Road and Park Impact Fee Study
for the
City of Tucson, Arizona

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INTRODUCTION AND SUMMARY

Impact fees, also called "development fees" or "development impact fees," are one of the most direct ways for local governments to require new developments to pay a larger portion of the costs they impose on the community. The fees are one-time, up-front charges, with the payment usually made at the time of building permit issuance. Essentially, impact fees require that each developer of a new residential or commercial project pay its pro-rata share of the cost of new infrastructure facilities required to serve that development.

Impact fees are most appropriate for communities experiencing rapid growth. Tucson, the 30th-largest city in the nation, has been growing in population at a rate of about two percent annually for decades. The city added over 80,000 new residents in the 1990s, and is projected to add more than 100,000 additional residents in the next decade. This growth creates the need for expanded capital facilities, including road improvements and new parks.

This report is designed to serve as the basis for the implementation of road and park impact fees for the City of Tucson. The Arizona impact fee enabling act authorizes municipalities to impose impact fees, provided that they comply with certain standards. One of these is that "the amount of any development fee ... must bear a reasonable relationship to the burden imposed upon the municipality" (Section 9-463.05, Arizona Revised Statutes). This study demonstrates the City's compliance with that standard by calculating the proportionate share of the cost of road and park capital improvements attributable to new development.

The City of Tucson's Cost of Development Element, which was ratified by the voters in November 2001 as part of the *General Plan*, states that the City will recover growth-related capital costs in the areas of transportation and parks and recreation, as well as a number of other facilities. One of the methods identified in the Cost of Development Element for recovering growth-related costs are impact fees. Development impact fees are also among the additional funding sources identified by the *Regional Transportation Plan*.

While Tucson does not currently require developers to contribute park land or improvements, the City does require some developers to make road improvements. Developers may be required to dedicate right-of-way and/or construct adjacent or internal arterial roads at time of subdivision approval, and additional improvements or contributions may be required in the conditional rezoning process. These traditional types of developer exactions tend to penalize the developer or landowner whose property happens to have frontage on a major street. A road impact fee would have several advantages over this system, including leveling the playing field among developers with and without arterial frontage, providing developers with greater certainty in the development review process, making the City's exaction system proportional to impact and therefore less subject to legal challenge, and generating greater resources for funding growth-related major road improvements.

REDUCED ROAD FEES IN CORE AREA

An alternative that was discussed in the feasibility study was to develop road impact fees for different areas that reflect differences in average trip lengths. Our analysis did not find significant differences in travel demand by geographic area, with one exception. The available data would support a 23 percent

reduction in road impact fees for residential development in the Central Core area as identified in the *General Plan*.

MAXIMUM POTENTIAL FEES

The maximum potential road and park impact fees calculated in this report for several typical land use categories are summarized in Table 1. Road impact fees for a typical new single-family home could be assessed at a level of $3,095 per unit in the Central Core, or $4,020 outside the Central Core area. Because the road impact fee calculations did not include right-of-way (ROW) costs, the City can continue to require dedication of ROW for major streets without giving credit against the road impact fees. Park impact fees for a new single-family home could be charged at $2,055 per unit. Maximum park fees would be reduced to $1,491 per single-family unit if neighborhood park costs were excluded.

Table 1
MAXIMUM POTENTIAL ROAD AND PARK IMPACT FEES

Land Use	Unit	Roads	Parks	Total
Single-Family Detached (in Central Core)	Dwelling	$3,095	$2,055	$5,150
Single-Family Detached (outside Central Core)	Dwelling	$4,020	$2,055	$6,075
Multi-Family (in Central Core)	Dwelling	$2,180	$1,520	$3,700
Multi-Family (outside Central Core)	Dwelling	$2,831	$1,520	$4,351
General Retail/Shopping Center	1,000 sf	$3,976	$0	$3,976
General Office	1,000 sf	$4,724	$0	$4,724
Industrial	1,000 sf	$2,039	$0	$2,039

Source: Potential road impact fees from Table 25 (residential fees in Core Area are reduced by factor from Table 5); potential park impact fees from Table 38.

ALTERNATIVE PROGRESSIVE FEES

One of the alternatives explored in this study is to vary residential fees by the size of the dwelling unit, rather than charging a flat rate per unit by housing type. The fees would vary by size category in a stair-step fashion as illustrated in Figure 1. If the fees were assessed on the basis of size, the combined residential fees would range from a low of $3,337 for a small apartment (less than 450 square feet) to $7,328 for a very large home (4,000 square feet or more), as summarized in Table 2. Road impact fees would be lower in the Central Core. Park fees would be lower if neighborhood park costs were excluded.

Figure 1
PROGRESSIVE FEES

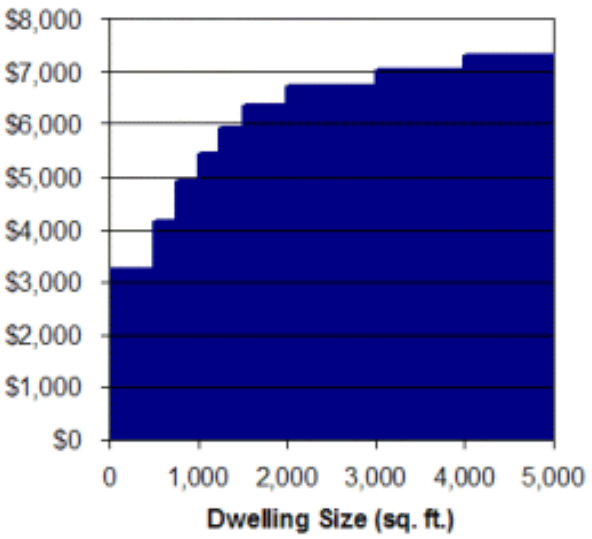


Table 2
PROGRESSIVE RESIDENTIAL FEES (OUTSIDE CORE)

Dwelling Size	Roads	Parks	Total Fee per Unit
Less than 500 sq. ft.	$2,186	$1,048	$3,234
500 - 749 sq. ft.	$2,743	$1,418	$4,161
750 - 999 sq. ft.	$3,198	$1,726	$4,924
1,000 - 1,249 sq. ft.	$3,462	$1,993	$5,455
1,250 - 1,499 sq. ft.	$3,829	$2,076	$5,905
1,500 - 1,999 sq. ft.	$4,196	$2,158	$6,354
2,000 - 2,999 sq. ft.	$4,386	$2,322	$6,708
3,000 - 3,999 sq. ft.	$4,562	$2,466	$7,028
4,000 sq. ft. or more	$4,738	$2,590	$7,328

Source: Road fees from Table 25; park fees from Table 38.

POTENTIAL REVENUE

If impact fees were adopted at 100 percent of the maximum amounts, the combined impact fee revenues could be as high as $30 million annually, as shown in Table 3. However, it is unlikely that road impact fees would actually bring in the estimated revenue in cash, since developers would be getting credit for the value of their arterial improvements. In addition, residential development in the Central Core would pay somewhat lower road impact fees. In any case, these projections should be viewed cautiously, and are intended only to provide an order-of-magnitude assessment of potential revenues.

