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SECTION 1 – INTRODUCTION

Parking, both on and off street, can play a major role in the success of downtown development and redevelopment activities. Parking serves as a means of permitting users and patrons of businesses, public venues and office spaces the ability of quick and easy access to multiple destinations. Parking demands can vary widely based on the mix of uses and activities that are occurring at any one point in time. Appropriate parking solutions, or lack thereof, can have many implications including economic health of a downtown area, air quality, traffic congestion and safety issues.

Downtown Amarillo Inc. is undertaking an aggressive and proactive approach to attract major new development, redevelopment and reinvestment in the Central Business District in Downtown Amarillo. This includes conducting a land use and housing study, developing a streetscape plan for the Polk Street and 6th Avenue corridors, completing a comprehensive circulation study, developing and adopting Urban Design Guidelines, and conducting an analysis of the parking system for the Downtown area.

The purpose of this study is to conduct the analysis of the current and future parking supply and demand to determine the sufficiency of the parking system through an inventory of the existing system, the identification of deficiencies, and the identification of possible improvement solutions.

The following questions are important in the development and conclusions of this study:

- What are the current parking conditions in Downtown Amarillo?
- How will the future development and redevelopment efforts affect the existing parking system?
- What remedies are available to ensure that an adequate parking supply is available to the residents, businesses and visitors of Downtown Amarillo?

SECTION 2 – STUDY AREA

The study area encompasses an approximate 45 block area within Downtown Amarillo bounded by the following streets:

- 2nd Avenue to the north;
- Grant Street to the east;
- 11th Avenue to the south; and
- Fillmore Street to the west.

The study area contains many important structures including City Hall, the Amarillo Convention Center, the Amarillo Civic Center, the Potter County Courthouse, the Globe Performing Arts Center and multiple office, commercial and industrial buildings. The study area also contains many significant undeveloped, underutilized and vacant lots. Figure 1 identifies the Study Area.

Figure 1 - Study Area

Study Area Boundary

SECTION 3 – APPROACH

The following approach was used in the development of this parking study:

- Task 1 – Assemble Existing Conditions Information. This task included the review of the Amarillo Zoning Code, existing land use patterns, discussion of current downtown development and planning efforts with Downtown Amarillo Inc., and a review of planning documents related to future or planned land use and transportation efforts for the Downtown area.
- Task 2 – Conduct an analysis of on and off-street parking areas. This task included the review of all on and off-street parking spaces during weekday during business hours. Inventory and occupancy levels were noted as were any parking restrictions that may be in place that affect parking.
- Task 3 – Establish strategies and alternatives for identified existing and future parking needs. This task included the analysis and evaluation of alternative methods for supplying additional parking spaces where necessary and for offsetting parking demand through various parking demand management strategies.
- Task 4 – Finalize study and provide recommendations.

SECTION 4 – EXISTING CONDITIONS

This Section serves to document the existing parking characteristics of the Downtown Amarillo Study Area. These characteristics will provide a foundation for the analysis of current parking supply and needs for the Study Area. The location and inventory of existing on and off-street spaces were documented and the occupancy of each was observed. Each off-street parking area and on-street block face were assigned a unique ID number for the purposes of this study.

Parking Inventory

A weekday physical inventory was conducted to count all on and off-street parking spaces in the study area. Inventory counts were classified by:

- On or Off-Street Parking;
- Surface or Garage;
- Public or Private;
- Metered or Non-Metered; and
- Restricted or Non-Restricted.

Parking inventory counts identified a total of 5,370 on and off-street spaces in the 45 block study area. This count includes 3,735 public spaces and 1,635 private spaces (entirely on private lots). Total demand for these spaces is approximately 1,634 spaces. Therefore, there is an approximate surplus of

3,736 parking spaces. Figures 2 and 3 identify the locations of off and on-street parking spaces, respectively. Actual parking counts are located in Appendix A, Parking Space Counts and Utilization.

Off-street parking supply represents 80% of the parking spaces in the Study Area. These spaces are entirely located on surface lots with the exception of two parking garages: one located at the northeast corner of the 9th Avenue and Fillmore Street intersection and the second being located at the southwest corner of the intersection of 9th Avenue and Pierce Street. As development pressure continues to occur, many of these off-street surface parking lots will most likely be eliminated.

On-street spaces are a mix of predominately parallel parking spaces (parallel to the curb or travel lane) with a small number of locations where diagonal or 90 degree parking is established (spaces are perpendicular to the curb, travel lane or building). None of the on-street spaces are metered. A majority of the on-street parking spaces are not striped.

The following Figures 2 and 3 identify the location of on and off-street parking spaces within the Study Area.

Legend

- Off Street Parking Location
- Study Area
- Parcel

Off-Street Parking Locations

200 100 0 200 400 600 Feet

JACOBS

Downtown Parking Study

Downtown Amarillo, Inc.

Legend

- On Street Parking Location
- Study Area
- Parcel

On-Street Parking Locations

200 100 0 200 400 600 Feet

JACOBS

Parking Utilization and Occupancy

Parking supply typically operates at peak efficiency when parking occupancy is no greater than 90% of the supply. When parking occupancy exceeds this level, patrons will typically experience delays and frustration, or give up all together, while searching for a space. Therefore, the perception of the parking supply may be seen as inadequate even though there are spaces available in the parking system although the space may not be as close to their destination as desired. There are several factors that affect parking utilization and perception including:

- Capacity of the Parking System – Large, scattered surface lots operate less efficiently than a more compact facility, such as a parking garage or structure, which can offer large amounts of consolidated parking in strategic areas. Furthermore, it is easier to find available spaces in a centralized parking garage than in a widespread parking system spanning several blocks. In downtown Amarillo, there are 64 surface lots located throughout the 45 block Study Area ranging from less than 10 to several hundred spaces. These surface lots account for over 90% of the off-street parking supply in the Study Area. The two parking garage structures in the Study Area provide less than 10% of the off-street spaces .

