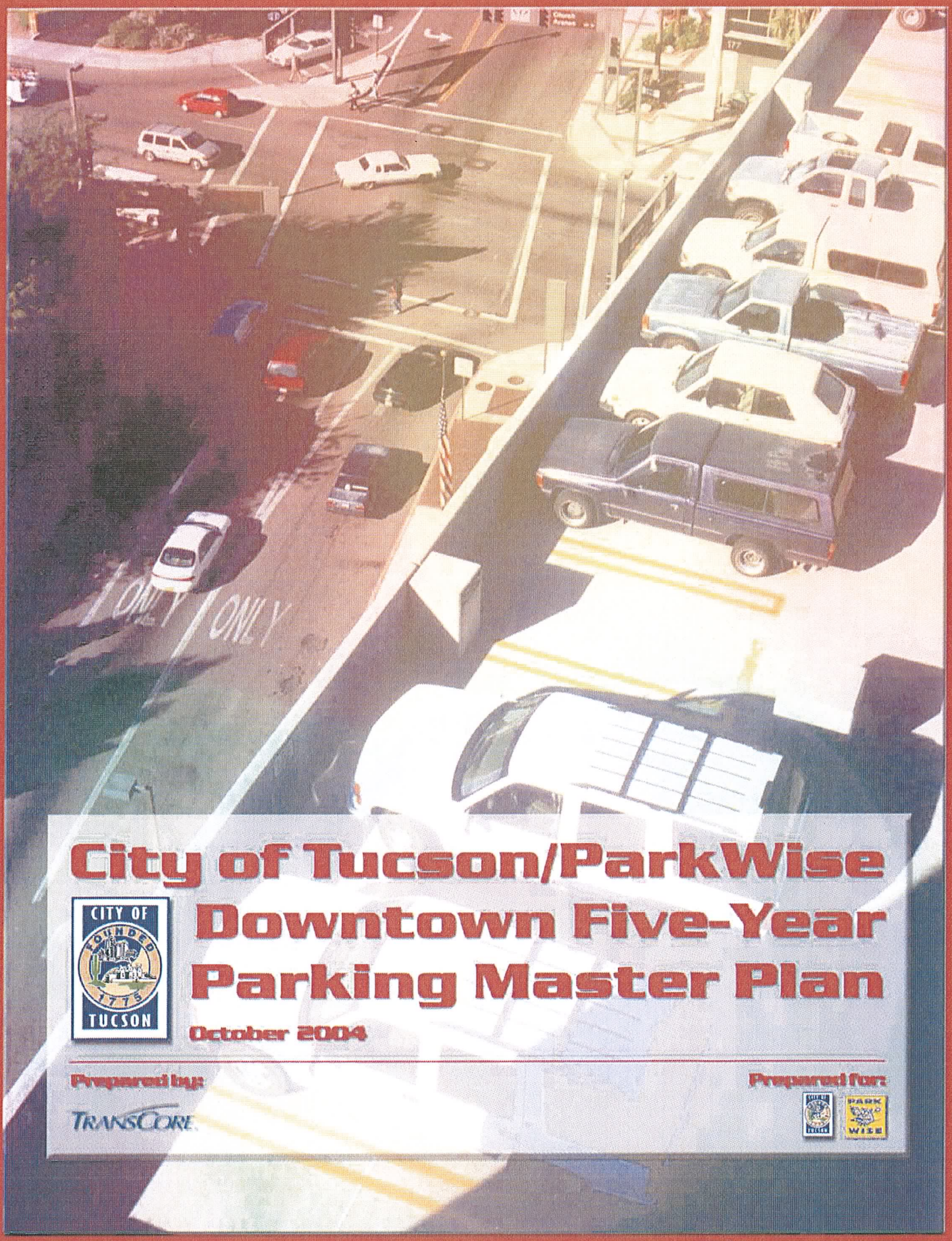

City of Tucson/ParkWise Downtown Five-Year Parking Master Plan

October 2004

Prepared by:

TransCore

Prepared for:

City of Tucson/ParkWise Downtown Five-Year Parking Master Plan

Final Report

Prepared for
City of Tucson

Prepared by

TRANSCORE

October 2004

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City of Tucson/ParkWise
DOWNTOWN FIVE-YEAR PARKING MASTER PLAN
EXECUTIVE SUMMARY

INTRODUCTION

Downtown Tucson is undergoing revitalization as part of the Rio Nuevo plan that will bring new cultural attractions, housing, and retail development to downtown. The City of Tucson's parking program, ParkWise, and the Transportation Enterprise Area Management (TEAM) Commission prepared this plan to estimate five-year parking needs and to present one scenario for size and location of parking structures to meet downtown's projected five-year parking need. Through this scenario the nature of downtown's five-year parking needs may be estimated and interpreted. Because this study can only estimate where redevelopment will occur and to what degree, as well as what future parking will actually develop, this study will need to be updated annually. Each update will incorporate actual redevelopment that is occurring, as well as parking availability.

It should be understood that because a location for a five-year parking structure is identified in this study, it does not mean ParkWise or the City of Tucson is going to build the structure. Rather, the locations identified were chosen because they are reasonable sites in terms of size and location to fulfill the parking needs of downtown. It should also be understood that sites that have been identified in this study may be developed as uses other than parking. This is the reason that a geographic information system (GIS) has been utilized: to allow for easy adjustment to the study as development plans for downtown continue to evolve.

METHODOLOGY

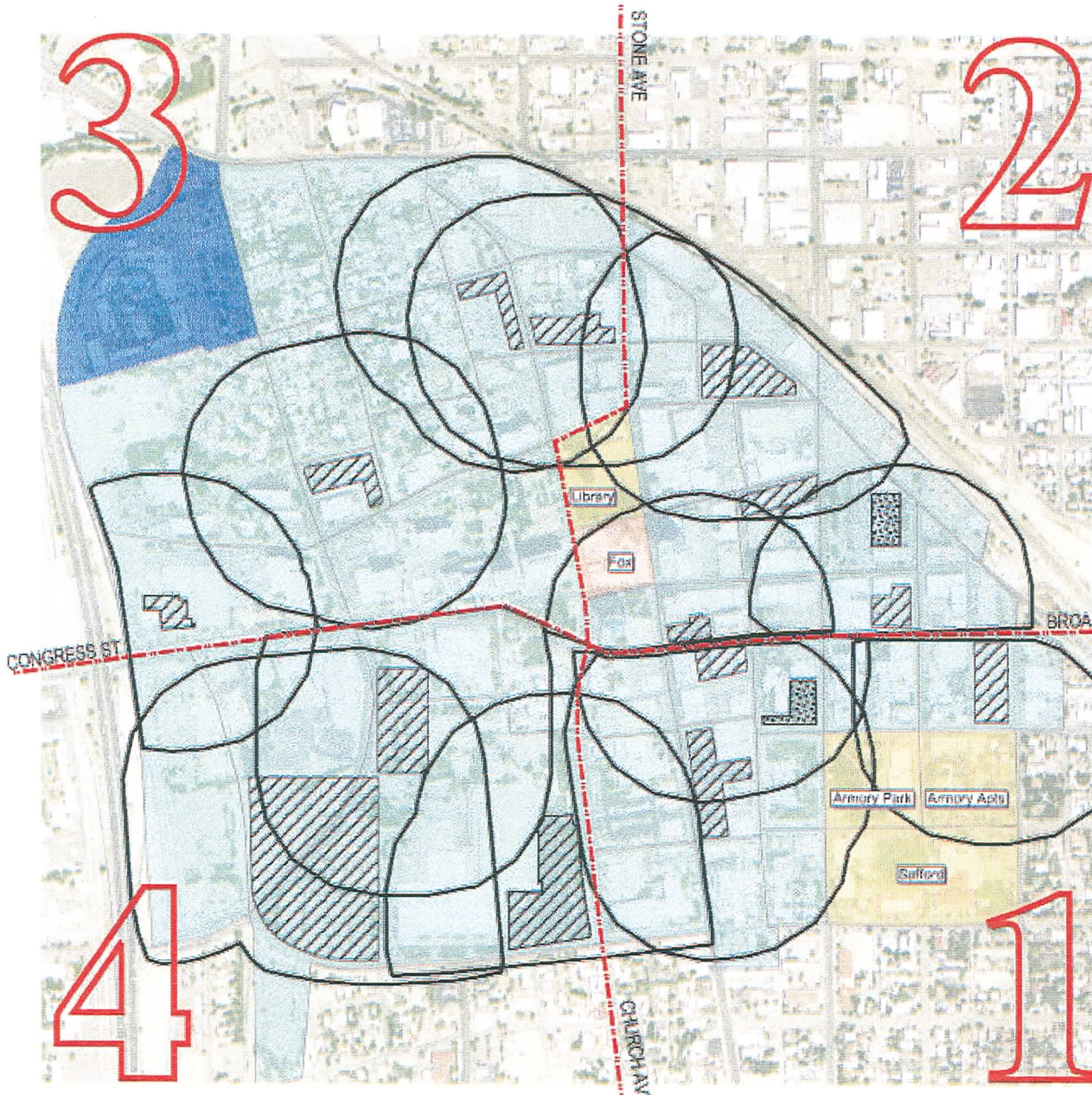
To build this scenario, an estimate was made as to which properties are known or likely to be redeveloped in the five-year horizon. For each redevelopment, the new parking requirement was estimated. The TEAM commission then identified possible locations for five-year parking structures. A line representing a five-minute walk from each structure's perimeter was established to size the possible five-year structures. These "five-minute walking radii" represent the assumption that people are most comfortable with a five-minute walk from their car to their downtown destination. Consideration was also given to meeting the needs of existing development in areas that there is a shortfall of parking today. Judgment was necessary to site possible parking structures and to size them.

