 the parking spaces east of Arizona Avenue were only about 10% occupied. The peak overall occupancy was approximately 12% occupied. West of Arizona Avenue the overall average occupancy was 33% with a peak occupancy of 42%. Considering the entire study area, the average occupancy was 20% with a 23% peak occupancy. During the November 2007 survey the average occupancy of spaces east of Arizona Avenue was 10% higher than the during the June 2014 Saturday survey. West of Arizona Avenue, the 2007 Saturday survey average was 49% occupied versus 33% during the 2014 Saturday survey; about 16% lower.

Table 2 – Parking Occupancy Survey Results Summary

Thursday June 12, 2014	Capacity	8:00 AM	10:00 AM	Noon	2:00 PM	4:00 PM			Average Occupancy	Peak Occupancy	11/8/2007 Average Occupancy	11/8/2007 Peak Occupancy
EAST OF ARIZONA AVENUE												
Off-Street Parking	1,977	594	896	847	891	749						
		30%	45%	43%	45%	38%						
On-Street Parking	126	34	57	80	56	55						
		27%	45%	63%	44%	44%						
Subtotal	**2,103**	**628**	**953**	**927**	**947**	**804**			**41%**	**45%**	**56%**	**62%**
	% Occupied	30%	45%	44%	45%	38%						
WEST OF ARIZONA AVENUE												
Off-Street Parking	1,092	171	195	255	230	207						
		16%	18%	23%	21%	19%						
On-Street Parking	665	171	204	304	267	242						
		26%	31%	46%	40%	36%						
Subtotal	**1,757**	**342**	**399**	**559**	**497**	**449**			**26%**	**32%**	**31%**	**36%**
	% Occupied	19%	23%	32%	28%	26%						
DAILY TOTALS	**3,860**	**970**	**1,352**	**1,486**	**1,444**	**1,253**			**34%**	**38%**	**44%**	**50%**
	% Occupied	25%	35%	38%	37%	32%						

Friday June 13, 2014	Capacity					4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy	11/9/2007 Average Occupancy	11/9/2007 Peak Occupancy
EAST OF ARIZONA AVENUE													
Off-Street Parking	1,977					647	178	140	98				
						33%	9%	7%	5%				
On-Street Parking	126					54	73	74	66				
						43%	58%	59%	52%				
Subtotal	**2,103**					**701**	**251**	**214**	**164**	**16%**	**33%**	**20%**	**36%**
	% Occupied					33%	12%	10%	8%				
WEST OF ARIZONA AVENUE													
Off-Street Parking	1,092					204	388	435	377				
						19%	36%	40%	35%				
On-Street Parking	665					294	401	434	398				
						44%	60%	65%	60%				
Subtotal	**1,757**					**498**	**789**	**869**	**775**	**42%**	**49%**	**46%**	**48%**
	% Occupied					28%	45%	49%	44%				
DAILY TOTALS	**3,860**					**1,199**	**1,040**	**1,083**	**939**	**28%**	**31%**	**32%**	**41%**
	% Occupied					31%	27%	28%	24%				

Saturday June 14, 2014	Capacity		10:00 AM	Noon	2:00 PM	4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy	11/10/2007 Average Occupancy	11/10/2007 Peak Occupancy
EAST OF ARIZONA AVENUE													
Off-Street Parking	1,977		174	199	204	141	128	172	156				
			9%	10%	10%	7%	6%	9%	8%				
On-Street Parking	126		42	49	38	32	31	46	35				
			33%	39%	30%	25%	25%	37%	28%				
Subtotal	**2,103**		**216**	**248**	**242**	**173**	**159**	**218**	**191**	**10%**	**12%**	**20%**	**27%**
	% Occupied		10%	12%	12%	8%	8%	10%	9%				
WEST OF ARIZONA AVENUE													
Off-Street Parking	1,092		161	214	184	243	377	343	243				
			15%	20%	17%	22%	35%	31%	22%				
On-Street Parking	665		351	360	304	294	365	294	272				
			53%	54%	46%	44%	55%	44%	41%				
Subtotal	**1,757**		**512**	**574**	**488**	**537**	**742**	**637**	**515**	**33%**	**42%**	**49%**	**55%**
	% Occupied		29%	33%	28%	31%	42%	36%	29%				
DAILY TOTALS	**3,860**		**728**	**822**	**730**	**710**	**901**	**855**	**706**	**20%**	**23%**	**33%**	**36%**
	% Occupied		19%	21%	19%	18%	23%	22%	18%				

PARKING ADEQUACY

In determining the current parking adequacy for the study area, it is important to first define two terms typically used in analyzing parking adequacy: *Effective Supply* and *Design Day Conditions*. When a parking area's occupancy reaches 85-90% of the total capacity (depending on the user group) the area becomes effectively full. When parking system occupancy exceeds effective capacity, users become frustrated as it becomes increasingly difficult to find an available parking space. Users will begin to either park illegally in the facility or leave altogether to search for parking elsewhere. When visitors are faced with significant parking difficulties, they may choose to avoid the downtown. The effective fill percentage for parking in the downtown study area is 90%. This 10% "cushion" of spaces is used to accommodate spaces lost temporarily due to construction, improper or illegal parking, and provides for shorter searches for available parking. In order to build in the 10% operating cushion of spaces for Downtown Chandler, the *Effective Supply is defined to be 90% of actual supply*.

Design day parking conditions attempt to represent typical peak activity that may be exceeded only occasionally during the year. The 2014 occupancy surveys were conducted in June and the 2007 were conducted in November. To adjust for seasonality, the monthly adjustments factors for a community shopping center from Shared Parking by the Urban Land Institute were used to adjust the June data upward by five percent.

Parking Adequacy is defined as the ability of the parking supply to accommodate the parking demand. It is calculated by subtracting the demand from the "effective" supply of spaces. Table 3 compares the calculated parking adequacy using the 2014 occupancy data and the 2007 data for the entire 2014 study area. The 2007 data includes only the blocks for the new study area; the data and calculation will not match the adequacy presented in the 2007 report. The unadjusted adequacy of the parking supply in the study area to accommodate the 2014 observed peak occupancy is calculated to be a surplus of about 1,988 parking spaces. Using the 2007 data the calculated adequacy for the same study area is a surplus of 1,348 parking spaces.

Table 3 also presents a similar adequacy calculation for 2014 with the peak occupancy adjusted upward five percent to account for seasonality. The 2014 adequacy calculation using the adjusted peak occupancy reduces the surplus to about 1,914 parking spaces.

Table 3 – Existing Overall Parking Adequacy

Overall Parking Adequacy - No Design Day Adjustment

		2014	2007
Actual Parking Supply		3,860	3,329
Effective Supply @	90%	3,474	2,996
Observed Peak Occupancy	(1)	1,486	1,648
Adequacy		1,988	1,348

(1) Overall peak occurred at noon during Thursdays in both 2007 and 2014

Overall Parking Adequacy - 2014 Design Day Adjustment

		2014	2007
Actual Parking Supply		3,860	3,329
Effective Supply @	90%	3,474	2,996
Adjusted Peak Occupancy (2)	5%	1,560	1,648
Adequacy		1,914	1,348

(2) Adjustment using ULI Shared Parking adjustment November vs. June for Community Shopping Center

Table 4 shows the calculation of parking adequacy with the adjusted occupancy by block for the areas east and west of Arizona Avenue. Adequacy is again calculated by subtracting the peak demand, or occupancy, from the "effective" supply. The calculations in Table 3 use the recorded occupancies for each block during the overall peak period of noon on June 12, 2014. The recorded occupancies for each block are also adjusted upwards to account for seasonality.