Table 3
POTENTIAL IMPACT FEE REVENUE

	Roads	Parks	Total
Existing Service Units (road VMT and park EDUs)	764,660	197,136	
Projected Population Growth Rate, 2000-2010	1.99%	1.99%	
Estimated Annual Growth in Service Units	15,217	3,923	
Maximum Fee per Service Unit	$1,467	$2,055	
Potential Annual Revenue	$22,323,339	$8,061,765	$30,385,104

Source: Existing service units from Tables 11 and 29; population growth rate from Table 39; maximum fee per service unit for roads is net cost per VMT from Table 24; maximum fee per service unit for parks is net cost per EDU from Table 37.

COMPARATIVE FEES

The proposed impact fees for Tucson are compared with impact fees currently charged by other jurisdictions in Pima County in Table 4. The proposed fees for residential uses are similar to those charged by the other jurisdictions. The biggest differential is for the nonresidential land uses. This is due to the fact that Pima County uses a methodology that results in unusually low road fees for nonresidential uses,[1] and Marana and Oro Valley assess their road impact fees only on residential development.

Table 4
REGIONAL IMPACT FEE COMPARISON

	Single-Family (dwelling)	Multi-Family (dwelling)	Retail (1,000 sf)	Office (1,000 sf)	Industrial (1,000 sf)
Roads					
Tucson (Central Core)	$3,095	$2,180	$3,976	$4,724	$2,039
Tucson (outside Core)	$4,020	$2,831	$3,976	$4,724	$2,039
Pima County	$3,500	$2,625	$1,265	$1,270	$1,609
Marana*	$8,435	$4,826	$3,000	$3,000	$3,000
Oro Valley	$3,040	$1,596	$0	$0	$0
Parks					
Tucson (proposed)	$2,055	$1,520	$0	$0	$0
Pima County	$1,500	$1,500	$0	$0	$0
Marana	$0	$0	$0	$0	$0
Oro Valley	$0	$0	$0	$0	$0
Water					
Tucson	$1,416	$330	$227	$227	$227
Pima County**	$1,416	$330	$227	$227	$227
Marana**	$1,416	$330	$227	$227	$227
Oro Valley	$2,074	$1,018	$653	$653	$653
Total					
Tucson (Central Core)	$6,566	$4,030	$4,203	$4,951	$2,266
Tucson (outside Core)	$7,491	$4,681	$4,203	$4,951	$2,266
Pima County	$6,416	$4,455	$1,492	$1,497	$1,836
Marana	$9,851	$5,156	$3,227	$3,227	$3,227
Oro Valley	$5,114	$2,614	$653	$653	$653

* includes 3% construction sales tax earmarked for transportation improvements and assumed average value of $200,000 per single-family unit, $100,000 per multi-family unit and $100 per square foot of nonresidential building
** most developments use Tucson water, according to City staff
Source: Tucson's road and park fees from Table 1; fees for other jurisdictions from internet and telephone survey by Duncan Associates, completed January 22, 2004; existing Tucson water fees based on fees by meter size from CH2M-Hill, *Water System Equity Fee Study*, December 2002 and assumptions used in survey (multi-family based on 240-unit complex using five 2" meters, nonresidential based on 100,000 square foot building using 3" meter).

[1] According to a national survey conducted by Duncan Associates, the ratio of the average road impact fee per 1,000 square feet for a 100,000 square foot shopping center to the average fee for a single-family detached unit is 1.9 to one. In Arizona, the ratio is 1.7 to one. Tucson's proposed fee ratio is 1.0 to one, while Pima County's ratio is 0.4 to one.

ROADS

The City's current developer exactions for roads are generally limited to boundary street improvements and occasional off-site improvements to intersections or drainage structures. A road impact fee would have several advantages over this system, including leveling the playing field among developers with and without frontage, providing developers with greater certainty in the development review process, making the City's exaction system proportional to impact and therefore less subject to legal challenge, and generating greater resources for funding growth-related major road improvements.

The long-range regional transportation plan has identified transportation funding needs, including both capital and maintenance costs, of $11.2 billion by the year 2025. With existing revenue sources projected to generate only about $7.5 billion, there is a projected funding shortfall of $3.7 billion. Development impact fees are among the additional funding sources identified by the *Regional Transportation Plan*.[2]

To date, Pima County, Oro Valley and Marana have adopted road impact fees. The fees per single-family unit range from $2,128 in Oro Valley to $3,500 in unincorporated Pima County. Of the three jurisdictions, only Pima County assesses nonresidential road impact fees, and it just began assessing them on July 7, 2003. In addition, Marana assesses a construction sales tax of 4 percent, with 3 percent earmarked for transportation capital improvements. The Town of Sahuarita has a 3 percent construction sales tax earmarked for capital projects (but not specifically for transportation improvements), as well as developer agreements that require developers to contribute to the cost of an arterial road improvement.

SERVICE UNIT

Service units create the link between supply (roadway capacity) and demand (traffic generated by new development). An appropriate service unit basis for road impact fees is vehicle-miles of travel (VMT). Vehicle-miles is a combination of the number of vehicles traveling during a given time period and the distance (in miles) that these vehicles travel. For an individual development, the appropriate trip generation rate is multiplied by the percent new trip factor and the average trip length to determine the number of VMT generated. For the major road system as a whole, VMT is determined by multiplying the length of each road segment by the average traffic count and aggregating the results for all road segments.

The capacity of a roadway segment is the maximum number of vehicles that can be accommodated at a desired level-of-service during the relevant time period. In order to be aggregated for the major road system as a whole, however, capacities of individual road segments must be converted into vehicle-miles of capacity (VMC). This is accomplished by multiplying the capacity of each segment by the length of each segment in miles.

The two time periods most often used in traffic analysis are the 24-hour day (average daily trips or ADT) and the single hour of the day with the highest traffic volume (peak hour trips or PHT). The use of ADT rather than PHT tends to result in higher fees for retail development and lower fees for office and

[2] Pima Association of Governments, *2001-2025 Regional Transportation Plan Amendment*, adopted January 28, 2004.

industrial development. Generally it is preferable to base road impact fees on peak hour trip generation, since it is during peak conditions that capacity becomes an issue. Most road impact fees are based on afternoon peak hour conditions, since they are insensitive to the direction of traffic flow (in almost all cases roads will be widened with the same number of lanes in each direction) and the afternoon peak tends to be larger than the morning peak (as a general rule, 10 percent of daily trips occur in the peak hour).[3]

The City uses PHT in traffic studies for individual projects, but available traffic counts are ADT. It is recommended that the road impact fees be based on trip generation rates during the afternoon peak hour of adjacent street traffic.

SERVICE AREAS AND BENEFIT DISTRICTS

There are two kinds of geographic areas in impact fee systems: service areas and benefit districts. A service area is an assessment area that is served by a defined group of capital facilities and subject to a uniform impact fee schedule. A benefit district is an area within which fees collected are earmarked to be spent.

Service Area

Generally, arterial road impact fees tend to have a single service area and a uniform fee schedule, whether at the municipal level or the regional, county-wide level. That is because the arterial road system is designed to move traffic from one part of a community to another, and improvements to this system are generally of community-wide benefit.

