

Final Report (Revised)

Downtown San Antonio On-Street Space Management Plan

Prepared for:

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A – Study Participants

B – Workshop Survey Forms

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1 Introduction

The San Antonio On-Street Space Management Plan study was initiated by the San Antonio-Bexar County Metropolitan Planning Organization (MPO) in October 1998. The study was initially recommended in the ***Downtown Transportation Study*** (Wilbur Smith & Associates, June 1997). The MPO established a Study Oversight Committee (SOC) consisting of representatives from the MPO, the City of San Antonio Public Works (Parking Operations and Traffic), Planning and Economic Development departments, VIA Metropolitan Transit, Downtown Alliance, and Bexar County Public Works. Appendix A provides a list of study participants. The primary role of the SOC was to monitor project progress, to review and comment on findings, and to provide guidance relative to recommendations and improvement strategies.

1.1 PURPOSE OF STUDY

The purpose of the San Antonio On-Street Space Management Plan study is to assess on-street space usage and, as appropriate, identify potential strategies to better manage the use of public curbside space. The need for this study, in large part, stems from an increase in employment, residential, retail, and tourism-related activities in downtown San Antonio. This growth, coupled with narrow streets and adaptive re-use of historic structures with few off-street parking and loading facilities, has led to a highly competitive environment for both long and short term curbside use.

The improvement strategies developed as part of the On-Street Space Management Plan support the existing transportation and parking policies of the City while providing a system of curbside facilities that benefits users, business developers, visitors, and the general community. This is accomplished through four approaches to On-Street Space Management:

- Policy and Regulatory Strategies
- Demand Management Strategies
- Low-Cost Capital Improvements
- Major Capital Improvements

While this study addresses on-street or curbside space, it is important to recognize the degree of influence that off-street parking and facilities have on the demand for curbside space. For example, where long-term parking supply is inadequate, long-term parkers will use curbside space, resulting in overtime violations at meters. This in turn reduces the supply of curbside space for users needing to complete short trips in downtown, and can cause short-term parkers to use commercial loading zones or traffic lanes for parking. Tour buses, which have few

dedicated facilities for passenger loading or parking, may use commercial or passenger loading zones, and reduce the availability of these facilities for the intended users.

1.2 DEFINITION OF STUDY AREA

Figure 1-1 shows the On-Street Space Management Plan study area boundaries. The study area is generally bounded by Frio Street to the west, Martin Street to the north, Cherry Street to east, and Durango Street to the south. The study area boundaries were agreed upon by the SOC at the outset of the project.

San Antonio is estimated to have approximately 7 million visitors per year, and is the number one tourist city in Texas. Downtown San Antonio has several existing and planned key activity centers for tourism- and entertainment-related activities, including:

- The Alamo – historic attraction
- Riverwalk – a promenade of restaurants and shops along the river below street level
- Rivercenter Mall – a major retail center with movie theater
- Market Square – historic and culturally-themed markets, shops and restaurants
- Alamodome – sports facility
- Sunset Station – entertainment-themed development located immediately to the north of the Alamodome
- Convention Center – world-class convention facilities undergoing major expansion, more than doubling the building footprint and exhibit space

Like many other downtown areas, San Antonio also supports a wide range of public, private, medical office and service buildings. The study area has an extensive network of pedestrian linkages, limited bicycle access, and an extensive system of CBD-oriented buses and internal streetcars (rubber-tired trolleys).

Houston, Market and Commerce Streets function as the key east-west roadways in the study area. These streets provide continuous access through downtown between IH 35 and IH37. Houston Street is a two-way street with one lane in each direction. Commerce is one-way westbound and generally consists of three travel lanes. Market Street is one-way eastbound with three travel lanes. These streets are important to downtown, both for circulation and aesthetics.

1.3 STUDY METHODOLOGY

The study methodology for the On-Street Space Management Plan was designed to provide a strong technical basis for identifying a full range of potential strategies or alternatives to address identified problems. The study used quantitative and qualitative analyses to identify candidate improvement strategies. Perhaps more important, given the range of competing uses and inter-relationships among curbside uses, the study process included stakeholder participation and input. Input from the users and other affected interests was used to define proposed facilities and management strategies.

Figure 1-1

The approach to the study also takes into account several unique characteristics of downtown San Antonio. Three general statements can be made about downtown San Antonio:

- The high level of tourist activity implies that many downtown users may be unfamiliar with the city and its transportation and parking system;
- San Antonio is an older city with narrow streets and rehabilitated historic buildings that are used for commerce, retail, residential and entertainment uses. This type of infrastructure results in high demand for on-street uses, but limits the availability of on-street space;
- The downtown area has a higher proportion of restaurant, retail, and entertainment venues as compared to other typical downtowns.

Downtown San Antonio is an important center for tourism, cultural activities, business and entertainment for the City. The approach to a study of on-street space management reflected these unique characteristics. The study followed the basic steps in plan development (problem definition, existing conditions analysis, development and evaluation of alternatives, and plan development and implementation). The study also considered the policies and vision of San Antonio (as summarized in Chapter 5) and the ways in which a management-based plan can address the issues associated with on-street space use. Lastly, the On-Street Space Management Plan contains an element of flexibility in that it presents a “toolbox” of improvement strategies and defines a process by which the City can select and implement strategies as conditions warrant.

Organization of Report

Chapter 2 documents the results of two workshops. These workshops identified specific issues that received detailed attention during the study. Using comments at the workshops, a primary study area composed of several subareas was defined. Chapter 2 documents these areas and the issues that were identified in each subarea.

A detailed accounting of existing public and private on-street parking spaces in the primary study area was determined by conducting a walking inventory. The demand for on-street uses was determined through a parking occupancy and turnover survey. The results of these activities are documented in Chapter 3. Chapter 4 identifies issues, opportunities and constraints in downtown. Chapter 5 provides a summary of City policies and regulations related to parking and the use of curb space. These three chapters provide the basis for the development of improvement strategies, and identification of evaluation criteria.

Chapter 6 summarizes on-street space problems as identified in previous chapters, and defines a range of approaches to address problems. Each approach category contains a “toolbox” of general improvement strategies, including their order of magnitude costs, national experience, and how they would work in San Antonio. This “toolbox” represents a resource guide containing ideas and strategies to assist the City of San Antonio with managing its on-street system now and in the future.

2

Problem Definition

The problem identification process was designed to provide a clear definition of needs and issues related to on-street parking supply and demand. The needs of each of the users in the downtown area were considered in defining the problem. Obtaining agreement on the needs and perceived on-street parking problems was an important first step that supported the decision-making and consensus-building process.

2.1 PROBLEM DEFINITION WORKSHOPS

In December 1998, two “Problem Definition” workshops were conducted with agency and private stakeholders in the downtown area. Each workshop participant filled out a survey form that summarized and ranked his or her key concerns and issues. Additional survey forms were provided via mail and fax for people who were unable to attend the workshops. Completed forms are contained in Appendix B.

The agency staff members and the downtown stakeholders identified many common issues. This indicates that there is a common understanding of some of the problems in downtown related to curbside use. There also was a common interest in working together to try to solve the problems using short-term and long-term improvement strategies.

The most common issues identified related to commercial loading zones and short-term parking for businesses and employers. Management of VIA bus stops and traffic flow were also identified as key issues. The participants in the stakeholders meeting noted that if appropriate curbside loading and short-term parking space was available, bus and traffic flow could be improved. Many people noted that new off-street parking or visitor facilities would help to address long-term parking and taxi/tour bus staging issues.

Table 2.1 presents a summary of the issues and comments provided at the workshops. The summary lists specific issues in seven subareas identified by workshop participants. These subareas were refined at the following Study Oversight Committee Meeting in January 1999. The subareas are described in Section 2.2.

**TABLE 2.1
PROBLEM IDENTIFICATION WORKSHOP – COMMENT SUMMARY MATRIX**

SUBAREA/ COMMENT CATEGORY	KEY COMMENTS
	DOWNTOWN STAKEHOLDER COMMENTS
General Comments	<ul style="list-style-type: none"> • Competition of service space and time for goods movement and delivery is the key issue. More curbside space for deliveries is needed. • Last addressed in 1990 through Tri-Party when streets were reconfigured. There has been a lot of growth since then (both business and residential) • Long-term residential parking negotiated with City for use of parking structures. • Need more consistent enforcement across all areas. • Signage could be improved for commercial loading zones to increase understanding; too many types of zones – should use one or two key types, or all 24-hour loading zones. • Need notification if loading zones are to be changed to other uses during special events. • Short-term non-commercial parking in limited Commercial Loading Zones is a problem. • Most delivery companies operate 2-5 trucks on a typical day. • Many signs are bent/turned around so can't tell what type of zone it is. • Traffic doesn't seem to be a big issue in downtown San Antonio – generally flows well. Impacts to traffic are generally due to special events or inadequate curbside use for loading, parking, drop-off, etc. • Would like to see some level of service (LOS) analysis to see if some streets could lose a lane (all or part of a day) and still maintain traffic flow. • During special events, delivery trucks will buy hoods for meters from traffic division – works well. • Biggest competition for commercial loading space is personal vehicles (residential or commercial decal cars)
1. Riverwalk / South Bank	<ul style="list-style-type: none"> • Heaviest demand for service delivery, most critical area for additional space and most strict enforcement area. • Crockett/Navarro area is most preferable for additional commercial space – easiest access. • Delivery windows for restaurants is typically 8:45-11:00 am and 2:00-5:00 pm. • 30-minute loading zones but often have 25 accounts to service – not enough time so usually get ticketed. • Delivery companies don't always get a paper ticket but have to check city records once a month to see if they got ticketed so don't get towed or booted. • Stairs down to Riverwalk and level of tourist activity is a safety issue. • College Street near Majestic Theatre (between Navarro and St. Marys) currently serves as a good location for commercial loading. • Street direction (1-way to 2-way, etc.; eg. Presa) makes for difficult circulation. Often have to circulate within area to find delivery space. • Usually can park in less convenient areas such as Soledad/Commerce but then have to carry delivery loads through bus

	<p>stop areas several times.</p> <ul style="list-style-type: none"> • Possible short to long term solutions: <ul style="list-style-type: none"> - Remove meters on Crockett (St. Marys and Navarro) for Commercial Loading Zone given the accessibility to Southbank. - Turning radius improvements at Commerce@ Presa; Losoya/Broadway @ Houston; St. Marys @ Crockett - Possible leasing of All Right parking lot at Commerce/ Presa for Commercial use vs. Cost of tickets. - Possible curb cuts (eg. Maverick building just put in 3 short-term spaces near Presa @ Houston – 24-hour passenger loading zones with 15-minute limit). More retail will be opening in the area. - Central loading area; would only work if convenient – more dispersed loading zones may work better. - Use of transguide system to guide commercial deliveries. - Electronic debit systems for commercial loading zone space. • Some zones are not big enough to accommodate commercial trucks. • Too small of a loading area zone at St. Anthony’s • Private service elevators generally off-limits – stairs are dangerous (eg. Hyatt elevator off limits so use stairs to Mad Dog’s) • Esquire and Aztec have lack of parking/loading zones. • Market (Alamo to Presa) possible use of traffic lane for loading zones. • New Westin Hotel deliveries are from curbside on Market; need enforcement of loading zones around hotels. • Better enforcement of pick-up/drop-off in Riverwalk area (eg. On payday people run in to get checks) • Previous discussions included riverbarge delivery concept – too many legalities involved.
2. Visitors Center/Alamo	<ul style="list-style-type: none"> • Crockett/Alamo/Blum – Mostly tour buses and taxis, some commercial loading zones. • In front of Hilton on Alamo, pick-up/drop-off vehicles use commercial loading zones. Charter or tour buses also layover in areas.
3. City Hall	<ul style="list-style-type: none"> • Need for short-term metered and commercial parking for passenger drop-off/pick-up, short business trips, meetings, etc.
4. Market Square/ Milam Park	<ul style="list-style-type: none"> • Second tourist location with generally sufficient short-term metered parking. • Two commercial loading zones on 100 South San Saba; could use one on 900 Dolorosa (north side). • Not much commercial loading zone space; more of a problem during special events.
5. Downtown Office/ Banking Core	<ul style="list-style-type: none"> • Not many problems identified in northern area. • Generally sufficient short-term parking. • Could improve designated commercial parking for FedEx, UPS, etc. • Travis (Navarro to Jefferson) too narrow for trucks
6. Sunset Station/ Alamodome	<ul style="list-style-type: none"> • Sunset Station is 1-2 months from opening with retail and restaurants. Commercial loading, short-term parking could be a problem if not properly incorporated into redevelopment.
7. Convention Center	<ul style="list-style-type: none"> • No problems identified at Convention Center

STAFF WORKSHOP COMMENTS	
General Comments	<ul style="list-style-type: none"> • Key issues identified as Commercial Loading Zones, Short-term parking for business, traffic (symptom of other problems), VIA bus stops with major transfer activity as stops get further and further apart. • Long-term residential parking seen as low priority. • Other possible solutions are Transportation Demand Management (TDM), Intelligent Transportation System (ITS) strategies. • Tour buses generally enter downtown after morning peak • Hotels (Hyatt, Hilton) stage tour/charter buses in front, using commercial or traffic lane while waiting. Could be a communication problem to bus drivers. • Resident and Business Decal users compete with Commercial Loading Zone users. • Contractors/vendors can buy a 20' space for \$6 per day for use (Frank Juarez 207-7755 is contact); eg. Majestic Theatre for loading, equipment, etc. during shows. • Delivery companies generally work with enforcement division. • UPS, FedEx are also problems, usually a short-term parking curbside use but can impact traffic and bus flow • "Sacred" streets are Commerce, Houston, and Market – important to downtown for appearance and circulation • Many streets in old downtown core are 53' right-of-way; buildings are built up to the street so there is not much room for expansion. • Tri-Party added bus (diamond) lanes, new curbs and pavers which took away some curbside space – the growth in downtown is now catching up. Part of original plan was a major arterial loop around downtown to pull traffic out of the core. • Potential strategies identified: <ul style="list-style-type: none"> - Distribution Center - ITS strategies: Special Event Management; Coordinated with Transguide; Parking Tolltags; etc. - Business Improvement District (to assist with financing) - Multi-Use structure – Possible for City to build then charge rent/user fees; privately owned parking garages are not feasible – parking costs are too low to turn profit. How much would costs have to increase to make private ownership feasible? - Possibly limit delivery trucks in downtown, but would need bigger trucks/more crew. Bigger trucks are harder to maneuver, can cause damage to downtown streets. • Parking Department and VIA can provide windshield tours for the Project Team to observe problems, issues, enforcement • ADA parking is free at meters with permit – this reduces the number of available short-term on-street parking spaces. • Construction of new facilities may be the key – other strategies will just redistribute uses but not increase supply. • Previous applications for valet curb cuts on Houston have not been approved. City will not allow them. • Bus diamond lanes have improved travel times, traffic flow and decreased accidents. • Using traffic lanes during off-peak times is difficult to enforce. • Zoning regulations don't work well. Zoning is political and variances can be given. Many older land uses are grandfathered so regulations don't apply.

	<ul style="list-style-type: none"> • Need signage improvements: <ul style="list-style-type: none"> - Clarifications to loading/parking signs - Easier directional signage for tourists/bus drivers
1. Riverwalk/South Bank	<ul style="list-style-type: none"> • Commerce@St. Mary's presents a VIA bus problem if blocked. Combined headways along Commerce/Market/St. Marys/Navarro can be as low as 0.9. • Most difficult area to solve curbside problems will be in Riverwalk area near Alamo, Soledad, Houston. • Marriot Rivercenter has underground delivery area. • Westin Hotel on Market (between Navarro and Presa) – short block faces in this area given historic nature • Heavy tourist and entertainment/restaurant area • Houston Street Redevelopment Project (Federal Realty Trust) proposes to put trees in middle of Houston Street and close Presa Street from Houston to the River (Presa Street will remain open as of the printing of this report). • Right-turn only from Commerce onto Navarro is accident area; cars try to cut off buses using diamond lanes. Also a problem at Navarro/College.
2. Visitors Center/Alamo	<ul style="list-style-type: none"> • Key problems are charter bus staging, taxis, and horse carriages using commercial loading space for deliveries to surrounding hotels/restaurants. • The new visitor center study should address tour bus parking, horse carriages, etc, for the Alamo area.
3. City Hall	<ul style="list-style-type: none"> • Key issue is lack of short-term parking for people who want to come in to take care of city business, attend meeting, etc.
4. Market Square/ Milam Park	<ul style="list-style-type: none"> • During special events people are bused in (usually around evening traffic peak); San Saba is typically blocked off; buses need a place to layover. • Staging area available under freeway; buses are only meant to drop off passengers in the area, then leave.
5. Downtown Office/ Banking Core	<ul style="list-style-type: none"> • This northern end of downtown (Travis/Pecan/Martin) is where most office buildings and banks are located. • There is a need for short-term meters, commercial loading, or passenger drop-off/pick-up activity. • Riverwalk to be extended north to this area so land uses could change in future.
6. Sunset Station/ Alamodome	<ul style="list-style-type: none"> • VIA has volunteered to provide tour or charter bus parking at Alamodome Thompson Station with a minimal charge for security. • Station Stadium Transportation Team is rarely contacted for events (Tony Pizzi is on team) • The Sunset Station will become an issue as it develops; could compound parking problem at Alamodome during scheduled events.
7. Convention Center	<ul style="list-style-type: none"> • Convention Center generally provide own taxi, tour bus, delivery areas. • Bowie Street acts as a staging area for deliveries to convention center; can queue back to I-37. • New expansion will accommodate 24 loading bays off Bowie Street, but Alamo Street is still often used for convenience.

2.2 DEFINITION OF SUBAREAS

Seven general subareas with distinct characteristics and issues were identified as a result of the workshops. These subareas were presented to the Study Oversight Committee at their January 1999 meeting for review. The results of the workshops were also discussed. Based on additional discussion with the SOC, subarea 6 was split into 2 areas to account for the different issues and needs associated with the new Sunset Station development and the Alamodome. With this revision a total of eight subareas were identified.

Figure 2-1 shows the boundaries of the eight subareas. Locations outside of a specific subarea, but within the study area were classified as “fringe” area.

A brief description of each subarea follows.

1. **Riverwalk/Southbank** – This subarea is bounded by Houston Street (north), Soledad Street (west), Nueva (south), and Alamo/Losoya (east). The area is characterized primarily by hotels and restaurants, most of which are located along Riverwalk, as well as La Villita, theaters (Majestic, Empire, Aztec), and residential and office buildings. The Southbank area is one of the most active in terms of restaurants and entertainment.
2. **Alamo/Visitors Center** – This subarea is bounded by Houston/Bonham (north), IH 37 (east), Commerce (south), and Losoya (west). The historic Alamo is a major tourist destination in the area. The existing Visitors Center is across from the Alamo on Alamo Street. Several hotels and the Rivercenter Mall are also located in the area. The area has intense tourist drop-off/pick-up activity. It also is the planned location for a new San Antonio Visitor Information and Transportation Center.
3. **City Hall** – This subarea generally surrounds San Antonio City Hall. It includes many of the associated City buildings and the Bexar County Courthouse. The Spanish Governor’s Palace and the San Fernando Cathedral are also located in the subarea. The boundaries are Houston (north), Soledad (east), Nueva (south), and Laredo (west).
4. **Market Square** – The Market Square (El Mercado) subarea is generally bounded by Houston Street (north), Laredo/Santa Rosa (east), Durango (south), and IH 35 (west). Market Square is estimated to have over 3 million visitors annually. It hosts 20 major weekend events during theyear. Market Square has more than 100 tenants, including specialty retail shops and restaurants.
5. **Office/Banking Core** – The office/banking core was identified by the SOC and workshop participants as the area north of Houston Street, generally bounded by Martin (north), Flores (west), and Third Street (east). This area is generally characterized by office and commercial buildings.
6. **Alamodome** – The Alamodome subarea comprises the immediate vicinity of the Alamodome. This subarea is primarily used during special events. The on-street space in the area is not used on a regular basis. Because special events are typically in the evening, they do not affect on-street parking during the busiest times of the day.