The blocks east of Arizona Avenue have a calculated adequacy of over 900 parking spaces.

Many of the larger parking structures in the area were only lightly used during the survey period. A large surplus of 663 is calculated for Block 10. In addition, a surplus of about 174 spaces is calculated for Block 22 which contains the City Hall Parking Structure.

Two of the areas surveyed for Turnover and Duration, Areas 1 and 4, had slight deficits of spaces during the peak noontime period. However, the overall area west of Arizona Avenue has a calculated surplus of nearly 1,000 parking spaces.

Table 4 – Existing Parking Adequacy by Block

Block	Total Actual Supply	90% Effective Supply	Noon 6/12/2014 5% Adjusted Occupancy	Adjusted Adequacy
East of Arizona Avenue				
5	53	48	17	31
10	1,481	1,333	670	663
17	133	120	82	38
22	374	337	163	174
Area 3	62	56	42	14
Subtotal	**2,103**	**1,893**	**973**	**919**
West of Arizona Avenue				
1	45	41	12	29
2	37	33	26	7
3	34	31	21	10
4	91	82	43	39
9	456	410	72	338
12	30	27	0	27
13	132	119	43	76
14	37	33	7	26
15	135	122	42	80
16	391	352	106	246
19	53	48	0	48
20	31	28	3	25
21	88	79	46	33
Area 1	53	48	51	-4
Area 2	45	41	21	20
Area 4	71	64	71	-8
Area 5	28	25	21	4
Subtotal	**1,757**	**1,581**	**587**	**994**

PARKING ALTERNATIVES ANALYSIS

Parking Management

The 2008 report presented suggestions to manage the downtown parking system. The recommendations and action plan summary from the 2008 report is included as an appendix. Many of those suggestions and recommendations still remain valid. One of the defining characterizations of the Chandler downtown parking system is the differing demand periods on either side of Arizona Avenue. During the weekday daytime hours the parking demand generated east of Arizona Avenue is generally greater than the demand generated west of Arizona Avenue. It appears that Arizona Avenue forms a psychological boundary that people are reluctant to cross. In the evening, there are a significant number of empty spaces east of Arizona Avenue. However, parkers headed for the restaurants/bars are not using the available spaces on the Eastside. The parking dynamic between parking for offices and parking for evening restaurants/bars is an almost classic example of shared parking. As office workers and visitors depart for the day, customers of the restaurants/bars can utilize the vacated spaces. If sharing in this way is encouraged, the total number of parking spaces required can be reduced. In addition, the 2007 report recommended that the City should consider allowing developers to reduce the number of required spaces needed for a development based upon a sound professionally prepared shared parking analysis.

Walking Distances

The acceptable walking distance from a parking location to the destination has a large number of variables such as: indoors vs outdoors, covered vs uncovered, weather conditions, type of destination, security perception, quality of pedestrian route, expected length of stay, cost of parking, etc. Generally, the acceptable walking distance outdoors and uncovered is about 800 feet to 1,000 feet. Figure 3 presents the generally acceptable walking distance from the three parking structures in the study area. Each of the circles represents an 800 foot radius centered on each of the parking structures. All of the destinations in the study area east of Arizona Avenue lie within 800 feet of a parking structure. Even if the privately-owned First Credit Union parking structure (Orange Circle) is not considered, all destinations east of Arizona Avenue are within 800 feet of a parking structure. Destinations west of Arizona Avenue located within 800 feet of one of the parking structures include: the main lobby of the San Marcos Hotel, most of the San Marcos Plaza businesses, and development Site 6 (Block 16).

Figure 3 - Generally Acceptable Walking Distances

Pedestrian Amenities

Improving the pedestrian path helps extend the acceptable walking distance from a parking location. The 2008 report recommended improvements to the pedestrian amenities for crossing Arizona Avenue. The improved crosswalk timings and the flashing light crosswalks that have been installed are excellent features to enhance safety and encourage pedestrian movement.

Way Finding

The 2008 study recommended way finding signage directing drivers towards parking facilities. In addition, the City should consider installing way finding signs with dynamic message modules along Arizona Avenue directing drivers to the parking structures east of Arizona Avenue. The dynamic message modules would be connected to an occupancy counting system that tracks the number of vehicles in the structures. The dynamic message modules would then display the number of available spaces in the parking structure(s) to drivers and help advertise the parking facility.

Shared Parking

The 2008 report included a recommendation that the City work with land owners to allow public parking in their underutilized parking spaces. The recommendations included a series of techniques and incentives to better utilize the shared parking resources. Those efforts should be continued.

Future Parking Facilities

The results of the 2014 parking utilization surveys indicate a significant surplus of parking spaces. Additional parking spaces are not necessary to accommodate the current demand. Some of the available parking spaces may not be available to all user groups during the peak demand periods. However, empty spaces are generally available within a reasonable walking distance. Based upon information provided by the City of Chandler for this update Sites 1, 2, and 3 are being developed in phases as a residential neighborhood. Sites 4 and 5 (Block 12) will be developed as a residential development with 154 new units. However, the development plans include 246 additional on-site parking spaces and 20 new on-street spaces. The 266 new spaces represent 1.7 spaces per unit which should satisfy all of the parking demand generated by residents and visitors to the residences.

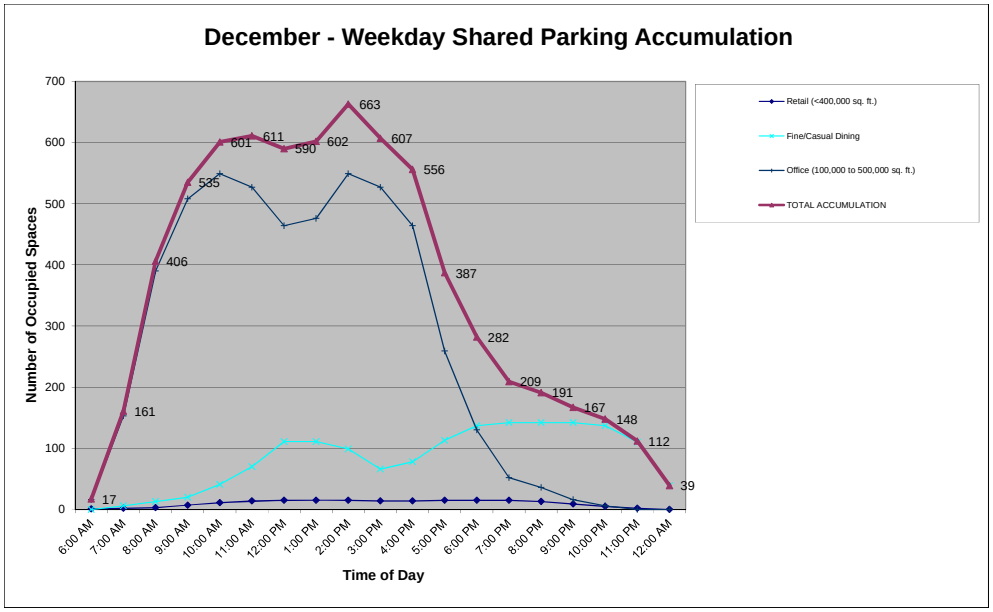
Figure 4, on the following page, shows the development plan for Site 6 which occupies Block 16 and part of Block 15. The mixed use development includes two office buildings with restaurant / retail space, a freestanding restaurant building, and an 800 space parking structure on Block 15.