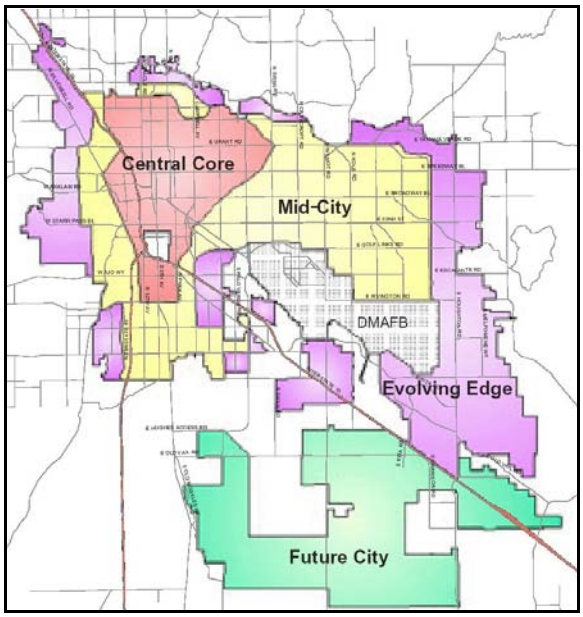
An alternative to a city-wide road impact fee is one that is assessed only in a defined "growth area." Marana, for example, assesses road impact fees only in the southern part of the city. Phoenix assesses impact fees only in defined growth areas, based on the cost of improvements in each area. A variant of this approach is to calculate what is essentially a city-wide fee, but to exclude a "developed area" where existing infrastructure is adequate to support infill and redevelopment from the service area. Impact fees collected in growth areas, however, cannot be spent on road improvements in areas that have been excluded from the impact fee system.

Our recommendation, based on consultation with City staff, is to develop a city-wide arterial street impact fee. This is consistent with our recommendations on the nature of the major road system to be funded with the impact fees and on the methodology to be used to calculate the fee (see next two sections).

[3] According to the Institute of Transportation Engineers (ITE), *Transportation and Traffic Engineering Handbook*, 1982, p. 283, "Approximately 10% of all person travel takes place in the morning peak period, and again in the evening peak period." For example, the ratio of PM peak hour trip rates to average daily trip rates for six major land use categories (single-family, multi-family, shopping center, general office, industrial park and warehousing) from the 2003 edition of the ITE *Trip Generation* manual averages 10.65%.

An alternative that was discussed in the feasibility study was to develop fees for different areas that reflect differences in average trip lengths. The demand for road facilities is directly proportional to average trip length, which in turn is likely to be related to distance from the urban core. The City's growth areas roughly correspond to concentric rings around the core, particularly if the Mid-City and Evolving Edge are divided, for example, by Craycroft Road. Whether average trip lengths actually correspond to this model was explored by examining census data on travel time to work. The 2000 Census data on average travel time to work for workers over sixteen years of age using other modes than public transportation is summarized in Table 5. The data revealed a modest difference between the Central Core area (19.1 minutes) and the rest of the city (21.6 minutes). Additional analysis revealed little differences between other subareas of the city.

Figure 2
GROWTH AREAS



Not only do Central Core residents travel somewhat quicker (and presumably shorter) routes to work when they use automobiles and other private forms of transportation, they are also more likely to use alternative modes of travel. Only 78.8 percent of Central Core residents take private motor vehicles to work, compared to 90.8 percent of other city residents. Taking into account both the reduced tendency to use private motor vehicles and shorter trip lengths, residential development in the Central Core can be expected to generate only about 77 percent of the vehicular travel demand generated by residential development in other parts of the city, as shown in Table 5.

Table 5
ROAD REDUCTION FACTOR FOR CORE RESIDENTIAL DEVELOPMENT

	Central Core	Rest of City	Ratio
Percent Driving Private Motor Vehicle to Work	78.8%	90.8%	0.87
Travel Time, Non-Public Transportation (minutes)	19.1	21.6	0.88
Reduction in Road Impact for Residential in Central Core			0.77

Source: 2000 U.S. Census, SF-3 sample data (1 in 6 sample) of workers 16 years or older; Central Core area approximated by Pima County census tracts 1-19, 22, 24-25.01, 26-29.01, 38.01, 45.04-45.05.

The analysis so far has been based on data from the U.S. Census of Population and Housing, which deals only with residential development. Can the results be extrapolated to nonresidential development as well? Given that the core area in most cities is better served by public transportation than outlying suburbs, it is likely that workers living in the suburbs and commuting to the core are more likely to use public transportation than suburban workers traveling to other suburban locations. However, trip lengths to nonresidential development in the core from suburban locations are likely to be longer than average. Without extensive traffic modeling analysis, it is not possible to quantify any reduction factor for nonresidential development in the Central Core area.

Benefit Districts

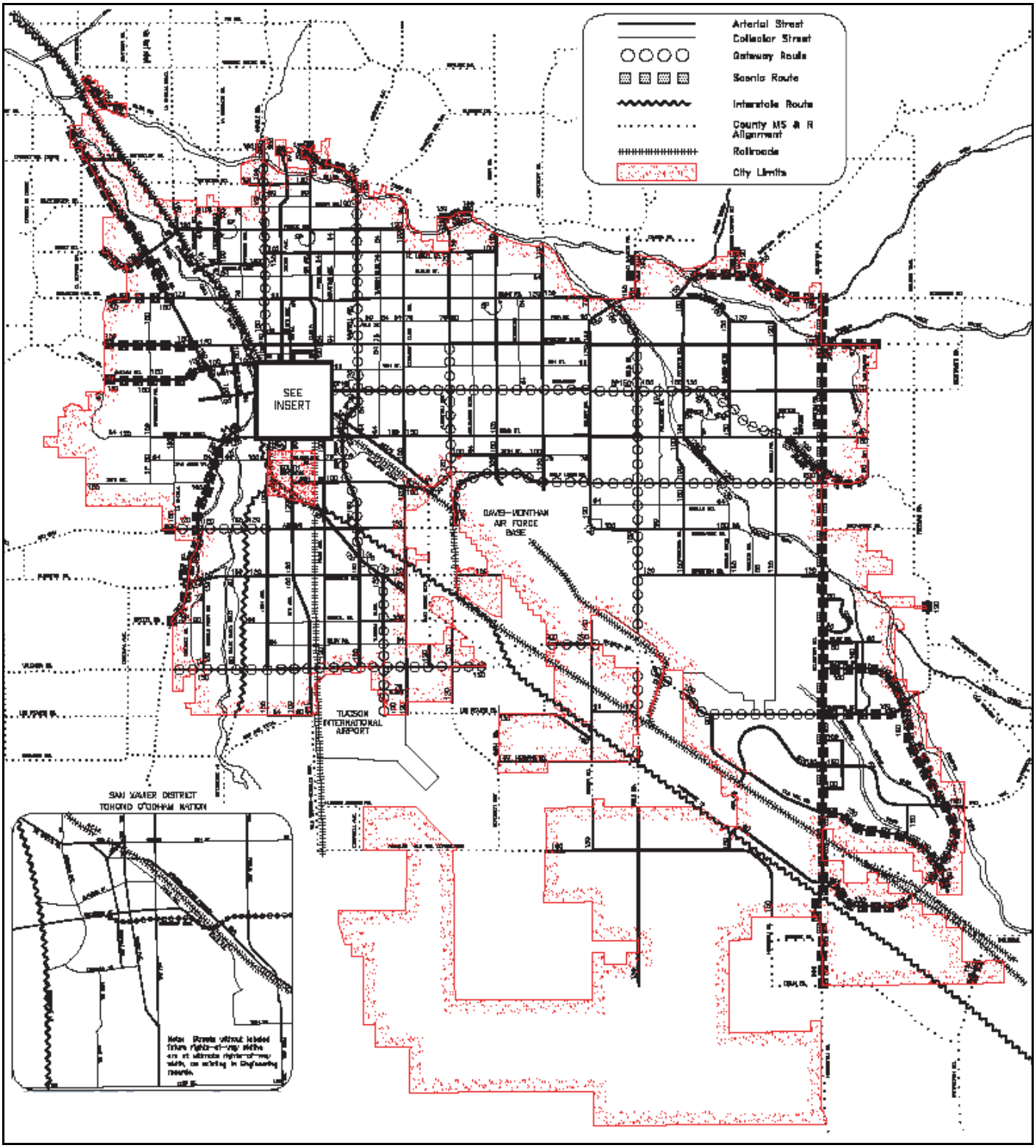
The city could be divided up into multiple benefit districts, so that money collected in one part of town is spent on project in the same part of town. Four benefit districts have been recommended for both the road and park impact fees by the stakeholder group appointed by the City Council. These are described in the Park section of this report.