Figure 2-1

7. **Convention Center** – Subarea 7 is primarily made up of the San Antonio Convention Center. It is bounded by Commerce (north), IH 37 (east), Durango (south), and Alamo (west). The Tower of the Americas and Hemisfair Park are also located in the subarea. The convention center is being expanded from its current footprint of 50,000 square feet to 1.3 million square feet. A total of 36 loading docks will be provided, 24 of which will be new. The docks will be accessed by three loading ramps.
8. **Sunset Station** – Subarea 8 includes Sunset Station, a mixed-use, entertainment, restaurant and specialty retail development located just east of IH 37 and immediately north of the Alamodome. Phase I of the Sunset Station opened in January 1999 with nearly 60,000 square feet of activity. Phase II, planned to open in Summer 1999, will triple the square footage. St. Paul Square is located in the subarea north of Commerce Street. The area is generally bounded by Houston Street (north), RR tracks (east), Gonzales (south) and IH 37 (west).

2.3 REVIEW OF PREVIOUS STUDIES

The *San Antonio Downtown Parking Study* (The Consulting Engineers Group, October 1995) and the *Downtown Transportation Study* (Wilbur Smith & Associates, Inc., June 1997) are the two most recent transportation studies completed in the downtown area. Both studies proposed the construction of additional parking facilities in downtown to address existing and forecast shortages of long-term parking. Both studies concluded that the need for additional off-street parking was most urgent in the center of downtown, which is generally the same area as Subarea 1 – Riverwalk/Southbank.

Several alternatives to better accommodate commercial vehicle loading and unloading in the downtown area are also mentioned in the *Downtown Transportation Study*. These alternatives include new on-street loading areas, expanded off-street loading, public parking spaces in garages for commercial vehicles, and setting aside parking spaces in private facilities for loading only.

The issues and needs identified in these studies were considered in the development of improvements for on-street space management.

3 Existing Conditions

This chapter describes the existing supply and demand conditions of curbside uses in downtown San Antonio. Based on the problem definition workshops, the common issues of Commercial Loading Zones and short-term parking are emphasized. However, the issues associated with other uses (e.g. tour bus parking, limousines) are also addressed.

3.1 EXISTING ON-STREET USE INVENTORY

The first step in the analysis of on-street space was to develop an inventory of uses within the study area. The City of San Antonio provided an initial inventory of on-street uses in a hand-colored map format. This inventory was verified through a field survey conducted by BRW and Vickrey & Associates. A total of 114 blocks (over 400 block faces) were inventoried within the downtown study area. This data was used to develop an inventory in Geographic Information System (GIS) format.

3.1.1 Types of On-Street Uses

Six categories of on-street curb space were identified in cooperation with the City. Some uses with limited space were aggregated to provide a reasonable format for summarizing data within each subarea. Table 3.1 summarizes the categories of on-street uses contained in the inventory. Handicapped parkers (with decal license plate or permit) can park in any metered space for any length of time without charge.

**TABLE 3.1
SUMMARY OF ON-STREET USE CATERGORIES**

Category	Uses Allowed
2-Hour Meters (\$0.50)	Short-term parking
2-Hour Meter (\$1.00)	Short-term parking
8-Hour Event Meters (20 minutes/\$0.25)	Mid- to Long-term Alamodome event parking
10-Hour Meters (2.5 hours/\$0.25)	Long-term parking
24-Hour Commercial Loading Zone (CLZ) (30 minute limit)	Commercial Delivery Vehicles, Residential Decal Permit Holders, Commercial Decal Permit Holders
24-Hour Passenger Loading Zone (PLZ) (15-minute limit)	Short-term passenger loading/unloading
Miscellaneous	Taxi Stand, Tour Bus Parking, Horse Carriage Stands, 1-Hour Parking (free), 2-Hour Parking (free)
No Parking/ No Standing	Traffic lane, VIA Bus Stop, Restricted Parking for official use only

Source: City of San Antonio; BRW, Inc.; April, 1999

3.1.2 On-Street Use Inventory

Figure 3-1 shows the existing on-street use inventory for the study area. Table 3.2 summarizes the percentage use by on-street category for the study area, as well as for each subarea.

TABLE 3.2
STUDY AREA – PERCENTAGE BY USE TYPE

Subarea	2-Hour Meters (\$0.50)	2-Hour Meters (\$1.00)	8-Hour Event Meters	10- Hour Meters	24- Hour CLZ	24- Hour PLZ	Miscell- aneous	No Parking
1- Riverwalk/SouthBank		7%			11%	1%	2%	79%
2- Alamo/ Visitors Center	7%	1%		3%	6%	3%	5%	76%
3- City Hall		11%			8%		2%	80%
4- Market Square		14%			2%	1%	3%	81%
5- Office/Banking Core		18%			6%	4%	1%	71%
6- Alamodome								
7- Convention Center		2%		6%	5%		1%	85%
8- Sunset Station	1%		13%		1%		3%	82%
Fringe	1%	17%		1%	4%	1%	1%	75%
Study Area	1%	11%	1%	1%	6%	2%	2%	77%

Source: BRW, Inc.; May 1999

As shown in Figure 3-1 and described in Table 3.2, the majority of curbside use in the study area is classified as No Parking. Downtown San Antonio has a very high proportion of No Parking use compared to other downtowns such as Denver, San Diego, Dallas and Phoenix. San Antonio's narrow streets are the primary reason for the high proportion of no parking areas. In addition, a large percentage of curbside space is reserved for VIA bus-only diamond lanes and bus stops, as well as traffic flow.

Chapter 4 describes the range of opportunities and constraints that influence the demand for and allocation of curbside space, as well as where on-street improvements are appropriate. These opportunities and constraints include:

- Traffic Operations
- VIA Bus Operations
- Pedestrian Activity
- Riverwalk Access
- Proposed Growth/Development Activity
- Related Transportation Projects

3.1.3 Off-Street Parking Supply

Figure 3-2 illustrates the location of parking garages and surface lots. Table 3.3 provides a summary of public and private off-street parking supply. This data is based on information provided by the City of San Antonio and The Downtown Alliance.

Figure 3-1



Figure 3-2



**TABLE 3.3
OFF-STREET PARKING SUPPLY**

Subarea	Surface Lots	% of Study Area	Parking Garages	% of Study Area
1- Riverwalk/South Bank	1,073 ⁽¹⁾	10.1	2,325 ⁽¹⁾	27
2- Alamo/Visitors Center	793	7.5	2,168	25.2
3- City Hall	403	3.8	1,167	13.6
4- Market Square	544	5.1	209	2.4
5- Office/Banking Core	1,369	12.9	780	9.1
6- Alamodome	N/A ⁽²⁾	-	N/A	-
7- Convention Center	312	2.9	1,296	15.0
8- Sunset Station	1,103 ⁽³⁾	10.4	0	0
Subtotal	5,597	52.8	7,945	92.3
Fringe	5,003	47.2	667	7.7
Study Area	10,600	100%	8,612	100%

Source: City of San Antonio; The Downtown Alliance; BRW, Inc.; May 1999.

Notes:

1. CPS Garage (351spaces) and CPS Lot (164 spaces) are event parking only.
2. The Alamodome provides more than 12,000 parking spaces for use during special events.
3. 663 of these spaces are City lots and are event parking only. 440 spaces are associated with the new VIA park-and-ride near IH 37/Commerce.

As shown, nearly 14,000 off-street parking spaces are provided within the defined subareas, and another 5,700 are located in the fringe area. More than 90% of garage spaces in the study area are located within the subareas. The more than 19,000 off-street parking spaces compares to approximately 800 on-street parking spaces. More than 200 of these are located in the fringe area. Additional meters are located immediately north of the study area. Of the approximately 70 meters in the Riverwalk/Southbank area, nearly all are located in the southern section near CPS and La Villita. Only four meters are located near Southbank and these have been covered due to construction in the area. The combined subareas contain more than 14,000 off-street spaces and approximately 600 on-street spaces. From these comparisons it is clear that on-street parking is a limited resource leaving the vast majority of parking needs to be met by off-street facilities.

3.2 ON-STREET PARKING TURNOVER SURVEY

To document the use of on-street spaces, an on-street parking occupancy and turnover survey was conducted. This survey was taken on Tuesday through Thursday, April 27-29, 1999. It should be noted that this was the week following Fiesta and some data may have been affected for this reason. The following sections describe the methodology and results of the survey.

3.2.1 Methodology

The parking occupancy and turnover survey was conducted for on-street metered parking spaces and commercial loading zones. Based on the field inventory, a sample of blocks and block faces were selected for the survey. Figure 3-3 illustrates the blocks and block face numbering system. Field crew members were stationed along assigned routes for an 11-hour period (7:00 am and 6:00 pm). From 7:00 to 8:00, the survey crew verified inventory and documented the configuration of block faces along their route. Thus, occupancy and turnover statistics were gathered for a 10-hour period.

Figure 3-3



The occupancy of each type of parking was recorded at one-hour intervals and a license plate record taken for spaces to determine the average parking duration and number of different vehicles parked over the survey period. Truck sizes and vendors were recorded for commercial zones by noting the vendor name on the survey form. The data from the occupancy and turnover study provides an estimate of parking use patterns under current supply and demand conditions. By examining occupancy levels, areas with inadequate parking supply can be identified. The data on average parking duration and turnover provide insight into the types of parking and loading uses occurring in curbside spaces. The block face data was aggregated to develop estimates of parking use characteristics for each subarea.

3.2.2 Definition of Terms

This section defines the data items collected during the survey.

- **Parking Accumulation** – The total number of vehicles parked in a given area at a given time.
- **Space-Hours Used** – The number of hours each space is used during the survey day.
- **Average Occupancy Rate** – The average percentage of occupied spaces within the area during a specific time interval, determined by dividing the space-hours used by the available space-hours (supply). The maximum practical utilization of parking is typically 85% of total supply.
- **Peak Occupancy Period** – The peak period of occupancy, or time of peak demand for an area. This is determined by observing daily trends in a subarea and seeing when parking accumulation is greatest.
- **Average Duration** – The average length of time an average vehicle remains in each space (total number of space-hours used divided by the number of cars parked in the area).
- **Average Turnover Rate** – The average number of cars using one on-street space over a defined time period (number of spaces in the area divided by the number of different cars parked in the area).

While supply data for the on-street parking meters was easily observed and recorded during the survey, the supply data for commercial loading zones was more difficult. This is because a variety of different sized trucks use the commercial loading zones, and supply varies depending on the size of the truck. To accurately reflect conditions observed in the study, the average truck size observed in each subarea was used. For the design of facilities, the National Parking Association (NPA) and the American Association of State Highway and Transportation Officials (AASHTO) recommend using two general design sizes: restricted (35 feet) and standard size (55 feet) commercial trucks.

3.3 EXISTING ON-STREET PARKING METER USE

The following section describes the parking accumulation and occupancy characteristics of on-street parking meter spaces for each subarea.

3.3.1 Parking Accumulation

Figures 3-4 through 3-13 illustrate the observed parking accumulation trends for 2-hour meters in each subarea. Data for 10-hour meters is illustrated for subareas 2 (Alamo/Visitors Center)

and 7 (Convention Center). Key observations and the peak occupancy period are highlighted for each subarea.

Subarea 1 – Riverwalk

As shown in Figure 3-4, on-street parking accumulation in the Riverwalk/Southbank subarea generally reaches its peak by 9:00 am and remains high throughout the course of the day. The peak occupancy period was observed to be the lunch/early afternoon hours, or approximately 1:00 to 3:00 pm. Data for blockface 58-1 was not used as meters were covered due to construction.

Subarea 2 – Alamo/Visitors Center

On-street parking accumulation in the Alamo/Visitors Center area for 2-hour meters and 10-hour meters is presented in Figures 3-5 and 3-6, respectively. As illustrated, parking accumulation at 2-hour meters in this subarea increased throughout the day. The peak occupancy period was observed to be from approximately 3:00 pm to 5:00 pm. Data for blockface 89-1 was not used due to some gaps in the data, however subsequent observations indicated that these meters are consistently used throughout the day and reflect the trend seen at adjacent blockfaces in the subarea. As shown in Figure 3-5, blockfaces 93-1 and 94-1 were minimally used during the observation period.

As shown in Figure 3-6, parking accumulation at the 10-hour meters in the Alamo/Visitors Center subarea peaked early in the day and remained high.

Subarea 3 – City Hall

Figure 3-7 illustrates that parking accumulation in Subarea 3, City Hall, occurred early and remained high throughout the day. This trend indicates that a slight peak occurs during the mid-morning and mid-afternoon hours.

Subarea 4 – Market Square

As shown in Figure 3-8, parking accumulation at 2-hour meters in the Market Square subarea peaked during the mid-morning and lunch hour. Additional vehicles began to accumulate in the late afternoon/early evening. Data for blockfaces 3-2 and 7-1 was not used because the meters were not accessible for a portion of the day due to activities associated with the end of Fiesta (breaking down equipment, etc.)

Subarea 5 – Office/Banking Core

Parking accumulation in the Office/Banking core (Figure 3-9), which extends across the north central portion of the study area, indicates a peak occupancy period of approximately 12:00 pm to 2:00 pm. Parking accumulation is lowest in the early morning and remains high through the late afternoon.

Subarea 6 – Alamodome

No data was observed for this subarea.

Figure 3-4

Figure 3-5

Figure 3-6

Figure 3-7

Figure 3-8

Figure 3-9

Subarea 7 – Convention Center

As with the Alamo/Visitors Center subarea, the Convention Center subarea also has 10-hour meters present. Figures 3-10 and 3-11 illustrate the parking accumulation trends for 2-hour and 10-hour meters, respectively.

Parking accumulation for the 2-hour meters appears to be at peak occupancy during the lunch hour, but generally remains high throughout the day. Only one blockface with 2-hour meters is present in this subarea.

Parking accumulation at the 10-hour meters was highest during the morning and early afternoon hours. Parking demand begins to decrease at approximately 2:00 pm and is significantly lower in the late afternoon. This is associated with many Federal Building employees who park in the area and leave earlier than the typical 5:00 pm workdays end.

Subarea 8 – Sunset Station

Only event meters and free 2-hour parking are located in this subarea. It was observed that a small percentage of the event meters were used for short- and long-term parking. Very limited activity was observed at the 2 hour parking location along Commerce near St. Paul Square. However, as this area develops and is used more, it can be expected that demand for parking on-street will increase also.

Study Area Fringe

As shown in Figure 3-12, parking accumulation at 2-hour meters within the study area fringe was generally consistent throughout the day. The highest demand was observed during the mid-morning, lunch, and mid-afternoon hours.

Figure 3-13 indicates that parking accumulation at the 10-hour meters in the fringe area follows the same accumulation trend as those in the Convention Center. The parking accumulation is generally highest in the early morning and drops off in the late afternoon.

Figure 3-10

Figure 3-11

Figure 3-12

Figure 3-13

3.3.2 Average Occupancy Rate

Figure 3-14 illustrates average occupancy rates for each subarea surveyed, while Table 3.4 summarizes the rates. No data was observed for Subarea 6 (Alamodome) and Subarea 8 (Sunset Station).

**TABLE 3.4
AVERAGE OCCUPANCY RATES BY SUBAREA (METERS)**

Subarea	Average Occupancy Rate (Average Weekday)
2- HOUR METERS	
1- Riverwalk/South Bank	88.2%
2- Alamo/Visitors Center	28.6%
3- City Hall	93.6%
4- Market Square	77.1%
5- Office/Banking Core	68.6%
6- Alamodome	N/A – Event Only
7- Convention Center	92.4%
8- Sunset Station	N/A – Limited Use
Fringe	53.0%
10-HOUR METERS	
2- Alamo/Visitors Center	99.5%
7- Convention Center	68.0%
Fringe	75.6%

Source: BRW, Inc.; May 1999.

Capacity is reached when demand matches the supply of on-street parking. Maximum practical utilization (sometimes called effective supply) is generally thought to be 85% of total supply (*Transportation Planning Handbook*, p. 400). At this point, the occupancy rate may not represent true demand; additional demand is likely not present due to the lack of parking. These drivers go elsewhere to find parking if their desired location is occupied.

As shown in Figure 3-14 and Table 3.4, the highest average occupancy rates for 2-hour meters were observed in Subareas 1, 3, and 7: Riverwalk/Southbank, City Hall and Convention Center. At these locations the occupancy rate is near or at capacity, indicating that supply is inadequate. Average occupancy rates at the remaining subareas indicate that the supply of 2-hour metered parking is adequate or underutilized. It should be noted that the low average occupancy rate at the Alamo/Visitors Center is largely due to the under-utilization of meters located in the northeast section along Bowie and Bonham.

Adequate capacity for 10-hour meters is suggested by average occupancy rates of 68% and 75.6% for the Convention Center subarea, and the study area fringe, respectively. However, long-term parking in the Alamo/Visitors Center is at-capacity, as evidenced by an average occupancy rate of 99.5%.

Figure 3-14



3.3.3 Average Duration

Figure 3-15 illustrates average duration in the study area. Average duration represents the average length of time a given vehicle remains in a specific space. This characteristic provides insight as to an appropriate time limit for an area and also can show where the majority of violations are observed to occur.

As shown on Table 3.5, the Riverwalk/Southbank, Alamo/Visitors Center and Convention Center subareas have an average duration of slightly more than 2 hours at 2-hour meter locations (10 to 24 minutes over the limit). Many parkers may simply “feed” the meter to avoid a ticket, even though they are in violation of the time limit. In addition, the longer duration in the Riverwalk/Southbank area may be due to handicapped parkers using meters in the southwest portion of the subarea near La Villita and the CPS building (no handicapped parkers were observed in the Alamo/Visitors Center and Convention Center subareas). These actions reduce the effective supply of short-term parking in the area. For the Riverwalk/Southbank and Convention Center subareas, the reduction in effective supply may affect the additional demand suggested by the high average occupancy rates discussed in the previous section. The remaining subareas, including the study area fringe, have an average duration of less than 2 hours.

**TABLE 3.5
AVERAGE DURATION BY SUBAREA (METERS)**

Subarea	Average Duration (Hours)
2- HOUR METERS	
1- Riverwalk/South Bank	2.1
2- Alamo/Visitors Center	2.4
3- City Hall	1.6
4- Market Square	1.7
5- Office/Banking Core	1.8
6- Alamodome	N/A
7- Convention Center	2.3
8- Sunset Station	N/A
Fringe	1.7
10-HOUR METERS	
2- Alamo/Visitors Center	5.5
7- Convention Center	4.3
Fringe	6.2

Source: BRW, Inc.; May 1999.

The average duration for 10-hour meters suggests that these meters are generally being occupied in accordance with their intended use. It is expected that 10-hour meters would be used for a long duration. However, the lower level of duration (4-6 hours) seen in the Convention Center and the Alamo/Visitors Centers, coupled with the longer duration observed at the 2-hour meters, suggests that additional mid- to long-term parking is in demand. This is particularly an issue in the Alamo/Visitors Center area, where the average occupancy rate for 10-hour meters is nearly 100%.

Figure 3-15



3.3.4 Average Turnover Rate

Average turnover rates for subareas are shown in Figure 3-16. The average turnover rate for each subarea approximates the average number of cars using one on-street space in an average weekday. For 2-hour meters, which are intended to serve short-term parking needs, a turnover of 5 or more times during a 10-hour period is desired to maximize use of that space. In areas where short trips are common such as a bank or hospital, higher turnover rates are common.

Table 3.6 summarizes the average turnover rate at 2-hour and 10-hour meters for each subarea. Subarea 3, City Hall, has the highest average turnover at 2-hour meters – 5.7 cars per space over the 10-hour survey period. The Riverwalk/Southbank and Market Square subareas also have high turnover rates – an average of 4.3 to 4.5 cars per space. The Alamo/Visitors Center subarea has the lowest average turnover rate of 1.2 cars/space on an average weekday. This is primarily due to the low utilization of meters along Bowie and Bonham.

**TABLE 3.6
AVERAGE TURNOVER RATE BY SUBAREA (METERS)**

Subarea	Average Turnover Rate (Cars per Space 10-HR period)
2- HOUR METERS	
1- Riverwalk/South Bank	4.3
2- Alamo/Visitors Center	1.2
3- City Hall	5.7
4- Market Square	4.5
5- Office/Banking Core	3.8
6- Alamodome	N/A
7- Convention Center	4.0
8- Sunset Station	N/A
Fringe	3.0
10-HOUR METERS	
2- Alamo/Visitors Center	1.8
7- Convention Center	1.6
Fringe	1.2

Source: BRW, Inc.; May 1999.