Figure 4 – Site 6 Development Plan

The parking demand generated by the proposed development is estimated using the Urban Land Institute's Shared Parking methodology. Because the development plans listed above present ranges for the office buildings the shared parking analysis uses the following assumed land uses: 166,000 s.f. of office space, 9,390 s.f. of restaurant space, and 4,000 s.f. of retail space.

Figure 5 graphically displays the annual peak shared parking accumulation for the proposed Site 6 development. It does not include any of the vehicles currently parked at the site.

Figure 5 – Shared Parking Peak Accumulation



The shared parking model estimates an annual peak accumulation for the development at about 663 vehicles occurring on a December weekday at 2:00 pm. The office space component dominates the development so logically the total parking demand pattern mimics the office space pattern. In the evening as the office workers depart for the day the overall accumulation drops to 286 vehicles by 6:00 pm, and about 200 vehicles by 8:00 pm. The observed occupancy of the surface lots and on-street spaces in Block 16 and part of Block 15 at 2:00 pm on 6/12/14 was 77 spaces.

The peak observed occupancy in the evening of the off-street lots and the on-street spaces in Block 16 and part of Block 15 during the 6/13/14 survey was 237 vehicles.

Table 5 compares the estimated combined demand for the Site 6 development with the proposed Site 6 parking structure. Parking adequacy is again calculated by subtracting the demand from the effective supply (90% of actual supply). The shared weekday parking demand estimate combined with the seasonally adjusted occupancy levels results in a peak daytime demand of 744 spaces. The total demand subtracted from the effective supply results in a slight deficit of 24 spaces. However, if the actual capacity of the structure is used in the calculation there is a surplus of almost 60 spaces. At the peak time the demand level would be infringing on the operating cushion of spaces. There would be spaces available; probably the most inconvenient spaces in the structure. The demand estimates used in the adequacy calculations assume full development occupancy and the assumed land use quantities described above. The Site 6 adequacy calculations do not include the small surface lot (#3) shown on the development plan.

The estimated shared demand generated by the development in the evening drops considerably to about 200 spaces. The seasonally adjusted existing demand is estimated at 249 spaces; resulting in a total adjusted demand of 449 spaces. The evening adequacy of the proposed structure is calculated at a surplus of about 270 spaces.

Table 5 – Site 6 Development - Parking Adequacy

Proposed Structure Capacity	Effective Supply 90%	Site 6 Weekday Demand	Weekday Observed Occupancy	Weekday Adjusted Occupancy 5%	Total Weekday Adjusted Demand	Weekday Adequacy
800	720	663	77	81	744	-24

Proposed Structure Capacity	Effective Supply 90%	Site 6 Evening Demand	Evening Observed Occupancy	Evening Adjusted Occupancy 5%	Total Evening Adjusted Demand	Evening Adequacy
800	720	200	237	249	449	271

SUMMARY

A significant surplus of parking spaces currently exists in Downtown Chandler although the empty spaces may not be the most convenient spaces during peak periods. However, during peak periods there are available spaces within a reasonable walking distance.

When the proposed Site 6 development is fully occupied the 800 space parking structure associated with the development should accommodate the future demand on all but the busiest days of the year. It may be difficult to locate the last few available spaces at those times but empty spaces should exist. In addition, the City of Chandler should continue to upgrade and improve the pedestrian paths throughout the downtown area to help increase the acceptable walking distance from all parking locations.

The decision to construct new parking structures in downtown Chandler should consider the initial development costs as well as the on-going operating and maintenance costs. The current estimated construction costs for an above ground parking structure in the Phoenix area is $48 per square foot or $16,000 per space. Additional costs would be incurred for design and legal fees, site surveys, geotechnical investigations, debt service costs, etc. Operating and maintenance costs will of course depending on the operating methodology.

Very truly yours,
Carl Walker, Inc.

William L. Surna
Senior Project Manager

APPENDICES

APPENDIX 1

Off-Street Parking Occupancy Survey Results - EAST OF ARIZONA AVENUE

Block	Facility	Capacity	Surveyed 6/12/14 8:00 AM	10:00 AM	Noon	2:00 PM	4:00 PM	Average Occupancy	Peak Occupancy
5	A	18	3	7	3	6	2	23%	39%
5	B	24	1	4	11	4	4	20%	46%
10	A	44	23	29	27	27	19	57%	66%
10	B	2	0	0	0	0	0	0%	0%
10	C	603	216	275	243	279	223	41%	46%
10	D	64	32	37	31	29	23	48%	58%
10	E	1	0	1	1	0	0	40%	100%
10	F	7	0	5	5	6	4	57%	86%
10	G	155	25	130	118	131	89	64%	85%
10	H	555	130	220	202	193	165	33%	40%
10	I	6	0	0	3	1	2	20%	50%
10	K	44	6	12	5	5	9	17%	27%
17	A	25	6	7	19	11	7	40%	76%
17	B	79	12	17	36	33	32	33%	46%
22	A	350	140	152	143	166	170	44%	49%
TOTALS		**1,977**	**594**	**896**	**847**	**891**	**749**	**40%**	**45%**
% Occupied			**30%**	**45%**	**43%**	**45%**	**38%**		

Off-Street Parking Occupancy Survey Results - WEST OF ARIZONA AVENUE

Block	Facility	Capacity	Surveyed 6/12/14 8:00 AM	10:00 AM	Noon	2:00 PM	4:00 PM	Average Occupancy	Peak Occupancy
1	A	36	9	7	5	0	0	12%	25%
4	A	23	4	10	16	12	10	45%	70%
4	B	16	10	8	9	9	8	55%	63%
4	C	36	3	2	9	8	7	16%	25%
9	A	33	0	0	0	0	0	0%	0%
9	B	346	73	55	52	53	51	16%	21%
13	A	21	0	0	0	1	0	1%	5%
13	B	31	4	4	4	12	11	23%	39%
13	C	33	8	16	14	18	18	45%	55%
15	A	22	17	17	16	18	2	64%	82%
15	B	20	2	2	6	4	5	19%	30%
15	C	17	0	1	0	0	0	1%	6%
15	D	24	2	3	2	2	3	10%	13%
16	A	177	15	25	71	48	45	23%	40%
16	B	180	5	6	13	11	12	5%	7%
19	A	20	1	7	0	0	0	8%	35%
21	A	16	0	2	9	6	8	31%	56%
21	B	7	0	1	1	0	0	6%	14%
21	D	22	15	26	22	23	23	99%	118%
21	G	12	3	3	6	5	4	35%	50%
TOTALS		**1,092**	**171**	**195**	**255**	**230**	**207**	**19%**	**23%**
% Occupied			**16%**	**18%**	**23%**	**21%**	**19%**		

Shaded areas indicate occupancies 90% or greater.

Note: Occupancies of over 100% when vehicles are parked outside of marked spaces.