- Type of users – Monthly or regular parking patrons (e.g. business owners and employees of downtown businesses) can typically find available spaces more efficiently than the infrequent visitor because such patrons are familiar with the layout of the parking system and typically know where the spaces will be available when they are parking. Furthermore, if monthly or regular parking patrons are paying monthly or annual fees to park, they know that there will be space available for them in the lot or garage for which they are paying. In downtown Amarillo however, a majority off-street parking is free unless such lot is reserved for public vehicle use or is a fenced private lot. This type of free parking situation is not typical for downtown locations.

- On-street versus off-street parking – On-street parking spaces are almost always less efficient than off-street spaces due to the time it takes patrons to find the last few vacant spaces in the system and the effort it takes to parallel park causing traffic delay and safety issues. At a national level, on-street spaces are typically not striped or are signed in a confusing manner, thereby leading to lost spaces and frustrated parking patrons. In the downtown Amarillo Study Area, on-street parking is not striped nor is it metered, leading to potential inefficiency in parking vehicles on the street. In a few instances, there is signage limiting on-street parking hours to 2 hour parking limits between 8am-5pm in a few select locations, most notably on the western edge of the Study Area. Enforcement of this parking restriction is unknown.

- Special Events – Special events can have a dramatic impact on the on and off-street parking system. These events have the characteristic of drawing large amounts of people (sporting event, performance, convention, public festival, etc.) over a relatively short period of time into a specific location. In downtown Amarillo, the Convention Center and the Globe Performing Arts Theater provide the opportunity for special events which have the ability to draw large amounts of patrons in a specific area at one period of time.

- Zoning Code – Municipalities regularly include some level of regulations for off-street parking in zoning codes. Such regulations typically identify the minimum number of spaces required for a use in terms of spaces per square foot of use (office, retail, industrial, public, etc.) or a number of spaces per dwelling unit (e.g. 2 spaces per dwelling unit). In many instances, zoning code parking requirements will address a shared or joint parking requirement permitting multiple users to utilize one parking area, under certain conditions, thereby reducing parking areas. In the case of Central Business District zoning applicable to the Study Area, the zoning code does not require off-street parking spaces for non-residential uses (commercial, public, semi-public, industrial) nor does it address shared or joint parking uses for this area. It does require, however, 1 space for each dwelling unit. The implications of not addressing all parking requirements in the zoning code may lead to a severe lack of parking options in the future as infill development occurs. This does not mean, however, that private entities will not provide parking for their patrons as a means of good business (e.g. a new hotel may provide a parking structure for its patrons even though the zoning code does not require the provision of parking spaces for the use) nor does it mean that the City will not provide public lots for patron and employee uses.

To identify the parking patterns in the study area, all on and off-street parking spaces located in the study area were observed for occupancy. Occupancy counts were taken for all on-street and off-street parking spaces on January 11th, 2010 and March 1st, 2010. These dates were representative of a typical weekday in downtown Amarillo, exclusive of holiday or special event occurrences. Weekday counts were conducted between 8:00 a.m. and 5:00 p.m. The goal of this count was to identify the parking situation during a working day in the Study Area.

Figure 4 and Figure 5 identify the utilization of off and on-street parking areas. Appendix A identifies the utilization rates for both on and off-street parking spaces.

Downtown Parking Study

Downtown Amarillo, Inc.

Legend

Off Street Lot Occupancy

- 0%
- 0.01% - 25%
- 25.01% - 50%
- 50.01% - 75%
- 75.01% - 100%
- **Study Area**
- **Parcel**