The average turnover rate at 10-hour meter locations is in accordance with the intended use of those spaces. 10-hour meters in the fringe area appear to have an average turnover rate that approximates the typical daily use by a downtown employee.

Figure 3-16



3.4 EXISTING COMMERCIAL LOADING ZONE USE

While many newer buildings in downtown San Antonio provide off-street loading areas for commercial deliveries, many of the older buildings that have been restored for commercial, office or residential use do not have such facilities and rely on on-street loading zones for service delivery and passenger loading. Because on-street loading activity can increase both traffic congestion and safety hazards related to vehicles and pedestrians, it is generally desired that all such activity be conducted off-street. However, given the unique and historic nature of San Antonio, a large portion of commercial loading and unloading takes place on-street. One of the key objectives of this study is to manage the existing space as efficiently as possible and explore other ways to accommodate this activity. A thorough understanding of loading zone activity is necessary to develop these improvement strategies. The following sections summarize loading zone activity in each of the subareas.

3.4.1 Commercial Loading Zone Activity – General Overview

In addition to short-term parking activity at meters, the April turnover survey also observed commercial loading zones. Figures 3-17 through 3-22 illustrate general characteristics of commercial loading zone activity over the 10-hour survey period based on one-hour survey intervals.

While commercial loading zones in downtown San Antonio have a 30-minute time limit, the one-hour observation interval during the April turnover survey was sufficient to provide a general overview of activity and use trends for the entire study area. Using one-hour intervals allowed for the identification of specific areas where commercial loading activity was at its highest, where problems or issues were observed, and where consistent loading activity was observed over the day. Thus, areas where loading activity was low or moderate, or where no user complaints were identified, could be generalized and study resources focused where problems are apparent and improvements may be necessary. These more problematic areas were subject to a more intensive survey period (i.e. 15-minute intervals), discussed in Section 3.4.2.

While occupancy, duration, and turnover rate characteristics were developed for metered parking, these indicators were not found to be helpful in explaining commercial loading zone operations. The primary reasons why these characteristics can be misleading are:

- the intensity of commercial loading zone activity varies greatly within a subarea so average characteristics could be misleading;
- several commercial vehicles parked for long periods of time within a commercial loading zone, which skews the average duration for both the blockface and the entire subarea;
- while supply can be quantified based on average vehicle space requirements, actual supply can vary based on where drivers actually park within a zone, given that no designated spaces are allocated to certain sized vehicles. This means that turnover and duration can be misleading; and,
- the impact of large-sized vehicles parking beyond the 30-minute time limit have a greater impact on supply than do small vehicles.

Rather, the analysis of survey data focused on the following:

- Overall activity level throughout the day;
- When peak periods of loading activity occur;
- Where the most large trucks are observed;
- What the commercial vehicle mix is and what the average vehicle size is; and,
- Where trucks consistently parked beyond the 30-minute limit (violation rate).

The following sections highlight the general characteristics within each of the subareas observed using one-hour intervals.

Subarea 1 – Riverwalk/Southbank

Figure 3-17 illustrates commercial loading zone activity based on the one-hour survey period in the Riverwalk/Southbank area. As shown in the figure, commercial loading activity peaks in the mid-morning, is moderate during the lunch hour, and increases again during the mid-afternoon. This is consistent with input from the initial stakeholders meeting, in which users indicated that their primary delivery times in the Southbank area are from 8 am to 11am and 2pm to 5pm. Most deliveries do not occur during the lunch hour when customer volumes are highest.

The vehicle mix in this subarea was generally observed to be 72% small (22 feet in length assumed), 20.7% mid-size (35 feet assumed), and 7.3% large delivery trucks (up to 55 feet in length). The majority of large trucks were observed on blocks adjacent to the Southbank development along Crockett and Presa. Another high activity area was observed just east of Soledad Street near the Bexar County Courthouse. However, the majority of vehicles in this area were observed to be small. No loading activity was observed along Block 49-1 on Commerce Street.

Of the approximately 180 vehicles observed in this area, more than 40 parked in excess of one hour, indicating a fairly high violation rate of more than 20%.

Subarea 2 – Alamo/Visitors Center

Commercial loading activity for the Alamo/Visitors Center area is illustrated in Figure 3-18. As shown, activity was generally consistent throughout the day with peaks in the mid- and late-afternoon. Limited activity took place in the morning. The majority of activity was observed along E. Crockett Street. No activity was observed on Block 105-3 along Elm Street. Approximately 75% of the vehicles observed in this area were small. Two large trucks were observed.

Four of the 15 vehicles observed in this area parked in excess of one-hour, indicating a violation of the 30-minute time limit, and a violation rate of approximately 23%.

Figure 3-17

Figure 3-18

Subarea 3 – City Hall

Figure 3-19 shows the commercial loading activity observed in Subarea 3. Loading activity peaked during two periods, in the mid-morning (9:00 to 11:00 am), and early afternoon (2:00 to 3:00 pm). Approximately 100 vehicles were observed in this subarea, 67% of which were small. Of the total vehicles, 22 were large trucks, and 14 of these were observed on Block 22-2, along Flores Street just north of City Hall. Blockfaces 18-2 and 18-3, in the southwest portion of the subarea, were also observed to have a moderate level of activity, nearly all of which consisted of small vehicles. Of the approximately 100 vehicles observed in this subarea, approximately 15 were parked for one hour or more. This indicates a violation rate of at least 15% in this area.

Subarea 4 – Market Square

As shown in Figure 3-20, commercial loading activity in the Market Square area was similar to that in the City Hall subarea, peaking in the mid-morning and mid- to late-afternoon. Data for only one blockface (8-1 along Commerce Street) was used to represent the trends. While commercial loading activity was observed on blockfaces 3-2 and 8-4, these blocks were closed during the latter half of the day to break down for Fiesta. It should be noted that during the morning period a total of 23 commercial vehicles were observed on these two blockfaces, the majority of which were large and mid-size.

For blockface 8-1, a total of 17 vehicles were observed, 53% of which were large vehicles. Another 30% were mid-size vehicles. It is interesting to note that one of the key comments from stakeholders with regard to the Market Square area is that the majority of problems are encountered during and before, during, and after special events. Six of the 17 vehicles observed parked beyond one-hour, which equates to a violation rate of at least 30%. However, on the other blockfaces along San Saba, where only morning activity was observed, a higher turnover rate was observed so the actual violation rate could be lower.

Subarea 5 – Office/Banking Core

Figure 3-21 illustrates the commercial loading activity trends in the Office/Banking Core. Approximately 65 vehicles were observed over the 10-hour period. As shown, a small peak in activity occurred in the mid-morning period, with a more pronounced peak in the mid- to late afternoon (3:00 to 4:00 pm). Approximately 10% of the vehicle mix consisted of large trucks, and were generally scattered throughout the area. The most consistent level of activity was observed on blockface 47-1 along Travis Street. In general, the loading zones in this area had a moderate level of activity and appeared to function well. Of the 65 vehicles observed, 10 were parked in excess of one hour, indicating a violation rate of at least 15%.

Subarea 7 – Convention Center

Data for only one blockface (101-1) along Commerce Street was used in this subarea. While an additional loading zone is present along Alamo Street south of Commerce, this zone was occupied by school buses for most of the day; thus, this data was not used. As shown in Figure 3-22, the majority of activity was observed in the early afternoon (12:00 to 3:00 pm).

Figure 3-19

Figure 3-20

Figure 3-21

Figure 3-22

Of the 15 trucks observed in the Convention Center subarea, 80% were small-sized vehicles. Two large trucks were observed on Commerce Street. Two of the 15 trucks were parked one hour or more, thus the violation rate in this area is at least 13%.

3.4.2 Commercial Loading Zone Activity – Focus Area Analysis

While the discussion above provides a general overview of commercial loading zone characteristics, a more detailed understanding was required in areas where:

- service delivery activity was high and consistent throughout the day;
- a greater number of large size trucks were observed;
- user complaints are greatest; and,
- there appeared to be violation problems based on duration in excess of one hour.

Based on the one-hour survey observations and user input, a more detailed analysis using a 15-minute survey interval was conducted for the following focus areas:

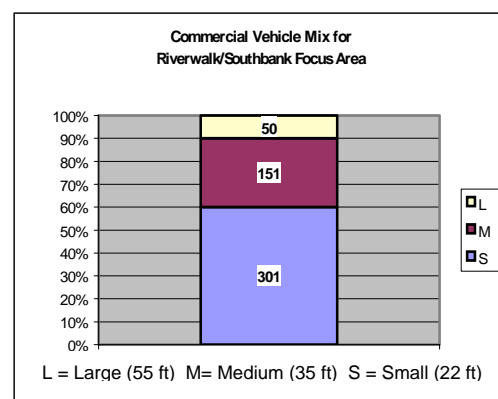
- Riverwalk/Southbank – 58-1, 59-1, 59-2, 60-3, 68-4, 69-1, 69-2, 70-2, 79-1, 79-2, 81-2, 81-3
- Alamo/Visitors Center – 87-3, 88-4, 89-1, 96-3, 98-1, 98-4
- City Hall – 20-1, 22-2, 23-3, 30-2, 41-4, 48-4
- Market Square – 3-2, 8-1, 8-4

The more detailed 15-minute turnover survey for the above four focus areas was conducted over three days: May 27, May 28, and June 2. The methodology was the same as that for the one-hour survey, except each blockface was visited every 15-minutes for a 10-hour period (7:30 am to 5:30 pm).

Upon reviewing the data from the 15-minute survey, only the Riverwalk/Southbank and Alamo/Visitors Center appeared to present issues or problems. Both City Hall and Market Square had moderate activity and appeared to function well in terms of commercial loading activity. Market Square's issues relate more to tour bus activity, which can impact commercial loading zone space availability. This is discussed in the following chapter and addressed in the evaluation of improvement strategies.

Subarea 1 – Riverwalk/Southbank

The Riverwalk/Southbank focus area has the highest level of on-street commercial loading activity in the downtown study area. A total of 12 blockfaces were surveyed, primarily in the area surrounding Southbank. Over the 10-hour survey period, more than 500 commercial vehicles parked in commercial loading zones in the focus area. Of these commercial vehicles, approximately 60% were small vehicles (passenger cars, small trucks, vans, etc.), 30% were mid-size trucks, and the remaining 10% were large delivery trucks. The weighted average of the commercial vehicle mix is used to quantify the supply of commercial loading zone spaces available ($60\% \times 22\text{ft} + 30\% \times 35\text{ft} + 10\% \times 55\text{ft} = 30$ feet per vehicle space). For example, a commercial loading zone that is 112 feet in length will



accommodate a combination of one small, mid-size and large truck based on the design lengths assumed, 22, 35, and 55 feet, respectively.

Figure 3-23 illustrates commercial loading zone activity in the Riverwalk/Southbank focus area during the 10-hour survey period. As shown in Figure 3-23, two peak periods are evident. The first peak period was observed before the lunch hour, while the second peak period was observed immediately after the lunch hour. This trend confirms observations obtained during the initial one-hour survey, as well as the input received from commercial loading zone users. The lowest accumulation of commercial vehicles was during the late afternoon, from 4:30 to 5:30 pm (65 vehicles parked). The maximum accumulation of vehicles occurred from 1:30 to 2:30 pm (127 vehicles parked).

In the focus area, there are 1,350 linear feet of commercial loading zones available. Based on the commercial vehicle mix, the average vehicle space requirement is 30 feet. This equates to approximately 90 spaces per hour available at any time of the day based on a 30-minute time limit. As shown in Figure 3-23, during the morning and afternoon peaks, the demand (90 or more vehicles) exceeds the supply available. Because the average vehicle space requirement is 30 feet, where more than 90 vehicles are present a large percentage are likely to be small and can be accommodated, or turnover was frequent. In addition, from 10:30 am to 12:30 pm and from 1:30 pm to 3:30 pm, when demand is constant, the survey indicates that when one vehicle leaves, another fills the space almost immediately. This indicates a shortage of supply, and often results in commercial vehicles circulating around the area waiting for a convenient space to become available.

More than 100 commercial vehicles parked in excess of the 30-minute time limit, which equates to a violation rate of 23%. Potential reasons for this violation rate are:

- Lack of commercial loading zone space, which results in competition for the space. Thus, vehicles tend to park beyond the 30-minute time limit to make all their deliveries in the area, rather than driving to another loading zone that may not be available.
- A 30-minute time limit may not be sufficient for deliveries that must complete the following tasks: parking, loading goods onto a dolly, carrying goods (often down stairs to Riverwalk), unloading goods often at multiple destination points, returning to vehicles, and possibly repeating these steps for another client or destination in the immediate area.
- Lack of effective signage, curb marking, and continuous enforcement. While signs may indicate a 30-minute time limit, if vehicles consistently park beyond 30 minutes but do not receive tickets, they may be encouraged to continue that practice.

Subarea 2 – Alamo/Visitors Center

As shown in Figure 3-24, the Alamo/Visitors Center focus area has a lower level of commercial loading zone activity relative to the Riverwalk/Southbank area, but presents many of the same issues. A total of six blockfaces were surveyed. Over the 10-hour survey period, more than 110 commercial vehicles parked in commercial loading zones in the focus area.

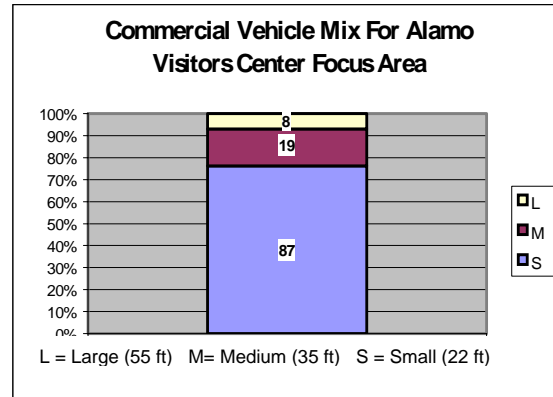
Figure 3-23

Figure 3-24

Of these commercial vehicles, approximately 77% were small vehicles (passenger cars, small trucks, vans, etc.), 16% were mid-size trucks, and the remaining 7% were large delivery trucks. The weighted average of the commercial vehicle mix is used to quantify the supply of commercial loading zone spaces available (27 feet).

As shown in the Figure 3-24, the peak period of activity generally spanned over most of the day, from 10:30 am to 4:30 pm. The lowest accumulation of commercial vehicles was during early morning, from 7:30 to 9:30 am (17 to 21 vehicles parked). The maximum accumulation of vehicles was from 2:30 to 3:30 pm (48 vehicles parked).

In the Alamo/Visitors Center focus area, there are 470 linear feet of commercial loading zones available. Based on the commercial vehicle mix in this focus area, the average vehicle space requirement is 27 feet. This equates to approximately 35 spaces per hour available at any time of the day based on a 30-minute time limit. As shown in Figure 3-24, over the peak period (10:30 am to 4:30 pm) the demand exceeds the supply available given that 40 or more vehicles parked during each hour. The majority of vehicles observed in this focus area were small. Thus, where more than 35 vehicles are present, a large percentage are likely to be small (22 feet assumed) and can be accommodated. Because demand is constant over most of the day, and generally at or near capacity, when one vehicle leaves, another fills the space almost immediately. This is similar to the operations observed in the Riverwalk/Southbank focus area. While this indicates a shortage of supply, the demand for and nature of service delivery in the Alamo/Visitors Center is different and relatively small compared to Riverwalk/Southbank. For example, service delivery in the Riverwalk/Southbank focus area is often targeted at multiple destinations with a larger quantity of goods required for restaurants, retail, etc. The Alamo/Visitors Center consists of fewer destinations and a lower demand for the types of goods prevalent in Riverwalk/Southbank.



More than 40 commercial vehicles parked in excess of the 30-minute time limit – a violation rate of 39%. This violation rate was much higher than that observed in the Riverwalk/Southbank focus area, but reasons for the violations appeared to be different. Based on observations and the types of vehicles that stayed beyond the 30-minute limit (primarily small vehicles and vans), it appeared that construction-related trucks (air conditioning, mechanical, etc.), as well as tourist-related users such as tour company vans, tended to park longer in commercial zones. These users could possibly have had a permit for parking beyond the time limit or may have simply stayed beyond the limit.

It was also observed that enforcement officers were more prevalent and active in the Riverwalk/Southbank area due to the higher level of activity. This could translate into users staying beyond the limit because the area may not be patrolled to the level that other, more active areas are. Another potential reason for the violation is that delivery trucks may park in this area because space adjacent to their immediate destination is not available, so delivery trips may take longer than if they had obtained a space adjacent to their destination.

3.5 TOUR BUS PARKING

Tour bus parking was raised as an issue that should be addressed in the On-Street Space Management Plan. Existing tour bus parking locations are summarized in Table 3.7.

**TABLE 3.7
EXISTING TOUR BUS PARKING**

LOCATION	STREET	SPACES	SIGNED AS
Market Square (El Mercado)	San Saba (east curb north of Dolorosa)	1	Tour Buses Only
	San Saba (east curb south of Dolorosa)	1	Bus Loading Zone 10-minute limit
	Under IH 35	3	Tour Bus Stop No Parking
San Fernando Cathedral	Main Street (west curb)	1	No Parking Tour Bus Stop
Spanish Governor's Palace	In City Hall Parking Lot	2	Tour Bus Only
Hyatt Hotel	Losoya	1	Passenger Loading 30-minute only
The Alamo	Crockett Street (north curb)	3	Local Tour Bus Permit Holders Only 20-minute zone / Midnight to 6 pm / Horse Carriage Stand 6 pm to Midnight
	Alamo Plaza (west curb)	1	
Imax Theatre	Crockett Street	2	Passenger Loading Zone 15-minute limit
La Villita	Nueva (north curb) near Alamo Street	3	No Parking Tour Buses Only

Source: Professional Tour Guide Association of San Antonio; May 1996.

Key observations provided by the Professional Tour Guide Association as a result of their discussions related to tour bus operations, as well as issues observed by the project team during the inventory and survey of the study area, are summarized below. These observations reflect the existing conditions and issues associated with tour bus parking.

- The Market Square parking area under IH 35 is difficult for buses to maneuver.
- Tour buses were observed parking beyond the signed San Saba location adjacent to Market Square (north of Dolorosa), indicating this is a high demand location.
- The San Fernando Cathedral parking spaces in City Hall lot are sometimes being used by cars.
- Passenger Loading Zone in front of Hyatt often filled with cars and/or commercial delivery vehicles.
- Tour bus spaces at the Alamo are used by a wide variety of operators; buses were observed parking beyond signed locations.
- School buses often park in IMAX theatre loading zone beyond 15-minute limit. School buses were also observed parking in commercial loading zones near the Convention Center and within westbound traffic lane on Crockett Street in Southbank area.
- La Villita bus spaces are often used by cars and/or commercial vehicles; other passenger loading zones in the general vicinity are too small for buses.

- There is a lack of consistency in signing.

3.6 MISCELLANEOUS USES

There are also several miscellaneous curbside uses in the study area:

- Taxi stands
- Horse carriage zones (6 pm to midnight)
- 2-Hour Parking (no meters)
- 1-Hour Parking (no meters)
- Passenger Loading Zones (24 hour)

These uses are generally scattered throughout the study area. Only two areas of free short-term parking are provided. A 2-hour parking zone is located on Commerce near St. Paul Square, and a 1-hour parking area on Main Street near Municipal Plaza. Taxi stands are generally located near tourist destinations and hotels. One horse carriage zone is located on E. Crockett south of the Alamo.

Stakeholder input suggested that the key issues associated with miscellaneous uses relate to taxi staging areas and limousine pick-up and drop-off. Areas where problems associated with these issues are most prevalent were indicated to be:

- Majestic Theatre – limousine drop-off and pick-up during events
- Alamodome – limousine and taxi drop-off and pick-up areas
- Alamo – tour bus parking, horse carriage space, taxi parking
- Market Square – tour bus and taxi parking
- Convention Center – limousine and taxi parking areas
- Hyatt Hotel – tour bus pick-up and drop-off

3.7 SUMMARY OF ON-STREET SPACE USE AND ISSUES

This section provides a summary of the existing conditions analysis. The key objective of this analysis was to identify the issues to be addressed by specific improvement strategies for on-street space management. Table 3.8 summarizes the parking meter use characteristics observed during the turnover survey.