APPENDIX 3

Off-Street Parking Occupancy Survey Results - EAST OF ARIZONA AVENUE

Block	Facility	Capacity	Surveyed 6/14/14 10:00 AM	Noon	2:00 PM	4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy
5	A	18	4	4	4	2	1	0	3	14%	22%
5	B	24	1	7	17	6	15	16	14	45%	71%
10	A	44	8	9	6	3	4	3	4	12%	20%
10	B	2	0	0	0	0	0	0	0	0%	0%
10	C	603	21	19	16	17	14	6	6	2%	3%
10	D	64	6	6	7	5	4	4	5	8%	11%
10	E	1	0	0	0	0	0	0	0	0%	0%
10	F	7	1	1	1	1	1	1	1	14%	14%
10	G	155	36	53	58	44	9	4	2	19%	37%
10	H	555	15	13	18	17	12	6	9	2%	3%
10	I	6	0	0	1	0	0	0	0	2%	17%
10	K	44	8	6	1	1	0	16	15	15%	36%
17	A	25	16	18	16	7	11	19	19	61%	76%
17	B	79	18	25	34	18	43	83	64	52%	105%
22	A	350	40	38	25	20	14	14	14	7%	11%
TOTALS		**1,977**	**174**	**199**	**204**	**141**	**128**	**172**	**156**	**8%**	**10%**
% Occupied			**9%**	**10%**	**10%**	**7%**	**6%**	**9%**	**8%**		

Off-Street Parking Occupancy Survey Results - WEST OF ARIZONA AVENUE

Block	Facility	Capacity	Surveyed 6/14/14 10:00 AM	Noon	2:00 PM	4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy
1	A	36	3	0	0	0	0	0	0	1%	8%
4	A	23	0	3	3	3	8	19	8	27%	83%
4	B	16	6	6	5	5	4	4	4	30%	38%
4	C	36	9	22	9	10	8	17	17	37%	61%
9	A	33	1	0	0	0	0	0	0	0%	3%
9	B	346	85	75	70	66	85	77	83	22%	25%
13	A	21	0	0	0	0	5	7	6	12%	33%
13	B	31	6	22	17	18	34	33	25	71%	110%
13	C	33	18	23	20	22	27	20	15	63%	82%
15	A	22	0	0	3	3	2	0	0	5%	14%
15	B	20	3	3	5	6	3	0	0	14%	30%
15	C	17	0	0	5	4	3	1	1	12%	29%
15	D	24	2	2	0	0	0	0	0	2%	8%
16	A	177	9	44	35	90	133	106	55	38%	75%
16	B	180	5	5	5	8	55	48	18	11%	31%
19	A	20	2	1	0	0	1	0	0	3%	10%
21	A	16	3	1	0	0	0	0	0	4%	19%
21	B	7	0	1	1	1	3	3	2	22%	43%
21	D	22	6	4	4	3	3	6	6	21%	27%
21	G	12	3	2	2	4	3	2	3	23%	33%
TOTALS		**1,092**	**161**	**214**	**184**	**243**	**377**	**343**	**243**	**23%**	**35%**
% Occupied			**15%**	**20%**	**17%**	**22%**	**35%**	**31%**	**22%**		

Shaded areas indicate occupancies 90% or greater.

APPENDIX 4

On-Street Parking Occupancy Survey Results - EAST OF ARIZONA AVENUE

			Surveyed 6/12/14					Average	Peak
Block	Face	Capacity	8:00 AM	10:00 AM	Noon	2:00 PM	4:00 PM	Occupancy	Occupancy
5	North	0	0	0	0	0	0		
5	South	0	0	0	0	0	0		
5	East	11	0	1	2	2	4	16%	36%
5	West	0	0	0	0	0	0		
10	North	0	0	1	1	0	0		
10	South	0	0	0	2	1	1		
10	East	0	0	0	0	0	0		
17	North	10	5	3	9	6	4	54%	90%
17	South	8	1	2	3	2	1	23%	38%
17	East	11	4	8	8	7	5	58%	73%
17	West	0	0	2	3	2	2		
22	North	5	2	2	2	2	1	36%	40%
22	South	0	0	0	0	0	0		
22	East	11	4	8	8	3	4	49%	73%
22	West	8	3	2	2	4	4	38%	50%
Area 3		62	15	28	40	27	29	45%	65%
	TOTALS	**126**	**34**	**57**	**80**	**56**	**55**	**45%**	**63%**
	% Occupied		**27%**	**45%**	**63%**	**44%**	**44%**		

On-Street Parking Occupancy Survey Results - WEST OF ARIZONA AVENUE

			Surveyed 6/12/14					Average	Peak
Block	Face	Capacity	8:00 AM	10:00 AM	Noon	2:00 PM	4:00 PM	Occupancy	Occupancy
1	East	9	4	5	5	4	4	49%	56%
1	North	0	1	1	1	0	0		
2	North	0	0	0	0	0	0		
2	South	20	18	17	17	18	13	83%	90%
2	East	9	4	4	4	3	3	40%	44%
2	West	8	4	4	4	4	4	50%	50%
3	North	0	0	0	0	0	0		
3	South	18	18	17	17	18	13	92%	100%
3	East	8	2	0	0	0	0	5%	25%
3	West	8	4	4	3	3	3	43%	50%
4	North	0	0	0	0	0	0		
4	South	5	4	5	5	4	4	88%	100%
4	East	0	0	0	0	0	0		
4	West	11	0	0	2	0	0	4%	18%
9	North	41	18	17	17	18	13	40%	44%
9	South	36	0	0	0	3	2	3%	8%
9	West	0	0	0	0	0	0		
12	North	7	0	0	0	0	0	0%	0%
12	South	9	0	0	0	0	0	0%	0%
12	East	7	0	0	0	0	0	0%	0%
12	West	7	0	0	0	0	0	0%	0%
13	North	12	0	0	0	0	0	0%	0%
13	South	29	19	28	23	25	23	81%	97%
13	West	6	0	0	0	0	0	0%	0%
14	North	8	1	0	1	5	1	20%	63%
14	South	8	1	0	0	0	1	5%	13%
14	East	11	2	2	2	2	3	20%	27%
14	West	10	4	5	4	4	4	42%	50%
15	North	18	3	5	12	5	7	36%	67%
15	South	8	0	0	0	0	0	0%	0%
15	East	14	1	0	3	2	2	11%	21%
15	West	12	1	1	1	2	1	10%	17%
16	North	12	5	7	12	12	1	62%	100%
16	South	8	0	0	0	0	0	0%	0%
16	East	0	1	1	1	1	1		
16	West	14	3	2	4	3	1	19%	29%
19	North	8	0	0	0	0	2	5%	25%
19	South	0	0	0	0	0	0		
19	East	12	0	0	0	0	1	2%	8%
19	West	13	0	0	0	0	1	2%	8%
20	North	8	0	0	0	0	0	0%	0%
20	South	0	0	0	0	0	0		
20	East	12	2	1	1	0	2	10%	17%
20	West	11	0	2	2	2	2	15%	18%
21	North	6	0	0	0	0	2	7%	33%
21	South	6	0	0	0	0	0	0%	0%
21	East	4	2	3	2	3	3	65%	75%
21	West	15	0	1	4	3	4	16%	27%
Area 1		53	18	22	49	33	30	57%	92%
Area 2		45	3	5	20	15	17	44%	0%
Area 4		71	19	23	68	58	54	63%	96%
Area 5		28	9	22	20	17	20	63%	79%
	TOTALS	**665**	**171**	**204**	**304**	**267**	**242**	**36%**	**46%**
	% Occupied		**26%**	**31%**	**46%**	**40%**	**36%**		

Shaded areas indicate occupancies 90% or greater.