One of the early phases of this study was to analyze parking utilization rates as compared to occupied space in the downtown. These results were then compared to the parking requirements of the Downtown Incentive Zone contained in the Tucson Land Use Code (approximately half of the standard code parking requirement). The result of this comparison was that the parking required by the Downtown Incentive Zone is adequate to meet demand. Therefore, parking requirements for future development is also based upon the Downtown Incentive Zone requirements.

SUMMARY RESULTS

There are 14,369 existing parking spaces in the study area, not including on-street parking. An existing shortfall of 3,038 parking spaces in the downtown parking districts was identified if all existing buildings were at full occupancy. In the scenario developed for this study, a total demand for 5,844 new parking spaces are expected based on redevelopment assumptions. (This number does not consider any parking requirement removed as a result of the removal of any existing uses not identified as being redeveloped.) Also in this scenario, 12,362 new parking spaces are either added or replace surface parking spaces, within new parking structures. The result is that the existing parking shortfall is eliminated and there is a surplus of 105 parking spaces. After distributing parking availability through downtown within the five-minute walking radii, most downtown blocks are adequately served by parking structures. The following exhibit illustrates parking supply by block after distributing parking within the five-minute walking radii.

FIVE-YEAR PARKING SUPPLY BY BLOCK, DISTRIBUTED



City of Tucson TEAM/ParkWise Parking Master Plan

5-YEAR PARKING SUMMARY AFTER PARKING DISTRIBUTION

5-Year Plan Parking by District After Parking Distribution

District	Surplus (+)	Shortfall (-)	Net
1	0	112	-112
2	76	340	-264
3	481	0	+481
4	0	0	0
Total	557	452	+105

N

5-Year Plan Parking Supply by Block Based on Availability Within 5-Minute Walking Radii

- District dividing lines
- 5-minute walking radius from edge of parking structure
- 5-year parking structure with surplus parking availability
- 5-year parking structure, meets own redeveloped parking need
- Surplus > 500
- Surplus 201 to 500
- Surplus 0 to 200
- Shortfall 0 to 200
- Shortfall 201 to 500
- Shortfall > 501

INTRODUCTION

Downtown Tucson is undergoing revitalization as part of the Rio Nuevo plan that will bring new cultural attractions, housing, and retail development to downtown. Rio Nuevo promises to dramatically increase downtown activity. The City of Tucson's parking administration, ParkWise, and the Transportation Enterprise Area Management (TEAM) Commission are tasked with the job of planning parking facilities to meet the needs of downtown redevelopment.

The *City of Tucson/ParkWise Downtown Five-Year Parking Master Plan* identifies parking requirements for downtown parking districts and presents a scenario for location and size of possible future parking structures to meet downtown's projected five-year parking need. In this effort the following were developed: an inventory of business properties, an estimation of occupancy of business properties, and a calculation of the parking requirement based on the Tucson Land Development Code for the Downtown Incentive Zone. An earlier phase associated with this planning effort verified that the parking requirement for the Downtown Incentive Zone, which is approximately half of the standard parking requirement, is reasonable and practical for downtown Tucson. An ArcView Geographic Information System (GIS) database was developed to assist in this work. GIS is well suited for this work and other parking database management because the databases are linked to maps and orthographic aerial photos.

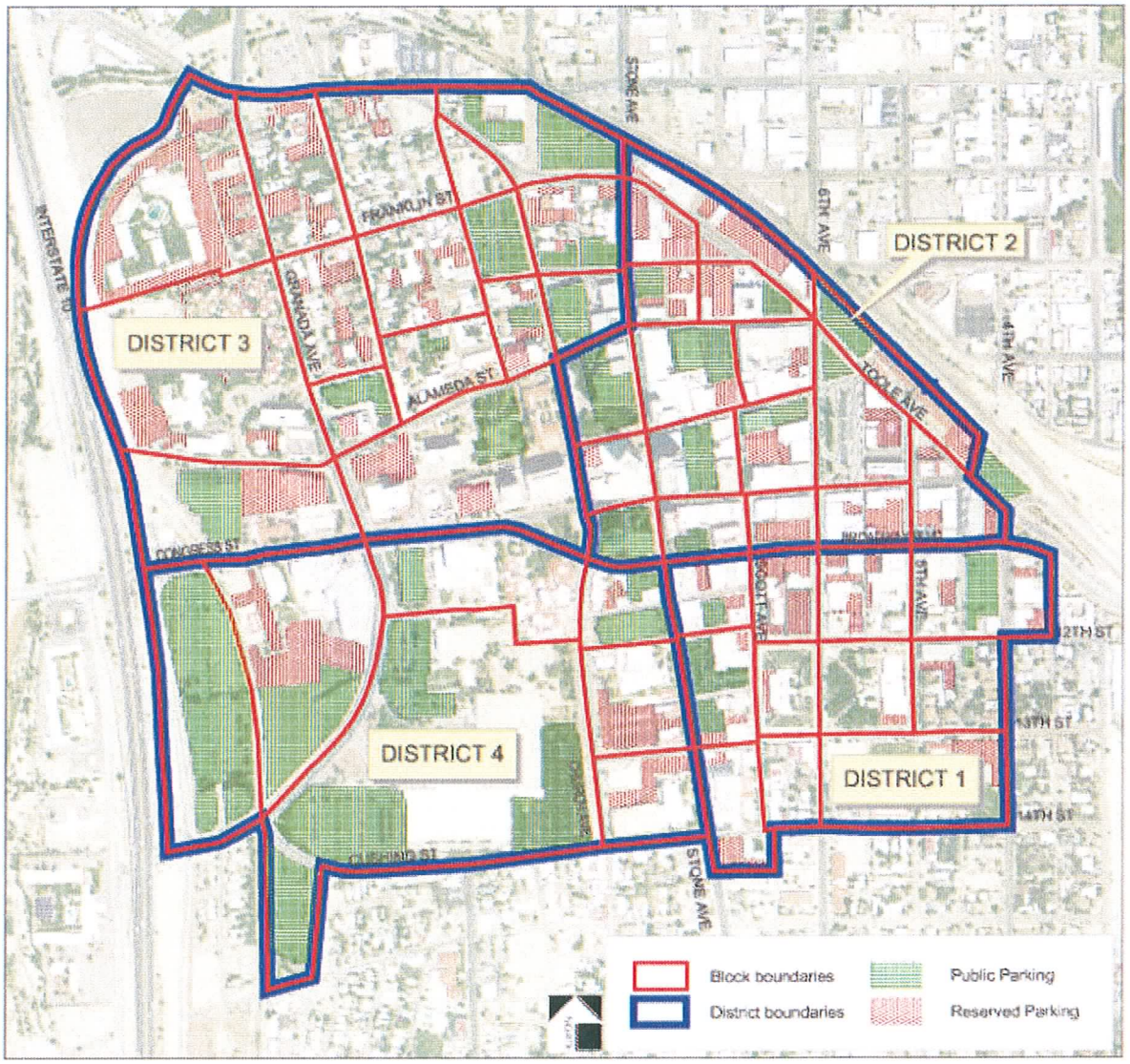
EXISTING CONDITIONS

Downtown Tucson is divided into four parking districts, as shown in Exhibit 1. For the purpose of this study, the downtown districts were subdivided into "blocks," which are included in Exhibit 1. Generally, the downtown street network delineates individual blocks. Each block was assigned a name that characterizes the block, e.g., "Library" (for the block that contains the main library) and "Ronstadt" (for the block that contains the Ronstadt Transit Center). Much of the work in this study was evaluated on the block level. Exhibit 1 also shows existing downtown parking facilities.

STUDY METHODOLOGY

A detailed database of existing parking spaces, both those that are available for the public and those reserved for private use, was established using GIS. In addition, a GIS database of existing properties/businesses and their parking requirements was established. Originally, these data were compiled by the City of Tucson as an Excel spreadsheet. These were incorporated into GIS, and both of these databases were constantly updated during the course of this project. These two databases formed the basic tools for this study. (Note: A separate layer for on-street parking was also established. Generally, this five-year study does not rely on on-street parking to meet parking needs. Conversion of downtown streets from one-way operations to two-way operations will result in some loss of on-street parking. The on-street parking that is retained will not substantially affect this analysis, but will enhance downtown redevelopment efforts.) An initial assessment of the adequacy of the existing parking supply on a block-by block basis was determined using these GIS layers.

Exhibit 1
DOWNTOWN PARKING DISTRICTS AND BLOCKS



Downtown is expected to undergo a significant amount of redevelopment in the next five years. An estimate of five-year redevelopment was made by identifying lots that may be expected to be redeveloped. It should be understood that neither the City of Tucson nor the ParkWise necessarily intend to develop these parcels. Rather, these assessments represent the best estimate at possible future private development for the purpose of determining five-year parking requirements. Some of these parcels are certain to develop (e.g., Thrifty block redevelopment), and others are relatively certain to be developed, for example, projects that are part of the Rio Nuevo redevelopment.

As a result of this assessment, which was directed by the City of Tucson ParkWise and the TEAM commission, five-year parking availability and five-year parking requirement were identified for each block. Spreadsheets tracked changes in parking availability and any increase in parking requirement caused by redevelopment. Five-year redevelopment assumptions, followed by assumed additional parking space requirement in parenthesis, are enumerated for each district. The increase in parking requirement shown in the list below does not account for any decrease in parking requirement as a result of removal of any existing uses.