Key observations associated with on-street metered parking are provided below:

- The average occupancy rates in the Rivewalk/Southbank and City Hall subareas are near or at capacity, indicating a shortage of supply. The Market Square subarea also has an average occupancy rate approaching capacity.

**TABLE 3.8
SUMMARY OF PARKING METER USE**

SUBAREA	AVERAGE OCCUPANCY RATE	AVERAGE DURATION (HOURS)	AVERAGE TURNOVER RATE (CARS/SPACE)
---------	------------------------	--------------------------	------------------------------------

2-HOUR METERS			
1- Riverwalk/South Bank	88.2%	2.1	4.3
2- Alamo/Visitors Center	28.6%	2.4	1.2
3- City Hall	93.6%	1.6	5.7
4- Market Square	77.1%	1.7	4.5
5- Office/Banking Core	68.6%	1.8	3.8
6- Alamodome	N/A	N/A	N/A
7- Convention Center	92.40%	2.3	4.0
8- Sunset Station	N/A	N/A	N/A
Fringe	53.0%	1.7	3.0
10-HOUR METERS			
2 – Alamo/Visitors Center	99.5%	5.5	1.8
7 – Convention Center	68.0%	4.3	1.6
Fringe	75.6%	6.2	1.2

Source: BRW, Inc., June 1999.

- The Riverwalk/Southbank, City Hall, and Market Square subareas also have the highest average turnover rates, indicating a high level of activity and efficient use of short-term parking.
- The Riverwalk/Southbank, Alamo/Visitors Center and Convention Center subareas have average duration longer than the 2-hour limit. This indicates a potential abuse of short-term parking by “feeding” the meter to avoid a citation, although still a violation. The presence of handicapped parkers that park all day at meters also has an influence on the duration. Areas where these parkers are prevalent were discussed with the City Parking Enforcement Division. Based on the review of the survey data, it appears that the most influence on duration is in the Riverwalk/Southbank area, particularly in the southern area near La Villita and CPS. Removing these parkers would bring the average duration in this subarea to approximately the 2-hour time limit.
- The Alamo/Visitors Center has a very low average occupancy rate and a low turnover rate. This is primarily due to low utilization of meters in the northwest portion of the subarea along Bowie and Bonham Streets. Meters adjacent to the Alamo and Rivercenter Mall are used to a greater extent.
- Both the Alamo/Visitors Center and the Convention Center subarea have the highest duration rate. This indicates a need for additional long-term parking in these areas, or better marketing of the lots and garages in the area that can provide parking beyond two hours.
- 10-hour parking meters, especially in the fringe area, are functioning as intended with a high duration and low turnover rate.

Commercial loading zone supply is difficult to quantify given the range of vehicle size and lack of designated space for certain sized vehicles. Key observations for commercial loading zones are as follows:

- The majority of subareas appear to function well with respect to commercial loading zones. The primary area of concern is the Riverwalk/Southbank subarea. This area

- has the greatest intensity of activity and has the most unique requirements related to access (ie. stairs to Riverwalk).
- Overall supply appears to be adequate on average. However, specific situations in higher demand areas identified by users and observed during the survey indicate a lack of supply or intense competition for space. Location is very important to vendors, particularly for those who have a specific destination for a short trip, a large delivery load, or multiple delivery loads. Thus, some zones will be underutilized but are still necessary to meet the need when it does occur.
 - Based on the one-hour survey of commercial zones, violation rates (vehicles parked in excess of one-hour in a 30-minute commercial zone) ranged from 13% to 30%. Violation rates under a more intensive 15-minute survey were found to be higher for specific focus areas. A violation rate of 23% was found for the Riverwalk/Southbank area, and a violation rate of 39% was found for the Alamo/Visitors Center area. These rates could be lower if vendors, particularly those needing additional time (construction related users), had a permit to use the space. However, many of the violators were larger trucks that had multiple deliveries to make in a small area and needed additional time.
 - The lowest violation rates were found in the City Hall, Office/Banking Core, and Convention Center subareas. This indicates that these zones are used for shorter trips with a specific destination and purpose (such as UPS or FedEx).
 - The Market Square subarea had the highest violation rate based on the one-hour survey. This is due to the nature of this activity center and the number of special events and activities. With the exception of January and February, at least one major event is hosted in Market Square monthly (20 per year). In many cases, curbside use is reserved for special activities so commercial deliveries must be made from zones further away. Moving the tour bus activity to a nearby loading/parking facility under IH 35 would increase curbside space available for other uses.
 - Commercial loading zone activity can affect traffic flow on adjacent traffic lanes and can present hazards for pedestrians. However, during the off-peak hours, loading zones on major arterials, such as Commerce or Market, appeared to function well. This approach also has worked successfully in other U.S. cities.

The following chapter provides an overview of issues, opportunities and constraints in the study area as they relate to the demand for and allocation of curbside space.

4

Issues, Opportunities, and Constraints

The following sections provide an overview of issues, opportunities and constraints in the study area concerning curbside uses. The following issues are discussed:

- Traffic Operations
- Bus Operations
- Pedestrian Activity
- Riverwalk Access
- Proposed Development/Growth Activity
- Related Transportation Projects

The above issues can affect where additional curbside uses such as commercial loading zones or short-term meters should or should not be located. They also highlight where potential growth is expected to increase the demand for curbside space. Lastly they can provide insight as to where potential opportunities for additional on-street or new off-street facilities are located.

4.1 TRAFFIC OPERATIONS

Average Daily Traffic Volumes

Streets within the study area generally provide local and regional access to key destinations (employment, tourist, retail, etc.) in downtown. Market/Dolorosa, Commerce and Houston are the key east-west arterials providing mobility within and access to downtown from IH 35 and IH 37. A summary of average daily traffic volumes on study area streets is provided in Table 4.1.

As shown in the Table 4.1, Dolorosa/Market and Commerce Street carry the highest volume of traffic in the east-west direction. The highest traffic volume is on Commerce Street from IH 37. While Houston Street is a two-way street (one lane each direction), it too carries a significant number of vehicles (6,000 to 7,000 vehicles per day) through downtown. As an element of the Tri-Party project, Houston Street received several urban design upgrades and provides a strong visual and pedestrian link through downtown. Many of the redevelopment projects in downtown are focused along this corridor. San Saba (north of Houston), Alamo (south of Market), and Santa Rosa (north of Commerce) carry the highest volumes for north-south streets. Navarro and St. Mary's also carry a considerable number of vehicles per day (up to 9,230).

TABLE 4.1

AVERAGE DAILY TRAFFIC VOLUMES – DOWNTOWN SAN ANTONIO

STREET	FROM	TO	1995 ADT
North-South Streets			
Alamo	Durango	Market	10,140
	Commerce	Houston	6,800
Presa	Durango	Market	2,250
	Market	Houston	3,690
Navarro	Durango	Commerce	6,670
	Commerce	Martin	9,230
St Marys	Navarro	Commerce	5,670
	Commerce	Martin	7,980
San Saba	Nueva	Houston	12,370
	Houston	Martin	8,440
Santa Rosa	Commerce	Martin	10,600
	Durango	Commerce	9,600
East-West Streets			
Nueva	Pecos	Laredo	4,200
	Laredo	Main	5,110
	Main	Navarro	6,680
	Navarro	Alamo	3,260
Dolorosa	Pecos	St. Marys	11,500
Market	St. Marys	Alamo	13,310
	Alamo	Bowie	18,550
Commerce	Pecos	Santa Rosa	12,370
	Santa Rosa	St. Marys	13,440
	St. Marys	Alamo	16,590
	Alamo	SH 281/IH 37	19,050
	SH 281/IH 37	Cherry	9,460
Houston	Medina	SH 87/IH 35	4,630
	SH 87/IH 35	Laredo	7,130
	Laredo	Alamo	6,190
	Alamo	Bonham	6,109
Travis	Santa Rosa	Presa	5,730
	Presa	Nacogdoches	4,730

Source: TxDOT 1995 Average Daily Traffic (ADT) Map.

Traffic Capacity as a Parking Constraint

Downtown traffic characteristics are important to consider as constraints. According to the *Institute of Transportation Engineers Traffic Engineering Handbook* (4th Edition), warrants for parking prohibition are present under three conditions: 1) statutory, 2) capacity effect, and 3) hazard. In terms of capacity in the adjacent lane, studies have found that typical streets with on-street parking have approximately two-thirds the capacity of those with no on-street parking. Parking prohibition criteria generally accepted by ITE indicate that for one lane or two lanes of directional flow the maximum number of peak vehicles per hour (vph) when parking can be allowed is 300 vph, and 500 vph, respectively (*Traffic Engineering Handbook*, Page 231; *Curb Parking – Warrants for Parking Prohibitions*). These parking prohibition criteria are based on intersection prohibition up to 150 feet on approach and departure. Because downtown blocks are short and signal spacing is close, these criteria were used to represent the worst-case scenario.

Figure 4-1 illustrates where parking constraints related to traffic operations are present in downtown San Antonio. These areas represent locations where peak hour traffic is greatest

(500 vph or more for two lanes of directional flow). This information was obtained from the ***Downtown Transportation Study*** (Wilbur Smith & Associates).

As shown in Figure 4-1, AM and PM peak volumes exceed 500 vph on many streets. Based on accepted criteria, these peak volumes may warrant parking prohibitions. However, as shown in Table 4.2, many of these streets already provide on-street parking. On major streets that have no curbside use or a moderate level of curbside use such as Commerce, Market/Dolorosa and Santa Rosa, the City may wish to consider allowing curbside uses during off-peak periods to increase supply in high demand areas.

**TABLE 4.2
LEVEL OF ON-STREET PARKING ON MAJOR STREETS**

STREET	LEVEL OF ON-STREET PARKING PROVIDED WHERE PEAK TRAFFIC EXCEEDS 500 VPH *
Commerce Street	Minimal – primarily west of Santa Rosa
Market/Dolorosa	Minimal – primarily west of Flores, east of Alamo
Santa Rosa Street	None
St. Marys Street	None – except one miscellaneous use
Navarro Street	None – except two small commercial loading zones near Nix Hospital
Soledad Street	Moderate – Some metered parking and commercial loading zones
Main Street	Moderate – Some metered parking and commercial loading zones
Flores Street	Moderate – Some metered parking and commercial loading zones
Pecos La Trinidad	None – higher speed frontage road
Martin Street	Moderate – Some metered parking, one commercial loading zone
Pecan Street	Moderate – Some metered parking, loading zones, miscellaneous uses
E. Houston Street	None
Third Street	Minimal – some meters, one commercial loading zone
Broadway	High – Meters and commercial/passenger loading zones
Bowie Street	None
Durango Boulevard	Minimal – primarily 10-hour meters east of Alamo Street

Source: BRW, Inc.; June 1999.

- * Minimal = (0 – 25% of curbside space) Very limited curbside use along street or concentrated in small areas.
 Moderate = (25 – 50% of curbside space) Generally consistent curbside use along street.
 High = (50% or greater) Majority of curbside space provides for parking or loading activity.

According to the ***Downtown Transportation Study*** (Wilbur Smith & Associates; June 1997), the peak hour traffic periods in downtown are generally 7:30 to 8:30 AM and 5:00 to 6:00 PM. As traffic continues to grow in San Antonio, the peak hour will likely continue to expand beyond a typical one-hour period in the AM or PM. This is the trend in many cities, and results in fewer hours in a typical day appropriate for curbside loading or parking activity. As a general statement, many cities are willing to accept a level of traffic congestion in order to continue to accommodate needed curbside parking. If the City's priority is to continue to maintain a good level of traffic flow, the existing uses can be maintained but no new curbside uses should be introduced along these streets. However, some uses could be allowed if necessary and if off-peak time restrictions are made.

Figure 4-1



4.2 BUS OPERATIONS

VIA Metropolitan Transit operates buses and streetcars in downtown San Antonio. Bus operations, including bus-only diamond lanes and bus stops, are a significant curbside use on a number of downtown streets. The majority of downtown routes follow St. Marys, Navarro, Commerce, and Market/Dolorosa, where bus-only diamond lanes are present. No parking zones help to ensure efficient operations for VIA buses and trolleys by keeping routes free of stopped vehicles.

Figure 4-2 illustrates VIA combined peak headways. On-street uses have the greatest potential to impact bus operations where combined peak headways are lowest by increasing side conflicts and potentially reducing speed. Ranges of potential impacts were divided into four categories:

- 5 minutes or less – very high impact potential
- 5 to 15 minutes – high impact potential
- 15 to 25 minutes – moderate impact potential
- 25 minutes or more – low impact potential

Combined peak headways on streets with bus-only lanes range from 0.9 to 3.8 minutes, with most areas under 2 minutes. This reflects a high level of service on these streets. Where buses are more frequent, the potential for conflict and safety hazards associated with other on-street uses such as parking or loading, is greater. It is recommended that where headways are less than 5 minutes, no new peak period curbside uses be introduced alongside bus only lanes. Where headways range from 5 to 15 minutes there is still a high potential for conflict and new curbside uses are not recommended unless absolutely necessary. Where frequencies are greater than 15 minutes there is still a moderate potential for conflict but this can be minimized by carefully designed and located on-street parking or loading zones.

4.3 PEDESTRIAN ACTIVITY

Figure 4-3 illustrates pedestrian count locations. As part of the *Downtown Transportation Study*, pedestrian counts (persons per hour) were taken at 16 locations in the study area. As shown in Figure 4-3, the area with the heaviest pedestrian activity (core pedestrian area) on a typical weekday was in the northern section of subarea 1, Riverwalk/Southbank. This is where the majority of restaurant and retail activity is accessed from street level, as well as where many shops and restaurants are located along the street. This subarea also has extensive bus stop activity.

Pedestrian activity is an issue because this core pedestrian area is also where the majority of commercial loading zone activity was observed, particularly with large-size delivery trucks. This introduces a potential for conflicts and safety hazards both on sidewalks and on stairs/ramps to Riverwalk, where pedestrian traffic may mix with delivery activity. North-south pedestrian movements (which pass through areas of high commercial loading activity in the Southbank area) along Commerce between Soledad and Loyosa total more than 1,600 persons per hour during the lunch hour, and are slightly less during the PM peak hour. North-south movements during the AM peak hour along this section of Commerce Street total approximately 700 persons per hour. To the north near Houston Street, north-south pedestrian counts on St. Marys and Navarro total over 1,800 during the lunch hour. Approximately 1,250 persons pass

north-south through these points in the PM peak hour, and fewer during the AM peak hour.

Figure 4-2



Figure 4-3



4.4 RIVERWALK ACCESS

Figure 4-4 illustrates Riverwalk access points including stairs, ramps and elevators. Riverwalk access is primarily achieved through vertical stairwell access from downtown streets and is also available by way of a limited number of elevators. Most elevators are reserved for public use and are located within major hotel developments such as the Hilton and the Hyatt. A new public access elevator that provides increased ADA accessibility was recently constructed at the new streetcar stop at Losoya and Commerce.

Service deliveries to Riverwalk are primarily limited to the use of stairs. The highest demand for service delivery along the Riverwalk is in the Southbank area. The most convenient stairs for service delivery to the many restaurants and stores in the area are along Crockett Street just east of Presa Street. Many vendors have indicated they nearly have or actually have dropped their delivery loads on the stairs or walkway. This presents a safety issue for pedestrians using the stairs.

4.5 PROPOSED DEVELOPMENT/GROWTH ACTIVITY

Downtown San Antonio is experiencing active growth and redevelopment. As shown in Figure 4-5, several projects are planned or are underway with the potential to increase the demand for on-street curbside space, as well as for off-street parking in the study area. The projects will require curbside delivery or loading space unless off-street provisions are made as part of the development. A summary of the projects is provided below:

- **Sunset Station Development** – Sunset Station is a mixed-use, entertainment, restaurant and specialty retail development located just east of IH 37 and immediately north of the Alamodome. Phase I of the Sunset Station opened in January 1999 with nearly 60,000 square feet of activity. Phase II, planned to open in Summer 1999, will triple the activity with the addition of a 16-screen movie theater, and additional restaurants and retail stores. An on-site tour bus facility is included. The majority of parking is anticipated to come from shared use of City surface lots north of Commerce Street and the new VIA park-and-ride facility. According to the *Downtown San Antonio Parking Study* (Consulting Engineers Group; October 1995), Phase I of this development could generate approximately 4,500 vehicle trips per day on average, requiring approximately 800 parking spaces. This parking demand does not reflect additional demand that could be associated with special events or Alamodome events.
- **Westin Hotel and Parking Garage (Groos Bank Site)** – The new Westin Hotel will be open in early 2000. The Groos Bank site, located in the northwest quadrant of Navarro and Market, was recommended as a parking garage site in the *Downtown San Antonio Parking Study*. This site will be developed as part of the Westin Hotel project. The parking garage will provide 660 parking spaces and will also open in early 2000. Monthly parking will be available, but will primarily serve the new Westin Hotel located across Market Street.

Figure 4-4



Figure 4-5



- **Houston Street Corridor Redevelopment** – The Federal Realty Trust (a REIT) has bought 13 buildings and plans to redevelop approximately 4 blocks of Houston Street (Soledad to Presa/Alamo Plaza). This area is in the center of Houston Street downtown. The *Downtown San Antonio Parking Study* recommended new parking structures at the east and west ends of Houston Street. However, it is envisioned that the Houston Street Corridor redevelopment project can serve these needs at a central location.
- **Convention Center Expansion** – The San Antonio Convention Center is currently being expanded from its current footprint of 500,000 square feet to 1.3 million square feet. Exhibit space will be doubled to 440,000 square feet. A 2,500 seat Performing Art Theater is also part of the expansion. A total of 36 loading docks will be provided, 24 of which will be new and accessed by 3 ramps.
- **Alameda and Aztec Theater Redevelopment** – The Central Alameda Group is considering renovation of the old Alameda Theater on Houston Street between Laredo and Camaron, similar to how the Majestic Theater was renovated. There is also the potential for similar redevelopment of the old Aztec Theater near Commerce and St. Mary's. Both of these projects would require the use of curbside space for passenger and equipment loading unless an off-street facility is provided with the redevelopment.

Many of these projects afford opportunities to incorporate additional off-street facilities into their design. For example, the Convention Center expansion is tripling its service delivery capabilities, while doubling in size. This will address potential issues associated with curbside deliveries in this area. Furthermore, because the Sunset Station development is in the early stages of development, there are opportunities to ensure that the planning of this project adequately addresses short-term parking and service delivery needs.

4.6 RELATED TRANSPORTATION PROJECTS

In response to previous planning and transportation studies, several transportation facilities have undergone feasibility analyses and preliminary planning efforts. The following facilities have the potential to alleviate some of the demand for curbside use in downtown San Antonio, particularly in the Alamo/Visitors Center subarea:

- **Visitor Information and Transportation Center** – The final report for the *San Antonio Visitor Information and Transportation Center* was issued in August 1998. The recommended site for the center is at the corner of Houston Street and Bowie Street, north of the Rivercenter Mall, and just east of the Alamo and the Crockett Hotel. This facility would displace existing surface lot parking (approximately 300 spaces). The center would provide 3 floors of parking (750 spaces), pick-up and drop-off points for motor coaches, tour operators, cars, horse carriages, taxis and pedi-cabs. Limited short-term parking would be provided along Houston Street. A bus staging area would accommodate approximately 9 buses.
- **Westside Multi-modal Transportation Center** – VIA Metropolitan Transit recently completed a feasibility study for this facility. The primary role of this intermodal facility is to provide a transportation hub for interstate, intercity, and intracity bus and

rail services. Potential uses include future Austin-San Antonio commuter rail service, interstate and intercity bus service, local and regional bus service, and downtown streetcar linkages.

- **Cattleman’s Square Lot** – Based on a recommendation in the *Downtown San Antonio Parking Study*, the City purchased the Cattleman’s Square lot on the west side of IH 35 at Pecos. The City provides 223 spaces on this surface lot.
- **Commerce/Soledad Lot** – The City’s Commerce/Soledad surface parking lot will be removed in the future in order to construct a pedestrian link to Riverwalk. This lot currently provides 34 parking spaces.

4.7 SUMMARY OF ISSUES

Figures 4-6 through 4-11 contain photos of some of the issues identified in the study area. Many of these issues represent opportunity areas for improvements to enhance the operation of commercial deliveries and tour buses. Additionally, opportunities to enhance the environment for pedestrians, the quality of traffic flow and the efficiency of VIA bus operations are available. A more detailed analysis of potential improvements and an evaluation of their potential effectiveness are provided in Chapter 6.