APPENDIX 5

On-Street Parking Occupancy Survey Results - EAST OF ARIZONA AVENUE

Block	Face	Capacity	Surveyed 6/13/14 4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy
5	North	0	0	0	0	0		
5	South	0	0	0	0	0		
5	East	11	1	1	1	1	9%	9%
5	West	0	0	0	0	0		
10	North	0	0	0	0	0		
10	South	0	1	1	1	1		
10	East	0	0	0	0	1		
17	North	10	8	8	9	9	85%	90%
17	South	8	1	1	0	0	6%	13%
17	East	11	3	3	4	0	23%	36%
17	West	0	6	6	5	4		
22	North	5	1	1	0	0	10%	20%
22	South	0	0	0	0	0		
22	East	11	0	0	2	2	9%	18%
22	West	8	0	0	5	2	22%	63%
Area 3		62	33	52	47	46	72%	84%
	TOTALS	**126**	**54**	**73**	**74**	**66**	**53%**	**59%**
	% Occupied		**43%**	**58%**	**59%**	**52%**		

On-Street Parking Occupancy Survey Results - WEST OF ARIZONA AVENUE

Block	Face	Capacity	Surveyed 6/13/14 4:00 PM	6:00 PM	8:00 PM	10:00 PM	Average Occupancy	Peak Occupancy
1	East	9	0	0	0	0	0%	0%
1	North	0	3	3	4	5		
2	North	0	0	0	0	0		
2	South	20	12	20	20	18	88%	100%
2	East	9	7	9	9	9	94%	100%
2	West	8	3	2	4	3	38%	50%
3	North	0	0	0	0	0		
3	South	18	12	20	13	10	76%	111%
3	East	8	0	0	0	0	0%	0%
3	West	8	7	9	10	0	81%	125%
4	North	0	0	0	0	0		
4	South	5	3	5	5	2	75%	100%
4	East	0	0	0	0	0		
4	West	11	0	0	0	0	0%	0%
9	North	41	12	20	33	30	58%	80%
9	South	36	0	25	27	28	56%	78%
9	West	0	0	0	0	0	0%	0%
12	North	7	0	0	0	0	0%	0%
12	South	9	0	0	0	0	0%	0%
12	East	7	0	0	0	0	0%	0%
12	West	7	0	0	0	0	0%	0%
13	North	12	0	16	16	15	98%	133%
13	South	29	29	29	28	29	99%	100%
13	West	6	0	0	15	15	125%	250%
14	North	8	1	1	0	0	6%	13%
14	South	8	0	1	1	1	9%	13%
14	East	11	3	1	6	8	41%	73%
14	West	10	5	5	4	3	43%	50%
15	North	18	10	12	13	12	65%	72%
15	South	8	0	0	1	0	3%	13%
15	East	14	3	7	8	5	41%	57%
15	West	12	2	1	1	1	10%	17%
16	North	12	15	11	11	13	104%	125%
16	South	8	0	0	0	0	0%	0%
16	East	0	0	1	0	0		
16	West	14	3	11	12	8	61%	86%
19	North	8	1	1	1	1	13%	13%
19	South	0	0	0	0	0		
19	East	12	0	1	1	1	6%	8%
19	West	13	0	0	0	0	0%	0%
20	North	8	0	0	0	0	0%	0%
20	South	0	0	0	0	0		
20	East	12	0	0	0	0	0%	0%
20	West	11	2	2	2	2	18%	18%
21	North	6	1	2	0	0	13%	33%
21	South	6	0	0	0	0	0%	0%
21	East	4	0	2	2	1	31%	50%
21	West	15	4	4	4	4	27%	27%
Area 1		53	47	53	52	50	95%	100%
Area 2		45	28	32	36	33	72%	80%
Area 4		71	66	70	68	69	96%	99%
Area 5		28	15	25	27	22	79%	96%
	TOTALS	**665**	**294**	**401**	**434**	**398**	**57%**	**65%**
	% Occupied		**44%**	**60%**	**65%**	**60%**		

Shaded areas indicate occupancies 90% or greater.

APPENDIX 6

On-Street Parking Occupancy Survey Results - EAST OF ARIZONA AVENUE

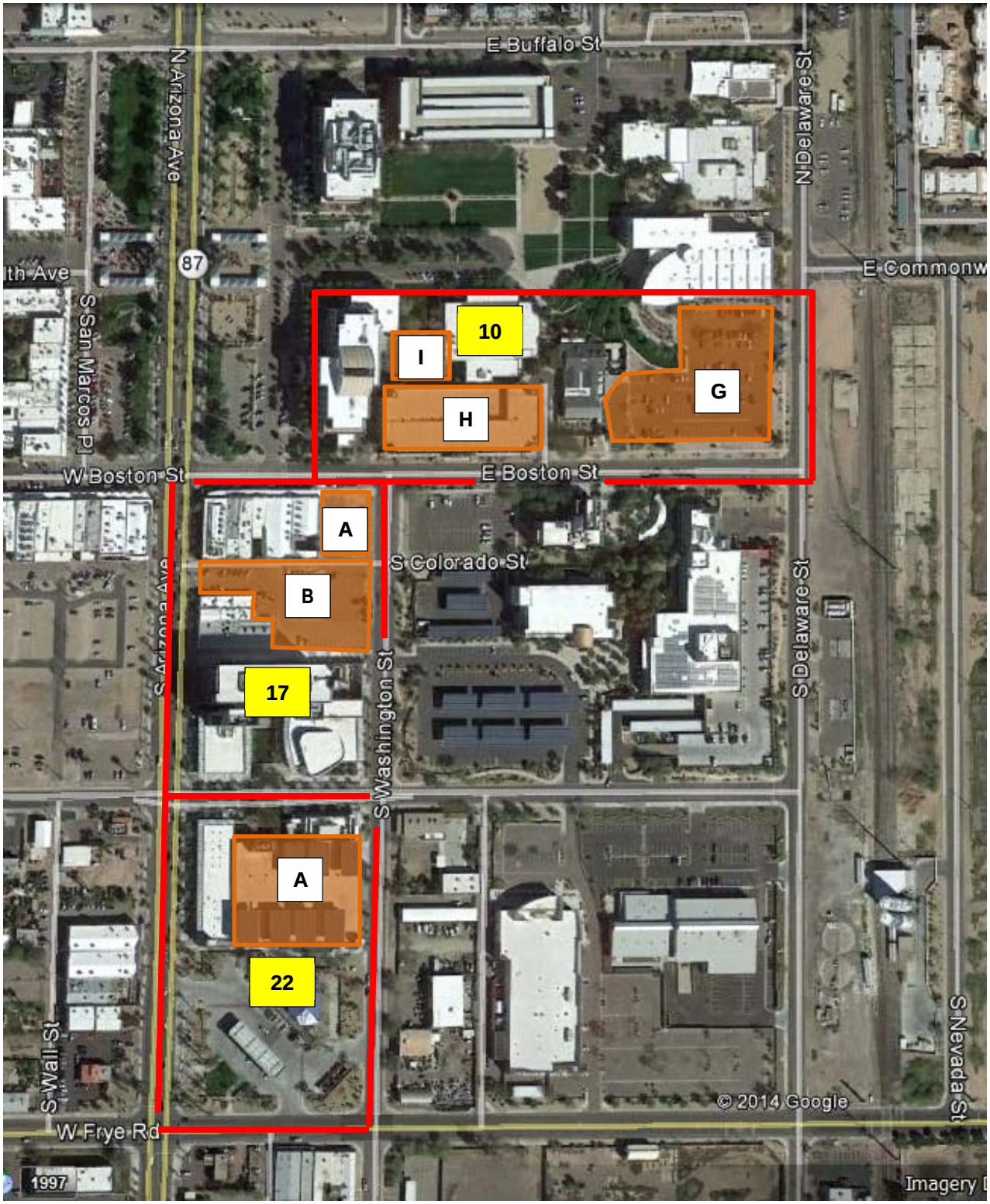
			Surveyed 6/14/14							Average	Peak
Block	Face	Capacity	10:00 AM	Noon	2:00 PM	4:00 PM	6:00 PM	8:00 PM	10:00 PM	Occupancy	Occupancy
5	North	0	0	0	0	0	0	0	0		
5	South	0	0	0	0	0	0	0	0		
5	East	11	0	1	2	0	0	2	2	9%	18%
5	West	0	0	0	2	2	2	1	2		
10	North	0	0	0	0	0	0	0	0		
10	South	0	1	1	1	1	1	1	1		
10	East	0	0	0	0	0	0	0	0		
17	North	10	9	9	6	8	7	8	0	67%	90%
17	South	8	0	0	2	2	0	0	0	7%	25%
17	East	11	0	0	0	0	0	0	0	0%	0%
17	West	0	0	1	1	0	1	1	0		
22	North	5	1	1	1	1	0	0	0	11%	20%
22	South	0	0	0	0	0	0	0	0		
22	East	11	0	0	0	0	0	0	0	0%	0%
22	West	8	4	4	4	3	3	1	0	34%	50%
Area 3		62	27	32	19	15	17	32	30	40%	52%
	TOTALS	126	42	49	38	32	31	46	35	31%	39%
	% Occupied		33%	39%	30%	25%	25%	37%	28%		