DEFINITION OF MAJOR ROAD SYSTEM

A road impact fee system should include a clear definition of the major road system that is to be funded with the impact fees. The most common approach is to use the adopted roadway classification system. The choice of the major road system does have an effect on the resultant impact fee. For example, if collector roads are included, the trip length on the major road system would be longer and therefore the fee would be higher. On the other hand, developers would need to get credit for collector roadways that they install within their projects. Our recommendation is for the City to assess impact fees only for the arterial system.

Another choice is whether to include Federal and State highways. There are only three State roads (Oracle Road north of Miracle Mile, Ajo west of I-19 and Miracle Mile), plus two Federal highways (I-19 and I-10), located within the City limits. In Arizona, there is no local participation in the cost of most improvements to Federal highways and State roads. Consequently, it is recommended that Federal and State highways be excluded from the major road system. Excluding Federal and State roads also means that it is not necessary to credit new development for the gas tax and other revenues it will generate that will go toward improving the Federal and State highway system.

Figure 3
TUCSON MAJOR STREETS AND ROUTES PLAN



FEE CALCULATION METHODOLOGY

The major alternative methodologies for calculating road impact fees are the "improvements-driven" and "consumption-based" approaches. The improvements-driven approach essentially divides the cost of growth-related improvements required over a fixed planning horizon by the number of new service units (e.g., vehicle-mile of travel or VMT) projected to be generated by growth over the same planning horizon in order to determine a cost per service unit. The improvements-driven approach depends on accurate planning and forecasting. For example, the fees will be accurate only if the forecasted increase in traffic actually necessitates all of the improvements identified in the transportation master plan. If many of the planned improvements will provide excess capacity beyond the planning horizon on which the fees are based, the fees may be too high.

The alternative consumption-based approach does not depend on knowing in advance what improvements will be made or what type or density of development will occur. The consumption-based model simply charges a new development the cost of replacing the capacity that it will consume on the major road system. That is, for every service unit of traffic generated by the development, the road impact fee charges the net cost to construct an additional service unit of capacity. Compiling a list of planned improvements needed to accommodate projected growth is not necessary for the development of consumption-based road impact fees, which can be calculated based on any representative list of road improvements, including an historical list or a list of projects needed at build-out. In a consumption-based system, the list of road improvements is used to determine the cost per unit of capacity. Thus, doubling the total cost of the list of road improvements will not double the fee and in fact may very well not increase the fee at all. Only if the improvements added to the list were more expensive, per unit of capacity created, would their addition have the effect of increasing the impact fee.

Since travel is never evenly distributed throughout a roadway system, actual roadway systems require more than one unit of capacity for every unit of demand in order for the system to function at an acceptable level of service. Suppose, for example, that the community completes a major arterial widening project. The completed arterial is likely to have a significant amount of excess capacity for some period of time. If the entire system has just enough capacity to accommodate all of the vehicle-miles of travel, then the excess capacity on this segment must be balanced by another segment being over-capacity. Clearly, roadway systems in the real world need more total aggregate capacity than the total aggregate demand, because the traffic does not always precisely match the available capacity. Consequently, the standard consumption-based model generally underestimates the full cost of growth.

A modified consumption-based road impact fee model that more accurately identifies the full growth-related cost of maintaining desired service levels uses the system-wide ratio of capacity to demand. Under the modified approach, new development should be required to pay for the cost to construct more capacity than it directly consumes in order to maintain the system-wide ratio of capacity to demand. To do this, the cost per vehicle-mile of capacity (VMC) is multiplied by the system-wide ratio of VMC/VMT to determine the cost per VMT. The modified version differs from the standard consumption-based methodology in that it makes the VMC/VMT ratio an explicit part of the impact fee formula (the standard version implicitly assumes a one-to-one ratio).

In most rapidly growing communities, some roadways will be experiencing an unacceptable level of congestion at any given point in time. One of the principles of impact fees is that new development should not be charged, through impact fees, for a higher level of service than is provided to existing development. In the context of road impact fees, this has sometimes been interpreted to mean that

impact fees should not be spent on roadways that are already over-capacity. A variant of this approach is that impact fees should only be used to fund a percentage of the project that can be attributed to providing additional capacity beyond what is needed to remedy any existing deficiency.

These approaches for dealing with existing deficiencies create several types of problems. A major one is that impact fees are restricted from being spent on roadways that are most in need of improvement. The approach that allows a percent of the cost to be funded complicates impact fee administration by requiring that the portion of the cost of each improvement that is attributable to remedying deficiencies be funded from a different revenue source. Finally, these approaches ignore the interconnectedness of the major road system. For example, road impact fees could not be spent directly to improve a deficient segment, but could be spent to improve or construct a parallel roadway that would also relieve the congestion.

The City's adopted LOS is "E." The maximum traffic volume possible under LOS E is identical to the capacity of a roadway. Arguably, it is not necessary to address existing deficiencies in a consumption-based system, which, unlike an improvements-driven system, is not really designed to recover the full costs to maintain the desired LOS on all roadway segments. Instead, the standard consumption-based system is only designed to maintain a minimum one-to-one overall ratio between system demand and system capacity. Virtually all major road systems have more capacity (VMC) than demand (VMT) on a system-wide basis. Consequently, under a standard consumption-based system, the level of service standard is really a systemwide VMC/VMT ratio of one. If the major road system currently has a VMC/VMT ratio higher than one, there are no existing deficiencies on a system-wide basis.

While available data would support the improvement-driven methodology, the modified consumption-based methodology is also feasible and has several advantages. The improvements-driven system used by Phoenix, for example, is very complex and requires extensive staff resources on a continuing basis to update and maintain the system. This is because the fees are directly dependent on the improvements in the plan, and any significant changes to the plan require the fees to be recalculated. In contrast, a consumption-based methodology can be easily updated at periodic intervals. In addition, an improvements-driven road impact fee is only as reliable as the plan on which it is based, and cost estimates for projects that may not be constructed for 25 years are unlikely to be reliable.

For these reasons, the modified consumption-based methodology is recommended for use in Tucson's road impact fee system. This methodology adjusts the cost per VMT by the VMC/VMT ratio, and evaluates existing deficiencies on a system-wide basis.

The formula for calculating the modified consumption-based road impact fee is summarized in Figure 4. The maximum fee calculated under this methodology is simply the service units (VMT) that will be generated by the development times the net cost per service unit. The inputs into the formula are described in more detail below.