Figures 4-6 through 4-7 contain photos showing tour bus operating issues. As shown, the bus turnout under IH 35 along Pecos is difficult to use. The turnout is not designed to allow buses to pass one another, effectively limiting its use to one bus. Furthermore, the pedestrian connections to the Market Square area along Dolorosa and Commerce and not well marked. Passengers must exit the bus into the turnout driveway. They find themselves within a wide-open, paved area with little direction. San Saba offers a more convenient and visible area for tour bus loading and unloading. As shown in the photo on Figure 4-6, four buses are using one tour bus parking space, and spillover into commercial loading zones and a no parking zone. Because the bus turnout location is very close to Market Square, a bus turnout designed to accommodate efficient loading area, as well as to provide for bus staging, would ease congestion and demand on San Saba. Enhanced pedestrian signage and maps could make the area more effective for tour bus loading/unloading and staging.

Figure 4-6



Figure 4-7

Many curb use conflicts occur in the Southbank area. As shown in Chapter 3 and discussed in the above sections, this area has the greatest concentration of commercial loading activity, and it is adjacent to Riverwalk where pedestrian activity is high. Furthermore, deliveries must often be carried down stairs accessing Riverwalk. Carrying goods down the stairs conflicts with pedestrian activity both on the sidewalk, on the stairs, and on Riverwalk itself, which is often very congested. The demand for goods delivery exceeds the supply of curbside spaces. Because larger trucks are being used, the limited curbside space is nearly always occupied. Many trucks make deliveries to multiple sites and stay beyond the 30 minutes limit. Because of high demand for curb space trucks may be required to circulate through the areas multiple times before a loading zone becomes available.

The Riverwalk/Southbank area has the greatest number of large delivery trucks. As shown on Figure 4-8, these trucks can cause curb and pavement damage. The large trucks and the damage they cause to the streetscape can detract from the pedestrian-oriented uses intended for the area. Figures 4-8 and 4-9 highlight the Southbank surface lots (privately operated) and issues in this focus area. The surface lot block is a convenient place for delivery trucks to park and take their loads to Riverwalk clients. It presents an opportunity to create a multi-use structure. This structure could accommodate street-level retail, short- and long-term parking and convenient off-street loading with vertical access (ramp or elevators) to the Riverwalk. Such a facility could replace curbside loading activity in the immediate area, allowing the street and public curb space for pedestrians, passenger loading, and metered parking.

An awkward commercial loading zone is located at Blum/Alamo Plaza. This loading zone, shown in Figure 4-10, is located along a curve and between passenger loading zones. Because passenger loading zones in this area are used by shuttles and cars, which are easier to maneuver than trucks, it may be appropriate to re-allocate curbside space. Furthermore, because this is a heavy pedestrian location accommodating traffic between the Rivercenter Mall and the Alamo, removing large vehicles from this area would be advantageous.

Also shown on Figure 4-10 is an example of how illegally parked cars or vehicles with commercial, residential or visitor decal permits park anywhere within a commercial loading zone. This parking effectively reduces the supply of loading zones and can prevent the potential use of a zone, particularly by mid- or large-size trucks.

Figure 4-11 shows a College Street loading zone that is often used by large trucks that cannot find space closer to their Southbank destination. At the stakeholders meeting, College Street was identified as a secondary, less convenient location for deliveries to Southbank. Because of the distance to delivery destinations, these trucks often have to stay beyond the 30-minute limit.

Another issue raised during the stakeholder's meeting was consistency in signage. For example, as shown in Figure 4-11, one commercial loading zone is marked by two signs that look different but have the same meaning. These particular signs also indicate that decal permit holders are allowed, but other signs do not. However, the ordinance states that decal holders can park in any commercial loading zone.

The following chapter discusses policies, regulations and ordinances related to curbside use and parking established by the City of San Antonio.

Figure 4-8



Figure 4-9



Figure 4-10



Figure 4-11



5 Policies and Regulations

The policies and regulations established by San Antonio for transportation, parking, service delivery, and the City's vision of downtown San Antonio, are important to consider in the development of improvement strategies related to On-Street Space Management. The purpose of this chapter is to:

- Provide an overview of existing City of San Antonio policies as they relate to downtown parking and transportation; and,
- Assess existing regulations and ordinances related to parking and curbside uses in downtown.

5.1 DOWNTOWN GOALS AND POLICIES

The City of San Antonio has developed several planning and policy documents which describe goals, objectives and policies relative to parking and transportation in downtown San Antonio. These policies, adopted by local representatives, were used to guide the development of improvement strategies in the On-Street Space Management Plan.

5.1.1 Downtown San Antonio – A Strategic Plan for Entering the 21st Century

The ***Downtown Strategic Plan*** is designed to meet the needs of local residents, visitors, and stakeholders by focusing on current projects and issues, and providing direction for dealing with those projects and issues proactively over the next five years. The following three strategies directly relate to the issues being addressed by the On-Street Space Management Plan:

- ***Enhance Downtown Parking*** – To provide adequate, conveniently located, safe parking in downtown San Antonio that will enhance movement, mobility, and accessibility. Specifically:
 - Discourage long-term parking in the Central Sector (which generally corresponds to the Riverwalk/Southbank subarea identified in this study),
 - Encourage long-term parking in peripheral areas of downtown, which should be linked by convenient and efficient transit to the core area and the entire downtown; and,
 - In future development activities, steps should be taken to ensure that parking facilities – both public and private – do not detract from the urban character of the downtown and/or individual sectors.
- ***Develop Motor Coach and Tour Bus Management and Staging Plan*** – To better accommodate and manage the many motor coaches and tour buses that access the downtown area, with special consideration to types of buses and riders (e.g., tour, school, and transit). Suggested actions include:

- City of San Antonio should require new major destinations and hotels to submit staging and circulation plans for motor coaches and tour buses.
- Signage should be provided at key entry points into downtown to direct motor coaches to staging areas, including the proposed Visitor and Transportation Center.
- **Prepare and Implement Service Delivery Management Program** – Provide for the needs of expanding and changing business operations, to maintain a quality environment, and to maintain and enhance traffic flow. Suggested actions include:
 - Develop, implement and enforce policies for the Central Sector regulating hours and zones for delivery/service provision for both private and public operations.
 - Loading/unloading space should be required for all new developments.

A vision statement related to Movement/Mobility/Accessibility provided in the Strategic Plan is:

“Good movement into and around downtown; good traffic flow; accommodates buses, cars/trucks, pedestrians, bicycles, and service vehicles while minimizing conflicts; accessible to all; easy to find your way into and around; ample, convenient and affordable parking”.

San Antonio’s older and often historically significant infrastructure, and the city’s role as a vibrant, exciting and dynamic place with cultural, special, and tourist-related events, presents a significant challenge to meeting these statements. Some strategies and improvements that can assist in accomplishing this vision are underway, including the Central Sector Streetcar Station (complete), and the San Antonio Visitor and Transportation Center (feasibility study complete). Revitalization of the Houston Street Corridor is also underway, as is the Convention Center expansion. These strategies are aimed at diversifying the Houston Street corridor and alleviating pedestrian congestion on Riverwalk by bringing people to the street, and increasing visitor business through convention activities.

5.1.2 San Antonio – Master Plan Policies

The **Master Plan Policies** (May 1997) are intended to provide guidance in the evaluation of future decisions on land use, infrastructure improvements, transportation, and other issues. Ordinances that are proposed and considered after the adoption of the **Master Plan Policies** should be consistent with the relevant goals and policies contained in the Plan. The following paragraphs summarize the key goals and policies related to transportation and parking.

- **Growth Management Goal 1** – *Utilize City resources and authority to manage growth and development.* One of the policies associated with this goal is the review of City codes, including the Unified Development Code (UDC), and the revision of ineffective, obsolete, or inconsistent requirements and definitions. The UDC is currently being revised, which presents an opportunity to incorporate findings from the On-Street Space Management Plan into the revised code.
- **Economic Development Goal 2** – *Promote a business-government relationship that addresses the needs of businesses to operate in a positive and mutually beneficial environment.* One of the key policies associated with this goal is to provide and

maintain infrastructure and transportation services so that economic activity can be supported throughout the City.

- **Neighborhood Goal 5** – *Encourage development of the downtown area as a complete neighborhood to enhance its image to both visitors and residents.* The policies associated with this goal stress improved access to and within downtown to support the continued development of downtown as a retail, residential, visitor and business center. Policy 5I addresses parking: “Encourage the construction of parking facilities in the downtown areas to promote mixed-use and commercial activity centers to be compatible in use, scale and material with the surrounding natural and built environment.” Elements of this policy include discouraging development of parking garages adjacent to the Riverwalk, analyzing downtown’s existing and potential growth and activity centers, and strategically constructing parking facilities to accommodate maximum parking availability and efficiency.
- **Urban Design Goal 5** – *Develop policies for various transportation modes that will increase access to employment centers, community services, and cultural, recreational, educational and commercial facilities; and decrease the reliance on single occupancy vehicles.* In terms of parking, policies recommend using ITS technology for parking enforcement, parking management innovations, and the provision of additional parking where needed, while ensuring its integration into the surrounding environment. In addition, policy recommendations promote mixed-use off-street parking facilities whereby two or more distinguishable land uses share common parking area.

These goals and policies have been considered in the evaluation of improvement strategies to ensure that the recommendations contained within the On-Street Space Management Plan support the goals and policies established by the City of San Antonio.

5.2 REGULATIONS AND ORDINANCES

The Study Oversight Committee identified the following regulations and ordinances that relate to curb uses. A summary and an assessment of each are provided below.

5.2.1 Event Decal Program Ordinance

The Event Decal Program was adopted in April 1993 to provide neighborhood access to public street parking spaces in the Eastside Neighborhood and the Hemisfair/La Vaca Neighborhood near the Alamodome, during and two hours prior to special events. Parking decals are issued free of charge to residents. Automobiles without decals are subject to immediate tow-away and impoundment by the San Antonio Police Department. Towing is enforced only if street signage at or near the corner of each intersection on each restricted curb of each street give notice of parking restrictions. The beginning and ending times of the restricted decal parking also must be posted by signage attached to manned and unmanned barricades at street entrances to these neighborhoods. This ordinance was amended in July 1995 to encompass special events at additional facilities, including the Convention Center, Hemisfair Park, La Villita, and the Institute of Texan Cultures.

This program is similar to those in other cities with neighborhoods in close proximity to major event facilities or major activity centers such as shopping malls and hospitals.

5.2.2 Commercial and Residential Decal Program Ordinance

This decal program was adopted in July 1991 for downtown merchants (commercial decal), residents (resident decal), and visitors of downtown residents (visitor permit). Downtown merchants can purchase a 30-minute decal sticker for \$25. Downtown residents can purchase a 20-minute resident decal for \$15, and can also purchase one 20-minute visitor permit per household for \$5. Decal and permit holders are allowed to park in any commercial or residential loading zone for the allowable period of time.

As part of this ordinance, metered parking in the downtown core, previously not enforced on Saturday, is enforced to provide for short-term parking on Saturdays. The downtown core is bounded by 4th Street to the northeast, West Quincy, and S. PamAm Expressway to the northwest, San Saba to the west, and West Nueva/East Market to the south.

This ordinance provides an increase in available public curbside space for short-term parking for business/property owners and downtown residents/visitors. However, these programs reduce the space available for commercial loading zone uses. This is an especially difficult problem in areas with high demand for loading, such as Southbank. Because decal holders can park anywhere within a commercial loading zone, these vehicles can disrupt the use of these zones by large trucks. If a decal holder parks in the middle of a zone, its potential use by one or more commercial vehicles can be reduced or eliminated.

5.2.3 Parking Ordinance

The parking ordinance was adopted in September 1987 to amend the City Code and declare a parking/stopping violation a civil offense that can be administratively adjudicated. This change reduced the number of parking offenses burdening the municipal court system, and produced a more effective means to deal with non-paying violators (immobilizing vehicle, adding fines, refusal of annual vehicle registration). Enforcement measures for Hearing Officer orders as contained within the ordinance are as follows:

- a. vehicle impoundment if the vehicle is found on any public street, public right-of-way, public easement, or City owned parking facility, or other public property, if the owner has committed three or more offenses in any calendar year;
- b. Immobilization of the vehicle if found on any public right-of-way, easement, city-owned parking facility or other public property;
- c. Imposition of added fines after a specified time; and,
- d. Refusal to allow the registration of the vehicle.

5.2.4 Booting Ordinance

This ordinance was adopted in May 1987 to enhance enforcement for an increasing number of habitual parking violators who did not appear at arraignment hearings and refused to pay parking tickets. This ordinance entitles the city to retain impounded vehicles with unpaid parking tickets. Three-month delinquents receive impoundment notices. If a registered owner has received notice at least three months prior by regular mail, the vehicle may be impounded and retained, pending arraignment of all outstanding parking citations.

5.2.5 Towing Ordinance

The towing ordinance amended City Code to authorize the parking manager and authorized representatives to request the towing of vehicles violating City ordinances and to impound the

vehicles at the police department vehicle storage facility or a location designated by the parking manager.

5.3 ZONING AND DEVELOPMENT CODES

The City of San Antonio is currently operating under the original Unified Development Code (UDC, as amended), and is in the process of reviewing and updating the UDC to reflect changing conditions in San Antonio. Subdivision C and D address off-street parking requirements and off-street truck loading requirements, respectively. The following is a summary of these subdivisions.

Subdivision C – Off-Street Parking Requirements

The general requirements for off-street parking do not apply to the “I business district” and the “B-4 central business district”. The B-4 district covers the downtown study area. The UDC assumes that public and private parking lots and garages throughout the downtown area will meet parking demand. It also reflects the availability of alternative forms of transportation, which reduce the demand for parking. The policy allows downtown land to be retained for higher and better uses than parking. It also supports travel demand management policies such as transit use, pedestrian activity, and parking pricing strategies. This subdivision is consistent with common practice in downtown areas. In many cases, developers of commercial and retail properties must provide parking to meet the standards of lenders and other financial partners.

Subdivision D – Off-Street Loading Requirements

The general requirements for off-street truck loading facilities do not apply to the central business district. In many cases it is infeasible or cost-prohibitive to provide off-street loading facilities as part of adaptive re-use projects in historic buildings. The ordinance also implicitly assumes that loading needs can be served from on-street loading zones.

The lack of requirements for off-street loading acts as an economic incentive to redevelopment and new development in downtown San Antonio. However, in the core of downtown existing on-street loading zones are utilized to capacity and few opportunities to provide new on-street facilities exist.

Downtown San Antonio aspires to be a “neighborhood” offering residential, commercial, retail, entertainment and cultural resources and activities. Thus, it may be appropriate to require or encourage the development of off-street truck loading facilities for new buildings, and to designate common off-street truck loading facilities for older buildings or where land uses result in an area of concentrated demand, such as Southbank restaurants. In such a case, the “Combined Facilities” section of the UDC (Section 35-3375) can be referenced. This section states:

“Requirements for the provision of off-street truck loading facilities with respect to two (2) or more structures may be satisfied by the permanent allocation of the requisite number of spaces for each use in a common truck loading facility, cooperatively established and operated; provided, however, that the total number of spaces designated is not less than the sum of the individual requirements unless, in the opinion of the director of planning, a lesser number of spaces will be adequate, taking into account the respected time of usage of the truck loading facilities by the individual user, the character of the merchandise and related

factors. In order to eliminate a multiplicity of individual facilities, to conserve space where space is at a premium, and to promote orderly development generally, the director of planning is hereby authorized to plan and group off-street truck loading facilities cooperatively for a number of structures requiring such facilities within close proximity to one another in a given area in such manner as to obtain maximum efficiency and capacity, provided consent there to is obtained from the participants in the cooperative plan”.

The strategic plan for downtown San Antonio calls for a requirement to provide off-street loading space for new development projects. If this type of change to the development code is pursued, the language can be defined to not discourage adaptive re-use and new development.

6

Definition of Candidate Improvement Strategies

This chapter defines a “toolbox” of candidate improvement strategies to address the problems and issues associated with on-street space management in downtown San Antonio. Prior to describing the improvement strategies, a summary of the problems and issues identified in downtown San Antonio is provided. Section 6.2 describes four basic approaches to on-street space management. Section 6.3 presents the “toolbox” of strategies, and describes their potential costs, benefits, and national experience. Section 6.4 describes how the improvement strategies can be applied to downtown San Antonio.

6.1 SUMMARY OF PROBLEMS AND ISSUES

Chapters 2 through 5 provide the basis for the identification of problems and issues in downtown San Antonio related to the use of on-street space. A summary of problems and issues that can be addressed through the On-Street Space Management Plan are summarized in Table 6.1. These problems and issues reflect the input of curbside users and city/agency staff.

Chapter 2 identified problems based on input from local agency and city representatives and curbside users themselves. Input from users is important and usually very reliable as they have daily experience using the system. Chapter 3 analyzed existing conditions to confirm problem areas identified through the problem definition workshops, as well as to identify other potential issue areas. Chapter 4 summarized issues, opportunities and constraints as they relate to traffic operations, bus operations, pedestrian activity, Riverwalk access, growth activity, and related transportation projects. These issues can influence future demand, as well as highlight areas where conflicts with curbside use are present or may be present in the future. Chapter 5 described existing ordinances and policies that guide parking and transportation-related decisions. Conflicts, issues, or opportunities associated with these established guidelines are considered in the definition of problems and development of improvement strategies.

Table 6.1 also highlights the key issues associated with the problems and indicates which of the subareas are most affected by the problem. In some cases, the problem is general in nature and applies to the entire study area.

Many of the problems identified in Table 6.1 were confirmed during the existing conditions analysis and apparent during study area observations, particularly those related to short-term parking, commercial loading zones, and tour bus parking and staging issues. The affect of special events on curbside use was also observed immediately following Fiesta.

