



City of McKinney

Historic Town Center Parking Study Update

DRAFT

August 18, 2014

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McKinney Town Center Parking Study Update

2014 Parking Supply and Demand Update

Approach

In general, parking standards for new development/redevelopment in town centers should be based on balancing available land for development and needed parking. Unlike suburban environments where parking ratios are used because of the availability of land, more nuanced parking strategies are required in town centers.

The primary objectives of these updated supply and demand analyses are to assess the current parking supply and demand under existing conditions compared to the demands and supplies that were present in 2009 when the last analysis was completed.

Existing Parking Supply

On-Street Parking Supply

Most streets within the study area have on-street, parallel parking spaces. Angled on-street parking is provided along both sides of Virginia Street, Louisiana Street, and Tennessee Street and the east side of Kentucky Street within the Square Proper (along Louisiana Street, Tennessee Street, Kentucky Street, and Virginia Street). The majority of streets in close proximity to the Square Proper have parking spaces marked with lines and are included in the “Three-for-Free” program. Streets that are further away from the Square Proper often have no marked parking spaces. In the case of unmarked parking spaces, information from the 2004 Downtown McKinney Parking Study is used, with the incorporation of changes since that time.

Notable Changes Since 2009

- On-street parking spaces on Kentucky Street and Tennessee Street have been marked with stripes. This allows for a more accurate record of on-street parking supply when compared to the previous method of calculating the number of typical parking spaces that would fit on a certain block.
- In the process of striping on-street spaces, some existing spaces have been converted to loading zones with yellow lines and signs designating the space as such.

Off-Street Parking Supply

Within the study area, there are a total of fifteen (15) public off-street parking lots. All of these parking lots are paved with concrete or asphalt and have marked parking spaces. As a portion of this update, the Wayfinding Program has been evaluated for its effectiveness in directing drivers to the free public parking lots. Several private off-street parking lots also exist in the study area. These parking lots allow parking only for patrons of certain businesses. As in the 2009 Parking Study, these parking lots are included in the 2014 analysis.

Notable Changes Since 2009

- For the duration of the 2014 Parking Supply and Demand Update, a substantial number of public off-street parking spaces were utilized as a construction staging area for the improvements being made to Kentucky Street. A total of 49 spaces located within the public off-street parking lot located on the northeast corner of

Johnson Street and Hunt Street were surrounded by a temporary fence and were not available for use as parking. As a result, these parking spaces are not included as a portion of the current parking supply. However, with the recent completion of improvements these parking spaces have now become available as free public off-street parking.

Total Parking Supply

In total, there are 2,576 parking spaces within the parking study (see Table 1). Roughly half (49%) of these parking spaces are provided by free off-street public parking lots. Another one-third (33%) are provided in private off-street parking lots. These private parking lots allow parking only for the patrons of specific private businesses, not for the general public. Because these parking lots are located downtown and contribute to the overall parking supply, they have been included in the analysis. The remaining parking spaces (18%) are on-street parking spaces.

Analysis by Zone and Ring

In order to identify specific conditions of downtown parking supply and demand, the study area has been divided into smaller pieces in two different ways. First, the study area was divided into four Zones (see Figure 2) of approximately equal size. Table 2 shows that parking supply is distributed evenly in the northern Zones (A and B). However, there is a substantially higher share of parking spaces in Zone D than Zone C. Zone D also provides the largest share overall of parking spaces. This is due to the large City-owned parking lot (512 spaces) in the Zone.

The study area was also divided into three Rings (see Figure 3). Table 3 shows the distribution of parking supply by Ring. These Rings increase in size the further they are from the center of the study area. Therefore, Ring 3 (the largest and most distant Ring) provides the majority of the parking supply (56%). Ring 1 is in the center of the study area and provides only 10% of total supply. Most of this 10% is in the form of on-street parking because of the physical constraints that are present in the Ring (existing built environment, historic structures, small lots, etc.).

Figure 1 - Parking Study Area and Public Parking Lots

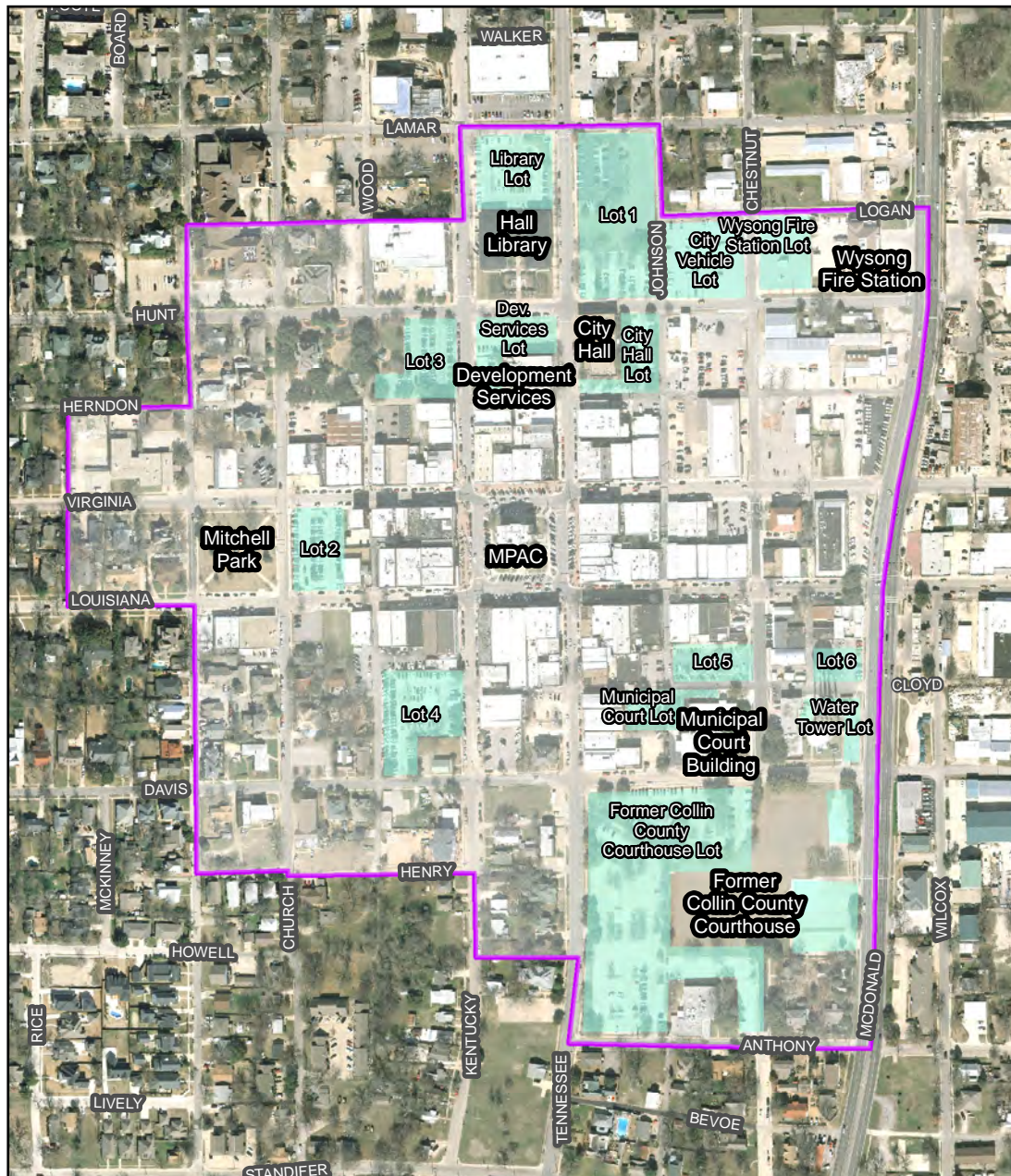


Table 1 - Summary of Existing On-Street and Off-Street Parking Supply

Off-Street Public Parking Supply	Off-Street Private Parking Supply	On-Street Parking Supply
1,266 (49%)	853 (33%)	457 (18%)
Total Spaces 2,576		

Figure 2 - Parking Study Area by Zone

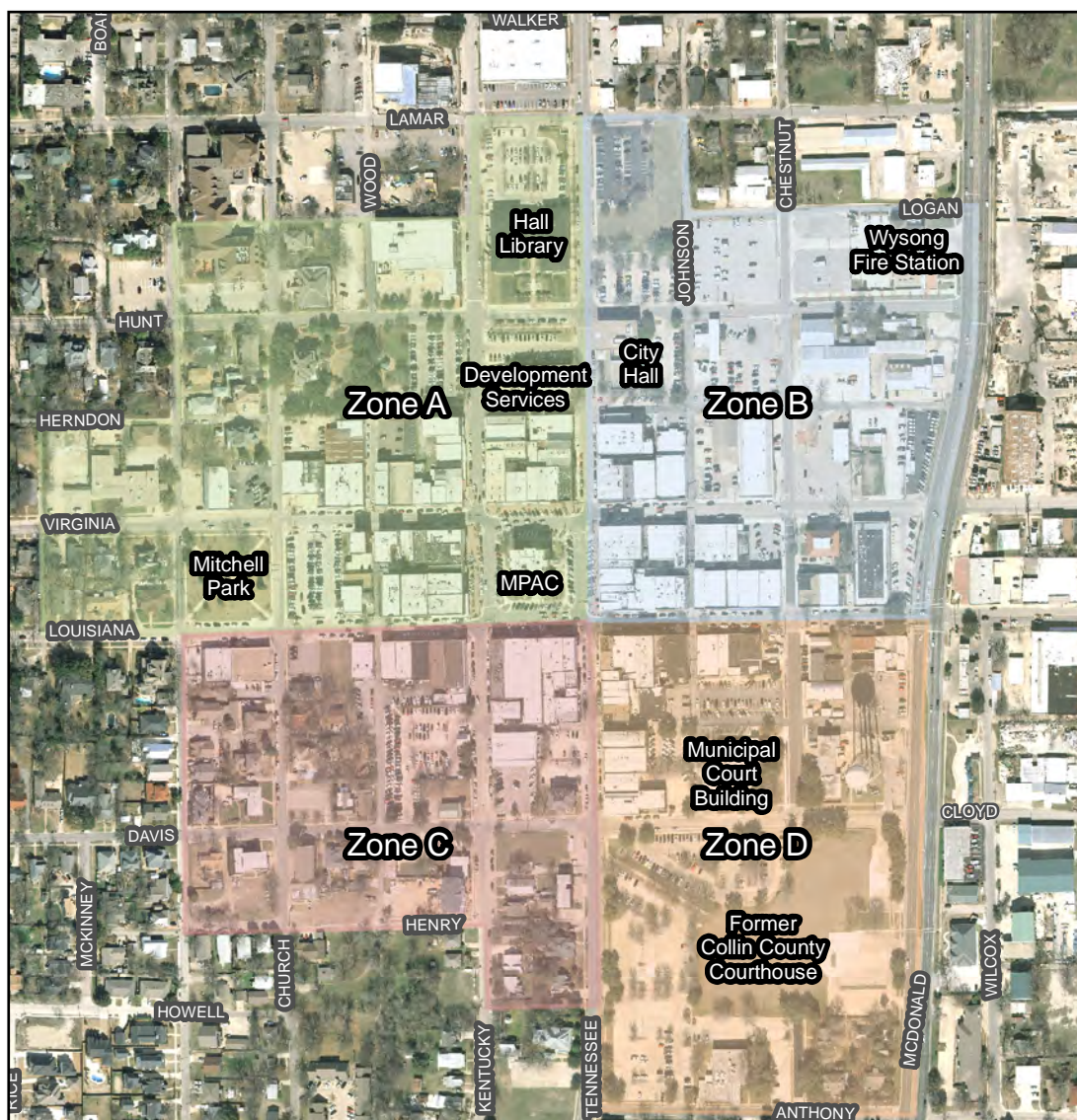


Table 2 - Summary of Existing On-Street and Off-Street Parking Supply by Zone

Zone	Off-Street Public Parking Supply	Off-Street Private Parking Supply	On-Street Parking Supply	Total Existing Supply
A	260	258	183	701 (27%)
B	253	288	87	628 (24%)
C	102	261	99	462 (18%)
D	651	46	88	785 (31%)
	1,266	853	457	
Total Spaces				2,576