District 1:

- San Agustin Plaza redevelopment (125)
- Multi-use at southwest corner 4th and Broadway (meets own parking need)
- Santa Rita hotel redevelopment (400)
- Westerner redevelopment (meets own parking need)

District 2:

- One-story Warehouse development (122)
- Greyhound depot replaced with three-story redevelopment (200)
- Thrifty redevelopment (43)
- Ronstadt Center/MLK redevelopment (278)
- New City Courts development across from existing Public Works Building (600)
- Removal of existing City Courts building (-386)

District 3:

- New development adjacent to State Building (188)
- Rio Nuevo origins project in TransAmerica block (32)
- Steinfeld Warehouse block redevelopment (297)

District 4:

- New Symphony Hall (400)
- Second hotel tower (250)
- New Arena (3,000, per estimate of 12,000 seats and 4 persons per vehicle)
- New Science Center (600, per David Duffy University of Arizona, Campus and Facilities Planning)
- Some new retail development (350, assuming 150,000 square feet of retail space)

The TEAM commission identified possible locations for proposed five-year parking structures. It should be understood that because a location for a five-year parking structure is identified in this study, that does not mean that ParkWise is going to build these parking structures. Rather, locations were identified as reasonable sites, in terms of size and location, to fulfill parking needs. Because this study cannot specifically identify where future parking will actually develop, this study will be updated annually. Each update will take into account redevelopment and new parking structures as they develop.

For each five-year parking structure, a line was drawn representing a series of points a distance of 600 feet from the edge of the parking structure. This 600-foot radius corresponds approximately to a five-minute walk, and represents the maximum distance that it was assumed that a person is willing to walk from his parked car to his destination. Each parking structure was sized according to the unsatisfied five-year parking need captured within these 5-minute walking radii.

Exhibit 2 illustrates conceptually two simple 5-minute walking radii and indicates the parking requirement for the properties captured within each shape. The parking requirement captured represents the number of parking stalls that the future parking structure should be designed to accommodate in order to meet five-year parking need.

Exhibit 2 illustrates a very simple condition. However, the 5-minute walking radii more often intersect each other, as shown in Exhibit 3. As a result, the TEAM commission had to make decisions about how the parking structures interacted with each other as well as with the downtown properties.

Exhibit 2
SIMPLE 5-MINUTE WALKING RADII CONCEPTUAL DRAWING WITH PARKING SPACE REQUIREMENT

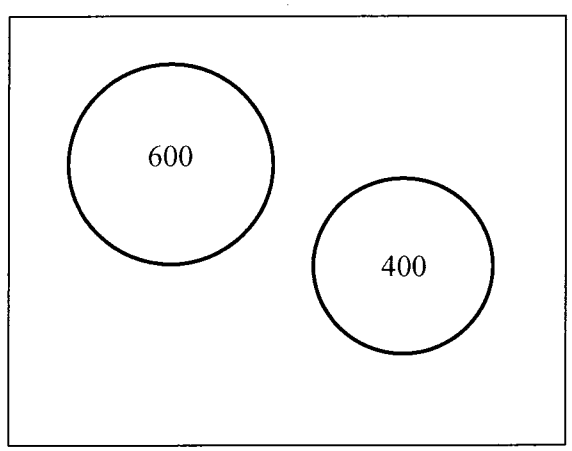
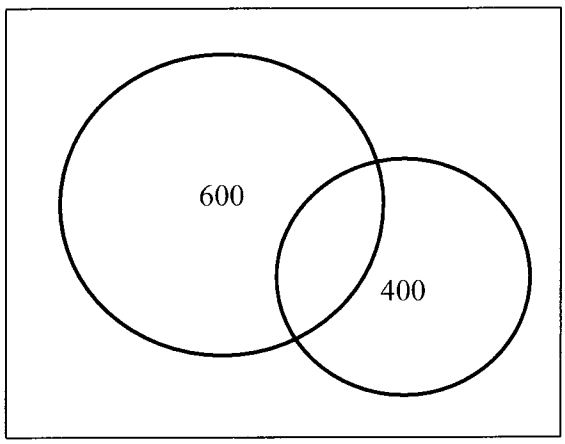


Exhibit 3 also illustrates that judgment must be exercised in assigning parking requirement to intersecting 5-minute walking lines. Judgment was exercised in other areas, as well. For example, some 5-minute walking radii were adjusted to reflect the fact that there are barriers to accessing the parking structures. The existing Union Pacific Railroad was considered a barrier, as was Broadway Boulevard.

Exhibit 3
OVERLAPPING 5-MINUTE WALKING RADII CONCEPTUAL DRAWING WITH PARKING SPACE REQUIREMENT



Judgment, too, was exercised in siting and balancing the size of five-year parking structures. The TEAM commission and ParkWise were cognizant that some locations are less suited for intense parking usage, based on the size of the parcel(s) and adjacent uses. For example a 1,100 parking structure could have been located in the Plaza San Agustin block, across from the San Agustin Cathedral. However, it was understood that the site may in the future accommodate mixed-use development. Therefore, a smaller parking structure is more desirable, and an additional parking structure was identified in order to capture the remaining five-year parking demand. Exercising balance and judgment allows an interpretation of the five-year parking requirement to better accommodate mixed-use development.

It is not the intent of the five-year plan that each block meet its own parking requirement. Rather, the very concept of the 5-minute walking radii suggests that parking structures sited on some blocks may fulfill the parking requirement of adjacent or nearby blocks. For example, a parking structure located in the Thrifty block can meet the parking shortfall of the Unisource block, or any other block that falls within the 5-minute walking radii. Therefore, parking availability was redistributed throughout the downtown districts.

In this way, the five-year parking plan is premised on assumptions regarding the redistribution of parking availability. The redistribution of parking availability used in this master plan represents one of many possible scenarios of redistributing parking availability.

Worksheets in Appendix A illustrate redistribution assumptions for Districts 1 through 4, respectively. The aerial photo background is omitted to make viewing easier. Each worksheet shows the outlines of each block. As indicated earlier, these generally align with the existing street network. Parcels that are anticipated to be redeveloped are shown in pale orange. Five-year parking structures are shown, and each 5-minute walking radii are color-coded to represent different structures. The parking distribution assumption for each 5-minute walking radius is shown in the same color scheme. For example, the Plaza San Agustin structure's 5-minute walking radius is shown in magenta. Likewise, the parking distribution is indicated with magenta arrows and numbers. Grey is used to represent redistributed existing parking. Black is used to represent redistributed nighttime parking availability. The size, in terms of the number of parking spaces each structure should provide, is labeled. It was assumed that some future parking structures will include mixed use development on the ground floor. A "+" on the parking-size label indicates that these structures are assumed to accommodate the parking needs any future need that comes from this redevelopment. Each block is labeled with its name and five-year requirement for that block, five-year number of spaces, and the difference – whether it is a shortfall or a surplus.

ANALYSIS RESULTS

Existing Conditions

Exhibit 4 illustrates existing parking conditions in the downtown districts on a block-by-block basis. The color of each block in Exhibit 4 reflects the difference between existing parking requirement and existing parking availability. The difference is either a parking surplus (blue), which may be distributed to adjacent needy blocks, or parking shortfall (yellow or orange). Exhibit 4 illustrates that there is a total parking shortfall downtown of 3,038 spaces. It should be noted that the parking requirement used in this analysis is based on reduced parking requirement for the downtown redevelopment zone, identified in the City of Tucson Land Use Code. Exhibit 4 does not take into account any on-street parking.

Five-Year Future Conditions

Exhibit 5 is similar to Exhibit 4 in that the color of each block reflects either a shortfall or surplus of parking, except that Exhibit 5 is based on the parking requirements for the five-year plan, which includes future parking structures. As shown in Exhibit 5, there is a net surplus of 105 spaces in the five-year parking plan.

As indicated earlier, it is an oversimplification to expect that each block will meet its own parking need. Blocks with excess parking will supply parking capacity to adjacent blocks that fall within the 5-minute walking radius. Exhibit 6, therefore, summarizes downtown parking conditions for the five-year plan based on distribution of parking availability within the 5-minute walking radii. (Worksheets illustrating redistribution assumptions are found in Appendices A.) As shown in Exhibit 6, parking need downtown is generally met in the five-year horizon with these five-year parking facilities. The most significant shortfall is the Fox block, which has a shortfall of 296 spaces. There are also minor shortfalls of less than 50 for the Safford Block, the Armory Park Block, and the Armory Apartments Block in District 1, and for the Library Block in District 2.

PROPOSED FIVE-YEAR PARKING STRUCTURES

This section summarizes the proposed five-year parking structures, by district. It is worth repeating that because these locations are identified as possible future locations for parking structures, that does not mean that ParkWise intends to develop these parking structures. Rather, locations were identified as reasonable sites, in terms of size and location, to fulfill five-year parking needs. This plan represents one scenario that would meet projected five-year parking needs, and is only a starting point for understanding five-year parking needs and how these needs may be met. Each year, actual development of parking facilities will be incorporated into the inventory, and the five-year plan will be updated to reflect these new developments.

Note that each proposed structure takes on the name of the block that contains it. For some structures, it is assumed that the future parking structure will include some ground-level mixed use development, and these structures should accommodate any additional parking needs that the mixed-use development generates. For this master plan effort, the Pennington Street parking structure is assumed to be an existing structure.

District 1:

- Plaza San Agustin Structure (564 spaces).
- Benjamin Supply Structure (327 spaces plus own redevelopment need).
- Westerner Structure (369 spaces plus own redevelopment need).
- Santa Rita (400 – assumed to meet only its own need).