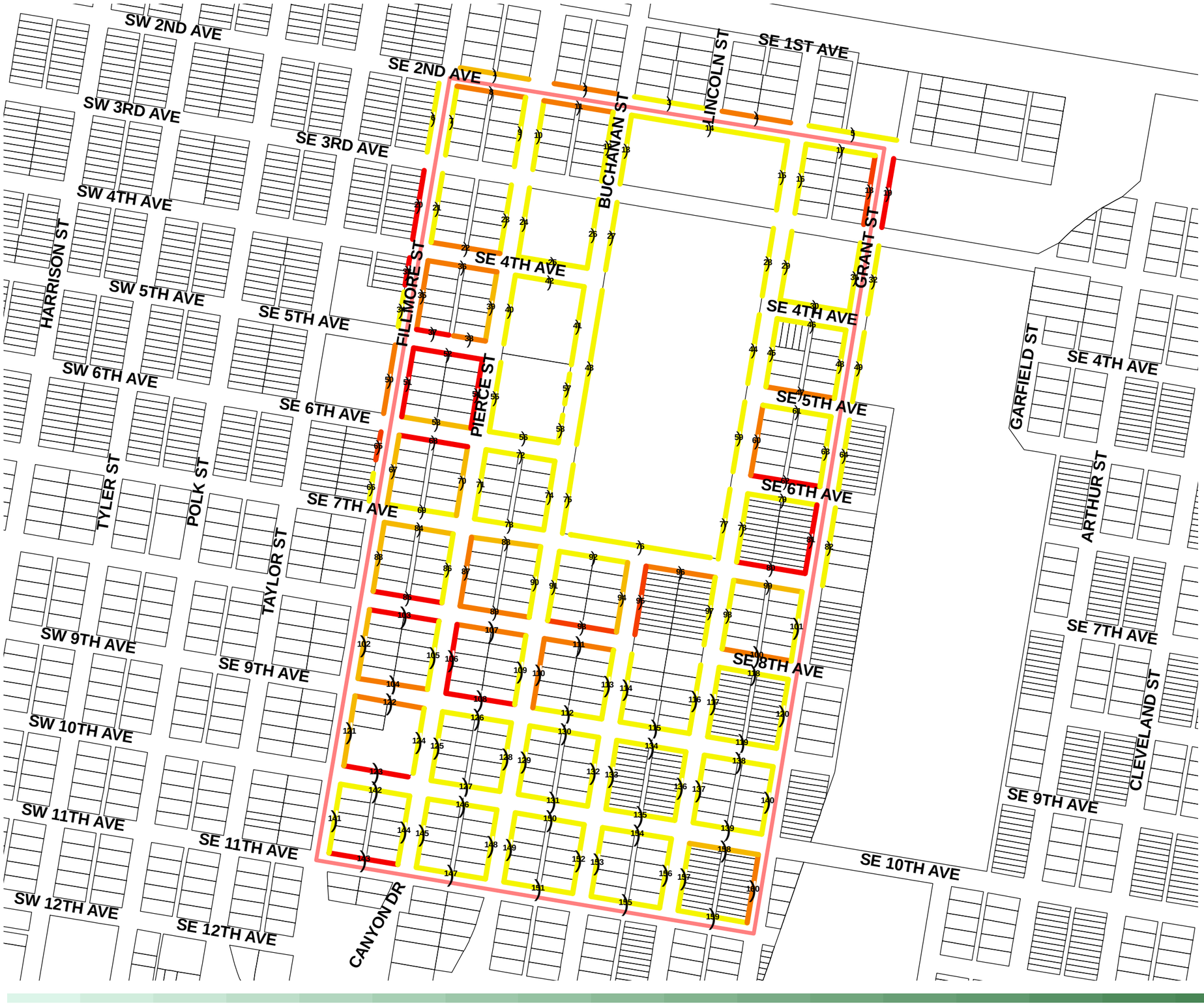
Off-Street Parking Occupancy

200 100 0 200 400 600 Feet

JACOBS

Downtown Parking Study

Downtown Amarillo, Inc.



Legend

On Street Occupancy

- 0%
- 0.01% - 25%
- 25.01% - 50%
- 50.01% - 75%
- 75.01% - 100%
- Study Area
- Parcel

On-Street Parking Occupancy

200 100 0 200 400 600 Feet

JACOBS

SECTION 5 – FINDINGS

1. On and off-street parking spaces are well distributed throughout the Study Area. Parking inventory counts identified a total of 5,370 on and off-street spaces in the 45 block study area. This count includes 3,735 public spaces and 1,635 private spaces (spaces entirely on private lots). Total demand for these spaces is approximately 1,634 spaces.

2. At peak periods on typical weekdays, there is sufficient parking supply to meet the demand of the Study Area user with an approximate surplus of 3,736 parking spaces. Results of the occupancy count indicate that only 32% of the available off-street parking spaces and 31% of the on-street parking spaces are being used during the typical working day. 66% of off-street parking areas had observed utilization of less than 50%; 30% of the off-street parking areas had no utilization (0%). Heaviest usage for on-street parking is occurring on the periphery of the Study Area around the Fillmore and Pierce Streets blocks between 5th and 6th and 8th and 9th Avenues. Heaviest usage for off-street parking is occurring primarily along the Pierce Street corridor between 5th and 9th Avenues (5 lots observed with 75-100% occupancy) and the parking lot south of the Civic Center along 7th Avenue between Buchanan and Johnson streets (60% occupancy). Industry standards identify that parking systems operate at peak efficiency when a 90% utilization rate is achieved; providing for a balance of high utilization and enough vacancies where a parking space is relatively easy to find. The current parking system is currently operating 68% lower than the 90% utilization threshold.

3. Off-street parking areas are a mix of publicly available spaces and privately owned lots with approximately 30% of the 5,370 spaces being private.

4. The Amarillo Zoning Code does not require off-street parking for non-residential uses. It does, however, require one parking space per residential dwelling unit in the CB Central Business District which encompasses the Study Area. Shared parking requirements are also not identified or required in the Amarillo Zoning Code. Discussions with Amarillo Planning Staff have confirmed these observations.

5. While there are currently a few areas where on and off-street parking levels reach 75-100% occupancy, a majority of the supply of parking spaces remain underutilized and unoccupied during the weekday day; many spaces and lots were observed that were not utilized at all. There is currently no need for additional supply of parking. However, as development and redevelopment efforts continue to occur within the Study Area, parking demand will increase and, as a result of the infill development efforts, the supply of parking will decrease. The recently completed preferred Land Use Plan, summarized in the next Section, identifies the potential changes to the downtown Amarillo Study Area.

6. On-street parking spaces are not marked or striped, which leads to an inefficient use of on-street parking. Typically, on-street spaces in a downtown area are metered or striped to ensure a specific number of spaces per block front; the Study Area includes neither. Vehicles were observed parked on-street with 8-10 feet between vehicles which prevents additional vehicles from parking on the block in an efficient manner.

7. There are few limitations to on-street parking. Few locations within the Study Area have limitations to parking which include 2 to 3 hour time limits or prohibiting parking all together. Limiting time for parking serves to generate turnover to provide for a more efficient parking system overall. Currently, because there is a significant excess of parking supply, this is not an issue. However, as the Study Area redevelops according to the Civic Center Land Use Plan, the excess parking supply will dwindle and turnover in parking spaces will become an issue.

8. The City of Amarillo does not currently institute a paid parking program; that is publicly available off-street and on-street parking are free of charge to the user. Free parking facilities are an unusual practice for urbanized Cities with significant downtowns. Paid parking, through meters or paid parking garages, typically generates revenue for the municipality to assist in the development and maintenance of off-street parking areas and generates turnover in parking spaces; although many parking divisions are not financially self-sustaining. Furthermore, free parking is generally seen as subsidized by those who pay taxes in the City and who use alternative public travel modes or who do not travel to downtown on a frequent basis or at all.

SECTION 6 – LAND USE PLAN

In February, 2010, Downtown Amarillo Inc. (DCI) engaged Jacobs to develop a land use plan and strategy for the Civic Center study area of Downtown Amarillo. The study area boundaries of the land use plan generally encompass the same boundaries established in this parking study. Existing land uses primarily consist of commercial and office uses around periphery of the study area, with public uses established in the core (blocks between Pierce and Johnston Streets and 3rd and 7th Avenue) including: City Hall, the Amarillo Convention Center, the Amarillo Civic Center, the Amarillo Public Library, the Potter County Courthouse and the Globe Performing Arts Center. The Preferred Land Use Plan is identified in Figure 6.