Figure 3 - Parking Study Area by Ring

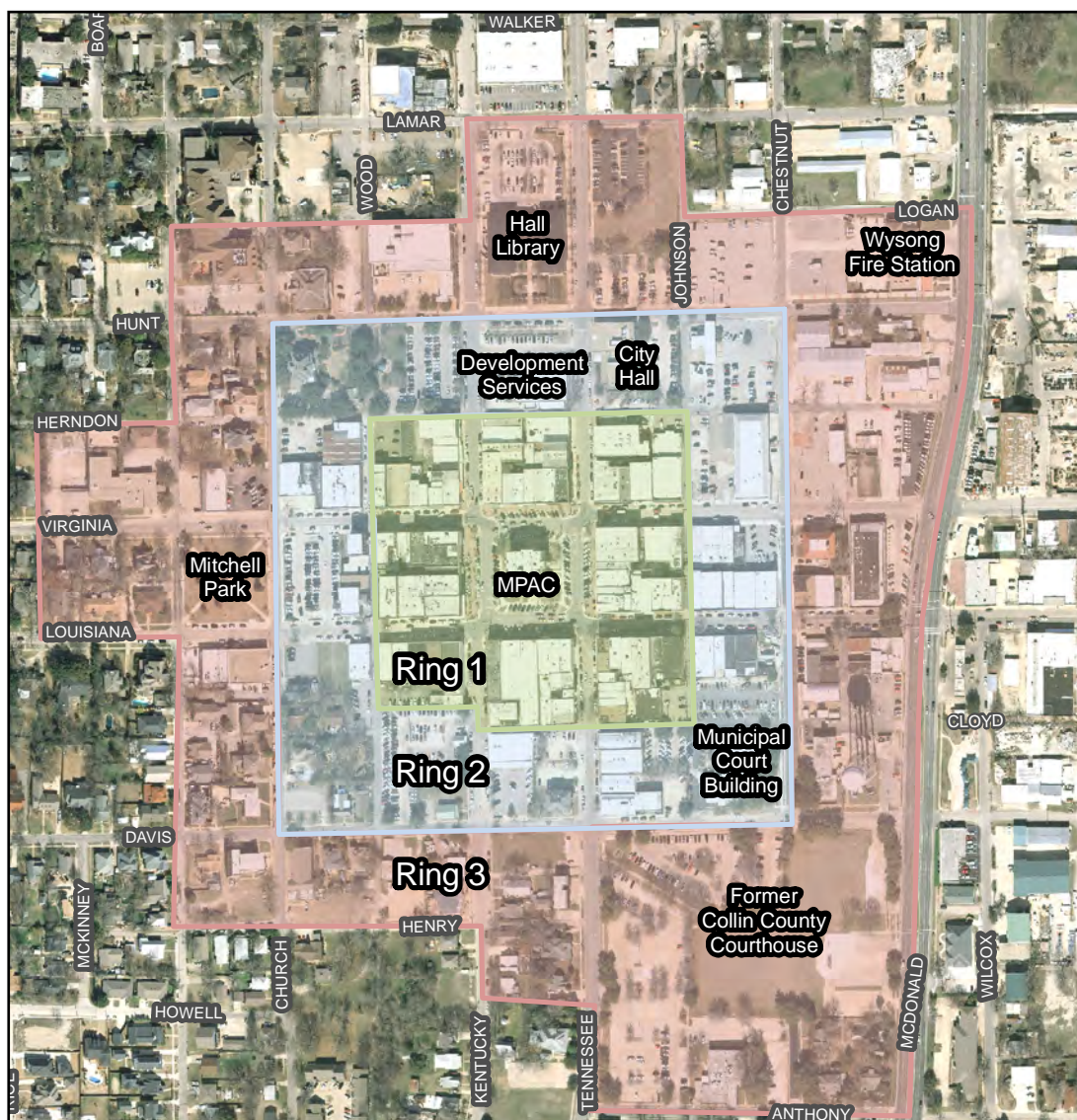


Table 3 - Summary of Existing On-Street and Off-Street Parking Supply by Ring

Ring	Off-Street Public Parking Supply	Off-Street Private Parking Supply	On-Street Parking Supply	Total Existing Supply
1	0	61	194	255 (10%)
2	412	336	127	875 (34%)
3	854	456	136	1,446 (56%)
	1,266	853	457	
Total Spaces				2,576

Existing Parking Occupancy

Parking occupancy is shown as the percentage of parking spaces that are occupied at a given time of day. In order to capture an accurate picture of parking occupancy, occupied parking spaces were counted during four different time intervals: morning (between 8am and 10am), mid-day (between 11am and 1pm), afternoon (between 3pm and 5pm), and evening (between 6pm and 8pm). Counts were performed on between the dates of Saturday, June 14 and Saturday, June 21. Parking occupancy was recorded on both Saturdays in this period as well as Tuesday, Wednesday, Thursday, and Friday. As in the 2009 Parking Study, only the highest recorded occupancy is reported in the 2014 Update. By reporting the peak occupancy, the true greatest parking need can accurately be captured. Overall parking occupancy is a composite calculated by adding the peak occupancies for each parking type and dividing by the total number of parking spaces. For example, 648 public off-street spaces were occupied at peak. This number is added to the 304 occupied private spaces and 379 occupied on-street spaces for a total of 1,331 occupied spaces. This constitutes 52% of the total 2,576 parking spaces.

Parking Occupancy Overall

Table 4 below shows that overall parking occupancy for the entire study area is 52% at its weekday peak. The peak time for each parking type was between 11am and 1pm on Friday. The most heavily utilized parking type is on-street parking (83% weekday, 77% Saturday). Off-street parking utilization ranged from 35% for private lots to 53% for public lots.

Table 4 - Existing On-Street and Off-Street Parking Occupancy for Entire Study Area

	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*
	Rate	Time	Rate	Time	Rate	Time	
Weekday	51%	Noon Friday	36%	Noon Friday	83%	Noon Friday	52%
Saturday	53%	Noon	35%	Evening	77%	Evening	51%
Note: Parking occupancy data gathered June 14 to June 21, 2014 Noon denotes count performed between 11am and 1pm. Evening denotes count performed between 6pm and 8pm. <i>*composite peak occupancy calculated from peak occupancies of each parking type</i>							

As in the 2009 Parking Study, parking occupancies have been analyzed by Zone and Ring. This analysis can be used to create an accurate image of parking conditions in the study area.

Parking Occupancy by Zone

Table 5 is a summary of parking occupancies by Zone under weekday conditions. There is a wide range of overall occupancies (40% to 66%). This range widens when occupancy is examined by type of parking space. On-street parking is most heavily utilized, with occupancies ranging from 69% to 95% depending on which Zone is examined. Zones A and C, however, see very high occupancies in public off-street parking lots (86% in Zone A and 97% in Zone C). The same two Zones, A and C, also see lower utilization of private off-street parking lots (27% in Zone A and

28% in Zone C) than the other areas. Zones B and D have relatively low occupancies in public off-street parking lots (52% in Zone B and 33% in Zone D) when compared to the same type of parking lots in Zones A and C. These low levels of utilization could be attributed to many factors. Zone B includes the Wysong Fire Station Parking Lot (East of Chestnut Street between Logan Street and Hunt Street) and McKinney City Vehicle Parking Lot (West of Chestnut Street between Logan Street and Hunt Street). Neither of these parking lots are marked as free public parking lots in the same manner as other City-owned parking lots in the study area. These parking lots also lack the landscaping, curbs, and trees that are present in many City-owned parking lots. These factors, along with the high concentration of City of McKinney vehicles that are always present can give the impression that these parking lots are not public parking lots. Zone D includes a very large public off-street parking lot that supplies 512 parking spaces to the study area. The peak public off-street parking occupancy of this Zone (33%) represents 218 occupied parking spaces. While this number of occupied parking spaces appears to be much lower than the other occupancy in other Zones, the actual quantity of occupied parking spaces is comparable to the quantity of occupied parking spaces in other Zones. For example, Zone C experienced a peak occupancy rate of 97% for public off-street parking spaces. This represents a total of 99 occupied parking spaces. Therefore, Zone D is utilized at or around the same levels as other Zones, but also has many more available public off-street parking spaces. While usage of public off-street parking lots in Zone D appears to be low, the reason for this is the large public off-street parking lot that exists in the Zone.

Table 5 - Existing On-Street and Off-Street Parking Occupancy by Zone - Weekday Condition

Zone	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*
	Rate	Time	Rate	Time	Rate	Time	
A	86%	Noon Thursday	27%	Afternoon Thursday	95%	Noon Friday	66%
B	52%	Afternoon Tuesday	51%	Noon Friday	83%	Noon Friday	56%
C	97%	Noon Friday	28%	Afternoon Thursday	69%	Noon Friday	52%
D	33%	Afternoon Friday	65%	Evening Thursday	75%	Afternoon Thursday	40%
Overall Occupancy							52%
<p>Note: Parking occupancy data gathered June 14 to June 21, 2014 Noon denotes count performed between 11am and 1pm. Afternoon denotes count performed between 3pm and 5pm. Evening denotes count performed between 6pm and 8pm. <i>*composite peak occupancy calculated from peak occupancies of each parking type</i></p>							

Table 6 is a summary of parking occupancies by Zone under Saturday conditions. There is a wide range of overall parking occupancies (39% to 100%). Generally, on-street parking was utilized more, with occupancies ranging from 76% to 84%. Off-street public parking in Zone C, however, had the greatest occupancy rate at 100%. An occupancy level at or above 85% is

considered the maximum occupancy level; only off-street public parking in Zone C experienced an occupancy rate at or above this level. Zone C includes City Parking Lot 2, located between Kentucky Street and Wood Street north of Davis Street. On Saturday, it can be assumed that the majority of vehicles utilizing the public parking spaces were patrons of the shops, restaurants, and entertainment choices in the McKinney's Historic Town Square.

Table 6 - Existing On-Street and Off-Street Parking Occupancy by Zone - Saturday Condition

Zone	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*
	Rate	Time	Rate	Time	Rate	Time	
A	75%	Noon	38%	Evening	80%	Noon	63%
B	39%	Noon	53%	Morning	80%	Evening	51%
C	100%	Evening	44%	Evening	76%	Evening	63%
D	44%	Noon	83%	Evening	84%	Evening	51%
Overall Occupancy							51%
<p>Note: Parking occupancy data gathered June 14 to June 21, 2014 Morning denotes count performed between 8am and 10am. Noon denotes count performed between 11am and 1pm. Afternoon denotes count performed between 3pm and 5pm. Evening denotes count performed between 6pm and 8pm. *composite peak occupancy calculated from peak occupancies of each parking type</p>							

Overall, analysis of parking occupancy by Zone reveals that no Zone experienced an overall parking occupancy above the maximum level of 85%. In general, more cars were parked in on-street and off-street public parking areas. Private off-street parking lots remained the least occupied. Private off-street parking in McKinney's Historic Town Square is most likely meeting all current parking demands, while on-street and some public off-street parking areas are nearing maximum occupancy during certain time periods.

The time period in which weekday peak parking occupancy level occurred is consistently near the end of the week (Thursday or Friday) and either during the noon count (11 am to 1pm) or afternoon count (3pm to 5pm). Saturday peak times most often occurred during the evening count (6pm to 8pm).