District 2:

- City Courts Structure (823 spaces).
- Thrifty Structure (554 spaces).
- Retail Structure (696 spaces).
- Ronstadt Structure (343 spaces).

District 3:

- State Building Structure (500 spaces).
- Tucson Water Structure (241spaces, plus own redevelopment need).
- Bates Structure (664 spaces, plus own redevelopment need).

District 4:

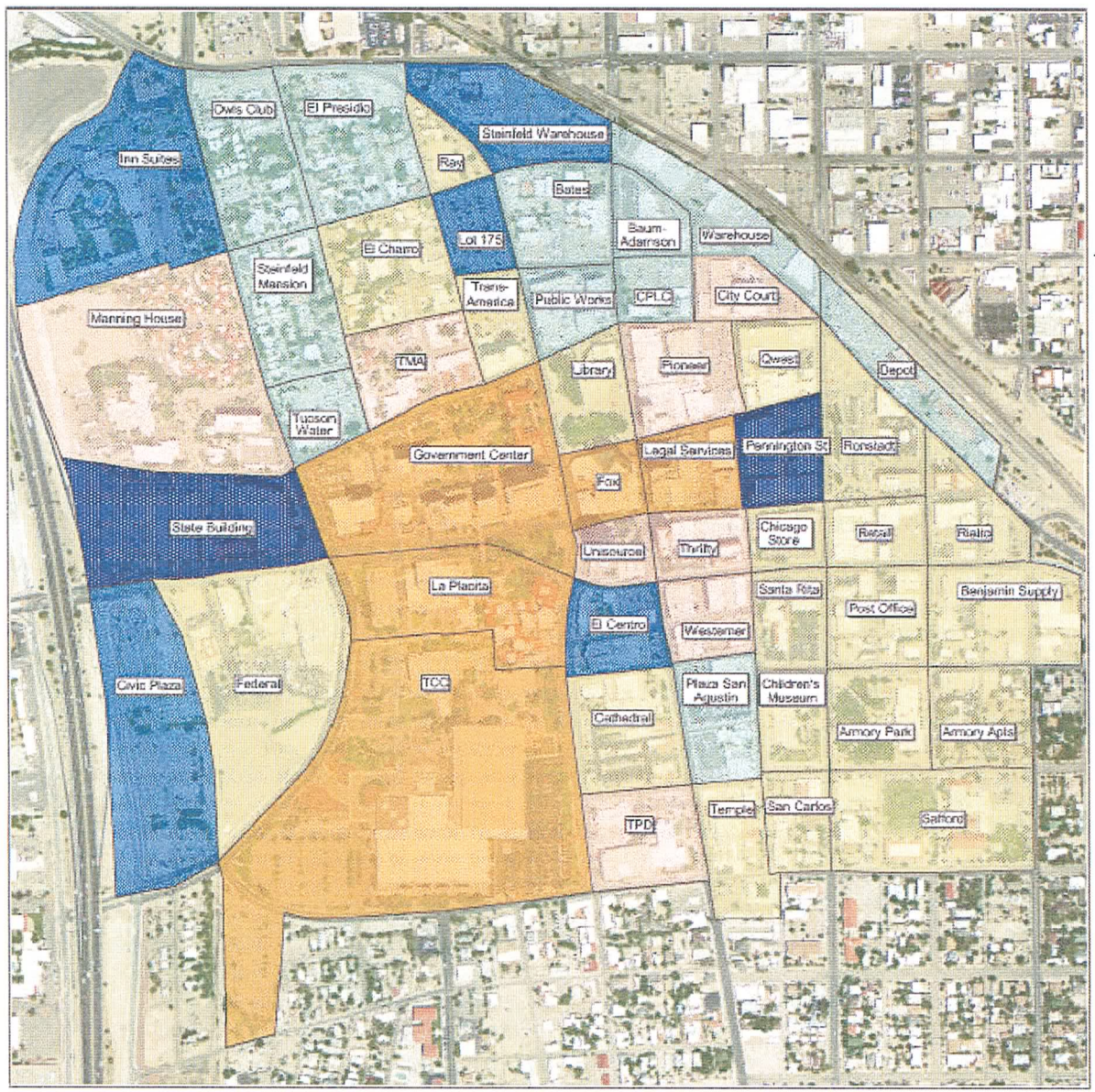
- West TCC Structure (4,881 spaces).
- North TCC Structure (1,000 spaces).
- East TCC Structure (1,000 spaces, plus own redevelopment need).

SUMMARY

The *City of Tucson/ParkWise Downtown Five-Year Parking Master Plan* is based on an estimate of how downtown Tucson will redevelop in the next five years and how much parking demand will change as a result of the redevelopment. Five-year demand for parking was based on downtown redevelopment assumptions developed with guidance from the TEAM commission and City of Tucson ParkWise. These are assumptions only; ParkWise will not be redeveloping these downtown properties. Five-year redevelopment estimates were based on downtown redevelopment proposals, including Rio Nuevo redevelopment plans.

The *City of Tucson/ParkWise Downtown Five-Year Parking Master Plan* presents one scenario for meeting projected five-year parking needs. ParkWise will not be the developer of these parking structures. The purpose of identifying these future possible five-year parking structures' locations and sizes helps establish the nature of the parking needs that downtown will face in five year's time. The plan will be revised annually to reflect actual redevelopment and parking availability.

Exhibit 4
EXISTING DISTRICT SUMMARY



DISTRICT SUMMARY
Existing Parking Supply

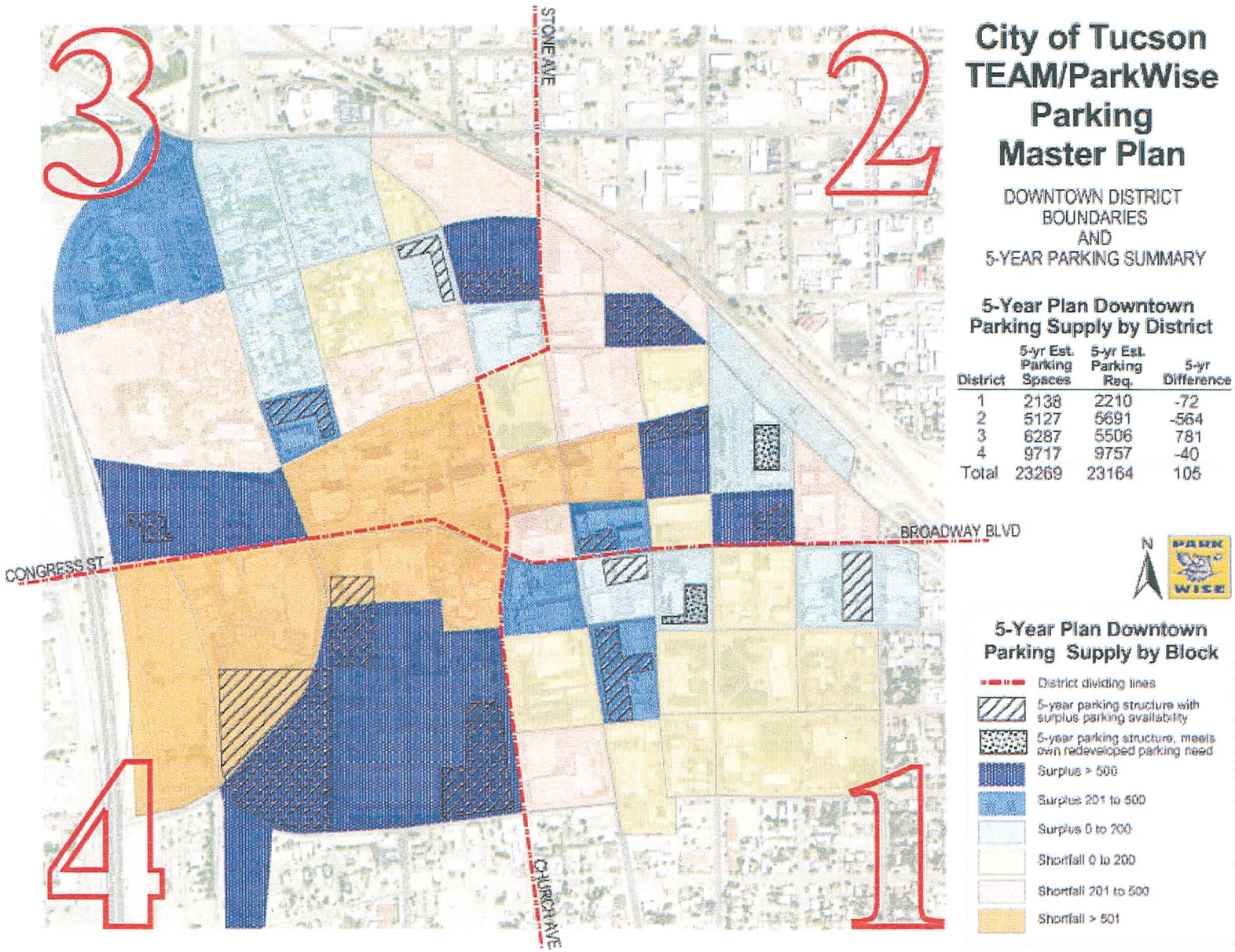
District	Parking Req.	No. of Spaces	Difference
1	2005	1004	-1001
2	5256	3500	-1756
3	4989	5762	773
4	5157	4028	-1129
Other			75
Totals	17407	14294	- 3038

City of Tucson TEAM/ParkWise Downtown 5-Year Parking Master Plan

Existing Downtown Parking Supply by Block

- Surplus > 500
- Surplus 201 to 500
- Surplus 0 to 200
- Shortfall 0 to 200
- Shortfall 201 to 500
- Shortfall > 501