**TABLE 6.1
SUMMARY OF ON-STREET SPACE PROBLEMS**

PROBLEM	KEY ISSUE(S)	SUBAREA(S)	CRITICAL STREET/ BLOCKFACE
Curbside Delivery Space	Lack of curbside space supply for commercial delivery vehicles identified by both city/agency staff and users as a key problem.	<ol style="list-style-type: none"> 1. Riverwalk/Southbank 2. Alamo/Visitors Center 3. Market Square 	<ol style="list-style-type: none"> 1. Crockett (69-1,80-3,58-1); Presa (69-2,70-2); Navarro (59-2, 68-4) 2. Crockett(87-3, 98-4,98-1,96-3); Bonham (89-2) 3. San Saba (3-2,8-4); W. Commerce (8-1)
Competition for Commercial Loading Zones (CLZ)	Competition between commercial vehicles and personal vehicles (i.e., decal program); personal vehicles park anywhere in CLZ for a limited time thus reducing supply.	<ol style="list-style-type: none"> 1. Study Area in general 2. Riverwalk/Southbank 	<ol style="list-style-type: none"> 2. Crockett (69-1,80-3,58-1); Presa (69-2,70-2); Navarro (59-2,68-4)
Special Events	The number of special events in downtown reduces the supply of curbside space available for deliveries or short-term parking. Communication with users or alternate parking areas is key issue.	<ol style="list-style-type: none"> 1. Study Area in general 2. Market Square 3. Riverwalk/Southbank 4. Alamo/Visitors Center 5. Alamodome 6. Sunset Station 	<ol style="list-style-type: none"> 2. San Saba (2-2,3-2,4-2, 9-4, 8-4,7-4); W. Commerce (8-1); Dolorosa (7-1,8-3,14-3); W. Houston (9-1); Laredo (15-2) 3. Crockett (69-1,80-3,58-1); Presa (69-2,70-2); Navarro (59-2, 68-4) 4. Crockett(87-3, 98-4,98-1,96-3); Bonham (89-2); E. Houston (89-1) 5. No critical issues identified 6. None at this time; future issue area.
Tour Bus Parking	Need for convenient bus drop-off/pick-up and layover locations. Buses often use CLZ space and compete with personal vehicles for passenger loading zones (PLZ). School buses also face same problems.	<ol style="list-style-type: none"> 1. Market Square 2. Alamo/Visitors Center 3. Riverwalk/Southbank 	<ol style="list-style-type: none"> 1. San Saba (7-4,8-4), under IH 35 2. E. Crockett (98-1,98-4) 3. Crockett (69-1); Presa (69-2)
Short-term Meter Parking	Lack of short-term meters for short business trips, passenger pick-up, meetings.	<ol style="list-style-type: none"> 1. City Hall 2. Downtown Office/Banking Core 3. Convention Center 4. Market Square 	<ol style="list-style-type: none"> 1. Commerce, Dolorosa, Flores, Main (within Subarea 3) 2. St. Mary's, Navarro, Pecan, Travis (within Subarea 5) 3. Alamo (102-4); Durango (102-3) 4. Santa Rosa (7-2,8-2)
Violation Rates	Based on parking turnover and occupancy survey, violations at short-term meters (parking in excess of 2-hour limit) and at commercial loading zones (parking in excess	<p>Meters:</p> <ol style="list-style-type: none"> 1. Alamo/Visitors Center 2. Convention Center 	<p>Meters:</p> <ol style="list-style-type: none"> 1. Elm (100-2,105-3) 2. Market (101-3)

PROBLEM	KEY ISSUE(S)	SUBAREA(S)	CRITICAL STREET/ BLOCKFACE
	of 30-minute limit) were observed. This indicates a demand for mid-long term parking at meters, and insufficient delivery time window for commercial vehicles.	Commercial Loading Zones: 1. Riverwalk/Southbank 2. Market Square 3. Alamo/Visitors Center	Commercial Loading Zones: 1. Crockett (69-1,79-1,58-1); Presa (69-2,70-2); Navarro (59-2, 68-4); College (59-1,60-3, 81-3); Losoya (79-2,81-2) 2. San Saba (8-4) 3. Crockett(87-3, 98-4,98-1,96-3); Bonham (89-2)
Conflicts (Pedestrian/Bus Stop/Auto/Delivery Truck)	Where more than one curbside use is present, there are conflicts which detract from the overall efficiency and atmosphere of downtown. For example, in the Southbank area, large trucks, tourists/pedestrians, and Navarro Street bus stop patrons are active in a small area.	1. Riverwalk/Southbank 2. Alamo/Visitors Center 3. Market Square	1. Crockett/Presa, Crockett/Navarro, Commerce/Losoya, Houston/Navarro, Houston/St. Mary's, Market/Alamo 2. Commerce/Alamo, Crockett/Alamo 3. San Saba/Dolorosa, San Saba/Commerce
Turning Radii/Curb Damage	Older infrastructure (narrow streets) and pedestrian-oriented areas are not suitable for use by large vehicles (delivery trucks, tour buses), which cause curb and sidewalk damage.	1. Riverwalk/Southbank	1. Crockett/Navarro, Crockett/Presa
Lack of Off-Street Parking Requirements for New or Re-Development	Off-street loading or parking requirements do not apply to downtown uses, so new developments typically accommodate such uses on-street.	1. Study Area in general	Applies to entire downtown Central Business District
Taxi/Limousine Parking	Stakeholders did not identify this as a critical problem but indicated that pick-up/drop-off areas are problems, particularly during special events and at theatres.	1. Alamo/Visitors Center 2. Market Square 3. Southbank 4. Alamodome	1. Imax Theatre; taxi activity on Crockett 2. San Saba 3. Houston Street (Majestic Theatre) 4. No critical issues identified
Signage	Inconsistent signs for certain uses or lack of directional signage for tourists unfamiliar with downtown.	1. Study Area in general	Overall problem statement by downtown users. Example: one sign at end of CLZ indicated decal permit holders allowed; sign at other end did not indicate this use was allowed.

SOURCE: BRW, Inc.; Problem Definition Workshops, December 1998.

6.2 APPROACHES TO ON-STREET SPACE MANAGEMENT

Continued residential and commercial development in downtown San Antonio, and the area's role as a retail and entertainment center, will increase the demand for curbside space. Based on the existing conditions analysis, the overall supply of curbside uses in the study area is adequate for most existing uses. However, the demand for curbside use exceeds the available supply of commercial loading zones, passenger loading zones, and to a lesser extent, metered parking spaces in some areas. Over time, delays to commercial vehicles and other curbside users can be expected to increase as demand increases for a finite number of on-street spaces. Eventually the overall demand for loading and short-term parking can be expected to exceed the supply unless management actions and, ultimately increasing supply, are implemented.

In order to address the on-street space problems identified in Table 6.1, four basic approaches have been identified. These four approaches reflect varying levels of financial ability. Political support will also vary depending on the severity of need and overall public and agency support. The On-Street Space Management Plan is intended to be an ongoing process that will allow the City to monitor problems, issues, or concerns, and, as necessary, work with downtown stakeholders to select from a menu of improvement strategies. More than one approach may be required to achieve management objectives. The four approaches are described below:

- A. Policy/Regulatory Strategies** – Modifications to existing regulations and policies that dictate on-street curbside usage (such as parking/loading zone enforcement and ordinances) and requirements for development projects (such as off-street loading or parking facilities). This approach emphasizes low-cost strategies that rely on regulations and policies to guide on-street use and development. Larger cities across the country are revising their zoning ordinances and building codes to acknowledge the changing conditions in traditional downtowns.
- B. Demand Management** – Travel and parking demand strategies, pricing policies, marketing and information, time management strategies, and transit, pedestrian, or bicycle improvements that could affect curbside or off-street parking demand. This approach emphasizes low-cost strategies that can influence the demand for on-street space.
- C. Low Cost Capital Improvements** – Minor capital improvements to modify the existing on-street parking and curbside use configuration or location, or improve access or ease of use. Improvements could include improved signage, Intelligent Transportation System (ITS) strategies, curb turnouts, access/roadway improvements, etc. This approach emphasizes low- to moderate cost improvements to enhance the efficiency and usability of on-street space.
- D. Major Capital Improvements** – Major improvements to increase the amount of on-street curbside uses by providing new off-street parking or loading facilities. Because these types of improvements are more costly, these strategies include funding and financing elements to promote public/private cost-sharing.

Once an approach(es) has been selected, the City can choose from a “toolbox” of improvement strategies within each approach category. The following section describes this “toolbox” of improvement strategies under each of the four approaches.

6.3 THE “TOOLBOX”: CANDIDATE IMPROVEMENT STRATEGIES

The “toolbox” reflects the range of candidate improvement strategies to address on-street space management issues in downtown San Antonio. The “toolbox” is purposely general in nature to allow the City to select and refine the scope of any one tool to address problems as they become more critical to downtown operations.

Table 6.2 summarizes the candidate improvement strategies as potential tools under each of the four basic approaches. Each improvement strategy has the following identified:

- **Key benefits/characteristics** – What are the primary benefits and what are the key characteristics of the strategy?
- **Order of magnitude costs** – What are the rough order-of-magnitude costs for this type of improvement ranging from low to high? Where the project is conceptually defined, a more definitive cost is provided. It should be noted that the predominant cost element of the majority of tools associated with the regulatory and demand management approaches is additional staff time to develop, manage and coordinate programs.
- **National experience** – Has the strategy been implemented in other similar cities? How has the strategy worked for other cities?
- **Key considerations** – In order to implement the strategy, what are the key considerations that must be addressed by the implementing agency? These key considerations reflect the evaluation criteria that must be reviewed if the City elects to implement a particular tool.

Following the table, Section 6.4 provides a brief description of how each candidate strategy can be applied in downtown San Antonio is provided. Additional information on how the strategy was developed and what the experience of other cities has been in applying certain types of strategies is also contained in Section 6.4.

TABLE 6.2
SUMMARY OF CANDIDATE IMPROVEMENT STRATEGIES “TOOLBOX”

APPROACH / IMPROVEMENT STRATEGY	KEY BENEFITS / CHARACTERISTICS	ORDER OF MAGNITUDE COSTS	NATIONAL EXPERIENCE	KEY CONSIDERATIONS
A. POLICY/REGULATORY STRATEGIES				
1. Modify Development Codes	<ul style="list-style-type: none"> ▪ Off-Street parking/loading supply would increase commensurate with growth ▪ Could be coordinated with business overlay zone to assist with funding/management of off-street loading areas 	<p>LOW</p> <p>Cost: Staff time to develop, manage, and coordinate code revisions</p>	Dallas zoning change (1980); direct and cheaper method than building off-street facilities.	<ul style="list-style-type: none"> ▪ Political support ▪ Developer support ▪ Minimize effect on rehabilitation projects
2. Extend Commercial Loading Zone (CLZ) time limits on fee basis	<ul style="list-style-type: none"> ▪ Would charge delivery vehicles for time at CLZ using: <ul style="list-style-type: none"> - paid permit, or - CLZ meters/electronic debit ▪ Payments would match demand ▪ Would encourage efficiency ▪ Potential revenue increases 	<p>LOW</p> <p>Cost: Staff time to revise ordinance; implementation cost varies on extent of permit program/meters</p>	Aspen, Colorado uses meters at commercial loading zones. Larger trucks that take up more than one space pay at 2 or more meters.	<ul style="list-style-type: none"> ▪ Political support ▪ User support
3. Refine Parking Enforcement	<ul style="list-style-type: none"> ▪ Promote turnover ▪ Educate users ▪ Could include tire-marking to reduce violation rates. ▪ Potentially increase revenue 	<p>LOW to HIGH</p> <p>Cost: Additional parking enforcement officer time or staff increase; administrative and finance support</p>	Many cities continually refine enforcement to meet changing conditions	<ul style="list-style-type: none"> ▪ Maintain customer-friendly focus ▪ Gradual enforcement; warning notices first.
4. Manage Commercial, Residential, and Visitor Permit Decal Ordinance	<ul style="list-style-type: none"> ▪ Would manage time/location of permit decal parkers ▪ Would increase CLZ space available by reducing conflicts with permit holders 	<p>LOW to HIGH</p> <p>Cost: Staff time to refine ordinance; signage improvements including design, production, and installation.</p>	Allowing vehicles with such permits to park anywhere within CLZ is not a common practice throughout U.S. Tucson has found that large permit programs are difficult to manage.	<ul style="list-style-type: none"> ▪ Political support ▪ Local business and resident support

APPROACH / IMPROVEMENT STRATEGY	KEY BENEFITS / CHARACTERISTICS	ORDER OF MAGNITUDE COSTS	NATIONAL EXPERIENCE	KEY CONSIDERATIONS
B. DEMAND MANAGEMENT				
1. Parking / Congestion Pricing Strategies	<ul style="list-style-type: none"> ▪ Would distribute parking and/or loading zone demand to better match supply ▪ Could price lots to discourage long-term parking and encourage short-term parking, or vice versa ▪ Would encourage use of alternative modes / ridesharing 	<p>LOW</p> <p>Cost: Staff time to develop and monitor pricing strategy</p>	<p>City of Madison, Wisconsin implemented parking pricing to manage demand and increase transit ridership</p>	<ul style="list-style-type: none"> ▪ Political Support ▪ Business/employer support ▪ Financial analysis
2. Manage Service Delivery Times	<ul style="list-style-type: none"> ▪ Would attempt to manage delivery times to meet supply and avoid times of demand exceeding supply. ▪ Current delivery times take into consideration peak customer periods and focus deliveries in off-peak customer hours. 	<p>LOW</p> <p>Cost: Staff time to develop and manage program</p>	<p>Private businesses such as restaurants typically determine delivery timeframes to avoid peak business hours. San Antonio's situation is unique given the variety and concentration of uses, and number of special events.</p>	<ul style="list-style-type: none"> ▪ City Coordinator needed ▪ May be difficult given the number of special events and non-typical delivery days. ▪ High demand areas are at capacity all day now.
3. Tour Bus Management Plan	<ul style="list-style-type: none"> ▪ Promote tourist friendly downtown. ▪ Increase supply of tour bus loading/unloading areas ▪ Provide convenient tour bus staging without impacting other curbside users. 	<p>LOW</p> <p>Cost: Staff time to coordinate and monitor program</p>	<p>City of Austin, Texas has developed a cooperative process with hotels to manage tour bus parking.</p>	<ul style="list-style-type: none"> ▪ City Coordinator needed ▪ Would require coordination and cooperation from hotels and tour bus operators.
4. Modified Use by Time of Day	<ul style="list-style-type: none"> ▪ Would increase supply of short-term meters or loading zones by using traffic lane. ▪ Use during off-peak hours only to minimize traffic/transit impacts 	<p>LOW</p> <p>Cost: Staff time to manage and coordinate; Increased parking enforcement personnel</p>	<p>Dallas, Texas provides metered parking on select arterials from 9:00 pm to 4:00 pm; no parking is allowed during peak traffic periods. City of Austin pilot project allows delivery</p>	<ul style="list-style-type: none"> ▪ Increased enforcement during transition times ▪ Minimize impacts to traffic and transit operations

APPROACH / IMPROVEMENT STRATEGY	KEY BENEFITS / CHARACTERISTICS	ORDER OF MAGNITUDE COSTS	NATIONAL EXPERIENCE	KEY CONSIDERATIONS
			vehicles to take travel lane and "double park" next to parking lane in off-peak hours.	
6. Special Events Coordination	<ul style="list-style-type: none"> ▪ Notify curbside users of events and changes in curbside space ▪ Provide alternate locations for commercial loading/short-term parking. 	<p>LOW</p> <p>Cost: Staff time to manage and coordinate</p>	Few urban areas have the concentration of retail, cultural, business and tourist related uses in downtown core.	<ul style="list-style-type: none"> ▪ City Coordinator needed ▪ Extensive coordination and planning with traffic,/parking departments, convention and visitors bureau and curbside users.
C. LOW-COST CAPITAL IMPROVEMENTS				
1. ITS Strategies	<ul style="list-style-type: none"> ▪ Improved data management ▪ Direct commuters, visitors, special event attendees to designated routes/parking lots ▪ Uses real time information to manage traffic/transit ▪ Element of flexibility to meet different needs 	<p>HIGH</p> <p>Cost: System cost varies widely depending on extent of program (complex system-wide programs have highest cost)</p>	St. Paul, Minnesota recently implemented loop detectors at 10 parking structures (public/private) to manage parking demand. Use dynamic message signs to provide information on parking capacity at each site at frequent intervals.	<ul style="list-style-type: none"> ▪ Multi-agency support and implementation ▪ Build upon existing Transguide system
2. Wayfinding Program	<ul style="list-style-type: none"> ▪ Would direct unfamiliar visitors to preferred parking areas or planned visitor center ▪ Could build upon existing brochures 	<p>LOW to MODERATE</p> <p>Cost: Varies by program/ materials used</p>	Dallas, Texas has a downtown signage program. Signs are strategically placed downtown to direct visitors to various attractions.	<ul style="list-style-type: none"> ▪ Signs should be large and easy to read. ▪ Coordinate with planned Visitor and Transportation Center
3. Signage Enhancements for Curbside Uses	<ul style="list-style-type: none"> ▪ Increased consistency among common curbside uses ▪ Reduce confusion ▪ Facilitate enforcement 	<p>LOW to MODERATE</p> <p>Cost: \$200 per sign</p>	Most cities have standardized signs to fit ordinance.	<ul style="list-style-type: none"> ▪ Relationship to permit and decal programs

APPROACH / IMPROVEMENT STRATEGY	KEY BENEFITS / CHARACTERISTICS	ORDER OF MAGNITUDE COSTS	NATIONAL EXPERIENCE	KEY CONSIDERATIONS
4. Market Square/IH 35 Bus Turnout Improvements	<ul style="list-style-type: none"> ▪ Would increase tour bus parking supply adjacent to key activity center. ▪ Would improve maneuverability of existing layout. ▪ Would enhance pedestrian access to Market Square. 	<p>LOW to MODERATE</p> <p>Cost: \$85,000 (excludes design work to enhance pedestrian linkages)</p>	<p>City of Tucson has developed tour bus parking areas to accommodate tourists.</p>	<ul style="list-style-type: none"> ▪ Financial feasibility ▪ Management and communications ▪ Amenities and pedestrian linkages
5. Modifications to Curbside Configuration/Use	<ul style="list-style-type: none"> ▪ Could be implemented as part of project review process ▪ Could incorporate improvements to turning radii, sidewalks, adding meters, etc. to balance vehicular/pedestrian needs. ▪ Implement as conditions change; need a process to monitor. ▪ Most appropriate to increase supply by moving major uses moved off-street (tour buses, large trucks, etc.) then reallocate curbside uses. 	<p>LOW to MODERATE</p> <p>Cost: Would vary depending on project:</p> <p>Meters: \$520 each installed</p> <p>50' long curb cuts construction cost:</p> <ul style="list-style-type: none"> - Asphalt \$8,000 - Concrete \$10,000 - Brick Paver \$13,000 	<p>Most cities indicate they will modify curbside uses as appropriate based on requests from community.</p> <p>Not typically an element of project review or planning process. Could be beneficial in San Antonio due to uniqueness and lack of supply in critical areas.</p>	<ul style="list-style-type: none"> ▪ Urban Design ▪ Pedestrian objectives ▪ Downtown Business support
D. MAJOR CAPITAL IMPROVEMENTS				
1. Southbank Multi-Use Parking Facility (New Facility)	<ul style="list-style-type: none"> ▪ Increase supply of off-street loading space in Southbank area ▪ Increase supply of short-term parking in Southbank area. ▪ Allow for reallocation of nearby curbside space ▪ Potential to incorporate 	<p>HIGH</p> <p>Cost: \$5.6 – 7 million for basic 4-5 level parking structure (140 spaces/level @\$10,000/space); could incorporate office/residential uses on upper</p>	<p>National experience is that typical office building design incorporates these elements. This could be a smaller scale, mixed-use project.</p> <p>Addition of residential uses</p>	<ul style="list-style-type: none"> ▪ Financial Feasibility ▪ Land Availability ▪ Potential for public/private joint development to reduce cost ▪ Operational considerations

APPROACH / IMPROVEMENT STRATEGY	KEY BENEFITS / CHARACTERISTICS	ORDER OF MAGNITUDE COSTS	NATIONAL EXPERIENCE	KEY CONSIDERATIONS
	residential/office space <ul style="list-style-type: none"> ▪ Promote a more pedestrian-friendly atmosphere by removing large trucks from curb 	levels. Land cost: \$3.7 million	to parking structure can more than double cost of the project.	
2. Incorporate additional off-street loading space into new parking structures (Modification to planned/proposed facility)	<ul style="list-style-type: none"> ▪ Would increase supply of off-street loading space as part of new structure ▪ Could be implemented as part of project review process ▪ Nearby curbside space could be reallocated 	MODERATE to HIGH Cost: \$1-\$3 million (to incorporate additional space for loading – varies depending on design)	Typically incorporated into office building as part of parking garage or provided on adjacent curbside to meet loading space needs or requirements.	<ul style="list-style-type: none"> ▪ Increased project cost; could be offset by revenue if loading space provided on fee basis. ▪ Would require developer cooperation ▪ Operational considerations
3. Downtown Visitor and Transportation Center	<ul style="list-style-type: none"> ▪ Would serve as “welcome” center to maintain tourist friendly downtown ▪ Increased supply of tour bus, taxi, short-term parking ▪ Would allow for reallocation of nearby curbside space 	HIGH \$20 - \$34 million (depending on design/financing strategy)	Natchez, Mississippi and Charleston, South Carolina, both of which have a high level of tourist activity and use shuttles/trolley buses, have implemented visitor centers that offer tours, ticket sales, transportation linkages, etc.	<ul style="list-style-type: none"> ▪ Financial Feasibility ▪ Needed to maintain San Antonio’s tourist-friendly atmosphere and reduce impacts to downtown operations.

SOURCE: BRW, Inc.; Vickrey & Associates, Inc.; City of San Antonio; September 1999.

6.4 “TOOLBOX” STRATEGIES: HOW WOULD THEY WORK IN SAN ANTONIO?

The following sections provide a brief description of how the various improvement strategies might work in downtown San Antonio. This information is intended to assist the City with selecting a particular tool and provides some examples as to how the tool can be applied to address on-street space issues in downtown San Antonio.

6.4.1 Approach A: Policy / Regulatory Strategies

Potential improvement strategies, or tools, associated with the policy and regulatory approach are described below.