Parking Occupancy by Ring

Table 7, below, is a summary of the parking occupancies by Ring during weekday conditions. There is a wide range of parking occupancies (23% to 99%). Generally, on-street parking spaces were more utilized, with occupancies ranging from 54% to 99%. The overall parking occupancy level in Ring 1 exceeded the 85% parking occupancy level, signaling that the current supply is at its maximum occupancy and is no longer meeting demands. Additionally, it should be noted that Ring 1 does not have a supply of off-street public parking spaces, unlike Ring 2 and Ring 3. The lack of off-street public and private parking spaces raises the overall parking occupancy rate for on-street parking spaces within Ring 1.

Table 7 - Existing On-Street and Off-Street Parking Occupancy by Ring - Weekday Condition

Ring	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*
	Rate	Time	Rate	Time	Rate	Time	
1	N/A	N/A	67%	Noon Thursday	99%	Noon Friday	91%
2	92%	Noon Friday	53%	Afternoon Friday	89%	Noon Friday	76%
3	33%	Afternoon Friday	23%	Noon Friday	54%	Noon Friday	32%
Overall Occupancy							52%
Note: Parking occupancy data gathered June 14 to June 21, 2014 Noon denotes count performed between 11am and 1pm. Afternoon denotes count performed between 3pm and 5pm. <i>*composite peak occupancy calculated from peak occupancies of each parking type</i>							

Table 8, below, is a summary of the parking occupancies by Ring during Saturday conditions. There is a wide range of parking occupancies (23% to 100%). Generally, on-street parking was utilized more, with occupancies ranging from 46% to 100%. On-street parking in Ring 1 had an on-street parking occupancy rate of 100% and a 49% off-street private parking occupancy rate, signaling the need for additional public parking areas within McKinney's Historic Town Square.

Table 8 - Existing On-Street and Off-Street Parking Occupancy by Ring - Saturday Condition

Ring	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*
	Rate	Time	Rate	Time	Rate	Time	
1	N/A	N/A	49%	Evening	100%	Evening	88%
2	91%	Noon	47%	Evening	81%	Evening	73%
3	35%	Noon	23%	Evening	46%	Evening	33%
Overall Occupancy							51%
Note: Parking occupancy data gathered June 14 to June 21, 2014 Noon denotes count performed between 11am and 1pm. Evening denotes count performed between 6pm and 8pm. <i>*composite peak occupancy calculated from peak occupancies of each parking type</i>							

Overall, analysis of parking occupancy by Ring reveals that weekday and Saturday parking occupancies are similar in distribution. The overall parking occupancy throughout the week was 52%, compared to 51% on Saturday. Parking occupancy levels declined as the distance from the McKinney Performing Arts Center increased. Parking occupancy was greatest in Ring 1 and Ring 2, and least in Ring 3.

Peak weekday occupancies consistently occurred during the noon or afternoon counts on Thursday and Friday. This is the same pattern that was observed in the analysis by Zone. Similarly, Saturday peak occupancies occurred during the evening count.

Recommendations

1. Consider the adoption of a comprehensive parking rate strategy and the installation of parking meters on the Square Proper to create vehicle turnover and occupancy opportunities.
2. Consider expanding the existing wayfinding program in an attempt to alert drivers to additional free parking opportunities one or two blocks away from the Square Proper.
3. If additional public off-street parking is desired, consider the construction of a public structured parking facility while being mindful of operation and maintenance costs.

Appendix A:

Comparison of Parking Supply and Occupancy, 2009 to 2014

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Comparison of Parking Supply, 2009 - 2014

Overall Parking Supply

Overall, parking supply has increased between 2009 and 2014 (from 2,503 to 2,560). The majority of this increase is in off-street private parking spaces, while there was a small increase in the number of off-street public spaces. These increases more than offset the decrease in the number of on-street spaces. Table 9 below shows the difference in overall parking supply from 2009 to 2014.

Table 9 - Comparison of Existing Downtown Parking Supply, 2009 to 2014

Off-Street Public Parking Supply		Off-Street Private Parking Supply		On-Street Parking Supply	
2009	2014	2009	2014	2009	2014
1,262 (50%)	1,266 (49%)	780 (31%)	853 (33%)	461 (19%)	457 (18%)
				2009 Total Spaces 2,503	
				2014 Total Spaces 2,576	

Parking Supply by Zone

Table 10 below contains a comparison of parking supply from 2009 to 2014 separated by Zone. As can be seen, the share of parking spaces that each Zone provides to downtown is roughly unchanged from 2009. Zone B is the only area that has seen a decrease in actual supply. Most of this decrease is of the off-street public parking type, and can be assumed to be the result of the use of a large number of the spaces in the City Vehicle Parking Lot for storage of equipment related to the improvements made to Kentucky Street. These spaces will be returned to use as free public parking spaces at the conclusion of improvements.

Table 10 - Comparison of Existing Downtown Parking Supply by Zone, 2009 to 2014

Zone	Off-Street Public Parking Supply		Off-Street Private Parking Supply		On-Street Parking Supply		Total Existing Supply	
	2009	2014	2009	2014	2009	2014	2009	2014
A	267	260	210	258	193	183	670 (27%)	701 (27%)
B	301	253	274	288	99	87	674 (27%)	628 (24%)
C	90	102	251	261	99	99	440 (17%)	462 (18%)
D	604	651	45	46	70	88	719 (29%)	785 (31%)
	1,262	1,266	780	853	461	457		
Total Spaces							2,503	2,576

Parking Supply by Ring

As shown in Table 11, the share of parking provided by each Ring has not changed between 2009 and 2014. Rings 2 and 3 gained parking spaces, while Ring 1 saw a slight decrease in parking spaces.

Table 11 - Comparison of Existing Downtown Parking Supply by Ring, 2009 to 2014

Ring	Off-Street Public Parking Supply		Off-Street Private Parking Supply		On-Street Parking Supply		Total Existing Supply	
	2009	2014	2009	2014	2009	2014	2009	2014
1	0	0	62	61	199	194	261 (10%)	255 (10%)
2	396	412	332	336	120	127	848 (34%)	875 (34%)
3	866	854	386	456	142	136	1,394 (56%)	1,446 (56%)
	1,262	1,266	780	853	461	457		
Total Spaces							2,503	2,576

Comparison of Parking Occupancy, 2009 - 2014

Overall Parking Occupancy

Parking occupancy has not changed significantly between 2009 and 2014. Overall weekday occupancy decreased from 53% in 2009 to 52% in 2014 (see Table 12). An examination by type shows that weekday off-street private parking usage has decreased while on-street parking occupancy has increased. This increase can most likely be attributed to the improvement of on-street parking space demarcation and signage that has taken place since 2009.

Table 12 - Comparison of Downtown Parking Occupancy for Entire Study Area, 2009 to 2014

	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*	
	2009	2014	2009	2014	2009	2014	2009	2014
Weekday	51%	51%	46%	36%	72%	83%	53%	52%
Saturday	46%	53%	43%	35%	74%	77%	50%	51%
Note: Parking occupancy data gathered July 7 to July 11, 2009 and June 14 to June 21, 2014 *composite peak occupancy calculated from peak occupancies of each parking type								

Parking Occupancy by Zone

Table 13 is a comparison summary of the weekday parking supply by Zone in 2009 and 2014. Generally, the average parking occupancy has remained constant since 2009. There were, however, specific occupancy areas that saw significant increases or losses in occupancy between 2009 and 2014. Areas of significant increases include public parking, both on-street and off-street. Public off-street parking in Zone C saw the greatest increase (72% to 97%). Zone A saw the greatest increase in on-street parking occupancy (68%-95%). Private off-street parking lots, however, generally saw decreases in occupancy between 2009 and 2014. Zone A saw the most significant off-street private parking occupancy decrease (40% to 27%).

Table 13 - Comparison of Downtown Parking Occupancy by Zone, 2009 to 2014 - Weekday

Zone	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*	
	2009	2014	2009	2014	2009	2014	2009	2014
A	85%	86%	40%	27%	68%	95%	66%	66%
B	34%	52%	32%	51%	75%	83%	39%	56%
C	72%	97%	31%	28%	63%	69%	46%	52%
D	21%	33%	73%	65%	79%	75%	30%	40%
Overall Occupancy (from Table 4)							53%	52%
Note: Parking occupancy data gathered July 7 to July 11, 2009 and June 14 to June 21, 2014 *composite peak occupancy calculated from peak occupancies of each parking type								

Table 14 is a comparison of the Saturday parking occupancy by Zone from 2009 to 2014. Generally, the overall parking occupancy rate has remained steady since 2009. There were however, specific occupancy areas that saw steep increases and decreases between 2009 and 2014. On-street parking occupancy in Zone A increased from 68% to 95%, well above the generally accepted full occupancy rate of 85%. Off-street public parking in Zone C also experienced occupancy growth to a level that exceeds this threshold (72% to 97%). Zone D experienced the greatest increase in parking occupancy in all three categories (off-street public parking, off-street private parking, and on-street parking). The overall parking occupancy for Zone D grew 30%, from 21% in 2009 to 51% in 2014.

Table 14 - Comparison of Downtown Parking Occupancy by Zone, 2009 to 2014 - Saturday

Zone	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*	
	2009	2014	2009	2014	2009	2014	2009	2014
A	70%	75%	46%	38%	81%	80%	66%	63%
B	22%	39%	44%	53%	90%	80%	41%	51%
C	94%	100%	36%	44%	63%	76%	54%	63%
D	15%	44%	42%	83%	59%	84%	21%	51%
Overall Occupancy (from Table 4)							50%	51%
Note: Parking occupancy data gathered July 7 to July 11, 2009 and June 14 to June 21, 2014 *composite peak occupancy calculated from peak occupancies of each parking type								

Overall, parking occupancy rates remained constant from 2009 to 2014. There were, however, areas that saw significant increases in parking occupancy. Saturday parking occupancy rates in Zone D increased significantly. Generally, on-street and off-street public parking occupancy rates remained higher than off-street private parking areas. No Zone experienced growth to a level above 85% between 2009 and 2014. However, on-street parking occupancy reached 84% in 2014, indicating that there may be a need for more parking of this type in the near future.

Parking Occupancy by Ring

Table 15 illustrates that the average weekday parking occupancy rate per Ring remained steady between 2009 and 2014. The occupancy rates grew steadily (between 6% and 13%) since 2009. Ring 1 was the most heavily used area in 2009 and remained so for 2014.

Table 15 - Comparison of Downtown Parking Occupancy by Ring, 2009 to 2014 - Weekday

Ring	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*	
	2009	2014	2009	2014	2009	2014	2009	2014
1	N/A	N/A	65%	67%	93%	99%	86%	91%
2	79%	92%	41%	53%	70%	89%	63%	76%
3	21%	33%	26%	23%	33%	54%	26%	32%
Overall Occupancy (from Table 4)							53%	52%
Note: Parking occupancy data gathered July 7 to July 11, 2009 and June 14 to June 21, 2014 *composite peak occupancy calculated from peak occupancies of each parking type								

Table 16 illustrates that the average Saturday parking occupancy rate per Ring remained steady between 2009 and 2014. The occupancy rate for Ring 1 remained the same from 2009 to 2014, but Ring 2 and Ring 3 saw increases up to 18% (Ring 2). Ring 1 was the most heavily utilized area in both 2009 and 2014.

Table 16 - Comparison of Downtown Parking Occupancy by Ring, 2009 to 2014 - Saturday

Ring	Off-Street Public Parking Occupancy		Off-Street Private Parking Occupancy		On-Street Parking Occupancy		Overall Parking Occupancy*	
	2009	2014	2009	2014	2009	2014	2009	2014
1	N/A	N/A	52%	49%	99%	100%	88%	88%
2	66%	91%	33%	47%	74%	81%	55%	73%
3	15%	35%	47%	23%	44%	46%	29%	33%
Overall Occupancy (from Table 4)							50%	51%
Note: Parking occupancy data gathered July 7 to July 11, 2009 and June 14 to June 21, 2014 *composite peak occupancy calculated from peak occupancies of each parking type								

Overall, the average parking occupancy rates for weekday and Saturday remained steady for 2009 and 2014. Ring 1 was the most heavily utilized area in both 2009 and 2014. Public off-street parking lots saw increased use in both Ring 1 and Ring 2. In Ring 1, these lots experienced occupancies higher than the 85% threshold. The same lots did not reach this threshold in 2009. Weekday on-street parking in Ring 2 also experienced an increase in occupancy past the 85% level from 2009 to 2014.