Figure 4
RECOMMENDED ROAD IMPACT FEE FORMULA

FEE	=	VMT x NET COST/VMT
Where:		
VMT	=	TRIPS x % NEW x LENGTH ÷ 2
TRIPS	=	Trip ends generated by the development during the PM peak hour
% NEW	=	Percent of trips that are primary trips, as opposed to passby or diverted-link trips
LENGTH	=	Average length of a trip on major road system
÷ 2	=	Avoids double-counting trips for origin and destination
NET COST/VMT	=	COST/VMT - CREDIT/VMT
COST/VMT	=	COST/VMC x VMC/VMT
COST/VMC	=	Average cost to create a new VMC based on historical or planned improvements
VMC/VMT	=	The system-wide ratio of capacity to demand in the major road system
CREDIT/VMT	=	Credit per VMT, based on revenues to be generated by new development

TRAVEL DEMAND

The travel demand generated by specific land use types is a product of three factors: 1) trip generation, 2) percent new trips and 3) trip length. The first two factors are well documented in the professional literature, and the average trip generation characteristics identified in studies of communities around the nation should be reasonably representative of trip generation characteristics in Tucson. In contrast, trip lengths are much more likely to vary between communities, depending on the geographic size and shape of the community and its major road system.

Trip Generation

Trip generation rates will be based on information published in the most recent edition of the Institute of Transportation Engineers' (ITE) Trip Generation manual or other authoritative sources. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trips. To avoid over-counting, all trip rates will be divided by two. This places the burden of travel equally between the origin and destination of the trip and eliminates double-charging for any particular trip.

To date, few road impact fees have been adopted that vary by the size of the dwelling unit. This is largely because road impact fees are generally based on national trip generation rate data, and the Institute of Transportation Engineers (ITE) *Trip Generation* manual does not provide rates by dwelling unit size. However, the fact that trip generation rates for residential uses vary by the size (and even the income) of the household is actually well documented in the transportation planning literature. As shown in Table 6, the average number of vehicle trips generated per day is strongly related to the number of people living in the dwelling unit.

Table 6
VEHICLE TRIPS BY HOUSEHOLD SIZE

Household Size	Daily Trips	PM Peak Hr Trips	
		Single-Family	Multi-Family
One Person	3.5	0.369	0.323
Two Persons	6.7	0.707	0.618
Three Persons	8.8	0.928	0.812
Four Persons	10.6	1.118	0.978
Five Persons or More	12.5	1.319	1.154

Source: Daily trips from Transportation Research Board, NCHRP Report 365, "Travel Estimation Techniques for Urban Planning," Washington, D.C.: National Academy Press, Table 9 (for urban areas with populations of 500,000 to 1 million), 1998; PM peak hour trips based on 10.55% of daily trips in PM peak hour for single-family and 9.23% of daily trips in PM peak hour for apartment units from ITE, *Trip Generation*, 7th edition, 2003.

In the Parks section of this report, data from the 2000 U.S. Census for Tucson is presented on average household size by number of rooms for single-family detached units and number of bedrooms for multi-family units. This information is combined with the trip rate data by household size presented in the previous table to derive peak hour trip rates by the size of the unit, represented by rooms and bedrooms, as shown in Table 7.

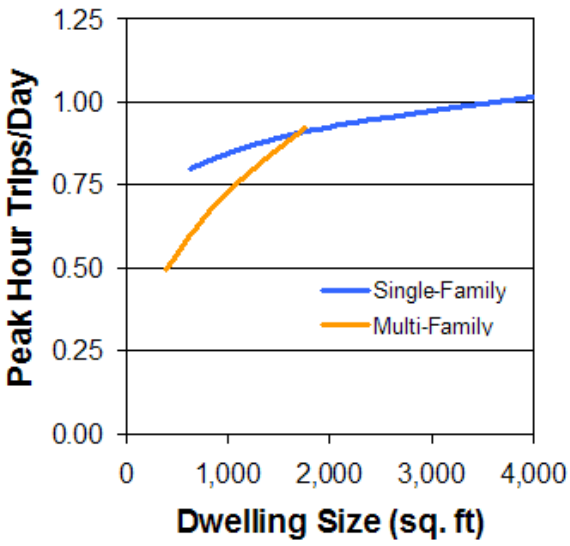
Table 7
PEAK HOUR TRIPS BY ROOMS AND BEDROOMS

Housing Type	Avg. HH Size	Pk Hr Trips
Single-Family, 4 Rooms or Fewer	2.43	0.806
Single-Family, 5 Rooms	2.67	0.860
Single-Family, 6 Rooms	2.79	0.884
Single-Family, 7 Rooms	2.93	0.917
Single-Family, 8 Rooms or More	3.29	0.983
All Single-Family Detached Units	2.76	0.872
Multi-Family, Efficiency	1.49	0.488
Multi-Family, One Bedroom	1.65	0.546
Multi-Family, Two Bedrooms	2.28	0.683
Multi-Family, Three Bedrooms	3.03	0.822
Multi-Family, Four Bedrooms or more	3.92	0.983
All Multi-Family Units	2.04	0.628

Source: Average household sizes from Tables 26 and 27; peak hour trips derived from Table 6 using linear interpolation.

As described in the Parks section, a data set with square footage and room or bedroom information for 10,000 single-family detached and multi-family units in Tucson was compiled from Pima County Tax Assessor data and data from the Arizona Multi-Family Housing Association. To this data base, a variable for peak hour trip rates was added, consisting of the trip rates by housing type and number of bedrooms or rooms presented in the previous table. Regression analysis was then performed to determine the relationship between unit size in square feet and peak hour trip rates. As with the park analysis, it turned out that housing type was significant. Both linear and logarithmic regressions were performed for single-family detached and multi-family data sets. In both cases, logarithmic equations were determined to provide the best explanation of the data.[4] The curves described by the equations are shown in Figure 5. Not surprisingly, the shapes of these curves are very similar to the regression curves for average household size by unit size shown in the Parks section, since trip rates are almost directly proportional to household size.

Figure 5
TRIPS BY UNIT SIZE



Using the regression equations, peak hour trip rates were derived for 12 square footage size categories. The two curves intersect in the 1,250 to 1,500 square foot range. Since the multi-family equation yields the lower trip rate estimates, and since relatively few single-family units are being built in the lower size range, the multi-family equation is used for unit sizes less than 1,500 square feet, and the single-family equation for larger units. The results are shown in Table 8.

Table 8
PEAK HOUR TRIPS BY SQUARE FOOTAGE

Housing Type/Size Category	Midpoint	Pk Hour Trips
Less than 500 sq. ft.	375	0.48
500 - 749 sq. ft.	625	0.60
750 - 999 sq. ft.	875	0.69
1,000 - 1,249 sq. ft.	1,125	0.76
1,250 - 1,499 sq. ft.	1,375	0.83
1,500 - 1,999 sq. ft.	1,750	0.91
2,000 - 2,999 sq. ft.	2,500	0.95
3,000 - 3,999 sq. ft.	3,500	0.99
4,000 sq. ft. or more	4,500	1.03

Source: Peak hour trips derived from formulas in footnote for the midpoint of the size categories.