The preferred land use plan identifies intensive, dense infill development including an aggressive mix of urban residential buildings, commercial and mixed use developments, a convention center hotel with meeting space, parking garages, a multi-use ballpark stadium, and public uses including area for an expansion of the Civic Center and a new aquatics center. Development patterns vary by block including complete block coverage with multiple story buildings to a mix of buildings with limited surface parking. New development is proposed to occur as follows:

Proposed Land Use	Proposed Square Footage/Dwelling Units	Potential Minimum Parking Requirement[1]
Residential (urban townhomes, urban lofts and apartments)	• 160 units (variety of unit mix & type)	• 160 spaces
Retail (ground floor)	• 17,000 square feet	• 85 spaces
Aquatic Center (indoor and outdoor facilities)	• 7,700 square foot Natatorium • Outdoor competition pool and support facilities	• 1 space for every 4 persons expected to be accommodated • 30 spaces plus 1 space for each 100 square feet over 2,000 square feet
Multi-Use Ballpark	• 5,500 seats • 15,000 square feet meeting space • 4,000 square feet entertainment and/or retail	• 1,833 spaces • Based on 1 space per each 3 seats • 20 spaces
Civic Center Expansion (Coliseum and retail)	• Early estimates - adding 750 permanent seats • 1,000 square feet of retail	• 250 spaces • 5 spaces
Convention Hotel	• 250-300 rooms • 14,000 square feet of ballroom space • 5,000 square feet of meeting rooms	• 250-300 spaces • Based on 1 space per each 3 seats • Based on 1 space per each 3 seats
Residential Lofts / Conversions	• variable	• Variable - based on 1 space per dwelling unit
Total Potential Minimal Parking Requirement		• Minimum 2,653 spaces excluding required parking for seating.

[1] This column identifies the potential minimum parking requirement by proposed use and is for informational purposes only as based on parking requirements in the Amarillo Zoning Code. It is important to note that the City of Amarillo Zoning Code does NOT require parking for non-residential uses in the Central Business District. Parking requirements for residential uses are 1 parking space per dwelling unit. These minimum parking requirements could be reduced between 40-60% with a shared parking requirement.

Downtown Amarillo inc.

Master Plan Legend

- Proposed Building
- Proposed Surface Parking
- Proposed Parking Garage
- Existing Condition

Existing Library
Aquatic Center
Kids Inc. (Potential)
Redeveloped Herring Building - Mixed Use
Park
Existing Theatre & Building to Redevelop With Adjacent Block
Globe News Center - Arts
Parking Garage / Ground Floor Retail
Convention Hotel
Urban Residential
Multi-Use Facility Ball Park
Mixed Use Developement
Parking Garage - Options(1 & 2)
Surface Parking For Civic Center and Aquatic Center
Civic Center Expansion
Existing City Hall
Residential Loft/Warehouse District
1st Ave
2nd Ave
3rd Ave
4th Ave
5th Ave
6th Ave
7th Ave
8th Ave
9th Ave
10th Ave
11th Ave
Polk St
S. Taylor St
Fillmore St
Pierce St
Buchanan St
Lincoln St
Johnson St
Grant St

0 25 50 500

June 2010

Civic Center Master Plan

amarillo, tx

Draft-Preferred Land Use Plan

Illustrative - Master Plan

JACOBS
Leland Consulting Group

As infill development occurs according to the preferred land use plan, it will impact the supply of off-street parking affecting most blocks within the study area. The proposed land use plan, upon buildout, has the potential to affect 25 off-street surface parking lots including 2,393 spaces or 55% of the available existing off-street parking spaces. While the entire surface parking system is currently underutilized, reducing the amount of available spaces while increasing the square footage of residential, commercial and public uses in the Study Area will undoubtedly cause parking issues in the future unless additional spaces are provided. In several instances, the preferred land use plan calls for new development to incorporate shared parking structures or shared surface parking. It is important to note that the existing Amarillo Zoning Code does not require parking for non-residential uses in the Central Business District.

As per the preferred land use plan, parking structures are recommended to incorporate ground floor retail activities with upper story parking facilities (Figure 7 identifies the concept of a mixed use parking garage). These parking structure recommendations include three public garages incorporating approximately 1,500 spaces each, located in the following areas:

- A multi-story structure to serve the convention hotel, multi-use ballpark facility, Civic Center and mixed uses in the southwestern portion of the study area. The structure is on the block bounded by 6th Avenue, Buchanan Street, 5th Avenue and Pierce Street.
- A multi-story structure to serve the Civic Center and aquatic center in the northern part of the study area. The structure is located on the block bounded by 4th Avenue, Grant Street, 3rd Avenue and Johnson Street.
- A multi-story structure to serve the Civic Center and aquatic center in the northern part of the study area. The structure is located on the block bounded by 4th Avenue, Johnson Street, 3rd Avenue and the existing Civic Center facility.

The land use plan also calls for establishing a “Parking District” which encompasses 16 blocks south of the Civic Center area. The “Parking District” serves to promote a mixed use environment, including residential uses, incorporating shared off-street surface parking lots and on-street parallel or angled parking.

SECTION 7 – RECOMMENDATIONS

Parking is a fundamental component of downtown infrastructure. As development continues to occur within the downtown Study Area, parking becomes an increasingly scarce and valuable commodity because of many factors including increasing land values, increasing construction costs and the lack of rates being charged for parking in the downtown study area. The best solutions are to ensure that on-street parking spaces are turning over and getting the most use out of private off-street parking spaces through shared spaces.