Appendix B:

Wayfinding Program Analysis

August 18, 2014

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Wayfinding Program Analysis

Existing Conditions

One recommendation from the 2004 Parking Study was the installation of various wayfinding signs around McKinney's Historic Town Square. In 2008, as part of significant infrastructure investment and capital initiatives in the Historic Town Square, a wayfinding system of custom-designed signs were installed to direct both pedestrians and drivers to (and within) the Historic Town Square. The wayfinding system includes several vehicular directional signs, parking lot directional signs, and parking lot destination signs.

Today, over six years later, the wayfinding signs are still used to direct pedestrians and drivers in and around McKinney's Historic Town Square. Due to recent street and sidewalk improvements on Virginia and Kentucky Streets, as well as growth of trees in and around the Historic Town Square, it is useful to evaluate the positioning and functionality of the signs in order to gauge the need of possible improvements to the wayfinding sign system.

Traffic counts from May 2013 have also been evaluated in order to determine possible locations for new signs directing drivers to public off-street parking lots. Figure 4 below is a map of the downtown vicinity including State Highway 5 on the east. The numbers along each roadway indicate the total number of vehicles that drove on that segment of the road. These counts indicate that over 25,000 cars drive past the Historic Downtown on State Highway 5 daily. There are multiple signs directing drivers to the Historic Downtown. However, there are no signs indicating the availability of free public off-street parking. The same is true of Louisiana Street heading eastward, with lower traffic counts (just over 4,600). Wayfinding and public parking utilization could be improved with the installation of new directional signs or the addition of parking availability notifications on existing wayfinding signs. Because of the much larger volume of traffic that moves along State Highway 5, it should have priority when determining new or improved signage for free public off-street parking.

Figure 4 - Daily Traffic Count in Vicinity of Historic Downtown



Typical Wayfinding Signs

There are two types of signs for parking included in the Wayfinding Program. The first type is the Directional Sign. These signs are green in color, marked with a P in a white circle, and indicate the direction to the nearest public off-street parking lot (see Figure 5). Directional signs are generally placed on traffic light poles or street light poles. The second type of sign is the Identification Sign. These are large stand-alone signs located at the entrances to public off-street parking lots (see Figure 6). They are marked with the lot number, City of McKinney logo, and the same 'circle-P' image that appears on Directional Signs. Some Identification Signs also have a map of the Historic Downtown on the rear indicating the parking lot's location relative to various locations nearby.

Figure 5 - Typical Directional Sign



Figure 6 - Typical Identification Sign



Other Parking Signs

There are two public off-street lots that are not marked with signs typical of the Wayfinding Program. The first is marked with two small white signs with the McKinney logo and the text "Parking Lot." (see Figure 7) This lot is not assigned an official number. The second lot is located on the City-owned parcel bounded by Tennessee Street, Davis Street, Anthony Street, and State Highway 5. This lot is marked by two large internally-lighted signs indicating the presence of free parking. There is one sign on the southeast corner of Tennessee Street and Davis Street (see Figure 8) and one sign on the eastern edge of the property along State Highway 5.

Figure 7 - Non-Typical Sign X4

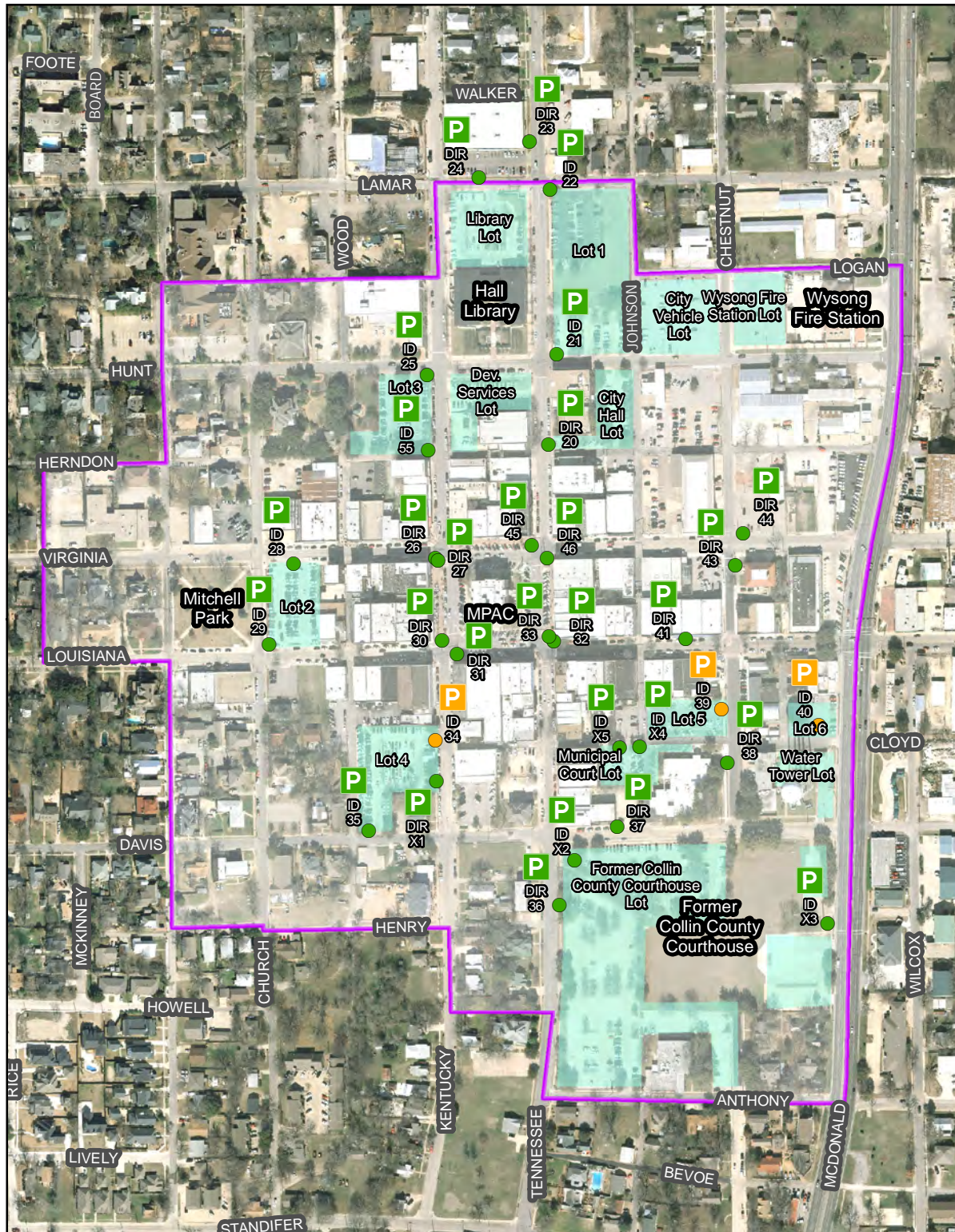


Figure 8 - Non-Typical Sign X2



Figure 9 below shows the location of wayfinding signage in and around McKinney's Historic Downtown Square. All signs that are part of the Wayfinding Program are numbered 20 through 55. Signs that are not typical of the Wayfinding Program are numbered X1 through X5. Signs that are present at the location marked on the map are shown as green. Signs that are missing are marked by their orange color.

Figure 9 - Parking Wayfinding Sign Map

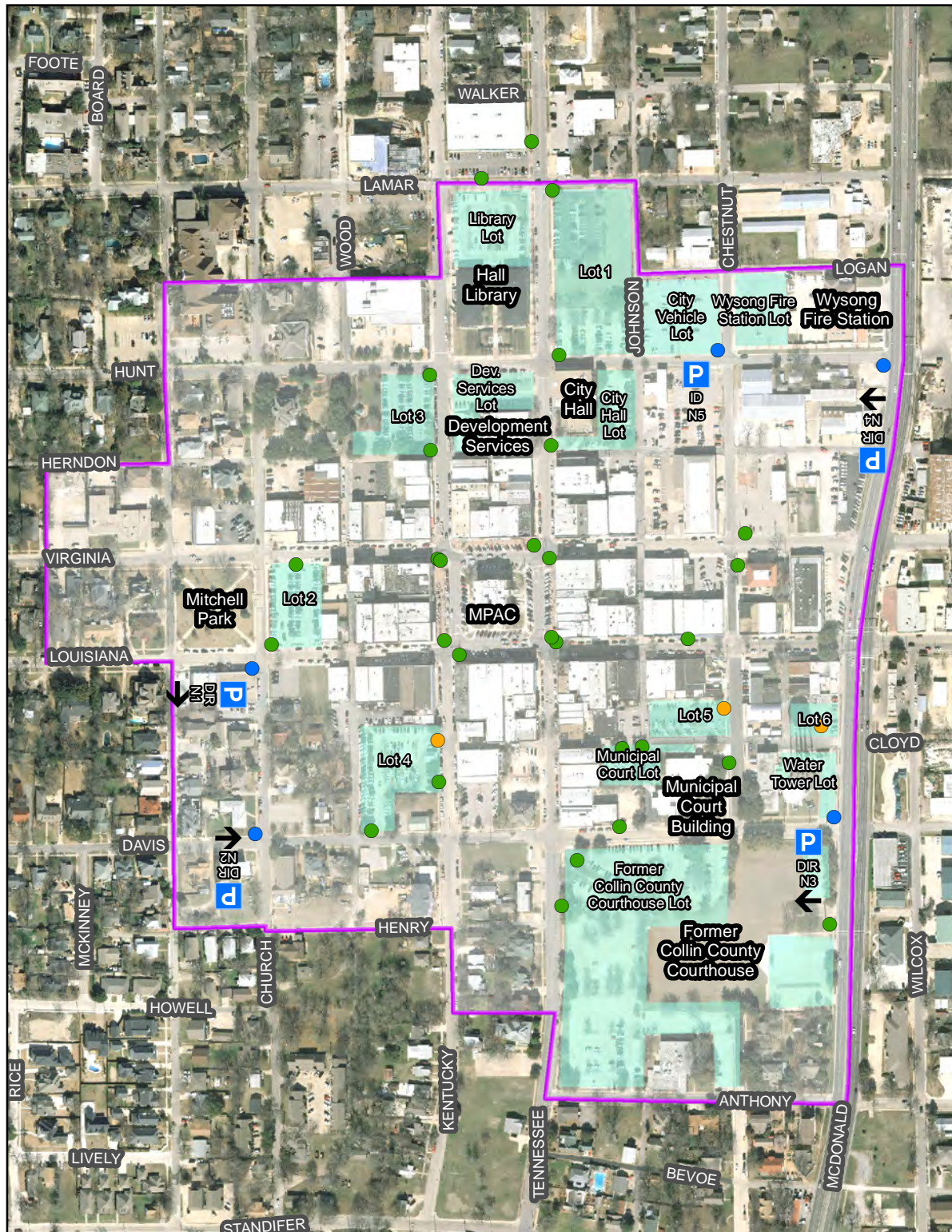


Parking Sign Present	Directional Sign	Typical Sign Number
Parking Sign Not Present	Directional Sign	Undocumented Sign Number

There is also the opportunity to install new parking signs directing drivers to free public parking lots. Figure 10 below shows new signs N1 through N5. Signs N1 through N4 are directional signs intended to direct drivers arriving to McKinney's Historic Downtown to free public parking lots. Sign N1, located on the corner of Louisiana Street and Church Street, directs drivers to turn right. Sign N2, located on the corner of Church Street and Davis Street then sends the drivers left towards City Lot 4. If this lot is full, drivers can continue straight until they arrive at Tennessee Street, where the large parking lot on the City-owned parcel is easy to see. Sign N3 will direct drivers on State Highway 5 northward to the same parking lot. Sign N4 directs southbound drivers on State Highway 5 to turn right on Hunt Street and either park in the City Vehicle Lot located between Johnson Street and Church Street north of Hunt Street (marked clearly as free public parking by new Identification Sign N5) or City Lot 1.