1. **Modify Development Codes.** A possible application of this tool in downtown San Antonio is to modify the Unified Development Code (UDC). In downtown San Antonio, the UDC regulates land use development and parking/loading requirements. Two possible changes would be to require new development within the CBD to provide off-street loading facilities, or to provide a payment in-lieu of. The City of Dallas made such a change in 1965, requiring new buildings to include off-street docking facilities (one per 250,000 square feet of space). This zoning ordinance was of the first of its kind and was intended to relieve the streets of parked trucks loading and unloading at the curb, and of trucks circulating on the streets. The City of Dallas tightened this zoning ordinance in 1980 to one loading space per 100,000 square feet of space. The City of Dallas had constructed two underground truck terminals to serve a concentrated area of office space, and intended to build additional terminals to remove trucks from the street altogether. While the two existing terminals are successful, the City realized that a zoning change is simpler, more direct and cheaper than building additional terminals.

The UDC currently requires one loading space per 100,000 square feet of leasable floor space for *non-CBD* development. Due to the unique nature of San Antonio, a payment in lieu of providing the space could be made in certain cases to assist with the development of off-street facilities, or on-street curb cuts. Language in the UDC would need to account for differences between new development versus adaptive re-use. Re-use often entails rehabilitation of historic buildings and it may not be financially feasible to provide off-street loading on-site. However, these strategies are worth exploring as the UDC is revised in an effort to remove truck loading activities from competing with traffic, pedestrians, and buses, while extending pavement life. Payment in lieu of monies can be used to develop common off-street facilities over time.

If this tool is selected, a Business Improvement District (BID) could be defined. This district would encompass the core area of downtown and include existing developments that do not currently provide off-street loading facilities. The most critical area is the Houston Street redevelopment corridor and the Southbank area. A BID in this area could build upon the new Public Improvement District (PID) to broaden their scope by addressing parking and transportation issues. The BID could be required to assist in funding and managing common off-street loading areas. The Paseo del Rio (Riverwalk) Association would be a key partner in the organization.

2. **Extend Commercial Loading Zone (CLZ) Time Limits on Fee Basis.** Based on user input and data from the turnover survey, many large delivery trucks require more than 30 minutes to make multiple deliveries. Because most commercial loading zone users can

accomplish their trip in 30 minutes or less, a sweeping change in the time limit is not necessary, nor is it desired because it will affect the space-hours available. Rather, time limits at loading zones could be extended to those who need it on a fee basis. Examples of how this could be implemented are:

- a. Purchase a permit from the parking division on a monthly basis to allow them to park beyond 30 minutes.
- b. Provide meters at commercial loading zones to delineate spaces more clearly and incorporate an electronic debit system. Larger trucks would have to activate 2 or more metered loading zones.

At the stakeholder meeting, users indicated a willingness to pay ahead through a permit program rather than deal with the ticketing process. While this strategy will work for curbside use, such a program may be more effective if an off-street facility is constructed in the future. This is discussed in the Major Capital Improvements approach section. Delineating loading zone spaces will also assist in controlling the supply of space and help to manage where decal permit holders can park within a loading zone.

3. **Refine Parking Enforcement.** The purpose of this tool would be to focus parking enforcement in known high violation areas to discourage violators. This tool would in turn promote parking turnover and increase parking revenue. This strategy applies to both metered parking and loading (passenger and commercial) zones. The highest duration at short-term meters was found in the Alamo/Visitors Center and Convention Center subareas. The City has indicated they do not mark tires at meters. A possible refinement would be to tire-mark at meters. Rather than ticket immediately, parking enforcement could issue warning flyers at the first violation to maintain a customer-friendly focus and educate parkers of the increased enforcement. Stakeholders also noted that enforcement of passenger loading zones should be increased. Enforcement for commercial loading zones in the Riverwalk/Southbank subarea was observed to be high and enforcement officers do mark tires in these zones. While enforcement appears to be satisfactory in San Antonio, a review of routes and operating policy is recommended taking into consideration the data presented herein.
4. **Manage the Commercial, Residential and Visitor Permit Decal Ordinance.** While the intent of this ordinance is appropriate, the effect of the ordinance is to reduce the overall supply of commercial loading zones. This is especially a problem due to the high demand in some areas, such as Southbank, and because a decal holder can park anywhere within a commercial loading zone. Two possible applications of how to manage this ordinance in downtown San Antonio are:
 - a. Restrict the time period allowable for decal holders to park to not coincide with the peak commercial loading period. In the Riverwalk/Southbank area for example, decal holders could be restricted to park only from 4:30 pm to 7:30 am, reserving the peak delivery times during the day for commercial vehicles with business.
 - b. Mark only a portion of each commercial loading zone as available for decal holders and size the space for a small vehicle. For example, one standard space (20 to 25 feet) could be signed at either end of a loading zone for “decal holders allowed”. This would designate a space for decal permit

holders, but still leave the space available for commercial permit vehicles. If this change was made an educational effort would need to be made, showing the locations of the zones and encouraging commercial vehicles to park outside of that space unless it is the only space within the zone available. This can be done as a part of the permitting process or completed by a notice to current decal holders. If meters are implemented at commercial loading zones, this application could be easily integrated.

It should be recognized that the City currently has in place preferred pricing programs for monthly parking permits for downtown residents. Residents also have meters available for their use free of charge after 6:00 pm.

6.4.2 Approach B: Demand Management

Management and policy-based strategies have the ability to address many of the curbside problems without a substantial investment. These demand management strategies require extensive coordination and cooperation among a variety of users, which can sometimes impede implementation. However, a cooperative approach to problem-solving did have a substantial level of support during the problem definition phase of the study. Many stakeholders view management of curbside space as a key element that should be put in place by the City.

1. **Parking / Congestion Pricing Strategies.** Parking pricing policies can both encourage the use of alternative modes of transportation and distribute parking demand within an area. Information on parking pricing differentials can be distributed through a TMA. In the first case, good alternatives need to be available. San Antonio currently provides a high level of transit service to and within downtown. In the second case, selectively raising parking rates in certain areas has been found to shift parkers from one location to another. For example, the City of Madison, Wisconsin imposed a surcharge of \$1.00 at four parking facilities in conjunction with new shuttle service. Five to eight percent of drivers switched to transit, while 22 percent shifted location. Six percent parked after the peak. Pricing preferences can also be made for carpoolers to discourage solo drivers.

In downtown San Antonio, the City can implement pricing strategies at select City lots to manage demand. If necessary, the City can tax private parking providers to ensure a competitive environment. In locations where the City wants to specifically discourage a use, such as long-term employee parking in the core area, monthly parking permits can be withdrawn, or pricing made to favor short-term parkers such as visitors and shoppers. Pricing levels and locations subject to differing pricing policies should be part of a comprehensive financial analysis. These types of strategies should be undertaken before constructing additional parking in an effort to shift drivers to alternative modes.

2. **Manage Service Delivery Times.** Because restaurants and many other businesses have delivery times that avoid peak customer hours, this type of strategy may be difficult to implement. Many of these common uses also have common delivery time requirements. One of the key constraints to this strategy is that deliveries in high demand locations currently have long peak periods, which if extended further would conflict with peak traffic flow into and out of downtown. Furthermore, downtown San Antonio is host to a number of special events that can result in non-typical delivery time requirements. If the City would like to explore this strategy further, it should be discussed with downtown leaders and representatives of the Paseo del Rio Association.

- Tour Bus Management Plan.** The San Antonio Tour Guide association has identified several areas where they would like additional tour bus stops. Because these uses are not as frequent as other uses, such as taxis or commercial trucks, designating additional curbside space may not be appropriate. Instead, a cooperative process could be developed in which hotels or tour bus associations can contact a City representative (traffic, parking or police) to designate a temporary passenger loading zone or short-term staging area (up to ½ hour). A good communication process is a critical element of this strategy. For example, the City of Austin has an excellent working relationship with downtown hotels. When tour buses are scheduled to arrive and need a place to stage for a few hours or a day, hotels have a contact person to call so that an area can be reserved or meters bagged to provide for bus parking. This means the tour bus driver knows where to go, eliminating any confusion, and decreases the potential that the bus will park somewhere where it will impact traffic or another curbside use.

This type of strategy would be consistent with the *Downtown San Antonio Strategic Plan's* recommendation to develop a tour bus management and staging plan. If the City of San Antonio selected this tool, the process should be monitored to see if a certain location is used enough to warrant a permanent marking. Curbside space should only be used for loading/unloading under 30 minutes. Longer-term bus staging should take place on the periphery of downtown. A communications system can be developed so bus drivers know when and where they are to load/unload passengers. This plan should also include considerations for limousine drop-off and pick-up activity.

- Modified Use by Time of Day.** This tool is a simple way to increase the supply of on-street commercial loading zones during off-peak traffic periods which often coincide with peak delivery times. While the City has a few zones of this type, a pilot project similar to that being done in Austin could be considered for Commerce (Santa Rosa to Bowie) and Market (Flores to Bowie). The City of Austin currently has a pilot project which allows commercial trucks to park in a traffic lane or “double park” during off-peak traffic hours. This has been working well according to the City.

An example of how this may work in downtown San Antonio is to use the left traffic lane on these streets to avoid impacts to VIA bus operations. This program should not be used when off-peak traffic flow is expected to be high (i.e. major daytime special events). This can also be considered for streets with no or moderate levels of existing curb uses but that are expected to maintain LOS D or better in the future, such as Santa Rosa, Soledad, Main and Flores Streets.

- Special Events Coordination.** This tool would help to manage on-street use during special events in downtown by informing users of how the event or activity will affect supply and recommend (or provide temporary) alternate locations. This program could be accomplished through a web site, fax or e-mail messages, or mailings to regular downtown users (vendors, tour buses, taxi companies, VIA). Due to the number of events that downtown San Antonio hosts, this type of special event management is necessary to control and on-street space use. To maintain access to curbside space, the City should provide alternate locations. This has been identified as a problem in the Market Square area, which has a limited number of commercial loading zones, and which also hosts a number of festivities that impact access and the availability of curbside space. One of the first efforts of associated with this tool would be to generate

a comprehensive list of users, what their needs and concerns are during special events, and how best this communication process can be implemented.

6.4.3 Approach C: Low-Cost Capital Improvements

In some cases, management strategies may need to be supplemented by low-cost capital improvements. A description of candidate low-cost capital improvements is provided below.

1. **ITS Strategies.** Intelligent Transportation System (ITS) strategies reflect a wide range of possible improvements that can expand upon the existing Transguide system in San Antonio. Improvements can range from information kiosks or websites that provide real time information to a comprehensive parking and traffic guidance system. These strategies are wide ranging and should be defined by the City working with regional and state agencies. ITS systems can influence travel behavior by guiding commuters and visitors to appropriate parking locations, or can help to market transit, pedestrian and bicycle linkages as alternative modes. The City of St. Paul, Minnesota, working with the Minnesota Department of Transportation, recently implemented a parking management system at 10 public and private parking structures. This system is intended to alleviate traffic congestion and manage parking demand by guiding commuters and visitors to quickly locate available parking, providing them real-time space available information (every 2 minutes during peak periods), and providing advanced monitoring capabilities. Dynamic message signs at strategic points relay the information to travelers. Signs are large enough to accommodate additional information related to traffic, weather, special events, etc. Implementation cost was approximately \$1 million.

Related to ITS is the use of interactive programs. For example, in addition to the current information kiosks locations, kiosks could also be located in major hotels and the planned visitor center to answer common questions, provide information on alternative modes of travel and show pictures or information on downtown attractions or activities. Websites can be another tool used by visitors, employees, businesses/employers to market alternative modes, and more importantly provide up to date information on changes in the on-or off-street system that may be associated with special events. Commercial loading zone users can be directed to alternate temporary loading zones, while residents and visitors can be directed to special event parking. Parking can be priced to influence use as is discussed in demand management section.

While ITS is more of a system-wide tool to manage traffic and parking, elements of an ITS system can help manage curbside uses related to:

- a. Tour Bus Parking and Management – communication systems at staging areas can relay messages to buses regarding pick-up times/locations. Information can be posted on website or dynamic message sign to direct bus to appropriate locations or City contact.
- b. Visitor / Employee Parking – to avoid visitors using curbside parking or limited off-street parking in core area, and direct them, as well as employees, to park in peripheral lots and use the rubber-tired trolley to travel within downtown.
- c. Commercial Loading Zones – electronic debit system that can track use and duration at key locations in the city, or be integrated into off-street facilities.

2. **Wayfinding Program.** This recommendation has been referenced in other studies conducted for the City of San Antonio and should be a priority given the number of visitors unfamiliar with downtown's parking and transportation system. The signage program should be based on a circulation plan that directs visitors who are walking or driving to follow certain streets and directs them to appropriate parking areas. Linkages could then be made to the downtown streetcar or transit system. Concessionaires or an information booth could provide additional visitor information. Such a signage program could be a precursor to a more sophisticated ITS parking and traffic guidance system, as well as be a precursor to an interim visitor reception center. The streetcar system is well established and successful so this element of the plan could be relatively simple to implement. A one-page brochure with the streetcar routes and attractions, and a corresponding signage program that is easy to see, read and understand would be key elements.

3. **Signage Enhancements for Curbside Uses.** During the stakeholder meetings, many curbside users indicated that consistent, simple and clear signage would help to manage on-street uses better. While San Antonio has a fairly consistent signage program, there are sometimes up to five different signs to different commercial loading zones, and many different signs indicating varying levels of tour bus parking use. On some streets, including Presa and Commerce, one commercial loading zone has two different signs that generally mean the same thing but that look slightly different and can be confusing. Furthermore, some signs indicate that decal holders are permitted and some do not, even though decal holders by ordinance can park in any commercial zone at any time. An example of how signage enhancements could be applied in downtown are:
 - a. Three different signs would be appropriate for commercial loading zones: 1) Commercial Loading Zone – 30 minute limit; 2) Commercial Loading Zone – 30 minute limit – decal holders allowed; and 3) Commercial Loading Zone – specifying time restriction (ie. 9-11am and 1-3 pm only, day/night, etc). Estimated cost per new sign is \$195.
 - b. Similarly there are many different signs for tour buses (Tour Buses Only, Bus Loading Zone – 10-minute limit, No Parking Tour Bus Stop, Local Tour Bus Permit Holders Only – 20-minute limit, as well as passenger loading zones which are used by buses when available). A consistent signing program, with a consistent time limit, and if necessary a permit program, should be developed to indicate whether buses can actually stage for a specified length of time or use 10 to 20-minutes to complete loading/unloading activities. Development of signage should be coordinated with the Tour Bus Management Plan.

4. **Market Square/IH 35 Bus Turnout Improvements.** Redesign of this tour bus turnout would provide a more efficient and usable tour bus loading/unloading and staging area near Market Square. Figures 4-6 and 4-7 showed photos of the existing tour bus parking area at this location. The Professional Tour Guide Association has indicated that this turnout is difficult to maneuver. Based on observations, the turnout is not wide enough to allow for one bus to pass another. Because of this, the area is underutilized and buses continue to park outside of designated curbside tour bus parking zones in the vicinity of Market Square.

Figure 6-1 illustrates how the City and/or TxDOT can redesign the turnout to accommodate up to six tour buses. Passengers would board/alight the bus from a

platform rather than from the driveway as the current design requires. Pavement markings would direct visitors to walk a short distance to Market Square. Bus bays could be numbered so visitors can return to the appropriate location to reboard their bus. This area could also be managed so that bus bays are reserved or access is restricted. Buses that drop-off/pick-up in the central core could stage at this location and a communications system could be provided so that the hotel could call the driver when passengers are ready for pick-up.

A preliminary construction cost to redesign this area is \$85,000. While this includes basic amenities such as lighting, seating and planters, it does not include additional design work to create more visual pedestrian linkages to Market Square. Study Oversight Committee members stressed that such an improvement should enhance east-west pedestrian linkages between the west (UTSA, public buildings) and downtown to the east.

5. **Modifications to Curbside Configuration/Use.** This tool could be an ongoing function incorporated into the planning review function of the City. As new developments occur and roadway or sidewalk improvements are made as part of the Capital Improvements Program, the City should review the ability to integrate curb cuts, turning radii improvements, etc. into the project. Curb cut improvements are typically made to narrower streets where the sidewalk is extended at each intersection (ie. Houston Street, Presa, Navarro). Consideration should be given to urban design and pedestrian oriented objectives.

Examples of how and where these types of improvements could be made in downtown San Antonio are as follows:

- a. If on-street loading is to continue in the Southbank area, turning radius improvements could be made at the following intersections to prevent curb, sidewalk and sign damage:
 - Navarro at Crockett
 - St. Marys at Crockett
 - Crockett at Presa
 - Commerce at Presa
 - Losoya / Broadway at Houston

Figure 6-1

- b. Possible changes to curbside uses include:
 - Extend the existing Commercial Loading Zone westerly to replace the Passenger Loading Zone on Blum/Alamo Plaza. Extend the passenger loading zone on Alamo Plaza (east curb) into the street curve since these passenger loading zones are often used by small vehicles. The turning radius from Alamo onto Blum must accommodate a large truck.
- c. Potential areas to consider the addition of parking meters are:
 - *Adjacent to Post Office along Avenue E* – 15 minute mail pick-up parking is currently provided along a portion of this street. Meters (15 to 20 minute limit) could be added to generate revenue while serving the same intent. This is currently done in Dallas.
 - *Along Commerce Street near St. Paul Square and Sunset Station* – The City should re-examine adding short-term meters in this area where no-cost 2-hour parking is provided, as well as add short-term meters in the vicinity of Sunset Station as this area develops.
 - *In the City Soledad/Commerce Lot* – Meters or pricing strategies to accommodate short-term parking in the vicinity of City Hall and near Riverwalk could be implemented given that short-term parking is in high demand and at capacity in these two subareas. Future plans to redevelop this lot to provide Riverwalk access should consider retaining some of the short-term parking spaces.
 - *Estimated cost per meter installed is \$520.*
- d. While other minor changes can be made, their effect would to reduce supply of one use while decreasing the supply of another. A better approach would be to reallocate curbside use to short-term parking, passenger loading, etc. as major uses such as tour buses and commercial truck deliveries are moved off-street.

6.4.4 Approach D: Major Capital Improvements

While the above described strategies can enhance and control the supply of on-street curbside use through management and low-cost improvements, major capital improvements are the only way to shift on-street uses associated with large vehicles (tour buses, large delivery trucks, etc.) to off-street facilities.

These improvements not only increase the supply of space available for such uses, but they can help to minimize pedestrian, traffic and transit operations conflicts, while re-allocating the curbside space to short-term parking, pedestrian use and passenger loading. A summary of candidate improvement projects is provided below.

1. **Southbank Multi-Use Parking Facility.** A multi-use parking facility that could provide an off-street truck loading facility, as well as incorporate visitor/short-term parking, retail,

office, and/or residential uses could be implemented in Southbank. The following reasons support this facility as a potential improvement strategy:

- More than 500 commercial vehicles use the 12 commercial loading zones in the Riverwalk/Southbank focus area on a daily basis;
- Based on the average vehicle size, there is an inadequate supply of commercial loading zone spaces during the two peak periods (mid-morning and mid-afternoon);
- The demand for loading zones is constant during these peak periods and results in many trucks circulating in the area until a space becomes available;
- Curbside loading activity detracts from the atmosphere and presents safety hazards for pedestrians;
- Riverwalk/Southbank has a shortage of short-term on-street parking and passenger loading areas which often results in vehicles or buses stopping in a traffic lane or commercial loading zone to make a quick trip or drop passengers off.
- Delivery destinations are primarily along Riverwalk, which must be accessed by stairs and ramps in the immediate area, resulting in additional safety hazards as delivery personnel carry goods down stairs to an often crowded Riverwalk.

Figure 6-2 shows the core area for commercial loading zone activity, and illustrates the location and average supply of commercial loading zones spaces. If an off-street facility was built it is recommended that it accommodate mid- and large-size trucks only and provide vertical access and an underground connection to Riverwalk. As noted in Chapter 3, 40% of the commercial vehicles in the area are mid- to large-size trucks. A limited number of smaller commercial loading zones can be retained to accommodate small delivery vehicles. These smaller spaces can be metered if desired. Where commercial loading zones are removed and transferred to the off-street facility, the curbside space can be used for meters and short-term passenger loading areas to create a more pedestrian friendly atmosphere.

Figure 6-3 shows the recommended location for such a facility. This block currently contains one building and two privately operated surface parking lots. This block was selected due to its convenient location adjacent to Riverwalk and because it is the only group of undeveloped parcels in the vicinity.