Exhibit 5
FIVE-YEAR PLAN PARKING SUPPLY BY BLOCK

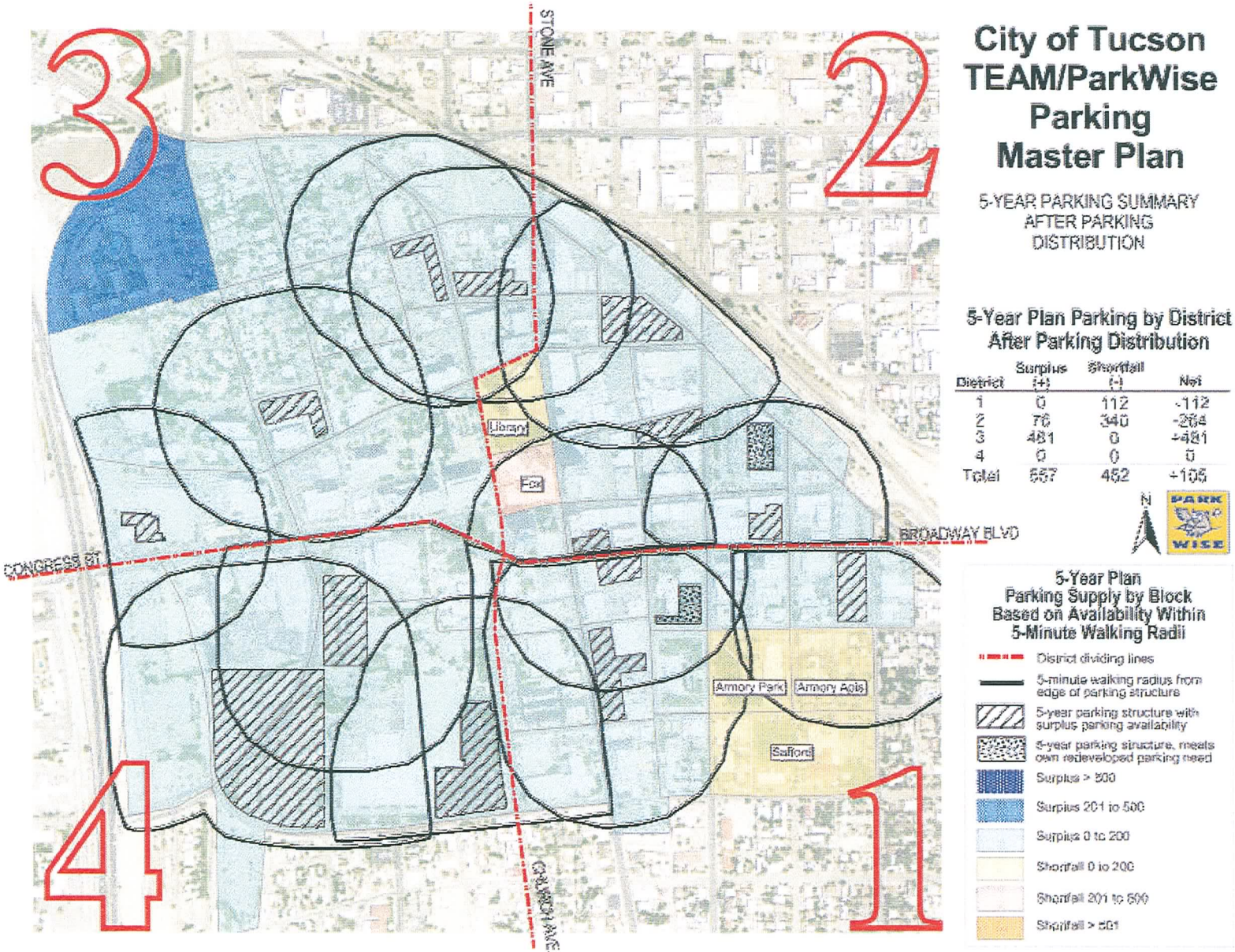


5-Year Plan Downtown Parking Supply by District

District	5-yr Est. Parking Spaces	5-yr Est. Parking Req.	5-yr Difference
1	2138	2210	-72
2	5127	5691	-564
3	6287	5506	781
4	9717	9757	-40
Total	23269	23164	105

Exhibit 6

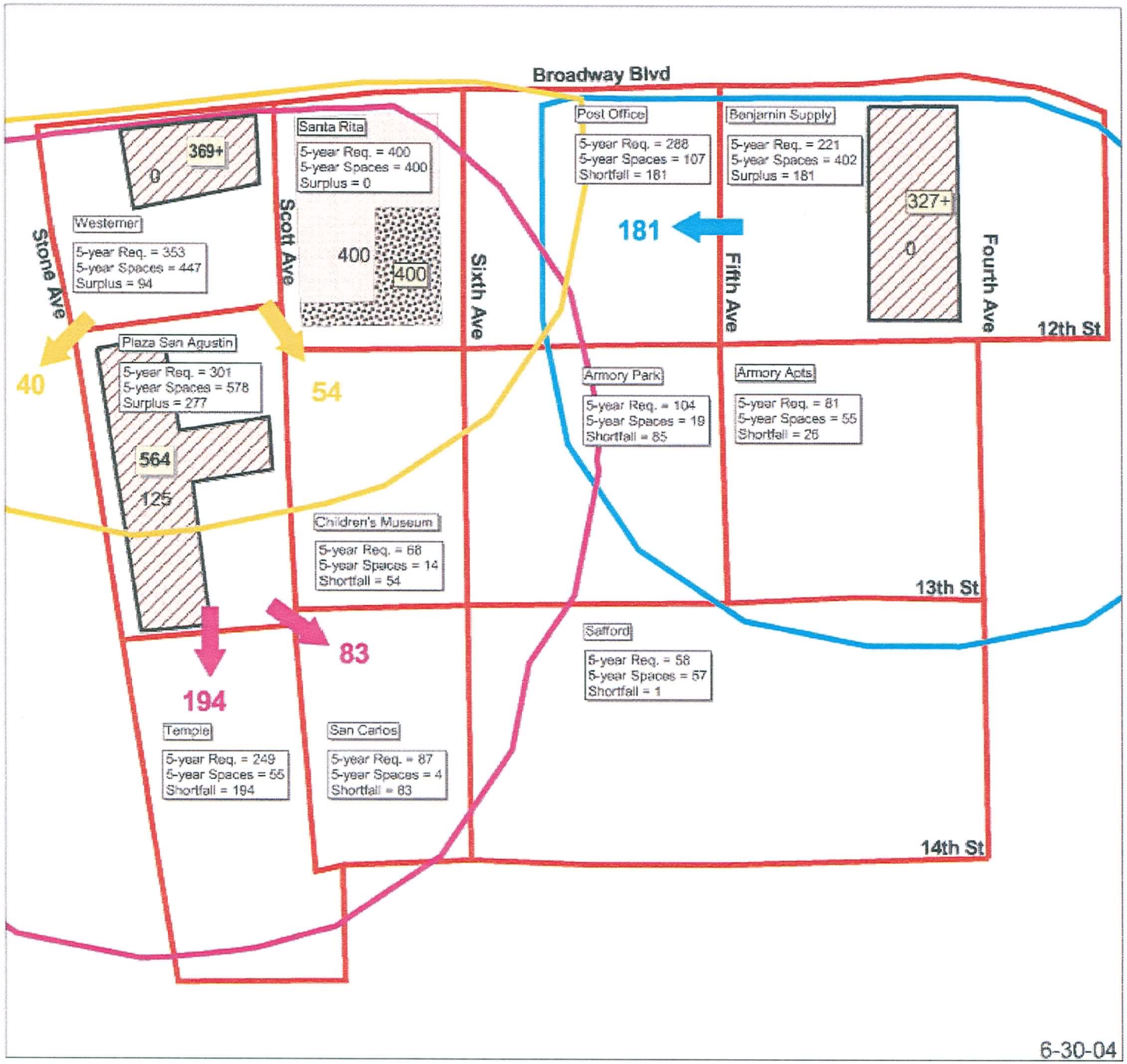
FIVE-YEAR PLAN PARKING SUPPLY BY BLOCK AFTER DISTRIBUTION



District	Surplus (+)	Shortfall (-)	Net
1	0	112	-112
2	76	340	-264
3	481	0	+481
4	0	0	0
Total	557	452	+105

APPENDIX A

Parking Distribution Worksheets



1 DISTRICT 1 5-Year Parking Distribution

NOTES:

- Block names have been assigned to each block within the district. The parking requirement specified is for the entire block.
- The 5-min. walking radius represents the distance that an average person can walk in 5 minutes. This analysis distributes surplus parking in parking structures to adjacent blocks within the 5-minute walking radii. It is assumed that people are willing to walk up to five minutes to their destination.