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Figure 10 - New Parking Sign Recommendations



- | | | | |
|---|--------------------------|-----|---------------------|
| ● | Parking Sign Present | DIR | Directional Sign |
| ● | Parking Sign Not Present | ID | Identification Sign |
| ● | New Parking Sign | ➔ | Direction of Arrow |

Wayfinding Evaluation

As part of the Update to the Parking Study, the signs that exist as part of the Wayfinding Program were evaluated as to their effectiveness. As noted above, public off-street parking lot occupancy has increased since 2009. The parking signs that are part of the Wayfinding Program are clear in font and easy to read under typical conditions. However, there are some signs that could be improved upon. For example, some signs are blocked by trees or are very badly faded. Other signs are not present. These signs and their conditions are described below.

Signs Faded from Weather Conditions

Figure 11 - Identification Sign 21



Issue

Sign is badly faded from sun and other weather conditions.

Recommendation

Sign should be restored in order to retain and improve original color.

Figure 12 - Identification Sign 28



Issue

Sign is badly faded from sun and other weather conditions.

Recommendation

Sign should be restored in order to retain and improve original color.

Figure 13 - Identification Sign 29



Issue

Sign is badly faded from sun and other weather conditions.

Recommendation

Sign should be restored in order to retain and improve original color.

Signs Not Visible Under Typical Conditions

Figure 14 - Identification Sign 55



Issue

Sign is obscured by trees when viewed from Kentucky Street southward.

Recommendation

Sign should be relocated in order to retain visibility.

Figure 15 - Directional Sign 46



Issue

Sign is obscured by trees when viewed from Tennessee Street northward.

Recommendation

Tree limbs should be trimmed in order to retain visibility.

Signs Not Present

Figure 16 - Identification Sign 40



Issue

Sign is missing.

Recommendation

Sign should be replaced.

Figure 17 - Identification Sign 39



Issue

Sign is missing.

Recommendation

Sign should be replaced.

Signs Not Typical of Wayfinding Program

Figure 18 - Undocumented Sign X1



Issue

Sign is not listed on official City Wayfinding map and does not match typical directional signs in color.

Recommendation

Sign should be replaced with typical Directional Sign and placed on official map (Kentucky Street south of Louisiana Street).

Figure 19 - Undocumented Sign X2



Issue

Sign is not listed on official City Wayfinding map.

Recommendation

Sign should be placed on official map (southeast corner of Tennessee Street and Davis Street).

Figure 20 - Undocumented Sign X3



Issue

Sign is not listed on official City Wayfinding map.

Recommendation

Sign should be placed on official map (west side of State Highway 5 between Davis Street and Anthony Street).

Figure 21 - Undocumented Sign X4



Issue

Sign is not listed on official City Wayfinding map and does not match typical identification signs in color or style.

Recommendation

Sign should be replaced with typical Directional Sign and placed on official map (southwest corner of Cloyd Street and Johnson Street).

Figure 22 - Undocumented Sign X5



Issue

Sign is not listed on official City Wayfinding map and does not match typical identification signs in color or style.

Recommendation

Sign should be replaced with typical Directional Sign and placed on official map (southwest corner of Cloyd Street and Johnson Street).

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Appendix C:

Public Structured Parking Facility Analysis

August 18, 2014

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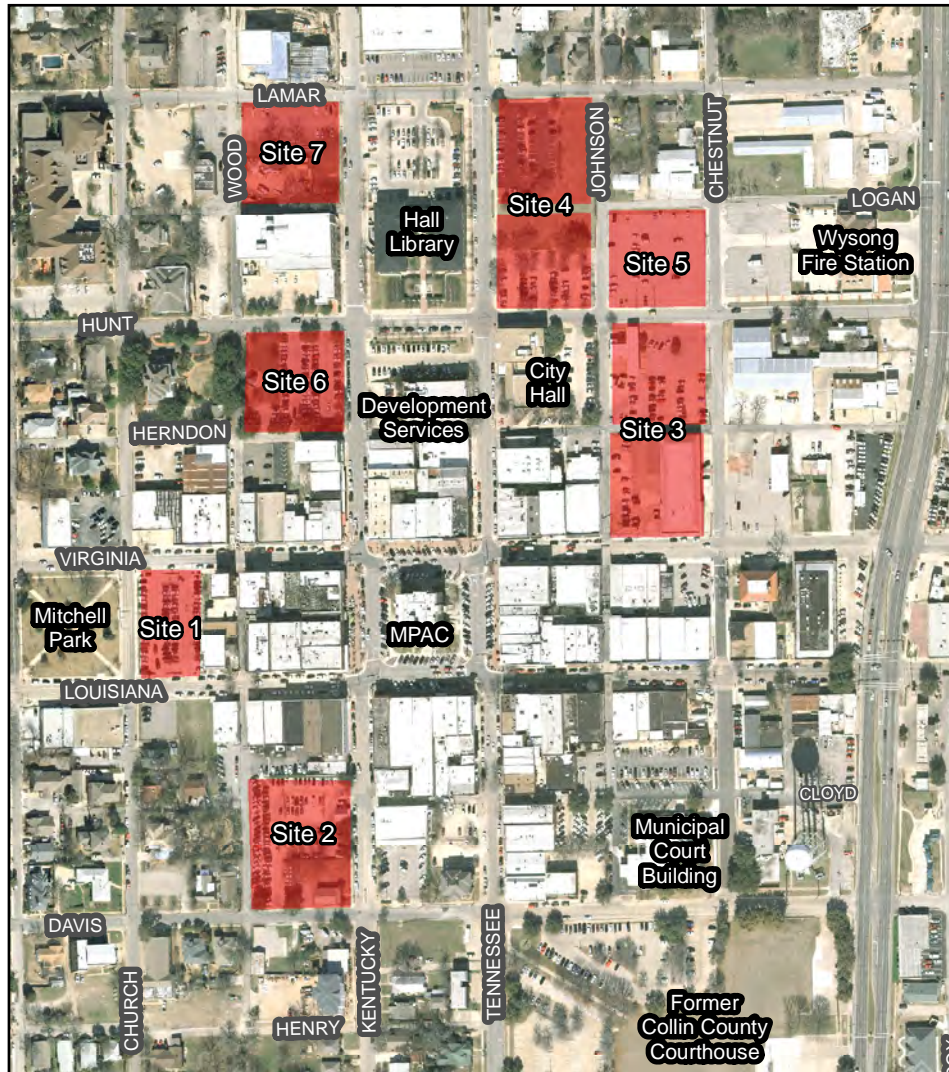
Assessment of Potential Sites

As part of the 2009 Parking Study, parking structure sites were identified based on availability of adequate land size, proximity to parking demand generators, potential to spur future economic development and their ability to implement the Town Center Master Plan vision (adopted in 2008). Seven (7) sites were originally evaluated as part of the parking study. Pursuant to recent City Council direction, this list has been narrowed down to four (4) potential sites for further evaluation. The evaluation of the parking structure sites was identical to the evaluation that was provided in the 2009 Parking Study, with the exception that updated cost estimates in 2014 dollars have been provided. In addition, a four-story parking structure option was evaluated for each site location.

Sites 1, 2, 3 and 6 are the sites that have been evaluated further and they are described below. For reference the seven original site locations are illustrated in Figure 23.

- Site 1** - This site is generally described as the existing surface parking lot (City Lot 2) adjacent to Church Street and bounded by Virginia Street to the north and Louisiana Street to the south. Access would likely be provided from Louisiana Street.
- Site 2** - This site is generally described as the existing surface parking lot (City Lot 4) and remote police annex north of Davis Street and bounded by Wood Street to the west and Kentucky Street to the east. Access would likely be provided from Davis Street.
- Site 3** - This site is generally described as the parcels currently occupied by an office building, bank drive-through, and privately-owned surface parking lot located west of Chestnut Street, between Virginia Street to the south and Hunt Street to the north. Access would likely be provided from Virginia Street and/or Chestnut Street.
- Site 6** - This site is generally described as the existing surface parking lot (City Lot 3) and City-owned park (Central Park) located south of Hunt Street between Wood Street to the west and Kentucky Street to the east. Access would likely be provided from Kentucky Street.

Figure 23 - Potential Parking Structure Sites



Evaluation Criteria and Matrix

In order to evaluate and provide a meaningful relative comparison of the four (4) potential parking structure sites, four (4) evaluation criteria were identified; the results of which are summarized in Table 17.

1. Meets Parking Needs

- a. What is the total net number of spaces added (gross garage spaces minus the number of spaces displaced by the proposed structure)?
- b. Does the total number of net spaces added contribute toward lessening the future parking deficit as defined by the parking study?
- c. Does the proposed structure have a potential for shared parking among different user groups?
- d. Is the proposed structure expandable to provide additional parking supply as demand increases?

2. Site Accessibility/Location

- a. Is the proposed structure located near Town Center generators and localized parking deficits, and is it visible to arriving patrons?
- b. Does the proposed structure adequately serve current destinations?
- c. Does the proposed structure adequately serve future destinations as identified in the Town Center Master Plan?
- d. What is the effect on traffic and pedestrian circulation?

3. Implements Town Center Master Plan Vision


























- a. Does the proposed structure incorporate urban design characteristics consistent with the Town Center Master Plan?
- b. Does the proposed structure serve as a catalyst for development/redevelopment?
- c. Does the proposed structure provide opportunity for public/private partnerships and redevelopment goals per the Town Center Master Plan?
- d. Does the proposed structure block, isolate, hinder, or negatively affect a particular area or areas from implementation of the Town Center Master Plan based on its location, size, context, etc.?

4. Cost Considerations

- a. Does the proposed parking structure incur construction costs consistent with current market conditions?
- b. What is the parking efficiency (SF/space)?
 1. Parking efficiency is defined as total parking area divided by total number of parking spaces and is typically defined per level and for the parking structure as a whole. A lower parking efficiency results in a more economical use of the parking structure and is typically more economical to construct.

- c. Are there land acquisition issues looking at current costs and future opportunity costs?
- d. Is the proposed parking structure expandable to provide for the opportunity of phased construction over time?

Table 17 - Parking Structure Site Evaluation

Evaluation Criteria		Site 1 Structure	Site 2 Structure	Site 3 Structure	Site 6 Structure
1	<i>Meets Parking Needs</i>				
2	<i>Site Accessibility/Location</i>				
3	<i>Implements Town Center Master Plan</i>				
4	<i>Cost Considerations</i>				
<i>Identified as viable site for potential parking structure development</i>					
Overall Rank		3 (Tie)	2	1	3 (Tie)
<div>  Poorly Addresses Criteria  Addresses Criteria </div> <div>  Moderately Addresses Criteria  Effectively Addresses Criteria  Best Addresses Criteria </div>					

Individual site summaries can be found at the end of this Appendix.

Summary of Parking Structures

Table 18 and Table 19 provide a summary of the three-story and four-story parking structure options for each site.