Lack of parking is not currently issue within the Study Area in downtown Amarillo; users can find ample available spaces both on and off street. With approximately 5,400 on and off-street spaces and approximately 32% of those spaces being utilized on a daily weekday basis, parking demand is approximately 52% lower than the 90% utilization rate that is the industry standard threshold at which point it becomes difficult to find a parking space, thus frustrating drivers. However, this current low utilization does not mean that parking should not be considered an issue for which good planning should be implemented in order to maintain a viable parking system; particularly since the proposed Civic Center Land Use Plan identifies the potential elimination of approximately 2,400 off-street parking spaces assuming no spaces are provided for as a part of redevelopment.

Parking recommendations are not a one size fits all solution. Recommendations should be provided that permit a variety of options for short and long term parking. The following recommendations are considered best practices solutions for on-street parking, off-street parking, and modifications to the zoning code, are proposed to ensure that adequate parking spaces are provided in the Study Area in the future as the area continues to redevelop. Recommendations include both structural (e.g. improvement of on and off-street parking areas) and non-structural options (e.g. improving utilization of future parking through the implementation of Parking Authority). Recommendations, in many cases, also identify a short, mid and long term task. For the purposes of this study, short term is considered 1-2 years, mid-term is considered 2-5 years and long term is considered 5+ years.

Specific Recommendations

1. Implement the parking garage recommendations of the Civic Center Plan as new development comes on-line. Parking garage “A” (Figure 7), as identified on the Civic Center Land Use Plan, should be developed concurrently with the construction of the convention hotel and/or the multi-use ballpark facility. This will ensure that adequate parking is available near the vicinity of these two facilities that have the potential of generating heavy users at specific time periods. The parking garage “A” concept (Figure 7) is expected to be a mixed use facility including ground floor retail fronting on all public streets with parking facilities to the rear and on upper floors of the structure.

2. Short to mid-term, consider the expansion of the *Downtown Streetscape Enhancement Master Plan, Polk Street and 6th Avenue Corridors* [2] that will serve to implement a Complete Streets©[3] concepts approach for this Study Area, bringing striped diagonal and parallel parking to maximize the amount of parking spaces downtown. The Complete Streets concept, based on multi-modal transportation elements, should include efforts to maximizing on-street parking, provide for wide pedestrian sidewalks to permit convenient and safe access from parking areas to destination points downtown, and include bicycle routes. Ultimately, implementing the elements of the Complete Streets concept will serve to provide for narrower streets which provides for a safer downtown street system.

3. Short term, implement a Civic Center shared parking plan. Shared parking has the ability to reduce typical parking requirements by 40-60%[4] and works best when land uses have different peak hours that vary by time of day, day of week or season of the year as will be the case with downtown Amarillo. Shared parking will permit the same parking area to be used by multiple users resulting in the need for fewer parking spaces downtown. Typical land uses involved in shared parking arrangements include: offices (7am-6pm), restaurants (11am-1pm, 5pm-10pm), bars and taverns (6pm-Midnight), stadiums/ballparks (weekends or 7pm-11pm), retail uses (9am-9pm), churches (Sundays), movie theaters (6pm-Midnight), live performance theaters (7pm-Midnight) and special events. Shared parking facilities must be conveniently located throughout the downtown area to ensure safe and convenient access to all uses sharing the parking facilities.

   As a part of the shared parking plan, language must be developed for incorporation in the Amarillo Zoning Code parking and loading chapter that identifies:
   - What the intent of shared parking is;
   - Where shared parking requirements are applicable (e.g. Central Business zoning district);
   - What projects are applicable to shared parking regulations (e.g. new development, substantially expanded existing development);
   - What items are required by a developer/property owner for submission and review of a shared parking facility;
   - Calculations needed to determine the amount of parking required under the shared parking requirements; and
   - Any formal agreements between property owners necessary to ensure compliance with the shared parking area.

   The Civic Center Land Use Plan identifies key areas for the location of shared parking garage and surface lots (see Figure 6).

[2] *Downtown streetscape Enhancement Master Plan, Polk Street and 6th Avenue Corridors* created by Jacobs, 2009
[3] For more information on Complete Streets, see www.completestreets.org
[4] *Transportation Demand Management Encyclopedia*, Victoria Transport Policy Institute, 2009

Supporting Strategies to Implement Specific Recommendations

1. *Parking Vision*
   The Civic Center area of downtown Amarillo includes the highest density of mixed use development with high concentrations of retail, residential, entertainment and public uses anchored by the Civic Center, Performing Arts Center and a proposed aquatics center and multi-use ballpark facility. Therefore, the primary purpose of parking is to serve visitor, resident and employee needs at a level that supports the economic vitality in this Study Area.

2. *Parking Authority*
   Short term, DCI should work closely with the City of Amarillo to request that the City establish a downtown parking advisory committee that investigates the potential of implementing enabling legislation to create a Parking Authority that would be responsible for the overall public parking system in downtown Amarillo. Responsibilities of a Parking Authority would include: facilitating parking operations and management, acquiring property for parking use and issuing long term debt for future parking improvements, if needed.

3. *Mitigation Plan*
   Short term, DCI and the City of Amarillo should develop a plan for mitigating the loss of publicly available parking spaces as redevelopment and revitalization occurs. While there is not currently a deficit of parking supply in the Study Area, new development has a two-fold impact on the off-street parking supply: 1) It will begin to remove parking spaces from the supply system, and 2) It will create additional demand for parking spaces. The mitigation plan should include the elements outlined below for on and off-street parking.

4. *Demand Ratio*
   In general, demand ratios for parking are based on the gross leasable or rentable square footage of space for retail, office or industrial uses or on a per unit basis for residential uses. The ratio is generally expressed as “X spaces per 1,000 square feet” or “X spaces per dwelling unit”. Most parking in a downtown/urban core areas is considered to be “shared parking” since a user can park at one location and visit many different uses conveniently by foot. Furthermore, downtown uses often involve uses that have different operating hours (e.g. a ballpark or convention center which primarily operates evenings or weekends should be jointly sharing parking with surrounding office uses that require weekday parking primarily between 7am and 5pm). Parking demand ratios should be adjusted to account for these facts.