City of Tucson TEAM/ParkWise 2004 Parking Master Plan

LEGEND

- Block boundary with block name
- 5-year parking structure with surplus parking availability
- 5-year parking structure, meets own redeveloped parking need
- XX 5-year redeveloped lot with est. redeveloped parking requirement
- YY No. spaces in proposed 5-year structure (+ indicates own redevelopment need)

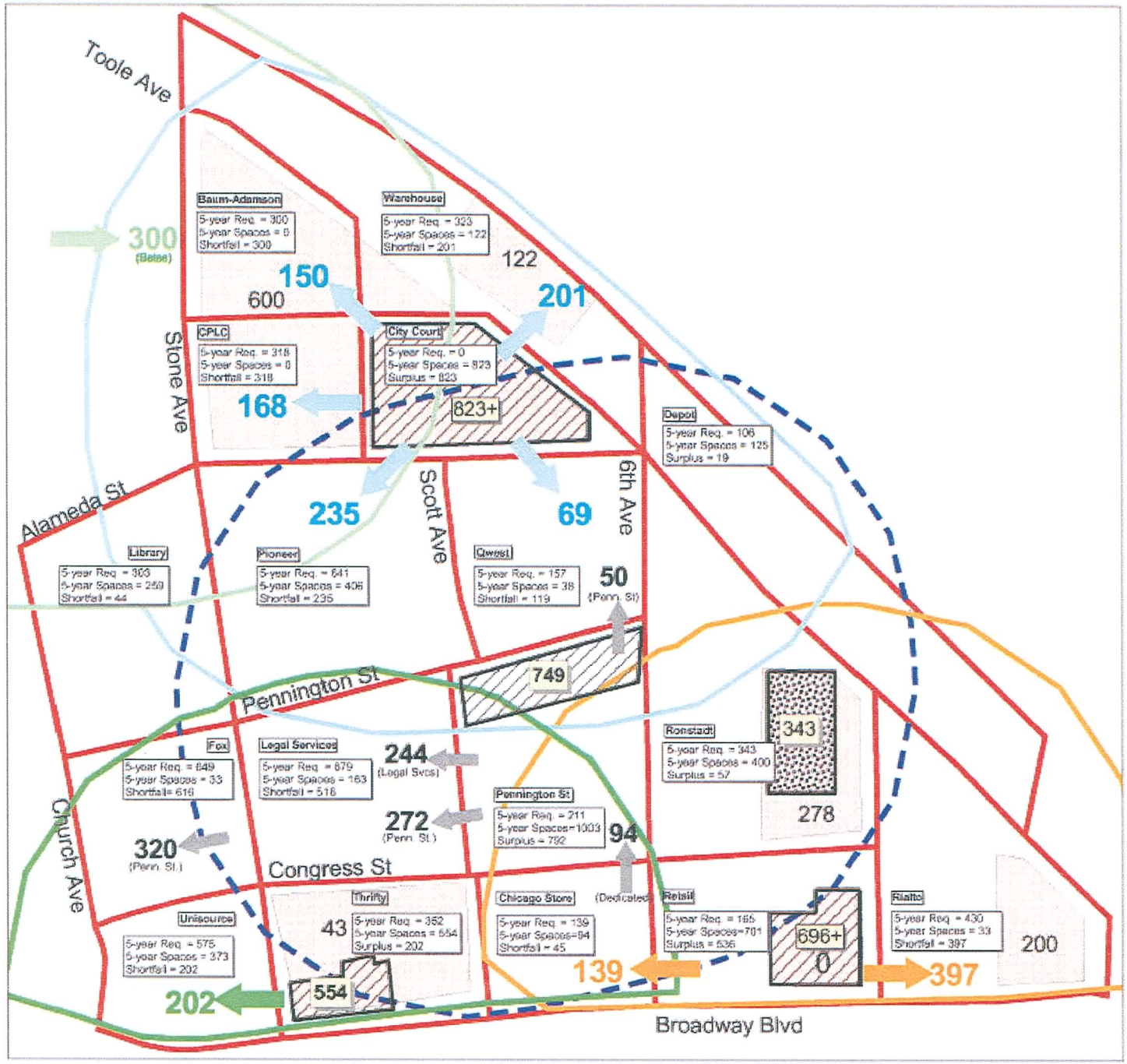
5-minute walking radius from:

- Plaza San Agustin structure
- Benjamin Supply structure
- Westerner structure

XXX Redistributed existing daytime surplus parking (gray)

Redistributed 5-year daytime surplus parking (color)

N



2 DISTRICT 2 5-Year Parking Distribution

NOTES:

- Block names have been assigned to each block within the district. The parking requirement specified is for the entire block.
- The 5-min. walking radius represents the distance that an average person can walk in 5 minutes. This analysis distributes surplus parking in parking structures to adjacent blocks within the 5-minute walking radii. It is assumed that people are willing to walk up to five minutes to their destination.

City of Tucson
TEAM/ParkWise
2004 Parking
Master Plan

LEGEND

- Block boundary with block name
- 5-year parking structure with surplus parking availability
- 5-year parking structure, meets own redeveloped parking need
- XX 5-year redeveloped lot with est. redeveloped parking requirement
- No. spaces in proposed 5-year structure (* indicates own redeveloped need)

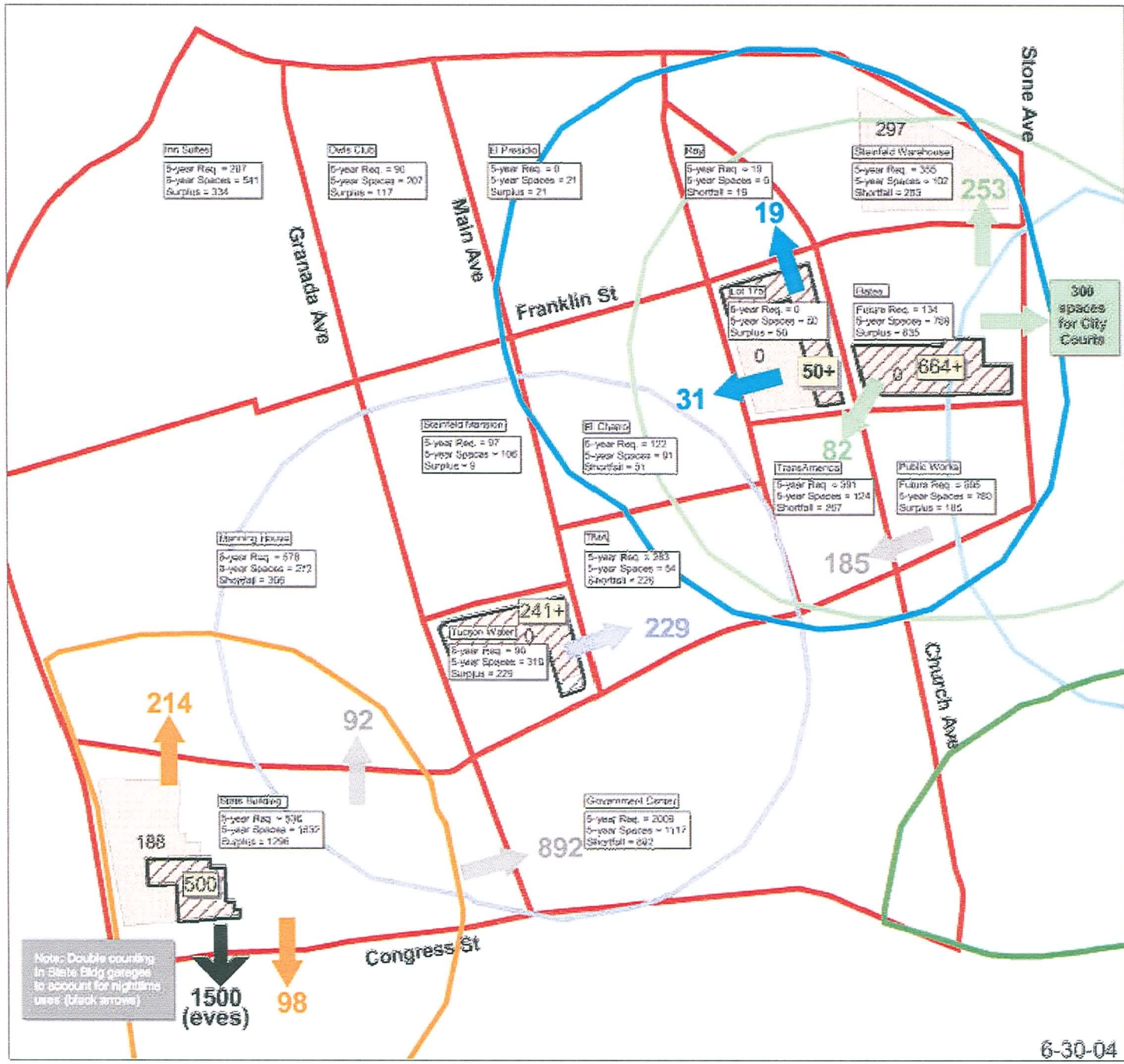
5-minute walking radius from:

- City Courts structure
- Thrifty structure
- Retail structure
- Bates structure (District 3)
- Pennington St structure

XXX Redistributed existing daytime surplus parking (gray)

Redistributed 5-year daytime surplus parking availability

N



3 DISTRICT 3 5-Year Parking Distribution

NOTES:

- Block names have been assigned to each block within the district. The parking requirement specified is for the entire block.
- The 5-min. walking radius represents the distance that an average person can walk in 5 minutes. This analysis distributes surplus parking in parking structures to adjacent blocks within the 5-minute walking radii. It is assumed that people are willing to walk up to five minutes to their destination.