Table 18 - Parking Structure Summary - 3-Story Parking Structure

	Current Lot Capacity	Anticipated Garage Capacity (net spaces added)	Efficiency (space per sq. ft.)	Cost per sq. ft.	Cost per Car	Cost per net Additional Space	Probable Project Cost
Site 1 Structure	75	241 (166)	317	\$50.88	\$16,130	\$23,418	\$3,887,378
Site 2 Structure	94	400 (306)	334	\$50.35	\$16,805	\$21,968	\$6,722,072
Site 3 Structure	124	685 (561)	324	\$53.46	\$17,337	\$21,169	\$11,876,037
Site 6 Structure	84	285 (201)	341	\$50.95	\$17,395	\$24,664	\$4,957,550

Table 19 - Parking Structure Summary - 4-Story Parking Structure

	Current Lot Capacity	Anticipated Garage Capacity (net spaces added)	Efficiency (space per sq. ft.)	Cost per sq. ft.	Cost per Car	Cost per net Additional Space	Probable Project Cost
Site 1 Structure	75	327 (252)	315	\$49.09	\$15,474	\$20,079	\$5,060,029
Site 2 Structure	94	544 (450)	333	\$47.78	\$15,887	\$19,205	\$8,642,445
Site 3 Structure	124	930 (806)	322	\$52.76	\$16,968	\$19,578	\$15,779,930
Site 6 Structure	84	389 (305)	338	\$49.16	\$16,620	\$21,198	\$6,465,318

Notes:

1. Cost estimates are based upon estimates previously provided by Kimley-Horn & Associates and include any associated land acquisition costs. Estimates do not incorporate any architectural treatment beyond the base concrete structure.
2. A more detailed analysis of the probable costs can be found at the end of this appendix.

Comparison of Probable Construction Costs 2009 vs 2014

A comparison of the estimated construction costs for a three-story parking structure in 2009 and 2014 is shown in Table 20. This table is provided to illustrate the rise in construction costs (including land acquisition) and adjustments in inflation from 2009. A comparison for a four-story parking structure has not been provided, as estimates were not provided for a four-story parking structure in 2009.

Table 20 - Comparison of Probable Construction Costs (2009 - 2014) - 3-Story Parking Structure

	Cost per Car (2009)	Cost per Car (2014)	Cost per net Additional Space (2009)	Cost per net Additional Space (2009)	Probable Project Cost (2009)	Probable Project Cost (2014)
Site 1 Structure	\$13,665	\$16,130	\$19,838	\$23,418	\$3,293,174	\$3,887,378
Site 2 Structure	\$14,857	\$16,805	\$19,421	\$21,968	\$5,942,828	\$6,722,072
Site 3 Structure	\$15,954	\$17,337	\$19,481	\$21,169	\$10,928,770	\$11,876,037
Site 6 Structure	\$14,740	\$17,395	\$20,899	\$24,664	\$4,200,778	\$4,957,550

Recommendation

Through the evaluation of the four potential parking structure sites, ***a three-story parking structure located on Site 3 was determined to best satisfy the evaluation criteria that was established.*** A three-story parking structure at this location provides the largest number of parking spaces (in comparison to the three other sites evaluated) in an area of future growth where parking demand is anticipated. A future City Municipal Complex that could be located on Site 4 (See Figure 23), would benefit from the parking structure being located on Site 3 and lessen the need for an additional parking structure be constructed with the Municipal Complex. Additionally, Site 3 scored highly in terms of cost per net additional space, accessibility to and from the site, and its proximity to both the Downtown Square and a potential future rail transit station.

As part of the recommendation for Site 3, it is recommended that commercial lease space be provided or reserved to a depth of approximately 100-feet along Virginia Street. By providing commercial space along the frontage of the parking structure, it helps to activate activity off McKinney's Historic Town Square and create a pedestrian connection between downtown and the future rail transit station. In addition, it would help link the planned three-story commercial project that is located across Chestnut Street, just east of Site 3, to the Historic Town Square. If commercial lease space were to be provided, the anticipated parking capacity of the garage would be reduced by approximately 56 parking spaces.

It is also strongly recommended that specific attention be paid to the operation and maintenance costs that are associated with owning a structured parking facility. Possible funding sources could include, but not limited to a comprehensive downtown parking rate strategy. The construction of a structured parking facility without consideration of long-term operation and maintenance cost could prove to be detrimental to future City budgets.

A summary of the key aspects for a three-story parking structure on Site 3 are listed below:

- Adds the most number of net parking spaces relative to other sites (561 spaces for three-story option)
- Schematic design concept has a high parking efficiency (324 SF/car)
- Opportunity for the structure to be constructed in phases
- Location is well-positioned between existing parking generators and areas of future growth.
- Close proximity to the Downtown Square, future rail transit station, and future Entertainment District
- Potential for excellent parking identification signage and access from SH 5
- Most likely to support immediate redevelopment opportunities identified in the Town Center Master Plan
- Establishes viable pedestrian connection between downtown and future rail transit station (fills in critical block face along Virginia Street)

- Close proximity to future City Municipal Complex (reduces the need for an additional parking structure)

Of the four sites evaluated, a three-story parking structure on Site 2 was the highest rated alternative to Site 3. Site 2 scored well due to its accessibility and its ability to accommodate the second largest amount of parking spaces. However, due to its location in Zone C, an area that is not anticipated to have a significant future parking demand and where public parking is already concentrated, Site 2 does not appear to be a good option for the location of a parking structure. Additionally, the massing and scale of a potential three-story or four-story parking structure would likely be incompatible with existing adjacent land uses (which include the historic Collin County Jail, single-family detached residences, and one-story restaurants).

Possible Funding Options

Funding to construct a parking structure could come from a variety of sources. These sources could include a mix of the following:

2010 Bond Election Funds - As part of the 2010 Bond Election, voters approved \$3,000,000 to go towards downtown parking improvements. Bonds may be taxable depending on the use of the structure (ex: charged or private parking use).

TIRZ 1 Funds - Currently, the TIRZ 1 fund could feasibly carry the annual debt service of an amount not to exceed \$5,000,000. This debt obligation would translate into an annual debt service payment of approximately \$400,000. Utilizing the TIRZ for this purpose so early in the life of the TIRZ may impact its ability to be used for other projects including, but not limited to the reconstruction of State Highway 5 or other vacant or underutilized sites.

McKinney Community Development Corporation (MCDC) Grant - Under the application guidelines for project grants, a parking structure would be an eligible project for grant funding. However, funding approval for this project would be contingent upon the overall goals and recommendation of the MCDC board.

Additional Funding - At present, a funding gap exists for the recommended three-story parking structure on Site 3. The anticipated \$8,000,000 in Bond Election Funds and TIRZ 1 Funds will not cover the estimated project cost of the Site 3 recommendation. Therefore, additional funding sources would need to be identified.

Table 21 and Table 22 below illustrate example funding scenarios for each site and structure. As shown, there are three instances where a potential funding shortfall is likely to occur: Site 3 (3-Story Parking Structure), Site 2 (4-Story Parking Structure) and Site 3 (4-Story Parking Structure). No MCDC Grant funds were applied in the scenarios as funding amounts are unknown at this time. It is assumed that any MCDC Grant funds that were awarded would go towards any funding shortfall and/or reduce the amount of TIRZ Funds that would be utilized.

Table 21 - Example Funding Scenarios - 3-Story Parking Structure

	Probable Project Cost	2010 Bond Election Funds	TIRZ 1 Funds	MCDC Grant	Potential Funding Shortfall
Site 1 Structure	\$3,887,378	\$3,000,000	\$887,378	Unknown	\$0
Site 2 Structure	\$6,722,072	\$3,000,000	\$3,722,072	Unknown	\$0
Site 3 Structure	\$11,876,037	\$3,000,000	\$5,000,000	Unknown	\$3,876,037
Site 6 Structure	\$4,957,550	\$3,000,000	\$1,957,550	Unknown	\$0

Table 22 - Example Funding Scenarios - 4-Story Parking Structure

	Probable Project Cost	2010 Bond Election Funds	TIRZ 1 Funds	MCDC Grant	Potential Funding Shortfall
Site 1 Structure	\$5,060,029	\$3,000,000	\$2,060,029	Unknown	\$0
Site 2 Structure	\$8,642,445	\$3,000,000	\$5,000,000	Unknown	\$642,445
Site 3 Structure	\$15,779,930	\$3,000,000	\$5,000,000	Unknown	\$7,779,930
Site 6 Structure	\$6,465,318	\$3,000,000	\$3,465,318	Unknown	\$0

Structured Parking Specifications

Site 1 Parking Structure

Site 1 Parking Structure (Three-Story)

241 spaces, 317 sf/space, 3- level, 2-bay Parking Structure

Site 1 Parking Structure (Four-Story)

327 spaces, 315 sf/space, 4- level, 2-bay Parking Structure

Summary of Site 1 Parking Structure:

- Two or Three elevated parking levels above surface parking below
- Two 62-ft wide parking bays (double loaded)
- Single entry / exit from Louisiana Street
- Parking on the ramps with flat end bay parking
- Replaces 75 existing public parking spaces (City Lot 2)

“Pros” of Site 1 Parking Structure:

- Close access to Downtown Square (located in Ring 2)
- Highly visible access from US 75 via Louisiana Street
- Utilizes existing City-owned property
- Most efficient parking structure based on relative parking efficiency
- Relative low cost to construct compared to other sites

“Cons” of Site 1 Parking Structure:

- Provides least amount of additional parking supply
- Inconsistent with Town Center Master Plan
- Relatively high cost per net additional space compared to other sites
- Potential traffic/circulation issues

Site 2 Parking Structure

Site 2 Parking Structure (Three-Story)

400 spaces, 334 sf/space, 3- level, 3-bay Parking Structure

Site 2 Parking Structure (Four-Story)

544 spaces, 333 sf/space, 4- level, 3-bay Parking Structure

Summary of Site 2 Parking Structure:

- Two or Three elevated parking levels above surface parking below
- Three 62-ft wide parking bays (double loaded)
- Single entry / exit from Davis Street
- Parking on the single interior ramp with flat end bay parking and perimeter parking
- Replaces 90 existing public parking spaces (City Lot 4), 4 existing private parking spaces, and a 1,000 square foot office building

“Pros” of Site 2 Parking Structure:

- Close access to Downtown Square (located in Ring 1 and Ring 2)
- Good access from US 75 via Louisiana Street
- Most of site currently owned by the McKinney Economic Development Corporation (MEDC), providing an opportunity for possible partnership
- Provides a high amount of additional parking supply relative to other options
- Flat façade is easier to treat architecturally
- Low relative cost per square foot and cost per net additional space

“Cons” of Site 2 Parking Structure:

- Massing and design of building would need to consider adjacent historic jail
- Massing and scale of structure may be incompatible with existing land uses to the west and south
- Located on south side of Downtown Square where public parking supply is already concentrated.
- Some land acquisition and demolition is required
- Relatively inefficient structure compared to other sites

Site 3 Parking Structure

Site 3 Parking Structure (Three-Story)

685 spaces, 324 sf/space, 3-level, 3-bay Parking Structure

Site 3 Parking Structure (Four-Story)

930 spaces, 322 sf/space, 4-level, 3-bay Parking Structure

Summary of Site 3 Parking Structure:

- Two or Three elevated parking levels above surface parking below
- Three 62-ft wide parking bays (double loaded)
- Dual entry / exits from Virginia Street and Chestnut Street
- Parking on the single interior ramp with flat end bay parking and perimeter parking
- Replaces 124 private parking spaces, one 18,000 square foot office building, and one 450 square foot bank drive-through building

“Pros” of Site 3 Parking Structure:

- Maximizes supply potential
- Close access to Downtown Square (located in Ring 2)
- Opportunity for parking structure to be constructed in phases
- Highly visible access from SH 5 via Virginia Street
- Most likely to support redevelopment opportunities identified in the Town Center Master Plan
- Establishes viable pedestrian connection between downtown and future rail transit station (fills in critical block face along Virginia Street)
- Efficient parking structure based on relative parking efficiency
- Flat façade is easier to treat architecturally
- Close proximity to future City Municipal Complex (eliminates the need for a parking structure)

“Cons” of Site 3 Parking Structure:

- Land acquisition and some demolition is required
- Closing of Herndon Street is required between Johnson Street and Chestnut Street (an asphalt street in generally poor condition that is 20’ right-of-way width and 17’ asphalt pavement width)
- Cost of larger parking structure and/or phasing may be more difficult to finance

Site 6 Parking Structure

Site 6 Parking Structure (Three-Story)