On-Street Parking Occupancy Survey Results - WEST OF ARIZONA AVENUE

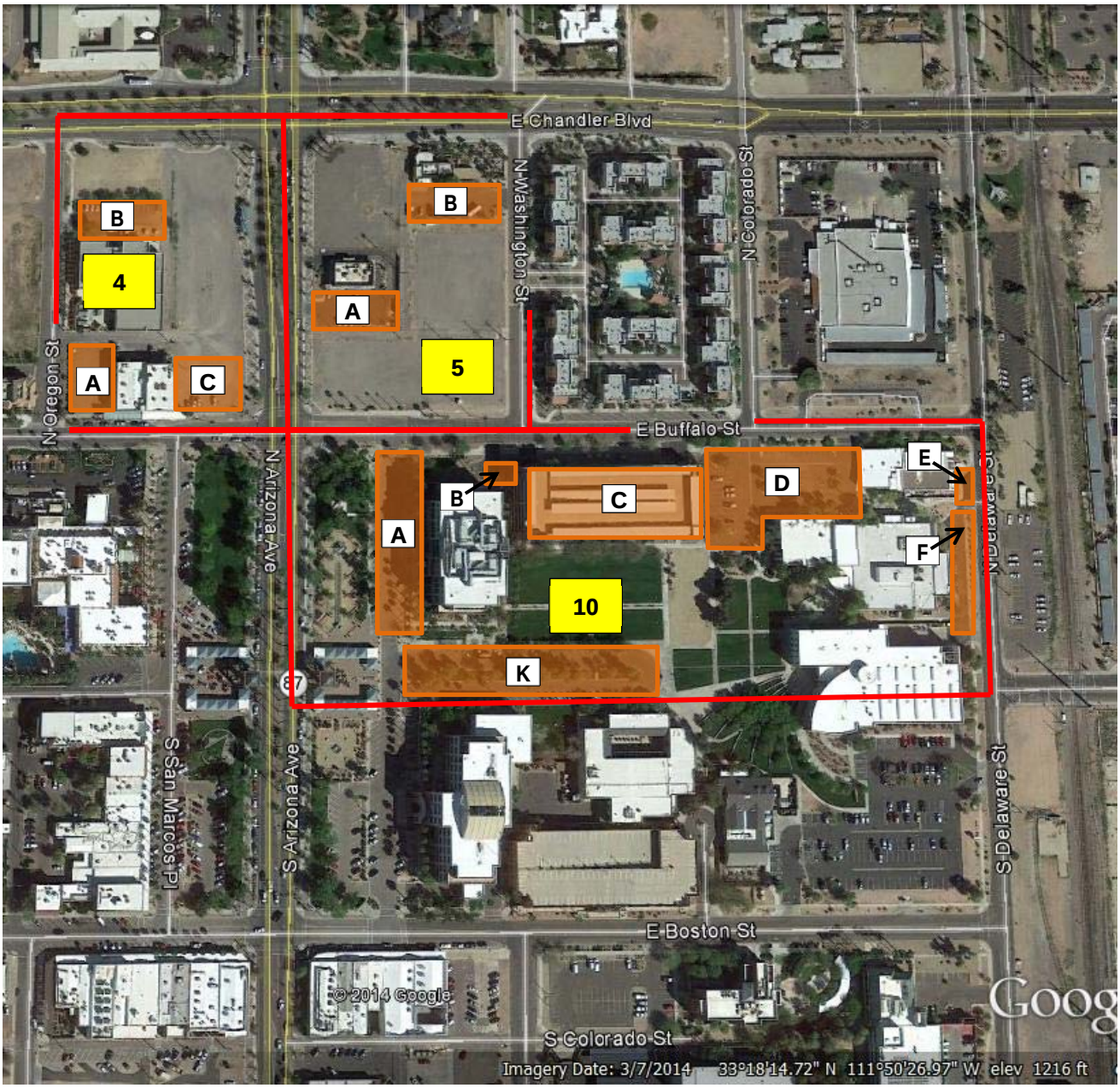
			Surveyed 6/14/14							Average	Peak
Block	Face	Capacity	10:00 AM	Noon	2:00 PM	4:00 PM	6:00 PM	8:00 PM	10:00 PM	Occupancy	Occupancy
1	East	9	0	0	0	0	0	0	0	0%	0%
1	North	0	5	5	5	5	5	2	2		
2	North	0	0	0	0	0	0	0	0		
2	South	20	20	21	18	20	18	4	4	75%	105%
2	East	9	9	7	7	6	5	3	4	65%	100%
2	West	8	5	5	5	5	5	4	4	59%	63%
3	North	0	0	0	0	0	0	0	0		
3	South	18	16	20	18	20	18	12	12	92%	111%
3	East	8	0	0	0	0	0	0	0	0%	0%
3	West	8	9	7	7	6	5	3	4	73%	113%
4	North	0	0	0	0	0	0	0	0		
4	South	5	5	5	2	3	4	4	5	80%	100%
4	East	0	0	0	0	0	0	0	0		
4	West	11	0	0	0	0	0	0	0	0%	0%
9	North	41	36	22	18	21	18	3	3	42%	88%
9	South	36	5	9	3	3	16	10	3	19%	44%
9	West	0	0	0	0	0	0	0	0		
12	North	7	5	9	3	3	8	2	0	61%	129%
12	South	9	0	0	0	0	0	2	2	6%	22%
12	East	7	0	0	0	0	0	0	0	0%	0%
12	West	7	0	0	0	0	0	0	0	0%	0%
13	North	12	5	9	3	3	12	6	4	50%	100%
13	South	29	30	29	28	28	29	21	22	92%	103%
13	West	6	0	0	0	0	0	0	0	0%	0%
14	North	8	1	0	0	0	0	0	0	2%	13%
14	South	8	1	0	1	1	1	1	1	11%	13%
14	East	11	2	2	3	3	3	2	2	22%	27%
14	West	10	3	3	3	3	4	4	4	34%	40%
15	North	18	11	12	13	15	12	8	8	63%	83%
15	South	8	0	0	0	0	0	0	0	0%	0%
15	East	14	0	0	2	3	4	4	2	15%	29%
15	West	12	1	1	1	1	1	1	1	8%	8%
16	North	12	13	12	12	12	11	10	8	93%	108%
16	South	8	0	0	0	0	0	0	0	0%	0%
16	East	0	0	0	0	0	0	0	0		
16	West	14	3	3	3	3	7	7	4	31%	50%
19	North	8	1	1	0	0	0	0	0	4%	13%
19	South	0	0	0	0	0	0	0	0		
19	East	12	0	0	0	0	0	0	0	0%	0%
19	West	13	0	0	0	0	0	0	0	0%	0%
20	North	8	0	0	0	0	0	0	0	0%	0%
20	South	0	0	0	0	0	0	0	0		
20	East	12	0	0	0	0	0	0	0	0%	0%
20	West	11	2	2	3	3	2	2	2	21%	27%
21	North	6	0	0	0	0	0	0	0	0%	0%
21	South	6	0	0	0	0	0	0	0	0%	0%
21	East	4	1	1	1	1	1	1	1	25%	25%
21	West	15	3	3	3	3	3	0	0	14%	20%
Area 1		53	51	51	22	26	53	51	49	82%	100%
Area 2		45	26	35	28	19	32	31	26	63%	78%
Area 4		71	70	70	68	60	70	70	69	96%	99%
Area 5		28	12	16	24	18	18	26	26	71%	93%
	TOTALS	**665**	**351**	**360**	**304**	**294**	**365**	**294**	**272**	**48%**	**55%**
	% Occupied		**53%**	**54%**	**46%**	**44%**	**55%**	**44%**	**41%**		

Shaded areas indicate occupancies 90% or greater.