[4] The equation for single-family detached units is Ln(y) = 0.1271 * Ln(x) - 1.0433, where y is peak hour trips per day and x is the floor area of the unit in square feet; the R^2 is 0.600 and the t-statistics are 94 for the x-coefficient and -108 for the y-intercept. The equation for multi-family units is Ln(y) = 0.4182 * Ln(x) - 3.2062; the R^2 is 0.763 and the t-statistics are 114 for the x-coefficient and -135 for the y-intercept.

New Trip Factor

Trip rates also need to be adjusted by a "new trip factor" to exclude pass-by and diverted-link trips. This adjustment is intended to reduce the possibility of over-counting by only including primary trips generated by the development. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a particular development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass-by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-link trip is similar to a pass-by trip, but a diversion is made from the regular route to make an interim stop. The reduction for pass-by and diverted-link trips will be drawn from the ITE manual and other published information.

Average Trip Length

The average trip length is the most difficult travel demand factor to determine. In the context of a road impact fee using a consumption-based methodology, the relevant input is the average length of a trip on the major road system within the service area. The average trip length can be approximated by dividing the total VMT on the major road system by the total number of trips generated by existing development in the service area. Total VMT on the major road system is estimated by multiplying the length of each road segment by the current traffic volume on that segment and summing for the entire system. Total trips can be estimated by multiplying existing land uses by the appropriate trip generation rates (adjusted for new trip factors and dividing by two) and summing for all existing development in the service area.

In the context of a road impact fee based on a consumption-based methodology, we are interested in determining the average length of a trip generated by a new development on the major roadway system within Tucson's city limits. This will be done by using national data for average trip lengths, and then calibrating total VMT to local conditions using a local adjustment factor.

Table 9 below shows national average trip lengths by trip purpose. The U.S. Department of Transportation's 2001 *National Household Travel Survey* identifies average trips lengths for specific trip purposes, including home-to-work trips, doctor/dentist, school/church, shopping, and other personal trips.

Table 9
NATIONAL AVERAGE TRIP LENGTHS

Trip Purpose	Length (miles)
To or from work (residential peak)	12.19
Doctor/Dentist	9.89
Average	9.82
School/Church	7.50
Family/Personal	7.43
Shopping	6.61

Source: US. Department of Transportation, *National Household Travel Survey*, 2001.

The first step in developing the adjustment factor for local trip lengths is to estimate the total peak hour vehicle-miles of travel (VMT) that would be expected on Tucson's major roadway system based on national travel demand characteristics. Existing land use data for the City of Tucson were compiled using information from the Pima County Tax Assessor. Existing land uses are multiplied by trip generation rates, percent of primary trips and average trip lengths and summed to estimate total

county-wide VMT. As shown in Table 10, existing land uses, using national trip length data, would be expected to generate approximately 1.5 million VMT during the afternoon peak hour.

Table 10
PROJECTED CITY-WIDE VEHICLE-MILES OF TRAVEL

Land Use Type	Unit	Existing Units	Trip Rate	Primary Trips	Pk Hr Trips	Length (miles)	Pk Hr VMT
Single-Family Detached	Dwelling	112,141	0.44	100%	49,342	12.19	601,479
Multi-Family	Dwelling	93,457	0.31	100%	28,972	12.19	353,165
Mobile Home/RV Park	Pad	18,415	0.28	100%	5,156	12.19	62,854
Hotel/Motel*	Rooms	10,440	0.27	80%	2,255	7.43	16,755
Gen. Retail/Commercial	1000 sq ft	38,342	1.87	43%	30,831	6.61	203,792
Office/Institutional	1000 sq ft	30,632	0.69	75%	15,852	12.19	193,237
Hospital	1000 sq ft	689	0.59	75%	305	9.89	3,015
Nursing Home	1000 sq ft	2,238	0.21	75%	352	9.89	3,486
Church	1000 sq ft	1,102	0.33	75%	273	7.43	2,026
Elementary/Sec. School	1000 sq ft	8,521	0.49	24%	1,002	7.50	7,516
Industrial/Warehouse	1000 sq ft	23,358	0.32	70%	5,232	12.19	63,780
Total		104,882			139,572		1,511,105

* assumes 500 sq. ft. per room
Source: Existing residential units from Table 41; existing nonresidential square footage from Table 42; trip rates, primary trip factors and trip lengths from Table 14; peak hour trips is product of trip rate and primary trips; peak hour VMT is product of trips and trip length.

The next step in developing the local travel trip length adjustment factor is to determine actual peak hour VMT on the City's major roadway system. An inventory of the existing major roadway system was prepared as part of this study (see Table 43 in Appendix B). Roadway segment lengths and recent travel volumes are used to estimate actual peak hour VMT. Average daily traffic counts taken over the past three years (2001 through 2003) as reported by the Pima Association of Governments were multiplied by ten percent to approximate peak hour volumes. Since counts were not available for all segments, total VMT must be estimated from VMT for segments for which counts are available, as shown in Table 11.

Table 11
TOTAL EXISTING VEHICLE-MILES OF TRAVEL

Peak Hour VMT on Segments with Counts	654,815
Lane-Miles of Segments with Counts	1,075
Average Peak Hour Volume per Lane-Mile	609
Total Lane-Miles	1,256
Estimated Total Peak Hour VMT	764,660

Source: Table 43 in Appendix B.

Comparing the results of the last two tables, it can be seen that projected VMT using existing land use data and national travel demand characteristics significantly over-estimates VMT actually observed on the major roadway system. Consequently, it is necessary to develop an adjustment factor to account for this variation. The local travel demand adjustment factor is the ratio of actual to projected VMT on the major roadway system. As shown in Table 12, the average trip length for each land use should be multiplied by a local adjustment factor of 0.51. This result is not surprising, since the actual local VMT

does not include travel on Federal or State highways, on local or collector roads or on roadways outside of the Tucson city limits.

Table 12
LOCAL TRIP LENGTH ADJUSTMENT FACTOR

Actual Peak Hour Vehicle-miles of Travel (VMT)	764,660
Projected Peak Hour Vehicle-miles of Travel (VMT)	1,511,105
Local Adjustment Factor	0.51

Source: Actual VMT from Table 11; projected VMT from Table 10.

Applying the local adjustment factor to the national average trip lengths yields reasonable estimates of local average trip lengths on Tucson's major road system, as shown in Table 13. The work trip is the dominant type of peak hour trip for residential, office and industrial land uses.

Table 13
LOCAL AVERAGE TRIP LENGTHS

Trip Purpose	National	Local Factor	Local
To or from work	12.19	0.51	6.22
Doctor/Dentist	9.89	0.51	5.04
Average	9.82	0.51	5.01
School/Church	7.50	0.51	3.83
Family/Personal	7.43	0.51	3.79
Shopping	6.61	0.51	3.37

Source: National trip lengths from Table 9; local factor from Table 12; local trip length is project of national trip length and local factor; all trip lengths in miles.

Travel Demand Summary

The result of combining trip generation rates, new trip factors and average trip lengths is a travel demand schedule that establishes the VMT during the average weekday generated by various land use types per unit of development. The recommended travel demand schedule for Tucson's road impact fees is presented in Table 14.