252 spaces, 341 sf/space, 3-level, 3-bay Parking Structure

Site 6 Parking Structure (Four-Story)

389 spaces, 338 sf/space, 4-level, 3-bay Parking Structure

Summary of Site 6 Parking Structure:

- Two or Three elevated parking levels above surface parking below
- Three 62-ft wide parking bays (double loaded)
- Single entry / exit from Kentucky Street
- Parking on the ramps with flat end bay parking
- Replaces 84 existing public parking spaces (City Lot 3) and approximately one-quarter of an acre of park space (Central Park)

“Pros” of Site 6 Parking Structure:

- Utilizes existing City-owned property
- Close access to Downtown Square (located in Ring 2)

“Cons” of Site 6 Parking Structure:

- Inefficient parking structure based on relative parking efficiency
- Requires removal of existing City-owned park (Central Park)
- Provides smaller amount of additional parking supply relative to other sites
- Highest cost per net additional space relative to other sites
- Massing and scale of parking structure may be incompatible with existing land uses to the west and northwest
- Difficult to direct vehicles to site based on existing one-way street configurations

City of McKinney Historic Town Center Parking Study
Site 1 Structure (Three-Story)

Professional Services		\$254,690
A/E Design Fees	\$214,476	8.00%
Materials Testing Fees	\$40,214	1.50%
Sub-Total PS&E	\$254,690	
Construction Cost of Work		\$3,351,188
\$ for Parking	\$2,680,950	
Land Acquisition	\$0	City Owned Land
Sub-Total Hard Cost of Work	\$2,680,950	
Design Contingency	\$402,143	15.00%
CM Construction Contingency	\$134,048	5.00%
Escalation	\$134,048	5.00%
Sub-Total Construct Cost of Work	\$3,351,188	
Construction Management		\$134,048
Construction Phase Fee	\$134,048	5.00%
Sub-Total CM	\$134,048	
Administration / Other		\$147,452
Permitting	\$26,810	1.00%
Special Inspections	\$40,214	1.50%
Owner Reserves	\$80,429	3.00%
Sub-Total Other	\$147,452	
Total Project Cost Projection		\$3,887,378
Efficiency =	317	SF/Car with 9'-0" Stalls
Total Spaces =	241	= \$16,130.20 per Car
Net =	166	75 existing parking spaces
Total Square Feet =	76,410	= \$50.88 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$25.00	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$40.00	
A/E Design Fees	8.0%	of hard construction cost
Materials Testing	1.5%	of hard construction cost
Special Inspections	1.5%	of hard construction cost
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study

Site 1 Structure (Four-Story)

Professional Services		\$331,519
A/E Design Fees	\$279,174	8.00%
Materials Testing Fees	\$52,345	1.50%
Sub-Total PS&E	\$331,519	
Construction Cost of Work		\$4,362,094
\$ for Parking	\$3,489,675	
Land Acquisition	\$0	City Owned Land
Sub-Total Hard Cost of Work	\$3,489,675	
Design Contingency	\$523,451	15.00%
CM Construction Contingency	\$174,484	5.00%
Escalation	\$174,484	5.00%
Sub-Total Construct Cost of Work	\$4,362,094	
Construction Management		\$174,484
Construction Phase Fee	\$174,484	5.00%
Sub-Total CM	\$174,484	
Administration / Other		\$191,932
Permitting	\$34,897	1.00%
Special Inspections	\$52,345	1.50%
Owner Reserves	\$104,690	3.00%
Sub-Total Other	\$191,932	
Total Project Cost Projection		\$5,060,029

Efficiency =	315	SF/Car with 9'-0" Stalls
Total Spaces =	327	= \$15,474.09 per Car
Net =	252	75 existing parking spaces
Total Square Feet =	103,070	= \$49.09 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$22.50	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$37.50	
A/E Design Fees	8.0%	of hard construction cost
Materials Testing	1.5%	of hard construction cost
Special Inspections	1.5%	of hard construction cost
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 2 Structure (Three-Story)

Professional Services		\$440,412
A/E Design Fees	\$370,873	8.00%
Materials Testing Fees	\$69,539	1.50%
Sub-Total PS&E	\$440,412	
Construction Cost of Work		\$5,794,890
\$ for Parking	\$4,360,500	
Land Acquisition	\$275,412	Per Collin County Appraisal District Records
Sub-Total Hard Cost of Work	\$4,635,912	
Design Contingency	\$695,387	15.00%
CM Construction Contingency	\$231,796	5.00%
Escalation	\$231,796	5.00%
Sub-Total Construct Cost of Work	\$5,794,890	
Construction Management		\$231,796
Construction Phase Fee	\$231,796	5.00%
Sub-Total CM	\$231,796	
Administration / Other		\$254,975
Permitting	\$46,359	1.00%
Special Inspections	\$69,539	1.50%
Owner Reserves	\$139,077	3.00%
Sub-Total Other	\$254,975	
Total Project Cost Projection		\$6,722,072
Efficiency =	334	SF/Car with 9'-0" Stalls
Total Spaces =	400	= \$16,805.18 per Car
Net =	306	94 existing parking spaces
Total Square Feet =	133,506	= \$50.35 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$22.50	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$37.50	
A/E Design Fees	8.0%	of hard construction cost
Materials Testing	1.5%	of hard construction cost
Special Inspections	1.5%	of hard construction cost
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 2 Structure (Four-Story)

Professional Services		\$566,229
A/E Design Fees	\$476,825	8.00%
Materials Testing Fees	\$89,405	1.50%
Sub-Total PS&E	\$566,229	
Construction Cost of Work		\$7,450,384
\$ for Parking	\$5,684,895	
Land Acquisition	\$275,412	Per Collin County Appraisal District Records
Sub-Total Hard Cost of Work	\$5,960,307	
Design Contingency	\$894,046	15.00%
CM Construction Contingency	\$298,015	5.00%
Escalation	\$298,015	5.00%
Sub-Total Construct Cost of Work	\$7,450,384	
Construction Management		\$298,015
Construction Phase Fee	\$298,015	5.00%
Sub-Total CM	\$298,015	
Administration / Other		\$327,817
Permitting	\$59,603	1.00%
Special Inspections	\$89,405	1.50%
Owner Reserves	\$178,809	3.00%
Sub-Total Other	\$327,817	

Total Project Cost Projection	\$8,642,445
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Efficiency =	333		SF/Car with 9'-0" Stalls
Total Spaces =	544	=	\$15,886.85 per Car
Net =	450		94 existing parking spaces
Total Square Feet =	180,882	=	\$47.78 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$20.00	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$35.00	
A/E Design Fees	8.0%	of hard construction cost
Materials Testing	1.5%	of hard construction cost
Special Inspections	1.5%	of hard construction cost
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 3 Structure (Three-Story)

Professional Services		\$778,085
A/E Design Fees	\$655,230	8.00%
Materials Testing Fees	\$122,856	1.50%
Sub-Total PS&E	\$778,085	

Construction Cost of Work		\$10,237,963
\$ for Parking	\$6,686,055	
Land Acquisition	\$1,504,316	Per Collin County Appraisal District Records
Sub-Total Hard Cost of Work	\$8,190,371	
Design Contingency	\$1,228,556	15.00%
CM Construction Contingency	\$409,519	5.00%
Escalation	\$409,519	5.00%
Sub-Total Construct Cost of Work	\$10,237,963	

Construction Management		\$409,519
Construction Phase Fee	\$409,519	5.00%
Sub-Total CM	\$409,519	

Administration / Other		\$450,470
Permitting	\$81,904	1.00%
Special Inspections	\$122,856	1.50%
Owner Reserves	\$245,711	3.00%
Sub-Total Other	\$450,470	

Total Project Cost Projection	\$11,876,037
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Efficiency =	324		SF/Car with 9'-0" Stalls
Total Spaces =	685	=	\$17,337.28 per Car
Net =	561		124 existing parking spaces
Total Square Feet =	222,150	=	\$53.46 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$20.00	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$35.00	
A/E Design Fees	8.0%	
Materials Testing	1.5%	
Special Inspections	1.5%	
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 3 Structure (Four-Story)

Professional Services		\$1,033,857
A/E Design Fees	\$870,617	8.00%
Materials Testing Fees	\$163,241	1.50%
Sub-Total PS&E	\$1,033,857	
Construction Cost of Work		\$13,603,388
\$ for Parking	\$9,378,395	
Land Acquisition	\$1,504,316	Per Collin County Appraisal District Records
Sub-Total Hard Cost of Work	\$10,882,711	
Design Contingency	\$1,632,407	15.00%
CM Construction Contingency	\$544,136	5.00%
Escalation	\$544,136	5.00%
Sub-Total Construct Cost of Work	\$13,603,388	
Construction Management		\$544,136
Construction Phase Fee	\$544,136	5.00%
Sub-Total CM	\$544,136	
Administration / Other		\$598,549
Permitting	\$108,827	1.00%
Special Inspections	\$163,241	1.50%
Owner Reserves	\$326,481	3.00%
Sub-Total Other	\$598,549	
Total Project Cost Projection		\$15,779,930

Efficiency =	322	SF/Car with 9'-0" Stalls
Total Spaces =	930	= \$16,967.67 per Car
Net =	806	124 existing parking spaces
Total Square Feet =	299,074	= \$52.76 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$20.00	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$35.00	
A/E Design Fees	8.0%	
Materials Testing	1.5%	
Special Inspections	1.5%	
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 6 Structure (Three-Story)

Professional Services		\$324,805
A/E Design Fees	\$273,520	8.00%
Materials Testing Fees	\$51,285	1.50%
Sub-Total PS&E	\$324,805	

Construction Cost of Work		\$4,273,750
\$ for Parking	\$3,419,000	
Land Acquisition	\$0	City Owned Land
Sub-Total Hard Cost of Work	\$3,419,000	
Design Contingency	\$512,850	15.00%
CM Construction Contingency	\$170,950	5.00%
Escalation	\$170,950	5.00%
Sub-Total Construct Cost of Work	\$4,273,750	

Construction Management		\$170,950
Construction Phase Fee	\$170,950	5.00%
Sub-Total CM	\$170,950	

Administration / Other		\$188,045
Permitting	\$34,190	1.00%
Special Inspections	\$51,285	1.50%
Owner Reserves	\$102,570	3.00%
Sub-Total Other	\$188,045	

Total Project Cost Projection	\$4,957,550
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Efficiency =	341		SF/Car with 9'-0" Stalls
Total Spaces =	285	=	\$17,394.91 per Car
Net =	201		84 existing parking spaces
Total Square Feet =	97,304	=	\$50.95 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$25.00
Estimated Construction \$/SF for Elevated Parking	\$40.00

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.