Shared parking generation rates should generally be considered as follows for redevelopment efforts in the Study Area[5]:

- Low rise apartment/condominium in urban central core – 1.52 spaces per unit.
- High rise apartment in urban central core - 0.65 spaces per unit.
- General office building – 2.25 spaces per 1000 square feet.
- General retail – 2.85 spaces per 1,000 square feet.
- Hotel – 0.63 spaces per room.
- Public assembly spaces – 0.25 spaces per permitted capacity.
- Arena/Stadium – 1 space per every 3.5 seats.

5. *Revenue Sources*
Short term, DCI should encourage the City to investigate potential revenue sources to assist in the funding and maintenance of parking options. The list below includes options that are most commonly used in jurisdictions.

- User Fees – includes meter charges, pay kiosk charges and monthly charges by parking structures. User revenues, based on charges for use of the space, can vary by time of day, special or public event, or discount voucher program. A comprehensive pricing strategy should be developed that considers short and long term usage, employee versus customer usage and supply versus demand.
- Parking Fines – includes fees collected for violation of on-street overtime parking, loading and unloading parking and handicapped space parking.
- Public Improvement District Fees – authorized by Chapter 372 of the Local Government Code of Texas, permits a City to levy and collect special assessments on property within the established district which can be used for parking improvements among other enhancements.
- Tax Increment Financing District (TIF) – TIF districts can assist in the financing of development within the district by dedicating the increase in real estate property taxes that will be generated by the completed project. Financing can be used for parking, infrastructure, utility and land acquisition costs.
- Fee-In-Lieu Of – includes an option given to a developer to pay the City a fee as a way to opt out of providing parking as a part of their development. Since the City of Amarillo does not currently have a requirement for minimum parking requirements for new development in the CB Central Business District, this option would not be valid. Prior to instituting such a provision, the City must revise the Zoning Code to include a minimum parking requirement for non-residential uses in the CB Central Business District.
- Bonding – involves the use of City issued non-voted or voted bonds to assist in the development of public parking structures, subject to overall debt limit requirements.

[5] Demand ratio adjustment based on shared use factoring identified in *Shared Parking*, Urban Land Institute, p 43-54, and the *Transportation Planning Handbook*, Second Edition, Institute of Transportation Engineers, p 523-527.

6. *On-Street Parking*
   On-street parking should be structured to promote short term, high turnover parking, typically less than 2 hours and is relatively cost effective to implement.

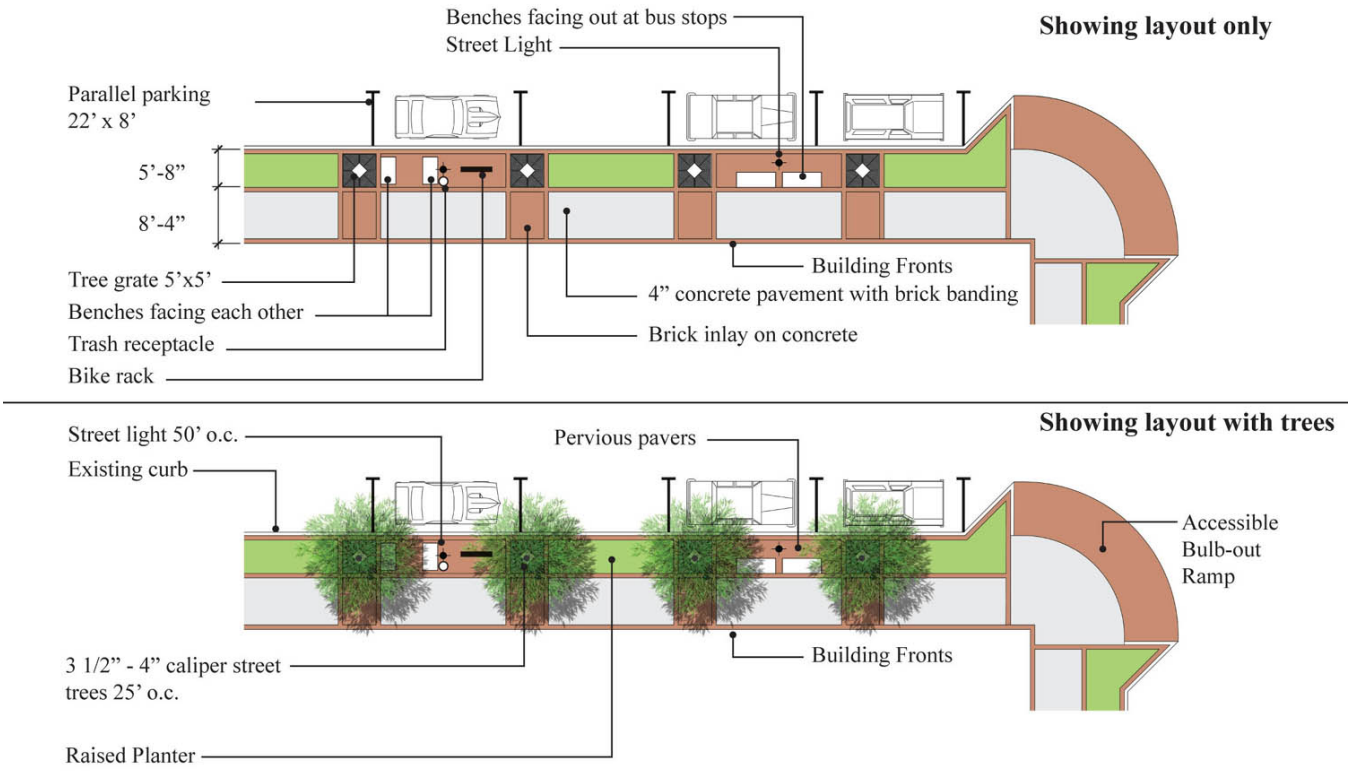
- *Increase Supply of Available On-Street Parking*
  - Short term, to increase the number of on-street parking spaces, all parking spaces should be striped. This will lead to an increase in the number of parking spaces created per block face as it creates a specifically designed space per vehicle, rather than relying on the driver to create their own space. This solution has the ability to significantly increase parking on each block. Figure 8 identifies potential plan and cross section views of a striped parking program.