Occupancy Route 1

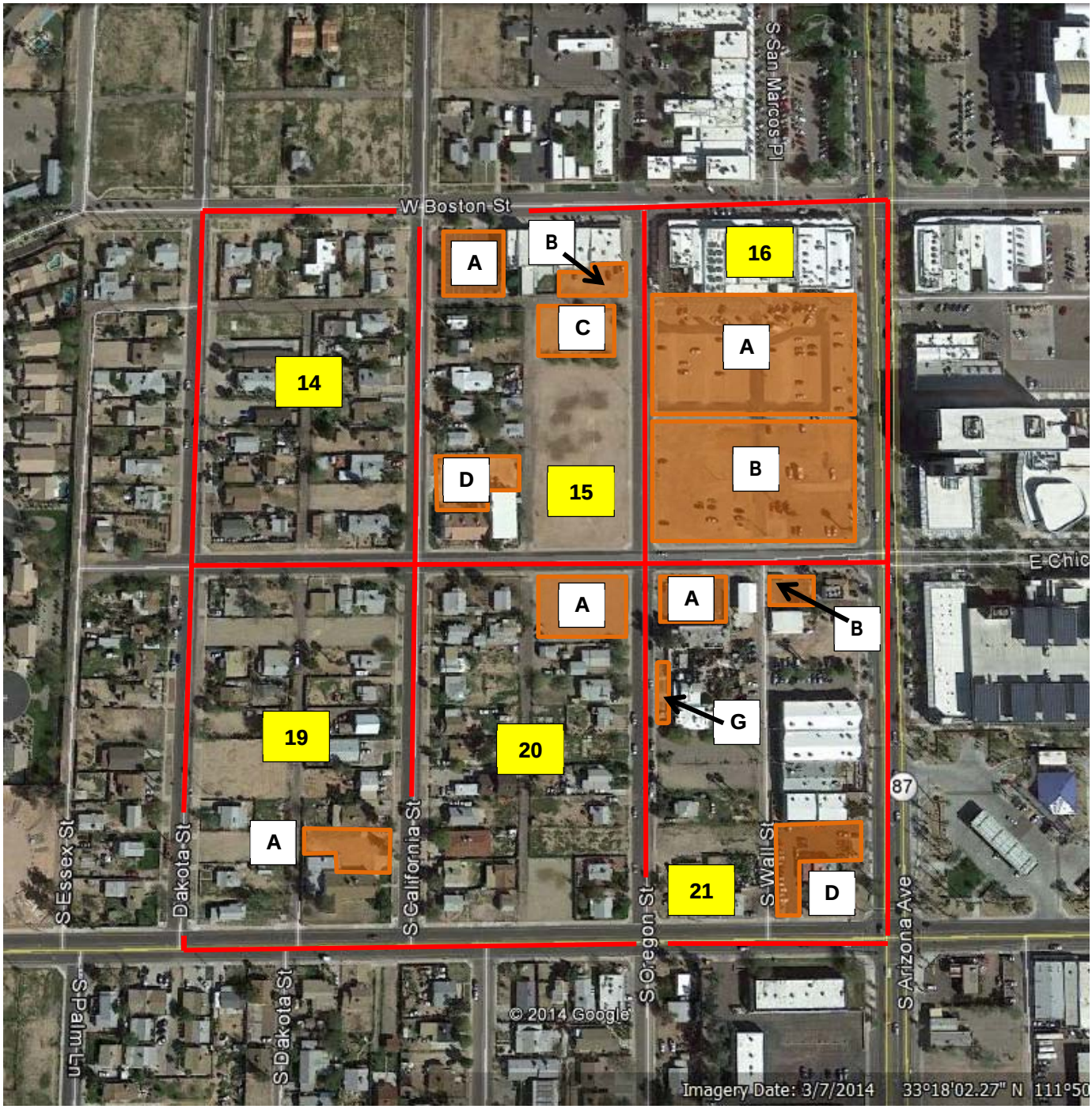


Occupancy Route 2



Occupancy Route 3

Occupancy Route 4



5.0 ACTION PLAN AND RECOMMENDATION SUMMARY

Currently, approximately 50% of the available parking supply in the downtown study area is unused during the typical peak parking period. However, future developments in downtown Chandler could lead to significant parking supply deficits in some areas. Therefore, future downtown development will necessitate the construction of additional parking resources – both on-street and off-street. With this in mind, ***Carl Walker*** recommends the following action plan:

Short-Term (Within the Next 24 Months):

1. Improve the utilization of existing parking supplies in the downtown. There is clearly an immediate need to improve parking conditions in Blocks 9 and 13. The utilization of available parking resources can be improved through one or more of the following measures:

    A. Improve parking-related signage and wayfinding in the downtown. First, concentrate on improving signage on Arizona Avenue and near primary public parking areas (e.g., Lots 9C, 9D, 10A, 10J, 10K, 13D, and 16 B/C). This should improve the utilization of available parking resources (e.g., while busy during daytime hours, the public parking areas on Block 10 are significantly underutilized during evening hours and could provide overflow parking). The signage should be distinctive, incorporating a unique and consistent design. Signage for short-term parking areas should reinforce the goal of providing parking for visitors.

    B. Improve the timing of the crosswalk across Arizona Avenue (at Buffalo Street and Boston Street) to make it more pedestrian friendly. Sufficient time should be provided to allow pedestrians to cross, and the frequency of "walk" signals should be increased.

    C. Provide long-term parking for downtown employees and long-term visitors in underutilized areas. For example, employees working in Blocks 13 and 16 should be directed to park behind businesses and/or in Lots 16B and 16C, instead of parking in short-term visitor parking areas. Ensure sufficient long-term parking is provided and require downtown employees to use appropriate parking spaces/facilities.

    D. Consider providing a centralized valet parking service during periods of heavy parking activity to help make parking more convenient. Ideally, this service would be provided in a location convenient to most downtown businesses located in Blocks 13 and 16. One possible location would be the south side of Block 13 on Boston Street. Valet vehicle

storage could be located in Block 16. This would help improve the utilization of available parking, as well as minimize customer walking distances. The cost of providing valet parking could be covered by charging customers for the service or funded by local businesses/organizations.

E. Create downtown parking maps that can be distributed to visitors and employees through the city and local businesses/organizations that illustrate the locations of public parking supplies and long-term parking areas, as well as basic parking policies and regulations. Parking maps should also be available on the Internet.

F. The city should discontinue the storage of city/public vehicles in the Library parking lot. Relocating city/public vehicle storage will help make up to 14 additional parking spaces available to library and downtown visitors.