City of Tucson
TEAM/ParkWise
2004 Parking
Master Plan

LEGEND

- Block boundary with block name
- 5-year parking structure with surplus parking availability
- XX 5-year redeveloped lot with est. redeveloped parking requirement
- YY No. spaces in proposed 5-year structure (+ indicates non-redevelopment basis)

5-minute walking radius from:

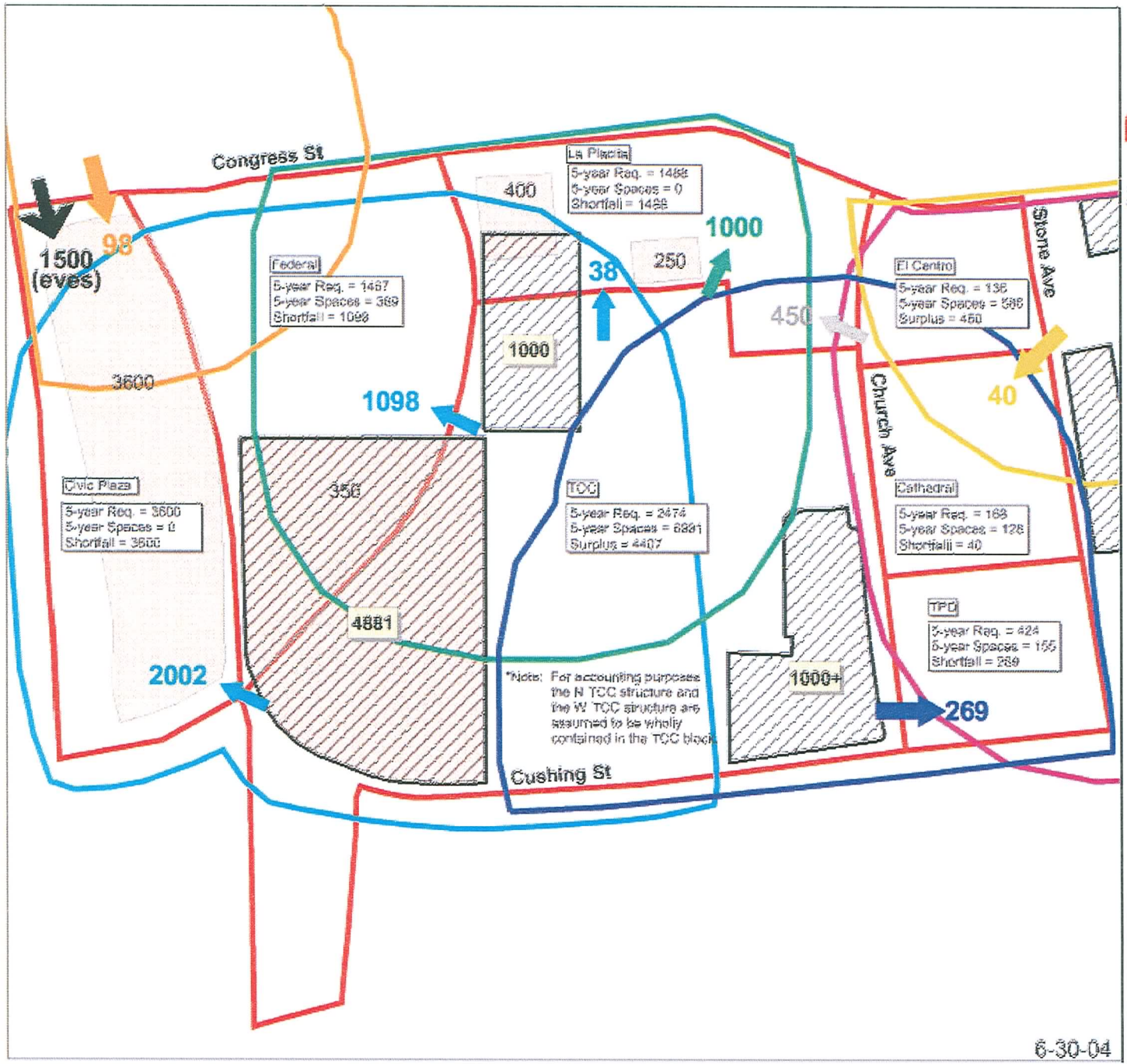
- Bates structure
- Tucson Water structure
- Lot 175 structure
- City Courts structure (Dis. 2)
- Thrifty structure (Dis. 2)
- New State Building structure

XXX Redistributed existing daytime surplus parking (gray)

Redistributed 5-year daytime surplus parking (color)

XXX Redistributed nighttime surplus parking

N



4 DISTRICT 4 5-Year Parking Distribution

NOTES:

- Block names have been assigned to each block within the district. The parking requirement specified is for the entire block.
- The 5-min. walking radius represents the distance that an average person can walk in 5 minutes. This analysis distributes surplus parking in parking structures to adjacent blocks within the 5-minute walking radii. It is assumed that people are willing to walk up to five minutes to their destination.

City of Tucson
TEAM/ParkWise
2004 Parking
Master Plan

LEGEND

- Block boundary with block name
- 5-year parking structure with surplus parking availability
- XX 5-year redeveloped lot with est. redeveloped parking requirement
- YY No. spaces in proposed 5-year structure (+ indicates non redevelopment need)

5-minute walking radius from:

- W TCC structure
- N TCC structure
- E TCC structure
- Plaza San Agustin struct. (Dis.1)
- Westernal structure (Dis. 1)
- New State Building struct. (Dis.3)

XXX Redistributed existing daytime surplus parking (grey)

Redistributed 5-year daytime surplus parking (color)

XXX Redistributed nighttime surplus parking

N

APPENDIX B

Spreadsheets

PARKING REQUIREMENT DEVELOPMENT (Based on Existing Code)

District	BLOCK NAME	Existing DT Parking Requirement	Add'l 5-yr DT Parking Requirement (redeveloped)	5-year Redeveloped DT Parking Requirement	Description
1	Safford	58	0	58	
1	San Carlos	87	0	87	
1	Temple	249	0	249	
1	Armory Apts	81	0	81	
1	Armory Park	104	0	104	
1	Children's Museum	68	0	68	
1	Plaza San Agustin	176	125	301	San Agustin redev. (Est.)
1	Benjamin Supply	233	-12	221	
1	Post Office	288	0	288	
1	Santa Rita	308	-308	400	Based on future parking
1	Westerner	353	0	353	

PARKING AVAILABILITY DEVELOPMENT

District	BLOCK NAME	Existing DT Parking Spaces	Parking Lost To New Development	5-year Redeveloped No. Parking Spaces (not counting future garages)	Future Spaces Needed By Block (not counting future garages)	Adjusted 5-year Parking Need (not counting future garages)	See Note. Nos.
1	Safford	57	0	57	1	0	1
1	San Carlos	4	0	4	83	83	
1	Temple	55	0	55	194	194	
1	Armory Apts	55	0	55	26	26	
1	Armory Park	19	0	19	85	85	
1	Children's Museum	14	0	14	54	54	
1	Plaza San Agustin	267	253	14	287	287	
1	Benjamin Supply	175	100	75	146	146	
1	Post Office	107	0	107	181	181	
1	Santa Rita	142	142	400	0	0	
1	Westerner	109	31	78	275	275	

Note No.	NOTES
1	Assume Safford needs mets by On-Street parking
2	Plus 40 spaces delivered to Cathedral Block in District 4

PARKING SPACE DISTRIBUTION BY BLOCK

(District) BLOCK NAME	Safford	San Carlos	Temple	Armory Apts	Armory Park	Children's Museum	Plaza SA	Benjamin Supply	Post Office	St Rita	Westerner	5-YR PKG REQ	Adjustments		
Safford	57											57	1	58	
San Carlos		4					83					87		87	
Temple			55				194					249		249	
Armory Apts				55								55	26	81	on-street
Armory Park					19							19	85	104	on-street
Children's Museum						14					54	68		68	
Plaza San Agustin							301					301		301	
Benjamin Supply								221				221		221	
Post Office								181	107			288		288	
Santa Rita										400		400		400	
Westerner											353	353		353	
Tot Space by Block	57	4	55	55	19	14	578	402	107	400	407	2098			
											40	2138			
											447				

TOTAL SPACES IN PARKING STRUCTURES

Future Parking Facilities	Total No. Parking Spaces	See Note. Nos.
Plaza SA Structure	564	
Western Structure	369	2
B. Supply Structure	327	

PARKING REQUIREMENT DEVELOPMENT (Based on Existing Code)

District	BLOCK NAME	Existing DT Parking Requirement	Add'l 5 Yr DT Parking Requirement (redeveloped)	5-year Redeveloped DT Parking Requirement	Redev. Description
2	Unisource	575	0	575	
2	Fox	649	0	649	
2	Library	303	0	303	
2	Depot	106	0	106	
2	Warehouse	201	122	323	1 story Warehse redevelopmt
2	Rialto	230	200	430	Greyhound depot replaced w/3-story redev
2	Retail	175	-10	165	New parking structure
2	Chicago Store	139	0	139	
2	Thrifty	439	-87	352	Thrifty redevelopment (-130 +43 new)
2	Ronstadt	247	96	343	Ronstadt/MLK redevelopment (net inc)
2	Pennington St	211	0	211	
2	Legal Services	679	0	679	
2	Qwest	157	0	157	
2	Pioneer	641	0	641	
2	City Court	386	-386	0	Parking structure
2	CPLC	23	295	318	Partial city courts redevelopment (300)
2	Baum-Adamson	95	205	300	Partial city courts redevelopment (300)
		5256	435	5691	

PARKING SPACE DISTRIBUTION BY BLOCK

NUMBER OF PARKING SPACES

(District) BLOCK NAME	Unisource	Fox	Library	Depot	Ware-house	Rialto	Retail	Chicago Store	Thrifty	Ron-stadt	City Annex	Legal Svcs	Qwest	Pioneer	City Court	CPLC	Baum-Adam-son	5-YR PKG REQ
Unisource	373								202									575
Fox		33									320							353
Library			259															259
Depot				106														106
Warehouse					122										201			323
Rialto						33	397											430
Retail							165											165
Chicago Store							139											139
Thrifty									352									352
Ronstadt										343								343
Pennington St								94			117							211
Legal Services											516	163						679
Qwest											50		38		69			157
Pioneer														406	235			641
City Court																		0
CPLC															168			168
Baum-Adamson															150			150
Tot Space by Block	373	33	259	106	122	33	701	94	554	343	1003	163	38	406	823	0	0	5051
				19						57								76
TOTAL SPACES IN PARKING STRUCTURES				125						400								5127