A/E Design Fees	8.0%	of hard construction cost
Materials Testing	1.5%	of hard construction cost
Special Inspections	1.5%	of hard construction cost
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

City of McKinney Historic Town Center Parking Study
Site 6 Structure (Four-Story)

Professional Services		\$423,590
A/E Design Fees	\$356,707	8.00%
Materials Testing Fees	\$66,883	1.50%
Sub-Total PS&E	\$423,590	
Construction Cost of Work		\$5,573,550
\$ for Parking	\$4,458,840	
Land Acquisition	\$0	City Owned Land
Sub-Total Hard Cost of Work	\$4,458,840	
Design Contingency	\$668,826	15.00%
CM Construction Contingency	\$222,942	5.00%
Escalation	\$222,942	5.00%
Sub-Total Construct Cost of Work	\$5,573,550	
Construction Management		\$222,942
Construction Phase Fee	\$222,942	5.00%
Sub-Total CM	\$222,942	
Administration / Other		\$245,236
Permitting	\$44,588	1.00%
Special Inspections	\$66,883	1.50%
Owner Reserves	\$133,765	3.00%
Sub-Total Other	\$245,236	

Total Project Cost Projection	\$6,465,318
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Efficiency =	338		SF/Car with 9'-0" Stalls
Total Spaces =	389	=	\$16,620.35 per Car
Net =	305		84 existing parking spaces
Total Square Feet =	131,520	=	\$49.16 per SF

Assumptions:

Estimated Construction \$/SF for at Grade Parking	\$22.50	The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgement as a design profession familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinion of probable costs.
Estimated Construction \$/SF for Elevated Parking	\$37.50	
A/E Design Fees	8.0%	
Materials Testing	1.5%	
Special Inspections	1.5%	
Construction Manager Construction Phase Fees	5.0%	of hard construction cost
Design Contingency	15.0%	of hard construction cost
CM Construction Contingency	5.0%	of hard construction cost
Escalation	5.0%	of hard construction cost to mid-2014
Permitting	1.0%	of hard construction cost
Owner Reserves	3.0%	of hard construction cost

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Appendix D:

Parking Occupancy Trends and Data
2004, 2005, 2006, 2009, and 2014

August 18, 2014

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Table 23 - Trends in Parking Occupancy

	Off-Street Public Parking Occupancy	Off-Street Private Parking Occupancy	On-Street Parking Occupancy	Total Parking Occupancy
2004	60%	51%	63%	56%
2005	72%	62%	63%	64%
2006	67%	61%	64%	63%
2009	51%	46%	74%	53%
2014	53%	36%	83%	52%
<i>Note: Parking occupancy information gathered from existing 2009 McKinney Historic Town Center Parking Study and City of McKinney staff parking counts from June 2014. Data shown is the maximum value of both weekday and weekend counts.</i>				

Table 24 - Trends in Parking Occupancy by Zone

	Zone A	Zone B	Zone C	Zone D
2004	55%	42%	42%	74%
2005	57%	51%	51%	90%
2006	56%	50%	50%	88%
2009	66%	41%	54%	30%
2014	66%	56%	63%	51%
<i>Note: Parking occupancy information gathered from existing 2009 McKinney Historic Town Center Parking Study and City of McKinney staff parking counts from June 2014. Data shown is the maximum value of both weekday and weekend counts.</i>				

Table 25 - Trends in Parking Occupancy by Ring

	Ring 1	Ring 2	Ring 3
2004	75%	54%	53%
2005	75%	61%	63%
2006	85%	57%	60%
2009	88%	63%	29%
2014	91%	76%	33%
<i>Note: Parking occupancy information gathered from existing 2009 McKinney Historic Town Center Parking Study and City of McKinney staff parking counts from June 2014. Data shown is the maximum value of both weekday and weekend counts.</i>			

Table 26 - Parking Occupancy by Zone - 2004 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	272	123	45.2%	58	21.3%	92	33.8%	33.5%	66.5%
B	135	66	48.9%	57	42.2%	59	43.7%	44.9%	55.1%
C	94	73	77.7%	47	50.0%	61	64.9%	64.2%	35.8%
D	40	7	17.5%	7	17.5%	15	37.5%	24.2%	75.8%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	203	131	64.5%	136	67.0%	134	66.0%	65.8%	34.2%
B	263	174	66.2%	155	58.9%	151	57.4%	60.8%	39.2%
C	214	123	57.5%	122	57.0%	121	56.5%	57.0%	43.0%
D	552	114	20.7%	148	26.8%	134	24.3%	23.9%	76.1%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	175	87	49.7%	58	33.1%	65	37.1%	40.0%	60.0%
B	97	62	63.9%	37	38.1%	41	42.3%	48.1%	51.9%
C	129	51	39.5%	40	31.0%	47	36.4%	35.7%	64.3%
D	81	31	38.3%	28	34.6%	31	38.3%	37.0%	63.0%

Table 27 - Parking Occupancy by Zone - 2005 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	272	119	43.8%	72	26.5%	87	32.0%	34.1%	65.9%
B	135	44	32.6%	47	34.8%	46	34.1%	33.8%	66.2%
C	94	50	53.2%	29	30.9%	39	41.5%	41.8%	58.2%
D	40	7	17.5%	8	20.0%	22	55.0%	30.8%	69.2%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	203	134	66.0%	142	70.0%	149	73.4%	69.8%	30.2%
B	263	202	76.8%	168	63.9%	185	70.3%	70.3%	29.7%
C	214	147	68.7%	152	71.0%	140	65.4%	68.4%	31.6%
D	552	33	6.0%	36	6.5%	44	8.0%	6.8%	93.2%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	175	111	63.4%	76	43.4%	80	45.7%	50.9%	49.1%
B	97	55	56.7%	29	29.9%	33	34.0%	40.2%	59.8%
C	129	61	47.3%	46	35.7%	52	40.3%	41.1%	58.9%
D	81	34	42.0%	27	33.3%	41	50.6%	42.0%	58.0%

Table 28 - Parking Occupancy by Zone - 2006 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	272	143	52.6%	95	34.9%	84	30.9%	39.5%	60.5%
B	135	39	28.9%	46	34.1%	39	28.9%	30.6%	69.4%
C	94	71	75.5%	44	46.8%	53	56.4%	59.6%	40.4%
D	40	12	30.0%	11	27.5%	15	37.5%	31.7%	68.3%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	203	152	74.9%	134	66.0%	144	70.9%	70.6%	29.4%
B	263	216	82.1%	187	71.1%	205	77.9%	77.1%	22.9%
C	214	162	75.7%	142	66.4%	153	71.5%	71.2%	28.8%
D	552	71	12.9%	80	14.5%	46	8.3%	11.9%	88.1%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	175	121	69.1%	66	37.7%	75	42.9%	49.9%	50.1%
B	97	76	78.4%	33	34.0%	37	38.1%	50.2%	49.8%
C	129	71	55.0%	49	38.0%	52	40.3%	44.4%	55.6%
D	81	42	51.9%	27	33.3%	30	37.0%	40.7%	59.3%

Table 29 - Parking Occupancy by Zone - 2009 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	267	101	37.8%	55	20.6%	49	18.4%	25.6%	74.4%
B	301	220	73.1%	214	71.1%	221	73.4%	72.5%	27.5%
C	90	64	71.1%	33	36.7%	38	42.2%	50.0%	50.0%
D	604	494	81.8%	500	82.8%	486	80.5%	81.7%	18.3%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	210	149	71.0%	168	80.0%	154	73.3%	74.8%	25.2%
B	274	223	81.4%	194	70.8%	195	71.2%	74.5%	25.5%
C	251	219	87.3%	207	82.5%	179	71.3%	80.3%	19.7%
D	45	19	42.2%	19	42.2%	18	40.0%	41.5%	58.5%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	193	108	56.0%	71	36.8%	80	41.5%	44.7%	55.3%
B	99	66	66.7%	29	29.3%	26	26.3%	40.7%	59.3%
C	99	73	73.7%	45	45.5%	50	50.5%	56.6%	43.4%
D	70	33	47.1%	33	47.1%	27	38.6%	44.3%	55.7%

Table 30 - Parking Occupancy by Zone - 2014 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	260	173	66.5%	47	17.9%	69	26.6%	37.0%	63.0%
B	253	154	60.7%	137	54.3%	135	53.2%	56.1%	43.9%
C	102	67	65.7%	28	27.5%	36	35.3%	42.8%	57.2%
D	651	482	74.1%	436	67.0%	444	68.2%	69.8%	30.2%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	258	232	89.8%	206	79.8%	202	78.2%	82.6%	17.4%
B	288	187	64.9%	155	53.9%	167	57.8%	58.9%	41.1%
C	261	233	89.3%	204	78.2%	198	75.9%	81.1%	18.9%
D	46	36	79.1%	32	69.1%	28	59.8%	69.3%	30.7%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Zone	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
A	183	114	62.2%	29	15.8%	40	21.6%	33.2%	66.8%
B	87	62	71.5%	23	26.2%	26	29.3%	42.3%	57.7%
C	99	75	75.8%	36	36.4%	39	39.4%	50.5%	49.5%
D	88	77	88.0%	55	62.3%	45	50.9%	67.0%	33.0%

Table 31 - Parking Occupancy by Ring - 2004 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	369	176	47.7%	87	23.6%	145	39.3%	36.9%	63.1%
3	172	92	53.5%	82	47.7%	82	47.7%	49.6%	50.4%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	62	34	54.8%	29	46.8%	30	48.4%	50.0%	50.0%
2	329	227	69.0%	208	63.2%	205	62.3%	64.8%	35.2%
3	841	361	42.9%	382	45.4%	381	45.3%	44.6%	55.4%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	180	62	34.4%	8	4.4%	19	10.6%	16.5%	83.5%
2	154	47	30.5%	35	22.7%	41	26.6%	26.6%	73.4%
3	148	110	74.3%	101	68.2%	107	72.3%	71.6%	28.4%

Table 32 - Parking Occupancy by Ring - 2005 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	369	143	38.8%	77	20.9%	107	29.0%	29.5%	70.5%
3	172	77	44.8%	79	45.9%	87	50.6%	47.1%	52.9%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	62	33	53.2%	34	54.8%	30	48.4%	52.2%	47.8%
2	329	227	69.0%	221	67.2%	212	64.4%	66.9%	33.1%
3	841	259	30.8%	246	29.3%	276	32.8%	31.0%	69.0%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	180	95	52.8%	30	16.7%	41	22.8%	30.7%	69.3%
2	154	58	37.7%	45	29.2%	54	35.1%	34.0%	66.0%
3	148	108	73.0%	103	69.6%	111	75.0%	72.5%	27.5%

Table 33 - Parking Occupancy by Ring - 2006 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	369	169	45.8%	122	33.1%	119	32.2%	37.0%	63.0%
3	172	97	56.4%	74	43.0%	73	42.4%	47.3%	52.7%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	62	40	64.5%	29	46.8%	31	50.0%	53.8%	46.2%
2	329	251	76.3%	213	64.7%	228	69.3%	70.1%	29.9%
3	841	311	37.0%	302	35.9%	289	34.4%	35.8%	64.2%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	180	62	34.4%	8	4.4%	19	10.6%	16.5%	83.5%
2	154	47	30.5%	35	22.7%	41	26.6%	26.6%	73.4%
3	148	110	74.3%	101	68.2%	107	72.3%	71.6%	28.4%

Table 34 - Parking Occupancy by Ring - 2009 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	396	180	45.5%	104	26.3%	128	32.3%	34.7%	65.3%
3	866	699	80.7%	697	80.5%	668	77.1%	79.4%	20.6%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	116	75	64.7%	60	51.7%	53	45.7%	54.0%	46.0%
2	278	223	80.2%	210	75.5%	185	66.5%	74.1%	25.9%
3	386	312	80.8%	328	85.0%	316	81.9%	82.6%	17.4%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	204	111	54.4%	21	10.3%	50	24.5%	29.7%	70.3%
2	115	58	50.4%	49	42.6%	42	36.5%	43.2%	56.8%
3	142	111	78.2%	107	75.4%	11	7.7%	53.8%	46.2%

Table 35 - Parking Occupancy by Ring - 2014 Data

PUBLIC LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	412	229	55.5%	72	17.4%	103	25.1%	32.7%	67.3%
3	854	667	78.1%	593	69.4%	598	70.0%	72.5%	27.5%

PRIVATE LOTS		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	61	44	72.5%	32	52.8%	29	47.1%	57.5%	42.5%
2	336	247	73.6%	204	60.7%	177	52.8%	62.4%	37.6%
3	456	397	87.0%	361	79.1%	388	85.0%	83.7%	16.3%

ON- STREET		A.M.		NOON		P.M.		Average Percent Available	Average Percent Occupied
Ring	Total Spaces	Number Available	Percent Available	Number Available	Percent Available	Number Available	Percent Available		
1	194	107	55.2%	22	11.4%	23	12.0%	26.2%	73.8%
2	127	87	68.8%	34	26.9%	42	32.9%	42.9%	57.1%
3	136	107	78.4%	80	59.1%	73	53.9%	63.8%	36.2%