G. During special events, several opportunities are available to improve existing conditions. First, require special events to provide sufficient directional signage on streets to guide visitors to designated special event parking areas. Second, provide signs in each event parking lot to denote availability and any designated restrictions. Third, minimize the use of parking areas for event staging wherever possible. Fourth, provide some event parking staff to help direct visitors to parking areas, change signage as needed to redirect visitors, and monitor parking activities. Finally, attempt to use off-site parking areas (e.g., the parking associated with the Chandler Center for the Arts) for overflow event parking.

2. While Chandler Police bicycle patrols were very visible during the parking inventory and occupancy counts, additional steps may be necessary to improve safety/security perceptions. Work with community stakeholders to improve both real and perceived safety levels in parking areas and on pedestrian pathways. Parking areas should provide the minimum footcandles per square foot noted in this report. Utilize CPTED design principles in parking areas. Also, local businesses could work together to provide private security patrols and safety escort services.

3. Conduct a maintenance review of existing public parking lots/spaces. Ensure parking surfaces are well maintained, parking space stripes are visible, signage is maintained, landscaping is appropriate, etc.

4. Begin the process to site and design a parking structure for the new City Hall development.

5. Attempt to better utilize existing parking supplies prior to constructing new parking areas. There is currently enough unused parking to accommodate current and projected parking needs in the near-term. The city and the downtown community should work with private parking lot owners to better utilize existing supplies. The continued development of the downtown will warrant the addition of parking supplies within reasonable walking distances of the downtown core.

6. Begin investigating opportunities to create a downtown Chandler parking district, using the study area for this project as the initial district boundary. The creation of the district should incorporate the ability to collect parking fees for both on-street and off-street parking, prepare for the creation of a downtown parking organization to manage the parking system, and provide the necessary authority to begin incorporating related parking functions (e.g., downtown parking operations and management, parking enforcement, parking planning) into a vertically-oriented management structure. All parking-related revenues generated in the district (including enforcement fines) would be designated to cover parking system costs, and if possible, other programs (e.g., transit programs, street/sidewalk cleaning).

    A. Until the downtown parking organization is created, designate a single city department as responsible for downtown parking planning and management. While the actual operation, maintenance, and planning of the system may be handled by several city departments in the near future, the system will appear to have a single responsible department. This department should work closely with the downtown community (as well as nearby neighborhoods) to ensure community concerns are addressed.

    B. Develop and approve a set of guiding principles for the downtown Chandler parking district, using the provided information as a starting point (see Section 4.01). The guiding principles will guide the future development of the district parking system, as well as provide reasonable constraints within which future parking issues can be addressed. The process to define parking system guiding principles should include significant public input.

    C. Decide how parking will be operated in downtown. Begin the process to determine a preferred method of parking operations (e.g., self-operated or outsourced operations).

D. Investigate opportunities to improve customer service by instituting additional service programs, such as battery jumps, lock-out assistance, tire inflation, etc. Vehicles provided to parking enforcement officers (or downtown ambassadors) could be equipment to provide these services.

E. Once the parking district is created, consider completing an annual report. The annual report would detail accomplishments, challenges, anticipated needs, parking supply/demand issues, financial issues, etc. This report would serve as a historical record of the year's activities, as well as a way to provide additional information to the downtown community.

7. Investigate opportunities to improve parking enforcement in the study area, especially in the Downtown Core. Parking time limits in Blocks 9, 10, and 13 should be consistently enforced. Parking time limits could be two to three hours. Parking enforcement time periods could be from 8:00 a.m. to 8:00 p.m. Monday through Saturday in Blocks 9, 13, and 16, and 8:00 a.m. to 5:00 p.m. Monday through Friday in other blocks. Improved parking enforcement could improve the utilization of approximately 70 to 80 downtown parking spaces. One PEO could be provided in the study area during enforcement periods. The PEO could also help provide additional security, as well as provide information to downtown visitors.

   A. Begin the process to discuss and investigate pay parking opportunities in downtown. This process should include both short-term and long-term parking areas. The city should work closely with downtown stakeholders to ensure parking goals/objectives are met.

   B. Begin to designate where pay parking could be implemented. Initially, consider the primary locations for public pay parking noted in this report. For most public parking areas, ***Carl Walker*** recommends multi-space meters – preferably pay-by-space meters (with a pay by cell phone option). If desired, the city could also consider purchasing access control equipment for off-street long-term lots to improve service and reduce enforcement needs.

8. In order to more proactively plan for parking, conduct an update of the parking inventory and occupancy surveys contained in this report. These counts should be updated as necessary (when new developments occur), and updates should be conducted annually (at a minimum). Evaluate the impacts of downtown development on nearby neighborhoods, and authorize the creation of residential permit programs as needed.

9. Ensure the city has sufficient land use data for the downtown parking district, and update annually or as necessary.

Mid-Term (Years Three to Five):

1. Develop a parking marketing program to include information for downtown visitors and businesses. Continue to improve lines of communication between the city and district businesses concerning parking issues. This information should incorporate information on alternative modes of transportation as well. Utilize the existing downtown newsletter to communicate parking goals and issues, as well as upcoming/ongoing construction projects and special events, to the downtown community.

2. Update the city parking zoning code to institute an approved shared parking model/methodology (using the shared parking model provided as part of this study), as well as acceptable parking design criteria. Also, update the parking zoning code, as well as existing municipal codes, to include the following issues:

    A. Allowing in-lieu fees and setting requirements.
    B. Improved lighting standard (using the recommendation included in this report).
    C. Specific requirements for bicycle parking (typically a percentage of vehicle parking requirements).
    D. Provide options for tandem parking (situations where one space blocks another) for residential parking and/or valet parking, if desired.
    E. Ensure ADA parking standards adhere to federal ADA guidelines.

3. Work with downtown businesses to determine loading and delivery needs. For example, loading and delivery zones may be needed around the businesses located in Blocks 9, 13, and 16. Where possible, designate specific loading zones and determine adequate hours for delivery vehicle parking. Loading zones could be used for short-term visitor parking after designated loading zone hours.

4. Provide sufficient support for alternative modes of transportation. Provide adequate bicycle racks, comfortable pedestrian paths, bike paths, etc. in the district to encourage a pedestrian-first mentality. A marketing campaign could be created to encourage people (especially employees located in the district) to walk, bike, carpool, vanpool, or use public transit to travel to the district.

5. Conduct a downtown lighting study to ensure lighting levels support safety and security goals and objectives.

Long-Term (after Year Five):

1. Additional parking supplies should be placed and sized appropriately, using the parking supply and demand analysis methodology detailed in this parking study. When designing additional parking facilities, ensure pedestrian paths to/from the parking encourage use by providing stable walking surfaces, shading, pedestrian amenities (e.g. benches, etc.), and traffic calming measures as needed.

2. Ideally, the development of a parking garage should be closely related with the development(s) it is serving or based on growing parking demands in the downtown. Building a parking garage on pure speculation, with the hope of attracting development, should only occur if sufficient district development demand warrants. Should developments not occur, a garage built on speculation could result in a severely underutilized facility. If a developer is interested in developing a portion of the district, and sufficient parking supplies cannot be provided using other methods, then the city could propose providing the necessary parking along with the construction of the development. In-lieu fees could be used to provide/supplement the funds necessary for parking facility design and construction.

3. Investigate opportunities to incorporate additional parking technologies to improve downtown parking operations and management. This could include variable message systems (to direct parkers to available supplies), MLPR enforcement systems, wireless parking sensors, etc.