Table 14
TRAVEL DEMAND SCHEDULE

Land Use Type	ITE Code	Unit	Pk Hr Trips	New Trips	Trip Length	Pk Hr VMT
Residential Unit Size:						
Less than 500 sq. ft.		Dwelling	0.24	100%	6.22	1.49
500 - 749 sq. ft.		Dwelling	0.30	100%	6.22	1.87
750 - 999 sq. ft.		Dwelling	0.35	100%	6.22	2.18
1,000 - 1,249 sq. ft.		Dwelling	0.38	100%	6.22	2.36
1,250 - 1,499 sq. ft.		Dwelling	0.42	100%	6.22	2.61
1,500 - 1,999 sq. ft.		Dwelling	0.46	100%	6.22	2.86
2,000 - 2,999 sq. ft.		Dwelling	0.48	100%	6.22	2.99
3,000 - 3,999 sq. ft.		Dwelling	0.50	100%	6.22	3.11
4,000 sq. ft. or more		Dwelling	0.52	100%	6.22	3.23
Single-Family Detached		Dwelling	0.44	100%	6.22	2.74
Multi-Family		Dwelling	0.31	100%	6.22	1.93
Mobile Home/RV Park	240	Pad	0.28	100%	6.22	1.74
Hotel/Motel	310/320	Room	0.27	80%	3.79	0.82
General Retail/Commercial	820	1000 sq. ft.	1.87	43%	3.37	2.71
Office/Institutional		1000 sq. ft.	0.69	75%	6.22	3.22
Hospital	610	1000 sq. ft.	0.59	75%	5.04	2.23
Nursing Home	620	1000 sq. ft.	0.21	75%	5.04	0.79
Church	560	1000 sq. ft.	0.33	75%	3.79	0.94
Elementary/Sec. School	520/530	1000 sq. ft.	0.49	24%	3.83	0.45
Industrial/Warehouse		1000 sq. ft.	0.32	70%	6.22	1.39

Source: "Pk Hr Trips" = ½ of trip ends during PM peak hour of adjacent street traffic from Institute of Transportation Engineers (ITE), *Trip Generation*, 7th ed., 2003 (where ITE code provided, others from Tucson Public Works Department, June 3, 2004 memorandum); single-family detached and multi-family trip rates from Table 7; residential trip rates by square feet size category from Table 8; new trip percentage for shopping center from ITE, *Trip Generation Handbook,* March 2001; percentage for schools from paper by Hitchens, 1990 *ITE Compendium*; remaining percentages are local estimates from Tucson Public Works Department, June 3, 2004 memorandum; average trip lengths from Table 13.

COST PER SERVICE UNIT

The cost per VMC will be calculated based on a representative list of historical improvements. The first step is to divide the total cost of the improvements by the number of additional lane-miles created to get a cost per lane-mile. The second step is to divide the average cost per lane-mile by the average capacity added by a new lane to determine the average cost per new VMC. The third and final step is to multiply the cost per VMC by the system-wide VMC/VMT ratio to get the cost per VMT to maintain the current system-wide level of service.

Cost per Lane-Mile

The average cost per lane-mile is based on City of Tucson road improvements completed in the last four years (2000-2003). These projects are all either new roads, or they involved the complete reconstruction and/or widening of interim roads. The City has very limited information on right-of-way (ROW) costs, since most of the ROW was dedicated and it is difficult to assign a cost for the land. Consequently, ROW costs have been excluded. As shown in Table 15, the average cost per lane-mile added by these improvements, in current dollars, is $1.3 million.

Table 15
AVERAGE CONSTRUCTION COST PER LANE-MILE

Arterial	Segment	Miles	Lanes Ex	Lanes Fut	New Ln-Mi	Cost	Cost per Lane-Mile
Golf Links	Pantano-Harrison	1.00	0	6	6.00		
Golf Links	Harrison-Bonanza	0.50	0	4	2.00		
Golf Links	Pantano-Bonanza	1.50			8.00	$8,860,278	$1,107,535
Harrison	Golf Links-OST	1.25	0	4	5.00	$5,841,510	$1,168,302
12th Avenue*	Drexel Rd to Valencia Rd	1.00	0	4	4.00	$4,810,679	$1,202,670
Pima St*	Swan Rd to Craycroft Rd	1.00	0	4	4.00	$7,903,501	$1,975,875
Ft Lowell	Laurel-Swan	0.25	0	4	1.00	$1,918,478	$1,918,478
Pantano	Golf Links-Escalante	1.00	0	4	4.00	$5,290,657	$1,322,664
Total		6.00			26.00	$34,625,103	$1,331,735

* reconstruction of existing interim four-lane roadway
Source: Project descriptions and costs from Tucson Department of Transportation, December 22, 2003.

Capacity per Lane

Nationally-accepted transportation level of service (LOS) categories have been developed by the transportation engineering profession. Six categories, ranging from LOS A to LOS F, generally describe driving conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. LOS A represents free flow, while LOS F represents the breakdown of traffic flow, characterized by stop-and-go conditions.

In contrast to LOS, service volume capacity is a quantitative measure, expressed in terms of the rate of flow (vehicles passing a point during a period of time). Service volume capacity represents the maximum rate of flow that can be accommodated by a particular type of roadway while still maintaining a specified LOS. The service volume capacity at LOS E represents that maximum volume that can be accommodated before the flow breaks down into stop-and-go conditions that characterize LOS F, and thus represents the ultimate capacity of the roadway.

Tucson's adopted level of service is LOS E, which has the same maximum service volume as the capacity of the roadway. Consequently, the discussion can dispense with levels of service and focus on roadway capacity.

The capacity of an individual roadway depends on a number of factors, including number of lanes, lane width, topography, percent of truck traffic, etc. In impact fee analysis, generalized capacity estimates are typically used based strictly on number of lanes. The Florida Department of Transportation has done extensive work developing generalized capacity estimates to be used for planning purposes based on *Highway Capacity Manual* procedures, and their work will be used to develop planning-level capacity estimates for use in this analysis. As can be seen below, multi-lane roads tend to have more capacity per lane than two-lane roads.

Table 16
AVERAGE HOURLY CAPACITY PER LANE

	Total Capacity	Capacity per Lane
Two-Lane Undivided	1,480	740
Two-Lane w/Continuous Turn Lane	1,554	777
Four-Lane Divided	3,120	780
Six-Lane Divided	4,690	782

Source: Data for major city/county roadways from Florida Department of Transportation, *2002 Quality/Level of Service Handbook*, 2002, Table 4-4: Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas (http://www11.myflorida.com/planning/systems/sm/los/default.htm).

The appropriate capacity per lane to use in the impact fee calculations is the capacity added by a typical improvement project. Using the same projects used to determine the average cost per lane-mile, the average hourly capacity added, according to FDOT generalized planning guidelines, is 780 vehicles per lane, as shown in Table 17.

Table 17
AVERAGE CAPACITY ADDED PER LANE

			Lanes		New	Peak Hour Capacity			New	Added
Arterial	Segment	Miles	Ex	Fut	Ln-Mi	Ex	Fut	New	VMC	Cap/Ln
Golf Links	Pantano-Harrison	1.00	0	6	6.00	0	4,690	4,690	4,690	782
Golf Links	Harrison-Bonanza	0.50	0	4	2.00	0	3,120	3,120	1,560	780
Golf Links	Pantano-Bonanza	1.50			8.00				6,250	781
Harrison	Golf Links-OST	1.25	0	4	5.00	0	3,120	3,120	3,900	780
12th Avenue*	Drexel Rd to Valencia	1.00	0	4	4.00	0	3,120	3,120	3,120	780
Pima St*	Swan Rd to Craycroft	1.00	0	4	4.00	0	3,120	3,120	3,120	780
Ft Lowell	Laurel-Swan	0.25	0	4	1.00	0	3,120	3,120	780	780
Pantano	Golf Links-Escalante	1.00	0	4	4.00	0	3,120	3,120	3,120	780
Total		6.00			26.00				20,290	780

Source: Project data from Table 15; capacities from Table 16; added capacity per lane is new VMC divided by new lane-miles.