PARKING REQUIREMENT

296	649	shortfall
44	303	shortfall

PARKING AVAILABILITY DEVELOPMENT

District	BLOCK NAME	Existing DT Parking Spaces	Parking Lost To 5 Yr Development	5-year Redeveloped No. Parking Spaces (not counting future garages)	Future Spaces Needed By Block (not counting future garages)	Adjusted 5-year Parking Need (not counting future garages)	See Note. Nos.
2	Unisource	373		373	202	202	
2	Fox	33		33	616	296	1
2	Library	259		259	44	44	
2	Depot	125		125	-19	-19	
2	Warehouse	274	152	122	201	201	5
2	Rialto	51	18	33	397	397	
2	Retail	95	90	5	160	160	
2	Chicago Store	94		94	45	139	2
2	Thrifty	37	37	0	352	352	
2	Ronstadt	142	85	57	286	286	
2	Pennington St	1003		1003	-792	0	
2	Legal Services	163		163	516	272	3
2	Qwest	38		38	119	119	4
2	Pioneer	406		406	235	235	
2	City Court	155	155	0	0	0	
2	CPLC	132	132	0	318	318	
2	Baum-Adamson	120	120	0	300	300	
			789				

Future Parking Facilities	Total No. Parking Spaces	See Note. Nos.
Pennington St Structure	749	7
City Courts Structure	823	8
Thrifty Structure	554	
Ronstadt Structure	343	6
Retail Structure	696	

City Annex Spaces	City Annex Block Distribution
	320 Goes to BofA
244	244 PC legal Svcs
	117 Future Req (211 minus 94)
10	272 Goes to Walgreens
749	50 Goes to US West
1003	1003

City Annex Garage Distribution

107	Own need -10 (surface) - 94 (Chicago Store)
50	US West Block
272	Walgreens block
320	B of A
749	

Note No.	NOTES
1	320 Pennington St spaces dedicated to Fox
2	94 Chicago Store spaces dedicated to Pennington St block
3	244 Pennington St spaces dedicated to Legal Services block
4	50 US West spaces served by City Courts structure, 69 by Pennington St structure

PARKING REQUIREMENT DEVELOPMENT (Based on Existing Code)

District	BLOCK NAME	Existing DT Parking Requirement	Add'l 5 Yr DT Parking Requirement (redeveloped)	5-year Redeveloped DT Parking Requirement	
3	Public Works	595	0	595	
3	TransAmerica	359	32	391	
3	TMA	283	0	283	
3	Government Center	2009	0	2009	
3	Tucson Water	90	0	90	
3	State Building	348	188	536	75,000 sq ft new office+500 sp pkg
3	Manning House	578	0	578	
3	Steinfeld Mansion	97	0	97	
3	El Charro	122	0	122	
3	Block 175	0	0	0	
3	Bates	134	0	134	
3	Steinfeld Warehouse	58	297	355	
3	Ray	19	0	19	
3	El Presidio	0	0	0	
3	Owls Club	90	0	90	
3	Inn Suites	207	0	207	
		4262	220	5506	

PARKING SPACE DISTRIBUTION BY BLOCK

NUMBER OF PARKING SPACES

PARKING REQUIREMENT (District) BLOCK NAME	Public Works	Trans-America	TMA	Govern-ment Center	Tucson Water	State Building	Manning House	Steinfeld Mansion	El Charro	Block 175	Bates	Steinfeld Warehse	Ray	El Presidio	Owls Club	Inn Suites	Total	Eves	5-YR PKG REQ
Public Works	595																595		595
TransAmerica	185	124									82						391		391
TMA			54		229												283		283
Government Center				1117		892											2009		2009
Tucson Water					90												90		90
State Building						536											536		536
Manning House						306	272										578	214	792
Steinfeld Mansion								97									97		97
El Charro									91	31							122		122
Block 175										0							0		0
Bates											134						134		134
Steinfeld Warehouse											253	102					355		355
Ray										19							19		19
El Presidio														0			0		0
Owls Club															90		90		90
Inn Suites																207	207		207
Tot Space by Block	780	124	54	1117	319	1734	272	97	91	50	469	102	0	0	90	207	5506		5506
						98	to D4	9			300			21	117	334	879	Adjust :	879
						1832		106			769			21	207	541	6287		6287

PARKING AVAILABILITY DEVELOPMENT

District	BLOCK NAME	Existing DT Parking Spaces	Parking Lost To 5 Yr Development	5-year Redeveloped No. Parking Spaces (not counting future garages)	Future Spaces Needed By Block (not counting future garages)	Adjusted 5-year Parking Need (not counting future garages)	See Note. Nos.
3	Public Works	780	0	780	-185	0	4
3	TransAmerica	188	64	124	267	82	4
3	TMA	54	0	54	229	0	
3	Government Center	1117	0	1117	892	0	2
3	Tucson Water	242	164	78	12	0	
3	State Building	1332	-500	1832	-1296	0	
3	Manning House	272	0	272	306	0	2
3	Steinfeld Mansion	106	0	106	-9	0	
3	El Charro	91	0	91	31	0	
3	Block 175	299	299	0	0	0	
3	Bates	223	118	105	29	0	
3	Steinfeld Warehouse	289	187	102	253	0	
3	Ray	0	0	0	19	0	
3	El Presidio	21	0	21	-21	0	
3	Owls Club	207	0	207	-117	0	
3	Inn Suites	541	0	541	-334	0	
		5762	332	5430	76		

TOTAL SPACES IN PARKING STRUCTURES

Future Parking Facilities	Total No. Parking Spaces	See Note. Nos.
Tucson Water Structur	241	
Bates Structure	664	1
Block 175 Structure	50	

St Bldg Garage:	Donation	
Government Ctr	892	day
Manning House	306	day
Civic Paza (D4)	1300	Nighttime
Civic Paza (D4)	98	Day
State Bldg	536	own req
	1832	

Note No.	NOTES
1	Plus half of the City Courts development (est. 300 sp)
2	State Building garage donates see side table
3	Steinfeld Warehouse redevelopment taken up by Council garage
4	185 of TransAmerica parking demand served by Public Works garage

PARKING REQUIREMENT DEVELOPMENT(Based on Existing Code)

District	BLOCK NAME	Existing DT Parking Requirement	Add'l 5-yr DT Parking Requirement (redeveloped)	5-year Redeveloped DT Parking Requirement	
4	TCC	2074	400	2474	New symphony hall (pkg req = 400)
4	La Placita	1238	250	1488	Second hotel tower + redev
4	TPD	424	0	424	
4	Cathedral	168	0	168	
4	El Centro	136	0	136	
4	Civic Plaza	0	3600	3600	(3000 Arena* + 600 Science Center**)
4	Federal	1117	350	1467	(350 Partial Retail***)
				9757	

PARKING AVAILABILITY DEVELOPMENT

District	BLOCK NAME	Existing DT Parking Spaces	Parking Lost To New Development	5-year Redeveloped No. Parking Spaces (not counting future garages)	Future Spaces Needed By Block (not counting future garages)	Adjusted 5-year Parking Need (not counting future garages)	See Note. Nos.
4	TCC	1393	1393	0	2474	2474	5
4	La Placita	328	328	0	1488	1038	1
4	TPD	155	0	155	269	269	4
4	Cathedral	128	0	128	40	40	
4	El Centro	586	0	586	0	0	1
4	Civic Plaza	480	480	0	3600	2002	2
4	Federal	958	589	369	1098	1098	
				1238	8969	6921	

Note No.	NOTES
1	450 El Centro spaces dedicated to La Placita
2	1598 State Building spaces dedicated to Civic Plaza block
3	This analysis assumes D4 Structure and N TCC structure are entirely within TCC block
4	269 TPD spots served by Lot A surface
5	Since 269 spaces served by Lot A, these are unavailable to meet TCC's block parking demand
6	E TCC structure provides 731 additional spaces

* Estimate based on 12,000 seats and 4 persons per car
** Per David Duffy, UA Campus Facilitites & Planning
***Assumes 300,000 sq ft retail per Rio Nuevo Plan upate and ~50% development

PARKING SPACE DISTRIBUTION BY BLOCK

(District) BLOCK NAME	(4) TCC	(4) La Placita	(4) TPD	(4) Cathedral	(4) El Centro	(4) Civic Center	(4) Federal	(3) State Bldg	(1) Westerner	5-YR PKG REQ
TCC	2474									2474
La Placita	1038				450					1488
TPD	269		155							424
Cathedral				128					40	168
El Centro					136					136
Civic Plaza	2002							1598		3600
Federal	1098						369			1467
Tot Sp by Block	6881	0	155	128	586	0	369	1598	40	9717
									329	8119
									369	

TOTAL SPACES IN PARKING STRUCTURES

Future Parking Facilities	Total No. Parking Spaces	See Note. Nos.	
W TCC Structure	4881	2,3,6	
Westerner Structure	369		4881
E TCC Structure	1000		1000
N TCC structure	1000		1000
New St Bldg Structure	500		6881

Existing Surface Lots		
480	Catalina	
589	S of Fed	
340	TCC toe	
506	S TCC	
278	N TCC	
269	Lot A	1393