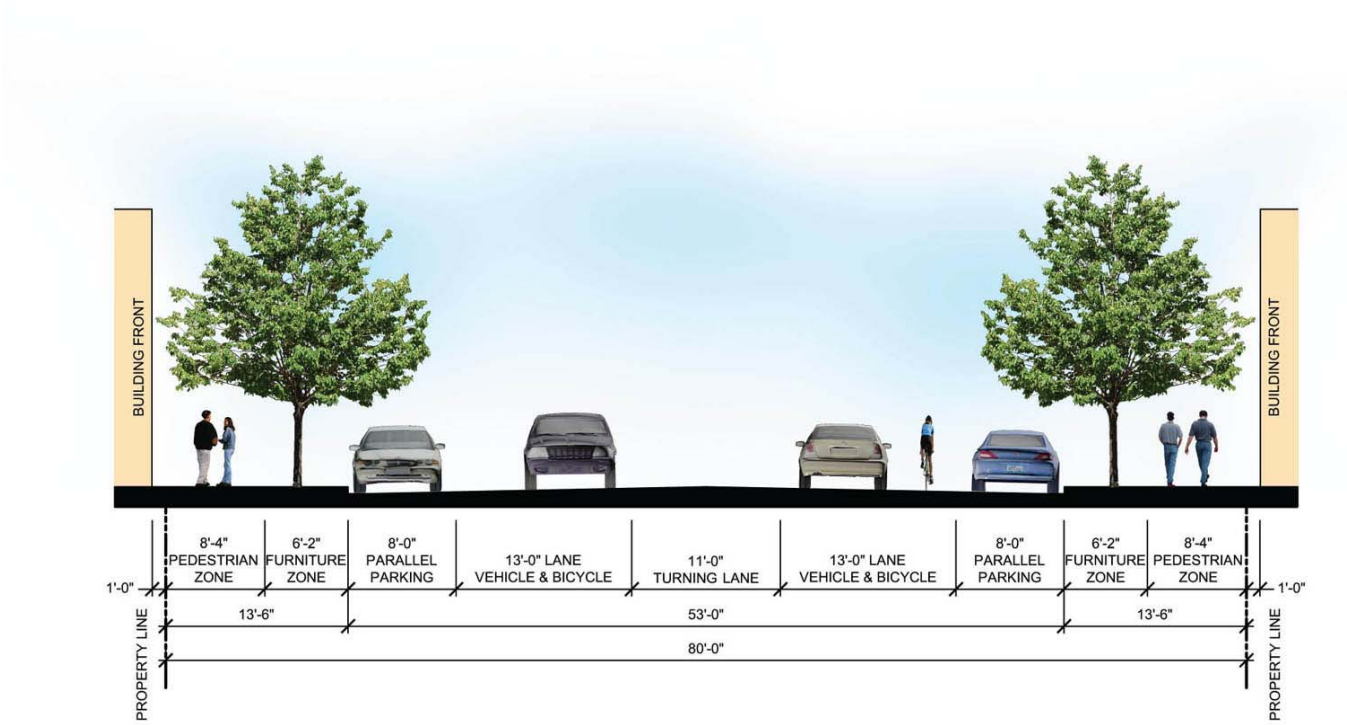
  - Mid to long term, consider replacing on-street parallel parking with diagonally striped spaces. This is particularly effective on one way streets where the pavement is at least 52 feet in width. This practice has been observed on a few streets (e.g. Johnston Street), but it was a solution created by the driver, not by physically striped spaces. Roadway geometry, traffic volume, speed and safety need to be taken into consideration if employing a diagonal parking strategy.

Diagonal Parking example, Denton, Texas

- *Two or Three Hour Parking Zones*
  Short to mid-term expand the implementation of signed two or three hour parking zones to ensure that downtown parking is available for short term customers/parkers. This is currently in effect in a few select areas, most notably along Fillmore Street between 7th and 4th Avenues. This effort should begin in the core portion of the Study Area where most of the redevelopment activity is expected to take place, according to the Civic Center Land Use Plan to ensure the turnover of parking spaces in what are expected to be the busiest locations (primarily the Johnson Street and Buchanan Street corridors between 5th and 9th Avenues). Such efforts will ensure that short term parkers will be able to find spaces in the core of the Study Area with longer term parkers utilizing spaces in the periphery of the Study Area.

Figure 8 - Plan and Cross Section Views of Striped Parking





- *Parking Meters*
  Mid to long term, install parking meters or pay station kiosks to be operated by the Parking Authority to ensure effective utilization and high turnover of available on street parking spaces. This project should begin in the core portion of the Study Area where most of the redevelopment activity is expected to take place, according to the Civic Center Land Use Plan. This is primarily includes the Johnson Street and Buchanan Street corridors between 5th Avenue and 9th Avenue. Traditional parking meters involve the insertion of coins for timed parking at each parking space. Pay station kiosks involve the installation of automatic kiosks at a centralized location on each block that dispense parking receipts upon payment of cash or credit card. Merchant validation may be possible under the pay station kiosk system to permit for a reduction in the price of parking.

Examples of typical parking meter and pay kiosk

  - Meter pricing should be higher in the core areas (Johnson Street and Buchanan Street corridors between 5th Avenue and 9th Avenue), with lower pricing around the perimeter of the core.

  - Maximum meter times should be lower in the core areas (Johnson Street and Buchanan Street corridors between 5th Avenue and 9th Avenue), with higher maximum times around the perimeter of the core.

  Long term, as downtown revitalization and redevelopment has occurred, if warranted, implement congestion pricing by increasing on-street parking rates during peak demand periods to ensure the availability of parking spaces.