The appraised land value of all parcels (approximately 1.2 acre) is \$3.7 million (excluding the existing building and lot). It should also be noted that existing revenue per parking space ranges from \$20 to 27/day (*Source: Personal communication with Allright Parking*), given an average turnover of about three vehicles per space per day and a high parking rate for short-term parkers.

Figure 6-2

Figure 6-3

Figure 6-4 illustrates a schematic design concept for this block. In order to carry the Riverwalk theme of restaurants and retail to street-level, while meeting the loading and parking requirements of the area, the facility should contain:

- Street-level retail space along Crockett Street and Presa across from Riverwalk to maintain a pedestrian atmosphere and “hide” internal parking and loading activity.
- Approximately 17 loading bays (34 spaces per hour based on a 30-minute limit) accessed from Navarro to avoid bringing large vehicles onto Crockett and Presa. The number of loading bays is estimated by multiplying the existing supply on the 12 blockfaces (86 spaces per hour), and by the percentage of medium to large trucks (40%) that use those spaces. These would be moved to the off-street facility. The same amount of on-street spaces could be reallocated to a different use to enhance the pedestrian and street environment.
- Underground vertical access (elevator or ramp) that connects to Riverwalk to efficient move goods to and from the facility.
- 3 to 5 levels of parking (140 spaces per level) to replace parking for the displaced surface lots and to provide additional short-term, visitor, and Nix Hospital parking.
- Potential office or residential spaces on upper levels for lease.

The estimated capital cost for this facility is \$5.6 to \$7 Million. The cost is based on 4 or 5 levels of parking at an estimate of \$10,000 per space. This cost estimate does not include underground access from commercial loading areas to Riverwalk, or additional development on upper levels. These costs are excluded due to uncertainties related to underground utilities and the type of development on upper levels. Because this is a prime redevelopment block, the City could pursue a joint development program to ensure that the project helps meet public needs in the area. However, additional development in conjunction with the project could more than double the cost.

2. **Incorporate Off-street Loading Space into New Parking Structures.** This tool would require the City to review new parking garage plans to assess the potential to incorporate off-street loading facilities where demand warrants. This strategy would increase the cost of garage design as it would add another element and require changes in access to separate uses (vehicular, delivery, pedestrian). If the City is the lead agency for construction of future garages, the design should address the need for additional off-street loading spaces. Where private developers construct garages, the City should encourage off-street loading facilities if demand warrants. However, unless a code requirement is in place, a private developer will not likely be willing to construct such a facility unless their financial package requires it. However, if the loading space is convenient and can be provided on a fee basis, the revenue stream may be attractive to developers.

Figure 6-4



3. **Downtown San Antonio Visitor and Transportation Center.** The new Visitor and Transportation Center has undergone initial planning and feasibility work. Funding for this center should be a priority, particularly if San Antonio wants to continue to serve as a major tourist destination. Additional space for tour bus parking and staging is needed in the Alamo/Convention Center area. The planned visitor and transportation center would provide for these uses so that existing curbside space can be reallocated to provide both additional short-term metered parking (which is at capacity in the immediate vicinity of the Alamo) and commercial loading zone space, which is inadequate during most of the day. Until funding is secured, an interim, lower-cost improvement could be to purchase part of the recommended site and use it for tour-bus loading and staging, or to use existing peripheral lots to set up a Visitor Reception area as discussed in the previous section.

The following chapter describes a process that the City can follow as part of an on-going effort to implement the On-Street Space Management Plan. This process allows for flexibility in that the City can determine which problems are most critical and then select an approach and tool to address the problem. The tool should be evaluated against criteria that take into consideration the interrelationships of on-street space problems and solutions.

7

On-Street Space Management Plan

This chapter presents the On-Street Space Management Plan. The plan represents an ongoing process to manage curbside space through a range of approaches and tools from which the City can select. One of the most important elements of the plan is that many of the tools reflect a collaborative approach to on-street space management. This collaborative approach seeks to identify critical problems, select a management approach based on fiscal constraint and political/community support, and select appropriate improvement strategies, or tools, to improve the efficiency of on-street space usage. The “toolbox” of improvement strategies supports established policies in an effort to continue working towards meeting the vision for downtown San Antonio.

7.1 PLAN METHODOLOGY

Figure 7-1 illustrates the methodology for addressing problems through On-Street Space Management Plan. This methodology incorporates a level of flexibility that allows the City to monitor problems and work with stakeholders and users to determine the level of problem criticality. The range of management approaches and improvement strategies were reviewed with stakeholders and the Study Oversight Committee. Based on comments, some strategies were consolidated as more general tools that can be refined by the City as conditions change. These strategies are *suggestions*; the City should use and refine them based on local knowledge, resources, and political realities.

The approach to on-street space management emphasizes low-cost coordination and management-based ideas. The first, best and most cost-effective way to improve the on-street system is to improve its performance. Changes do not have to be complex or expensive to work. Rather, a common sense approach based on local knowledge is key. Where a problem area was more concisely defined, a more specific tool or improvement strategy was identified. However, an important element of the plan is to assess the level of effectiveness of management-based programs prior to investing in more expensive capital improvements.

The following sections describe each of the steps in implementing strategies selected by the City or other implementing agencies from On-Street Space Management Plan “toolbox”.

Figure

7-1

7.1.1 Plan Oversight

A range of City departments, local businesses, downtown residents, and curbside users (tour buses, delivery companies, taxis, vendors, etc.) have an interest in how on-street space is utilized and managed. Thus, parking issues and management concerns are often sensitive issues; changes may benefit one user while impacting another. There are currently three downtown groups that can work with the City of San Antonio to review problems, and recommend tools to address critical problems. These groups are the Downtown Alliance, the Downtown Owners Association, and the Downtown Advisory Board. Representatives from these groups, preferably with one group as the lead organization, can work with City representatives to come to a mutual agreement on what problems are most critical. Working cooperatively with the City, these representatives can help to recommend tools, as well as provide feedback on the level of effectiveness of the different programs and strategies. A designated City representative can provide a link to the local decision-makers that will ultimately approve programs and policies related to on-street management.

The lead organization or a designated City representative should monitor and coordinate activities associated with the On-Street Space Management Plan, including:

- Establish a communication process
- Review problem statements and prioritize issues
- Recommend an approach and select one or more tools
- Evaluate tools based on relevant criteria and key considerations
- Refine program or strategy with public and user involvement
- Work with City leaders and decision-makers to implement strategy or test pilot project/program
- Monitor and evaluate program effectiveness to support local consensus building, grant development, etc.

7.1.2 Problem Criticality

As shown in Figure 7-1, the first and second steps in the plan methodology are:

1. Review Problem Statements
2. Determine Problem Criticality

Chapter 6 (Table 6.1) summarized those problems which appear to be most critical to downtown agency staff and curbside users based on a review of previous studies and agency/stakeholder workshops. The existing conditions analysis confirmed that many of the problems are issues at this time and will likely worsen as downtown development and rehabilitation continues.

These two steps in the plan will, in effect, prioritize the on-street space problems in an open forum. As conditions change and the plan is monitored, problem statements may be modified or placed higher or lower on the priority list. When reviewing problems, the City and downtown representatives should consider questions such as the following to determine severity of the problem:

- Is the problem detracting from the City’s ability to maintain a business or visitor-friendly downtown environment?
- Is the problem compromising downtown traffic or transit operations, or is the problem being caused by a focus on traffic flow or transit needs?
- Does the problem affect the willingness of private developers to build new or re-develop certain areas of downtown?
- Does the problem create safety hazards for pedestrians or bus stop patrons?
- Does the problem detract from the urban design objectives in downtown?
- Has the problem been identified as an issue for a considerable length of time?
- Is there political support to address the problem?

These types of considerations will help to put the problem in perspective and lend insight as to which problem(s) should be addressed first. Once a problem or list of critical problems has been identified, the City and downtown representatives should proceed to Steps 3 and 4, described below.

7.1.3 Approach and Strategy Selection

Steps 3 and 4 of the methodology (refer to Figure 7-1) are:

3. Choose Approach
4. Select Strategy(s) from the “Toolbox”

Four general approaches to on-street space management were defined in Chapter 6. Within each approach, a general “toolbox” of improvement strategies was identified. These two steps in the process require careful examination of the order-of-magnitude costs and key considerations identified under each tool in Table 6.2.

It should be recognized that some of the strategies are long-term projects that will require additional planning, design and financial analysis before completing an evaluation and ultimately recommending the strategy to decision-makers. Other strategies are shorter-term, and could be implemented as pilot projects with minimal start-up costs. However, these lower cost strategies emphasize *coordination, management and stakeholder participation*. Thus, staff time and a project “champion” are critical to the success of these strategies.

7.1.4 Evaluation Criteria

An evaluation process can help to identify the costs, benefits, and trade-offs associated with candidate improvement strategies. While Table 6.1 identified the general benefits, order-of-magnitude costs and key considerations associated with the range of improvement strategies, a detailed evaluation may be warranted if the tool is recommended for implementation. The evaluation process will allow the Committee to assess the potential of each strategy to improve the utilization of curbside space against a set of evaluation criteria. The City can focus on the most relevant criteria for a particular tool. Consistency with policies, cost, and implementation requirements must also be considered.

The following criteria were reviewed with and approved by the Study Oversight Committee as appropriate for evaluation of on-street space management improvement strategies:

1. *Consistency with Established Policies and Regulations* – Are the improvement strategies consistent with current policies, codes, ordinances or regulations, or would the strategy require a change or refinement to the existing policy?
2. *Effect on Access to and Availability of Commercial Loading Zones* – Would the strategy or improvements enhance access to and increase the effective supply of commercial loading zones?
3. *Effect on Transit Operations* – Does the strategy have the potential to enhance transit operations by helping to keep lanes clear for buses and minimizing conflicts at bus stops, or does the strategy have the potential to negatively impact transit operations?
4. *Effect on Traffic Operations* – Would the strategy enhance traffic flow by minimizing curbside uses, especially during the peak hour?
5. *Need for Additional right-of-way* – Would the improvement require the purchase of additional right-of-way or the potential displacement of existing uses?
6. *Effect on Access to Business/Residential* – Would the improvement enhance access to downtown business and residential uses by increasing the supply of short-term parking or expanding the decal permit program?
7. *Potential to Increase Parking Revenue and/or Decrease Operating Costs* – Does the improvement have the potential to increase parking revenue through enforcement or increased supply? Does it also have the ability to decrease operating costs?
8. *Financial Feasibility* – Is the improvement financially feasible, or would it require an outside funding source or other financing program to support implementation?
9. *Effect on Tour Bus and/or Taxi Operations* – Would the improvement affect the availability of space for tour bus, limousine, or taxicab activity?
10. *Potential to Encourage Use of Alternative Modes* – Can the improvement support policies to encourage the use of alternative modes such as transit, car-pooling, bicycling, and walking?

7.1.5 Program Development

The sixth step in the plan methodology is program development. This step provides an opportunity for City staff to work with affected users and the downtown community to refine the strategy and recommend the program to local decision-makers. This step will likely be an iterative process until the project receives adequate support and/or funding. For example, if a Tour Bus Management Plan is selected and the evaluation process supports further refinement, the program development step will identify people, funding and actions required to implement the plan. This step would likely include public meetings and stakeholder workshops to refine the project and build local community and political support. On the other hand, if a major capital improvement such as the Southbank Multi-Use Facility is selected, program development could include development of a public/private partnership, grant applications, financial analyses, engineering and design documents, coordination with the existing and planned ITS system, and traffic impact analyses.

7.1.6 Implementation

Step 7 is Implementation. Implementation can take the form of a pilot program to test a particular strategy or formal application of a strategy, such as construction and operation. Many of the policy/regulatory or demand management approach strategies may lend themselves to pilot programs. For example, increasing the supply of curbside loading space can be accomplished by allowing trucks to park in a traffic lane on certain streets during off-peak hours. This type of pilot program would need to be coordinated and an outreach effort would have to be made to inform delivery companies of the timeframe and restrictions. If the pilot program appears to be effective without having a major adverse impact on traffic flow, the City may wish to consider expanding their program by permanently signing certain curbsides to allow loading during off-peak periods.

Formal application of a strategy would include completion of project design and operation. A good example of how a strategy that would fall into this category is the redesign of the Market Square/IH 35 tour bus turnout.

The On-Street Space Management Plan needs to include not only the physical aspects of improvement, but also needs a marketing plan, promotional programming, and system for measuring the effective of the program, and ongoing maintenance.

7.1.7 Feedback and Monitoring

The last, and one of the most important, steps in the On-Street Space Management Plan is feedback and monitoring. This ongoing activity will provide feedback relative to the ability of the selected improvement strategies to address problems associated with on-street use. As shown in Figure 7-1, this step is linked to the first step in the process. That is, City staff should frame the feedback and monitoring process to the stakeholders to determine if the problem has been addressed to a sufficient level.

An informal assessment should be conducted every 12-18 months. The assessment needs to rely on current conditions at that time. This would include the location, design and quantity of on- and off-street parking or other curbside use, as well as the current time limits, parking fees, fines and enforcement for both. Every year or so, the following actions should be taken:

- Interview business and property owners and get their reactions and feelings – do they still support the original solutions?
- Conduct spot turnover and occupancy surveys and compare them to the original data – what has changed?
- Determine if there has been an increase in accidents, curb damage, or other similar issues that reflect conflicts or inappropriate use.
- Analyze the revenue generated from fees and fines and assess the effectiveness of the adjudication system.
- Assess the effectiveness of the marketing and promotional program.

Every 3 to 5 years a thorough update should be conducted, particularly if a significant amount of new or re-development has taken place in the downtown area. Informal interviews and spot

checks on turnover and duration are simply periodic checks of the curbside use. This examination would include:

- Repeat all of the data gathering and analysis functions.
- Take a critical look at the plans for downtown – what has changed since implementing a strategy? Has the strategy affected interest or activity in downtown development?
- Has the strategy promoted downtown as a more user-friendly area for both visitors, employees, and residents?

7.2 FUNDING STRATEGIES

With regard to parking, funding opportunities are at best difficult to find, not readily defined in terms of federal allocations, and still considered as ancillary to national transportation objectives. It is suggested that some development projects make available money for parking facilities by utilizing other revenue sources for adjacent and related activities, as well as finding “hidden resources” for activities ancillary to parking.

7.2.1 Federal, State, Regional and Local Assistance

Over the next six years, the Transportation Equity Act for the 21st Century (TEA-21) will provide approximately \$215 billion in spending authorization for highway and transit investments. In comparison, the Intermodal Surface Transportation Efficiency Act (ISTEA) authorized about \$155 billion for transportation over the past six years. Under the US Department of Transportation programs there are two general categories that funding for parking facilities falls into:

- Appropriation – monies that are identified in TEA-21 or other legislation that are designated for a specific program or location such as a state or local Metropolitan Planning Organization (MPO). Once the monies are appropriated, it is up to the recipient state, local government or program to designate how the funds are to be spent.
- Transportation Enhancement Funds – funds for projects or facilities that enhance mobility and access, such as tourist and welcome centers. These funds are tied to matching programs and are awarded based on a competitive process.
- Congestion Mitigation and Air Quality Program (CMAQ) - transportation pollution control measures including “fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit services (CAA 1990 Sec 108 b, 1,A, iv). Generally, this is the establishment of park and ride facilities.

Direct allocations from ISTEA were provided to several projects. Examples of parking facilities funded under the program designation of *Congestion Relief* include:

- On street parking lanes – Long Island, New York
- United Hospitals Medical Center parking facility – Newark, New Jersey
- Handicapped accessibility projects – Chicago, Illinois

TEA-21 and the Federal Transit Act authorize funding of programs administered by the Federal Transit Authority (FTA). The theme of all FTA-administered programs is the Livable Communities Initiative. Transit Authorities that receive FTA funds are required to incorporate Livable Communities initiatives into their planning programs.

The Livable Communities Initiative is a broad based funding source for a variety of transit related activities. With respect to parking facilities, The Project Planning Activities funds may be available for feasibility studies, technical assistance, environmental consideration, and the preparation of plans and designs for transit related facilities. In the Capital Activities and Demonstration Projects including parking facilities, FTA funds may be used for land acquisition, site preparation, demolition, restoration, walkways, foundations, park and ride facilities, safety equipment, lighting, as well as, access and revenue control equipment. Two project examples utilizing these funds include:

- Park and Play Garage Childcare Center (Orlando, Florida) – This is a 515 space parking structure with a day care facility, a restaurant, and offices. FTA funded 80 percent of the facility plus the land acquisition cost for the day care.
- Ybor City Trolley (Tampa, Florida) – The improved connection between trip attractions in the Ybor City district (Historic District of Tampa) alleviated pressure for core parking and thus reduced traffic congestion. FTA discretionary capital assistance funds were combined with the donation of land, local fund financing by the Hillsborough Area Regional Transit Authority (HART), CMAQ funds administered by the FLDOT under the flexible funding provisions of ISTEA, and FTA urban area formula funds.

The US Department of Housing and Urban Development administers the Community Development Block Grant (CDBG) program. These funds are for all types of urban and rural infrastructure programs and community development programs. These funds come in two forms, entitlements and competitive grants. The competitive funds are distributed to states. Usually, regional planning jurisdictions apply for such funding for a variety of regional projects. HUD sponsored parking facility projects include:

- Parking lot expansion – North Richland Hills, Texas
- Parking lot redevelopment – Honolulu, Hawaii
- City parking lot – Glendale, California

There are a number of federal, state, and local revenue sources that may not necessarily support the funding of parking facilities, but may indeed support those activities adjacent to, or serving, a proposed parking facility, including private or public/private development projects. It is recommended that all potential funding sources, either direct or ancillary to parking facilities be explored; particularly if the cost of the parking facility is the piece that threatens the likelihood that the project will be realized.

State and local government funding sources consist of grants from various state agencies with an interest in such projects and from the City of San Antonio, Bexar County, and other local government units and agencies such as the MPO. Local contact through the MPO will be needed to determine interest in any project and the availability of resources. Funds available through these sources may be used to provide the local matching funds required of federal grant recipients.

It is important to note that the list of funding sources for parking facilities in no way suggests that they will be made available or awarded.

7.2.2 Other Financing Tools

There are several other financing tools available to the City of San Antonio to assist with funding of major improvements. They are summarized below:

- *Bonds with debt service.* The City of San Antonio has issued bonds in the past to fund major improvements. Revenue from the parking facility would be used to pay back the bonds over a specified length of time. Because public entities can obtain better interest rates for such projects, the public sector usually takes the lead with this type of financing.
- *Parking payments in lieu of on-site construction.* Implementation of a “fee in-lieu of” parking program provides a method in which a municipality can pool and control resources in order to provide the most effective public parking. This is especially applicable to the historic downtown area in which space is usually at a premium, and pooling of resources could provide for structured parking, an expense that small developers would have difficulty with themselves.

Most parking payments in lieu of on-site construction operate on the premise that a developer cannot or chooses not to provide the number of spaces required by zoning regulations. As a result, the municipality can impose an in-lieu of parking fee on a per space basis. The municipality then collects these fees from various developers, and when sufficient funds are available, utilizes the fees to improve or construct public parking that can be used by the developer. This system allows the city to centralize public parking, which can be a significant advantage in maintaining a preferred atmosphere downtown.

The limited application of this type of program reflects a variety of planning and administrative problems. Results from other similar sized municipalities have yielded the following common issues in utilizing these provisions:

1. Convincing developers that payments of fees in-lieu of parking will actually result in the timely construction of public facilities to support their development.
 2. Collecting sufficient in-lieu contributions to make the construction of parking facilities feasible.
 3. Determining the appropriate charges for fees in-lieu contributions and for the management of any parking facility constructed through the collection of such fees.
- *Special Improvement or Business Improvement overlay district.* One of the management strategies mentioned is to define a Business Improvement District. These types of districts are designed to capture a portion of any increase in property values and investment opportunities directly related to the construction and operation of the new facility.
 - *Public-Private Cooperation.* Public-private partnerships can also be used to develop parking facilities, particularly multi-use facilities such as that described for Southbank. Potential joint development partners are also potential sources for financing strategies. Projects such as

hotel, office, and retail are all candidates for joint development with a parking facility. Such joint development proposals will involve the leasing of space or air rights. The private sector will provide capital funding through these leases for a portion of the facility.

- *Private-sector retail/residential/office space.* Other sources of funds are from the fees associated with the leasing of a portion of the facility space to commercial and businesses such as food service, car rental agencies, day care operators and their service oriented operations.