- *Enforcement*
  On-street parking regulations must be enforced (violation of time limits on meters or signed zones) to promote compliance with regulations and to promote turnover in spaces.

7. *Off-Street Parking*
   Off-street parking provides the ability to serve many users in one centralized location. However, off-street parking can be an extremely costly system to implement and maintain with the average surface space costing $3,000-$5,000 and the average parking structure space costing $15,000-

$20,000. As the Study Area continues to develop, on-street parking will require transition into an off-street parking supply.

- Parking Structures
  The timing for the need for parking structures in the Study Area of downtown Amarillo for additional parking supply is contingent on a number of factors including: new development and its associated parking demand; loss of existing spaces as redevelopment occurs; and projected or expected growth in residential, customer, employee and visitor demand as the economy continues to improve. Parking structures should be designed as shared parking facilities; that is parking should be available for multiple users. Parking structures should be located in areas where identified in the Civic Center Master Plan in order to appropriately serve the redevelopment activities that are expected to occur.
  - Short term, DCI should work with the City to encourage a parking policy that requires off-street parking accommodation by the developers of new non-residential uses that would be considered a "heavy generator" of traffic. Heavy generators would ultimately need to be defined through dialogue between DCI and the City, but some examples include: high density office buildings and residential buildings, hotels, and regional retail uses. Parking accommodation would not necessarily need to account for all required spaces, but should provide ample parking spaces for at least 50% of the spaces needed. Consider a fee-in-lieu of if the City established a Parking Authority and has a role in providing public garages in the Study Area. Such a fee can be used for multiple purposes including the construction and maintenance of additional parking. A sample pro-forma worksheet is attached to this study (Appendix B).
  - Short to mid-term, DCI should encourage the City to investigate a pro forma analysis of the development and operational costs for public parking structures in the Study Area. Several conceptual parking structure options were identified in the Civic Center Land Use Plan that can be used as a basis for sizing assumptions.
  - Ensure that parking structures contribute to the integrity of the urban forum by incorporating retail, office or service type uses between the sidewalk and the parking structure to ensure a ground level active use and ensuring that new parking structures meet the same design requirements of a building.
  - Incorporate bicycle lockers or secure areas for bicycle lock up in parking structures to encourage alternate modes of transportation within, to and from the Study Area.

- Wayfinding Signage
  Long term, consider a system of wayfinding signage to identify off-street parking facilities that is uniform in design, logo and color for ease of identification. Signage systems can be as simple as single panel directional signage directing the driver to a parking facility to the complex parking guidance and information (PGI) systems which

Examples of "Parking Guidance and Information" signage, Portland, Oregon and stock sign from Trans-Tech

identify, on a real time basis, the number of available spaces in each parking facility by use of message signs to give drivers information regarding parking availability. PGI systems combine traffic monitoring, communication, processing and variable-message sign technologies to provide the service and are designed to aid the in the search for vacant parking spaces by directing drivers to car parks where occupancy levels are low.

Example of single panel directional sign, Portland, Oregon

- Negotiated Agreements with Private Owners
  Short to mid-term, consider negotiating shared use and/or lease agreements with owners of private surface or structured parking lots to provide for an interim supply of public parking, if needed, as redevelopment occurs. Currently, there 47 private lots containing approximately 1,600 spaces (38% of the total number of off-street parking spaces available within the Study Area. Consider providing incentives to owners to encourage negotiated agreements (e.g. increased signage).

- Off-Street Surface Parking Lots
  Short, mid and long term, include off-street surface parking only in areas where directed by the Civic Center Master Plan. Surface lots are not traditionally part of a downtown urban fabric, but have been prevalent in downtown Amarillo prior to the current redevelopment and revitalization efforts. The Civic Center Master Plan considers the use of surface parking only integrated with redevelopment efforts that includes new buildings. Design standards should be developed and adopted by the City of Amarillo that requires limited curb cuts, physical vertical element design (e.g brick or wrought iron fencing), lighting and landscaping.

- Incentives program
  Short to mid-term, work with the City of Amarillo to develop an incentive program that is available to private developers who incorporate off-street parking, preferably structured parking, into downtown development projects. Samples of incentives include: height bonuses, reduced or waived permit fees, density bonus, supply/revenue agreements (City or DCI guarantees leased spaces at a negotiated rate per stall), or property tax abatement (Chapter 312 of the Texas Tax Code).

SECTION 8 – CONCLUSION

Based on an existing conditions inventory, it is apparent that the existing parking supply has adequate room to absorb current parking demand based on existing land use patterns. Supply is available both on and off-street throughout the Study Area. However, it is important to understand that as revitalization and redevelopment of the Study Area occurs as expected in the Civic Center Master Plan, many of the surface lots providing the bulk of off-street parking will be eliminated, thus removing spaces from the supply side of the parking inventory. Basic strategies as identified in the recommendations above will serve to provide for a more effective utilization of existing spaces and will provide for future parking needs that fit into the urban fabric, as land development occurs.

APPENDIX A

Parking Space Count and Utilization

APPENDIX B

Sample Pro Forma Worksheet

	SAMPLE Pro-Forma Assumptions Freestanding Parking Structure	
1	Site Size (square feet)	
2	Number of parking spaces	
3	Retail square footage (if applicable)	
4	Front end equity contribution(s)	
5	Construction costs per stall (direct hard costs only)	
6	Cost of land	
7	Total cost of garage development	
8	Total cost of retail development (if applicable)	
9	Development costs (indirect soft costs)	
10	Total cost of development	
11	Rate of finance/term	
12	Rental rate	
13	Initial monthly parking rate	
14	Hourly and daily parking rates	
15	Necessary rate of annual revenue growth	
16	Annual debt service	
17	Annual Net Income before debt service @ 20 years annualized	
18	Average annual cash flow +/- @ 20 years annualized	
19	Estimated gross revenue per space (monthly)	
20	Revenue per space necessary to break even (monthly)	