The capacities shown in Table 16 above were used to estimate system-wide capacity. For each road segment on the existing major roadway system for which traffic counts were available, the generalized capacity of the segment was multiplied by the length of the segment in miles to determine vehicle-miles

of capacity (VMC). These were summed for all segments to determine system-wide capacity. Dividing the system-wide capacity (VMC) by system-wide demand (VMT) calculated earlier yields the VMC/VMT ratio. As shown in Table 18, the major roadway system currently has 1.16 units of capacity for every unit of demand. This represents the current system-wide level of service.

Table 18
EXISTING SYSTEM-WIDE CAPACITY/DEMAND RATIO

Hourly Vehicle-Miles of Capacity (VMC)	759,051
Peak Hour Vehicle-Miles of Travel (VMT)	654,815
Existing VMC/VMT Ratio	1.16

Source: VMC and VMT from Table 43 in Appendix B.

The first step in determining the cost per service unit to add capacity to the major roadway system is to divide the average cost per lane-mile by the average hourly capacity added per new lane. The resulting average cost per VMC must then be multiplied by the system-wide VMC/VMT ratio to determine the cost per VMT. As shown in Table 19, the average cost per service unit is $1,980 per peak hour VMT.

Table 19
COST PER SERVICE UNIT

Average Cost per New Lane-Mile	$1,331,735
Average Hourly Capacity Added per New Lane	780
Average Cost per Peak Hour VMC	$1,707
System-Wide VMC/VMT Ratio	1.16
Cost per Peak Hour VMT	$1,980

Source: Cost per new lane-mile from Table 15; average capacity per new lane from Table 17; VMC/VMT ratio from Table 18.

REVENUE CREDITS

Credit against the cost per service unit would need to be given for outstanding debt for past road improvements, and for motor fuel tax and vehicle license fee revenue that is generated by new development and used to make capital improvements. The City has $125 million in outstanding debt from the 1994 and 2000 bond authorizations as well as several refunding issues for past street improvements. The City relies exclusively on State-shared fuel taxes, also known as Highway User Revenue Funds (HURF), to retire the street bonds. Consequently, it is necessary to give credit for motor fuel tax and vehicle license fee revenue that is generated by new development and used to make capital improvements and retire street bonds.

The credit for outstanding debt for past road improvements can be calculated by dividing total outstanding debt by existing VMT on the major road system to determine the credit per VMT, as shown in Table 20. Essentially, this means that new development will be allowed to pay the same portion of its road costs through HURF-funded debt that existing development does.

Table 20
ROAD DEBT CREDIT PER SERVICE UNIT

Authorization	Bond Issue	Total Amount	Outstanding
1992	Refunding	n/a	$3,930,000
1993	Refunding	n/a	$33,245,000
1994	1995 A	$10,900,000	$10,900,000
1994	1996 B	$10,025,000	$10,025,000
1994	1997 C	$5,000,000	$5,000,000
1994	1998 D	$14,675,000	$14,675,000
1994	2000 E	$19,400,000	$19,400,000
1994	2001	$10,000,000	$10,000,000
1994	Total	$70,000,000	$70,000,000
1996	Refunding	n/a	$7,365,000
2000	2000 A	$0	$0
2000	2001 B	$5,500,000	$5,500,000
2000	2001	$5,000,000	$5,000,000
2000	Unissued	$14,500,000	$0
2000	Total	$25,000,000	$10,500,000
Total Outstanding Road Debt			$125,040,000
Total Peak Hour VMT on Major Road System			764,660
Road Debt Credit per VMT			$164

Source: City of Tucson Finance Department, June 13, 2003 memorandum; total VMT from Table 11.

The City's transportation portion of its Capital Improvement Program (CIP) is funded almost exclusively with motor fuel taxes and highway user fees in one form or another, including HURF, revenue bonds (repaid with HURF money), and funding from Pima Association of Governments (PAG) and the Arizona Department of Transportation (ADOT). Of the total transportation funding for the five-year period of $238 million, only about $67 million is for capacity-expanding improvements, such as widening existing roads, constructing new roads, installing traffic signals or making intersection improvements, as summarized in Table 21. The remaining non-capacity projects include bikeway/pedestrian improvements, transit improvements, drainage projects, lighting and safety improvements and resurfacing, rehabilitation and reconstruction projects.

Table 21
ROAD CAPACITY FUNDING, FY 2004-2008

Improvement	Funding Sources	Total	Capacity
1st Ave: Prince Rd to River Rd (lighting)	GO Bonds, Sp Assess	$400,000	$0
12th Ave: Veterans Blvd to Ajo Way (lighting)	GO Bonds, Sp Assess	$63,000	$0
36th St/Kino Blvd Pedestrian Overpass	HURF, FHA	$1,590,000	$0
5th/6th St Circulation Improvements	HURF, PAG, FHA, Rev Bonds	$200,000	$0
Alamo Wash Drainage Improvements	GO Bonds	$2,800,000	$0
Alternate Modes Improvements	HURF, FHA	$3,421,000	$0
ADA Improvements (signals)	HURF, Rev Bonds	$425,000	$0
Anklam Rd Traffic Safety Improvements	HURF, Cap Agreement	$2,050,000	$0
Arroyo Chico Drainage Improvements	GO Bonds	$1,850,000	$0
Arroyo Chico Greenbelt Extension	GO Bonds	$162,000	$0
Arterial Street Lighitng Pole Relocation (lighting)	Go Bonds, HURF	$1,003,000	$0
Barraza-Aviation Pkwy: 4th Ave Underpass	HURF, PAG, FHA	$15,000,000	$15,000,000
Barraza-Aviation Pkwy: 6th Ave Improvements	HURF, PAG, FHA	$2,009,000	$2,009,000
Barraza-Aviation Pkwy: Downtown Segment	HURF, PAG	$600,000	$600,000
Barraza-Aviation Pkway: Nhood Traf Mitigation	HURF	$200,000	$0
Barraza-Aviation Pkwy: St. Mary's/6th St	PAG, FHA	$7,500,000	$7,500,000
Barraza-Aviation Pkwy: Arroyo Realign I	PAG	$2,800,000	$0
Barrio Anita Enhancements	HURF, FHA	$486,000	$0
Benson Highway: 44th St to Park Ave (lighting)	GO Bond	$32,000	$0
Broadway Blvd Right Turn at El Con Mall	HURF, Cap Agreement	$1,120,000	$0
Broadway Blvd: Euclid to Columbus	PAG	$2,400,000	$2,400,000
Bus Pull-Outs, Shelters, Access and Misc.	Rev Bonds	$2,300,000	$0
Campbell at Adelaide Ped Crossing (signals)	Rev Bonds	$70,000	$0
Campbell Ave: Roger Rd to River Rd (lighting)	GO Bonds, Sp Assess	$220,000	$0
Citation Wash Drainage Improvements	GO Bonds	$65,900	$0
Columbus Wash Drainage Relief, Phase II	GO Bonds	$7,738,500	$0
Communication System Improvements (signal)	Rev Bonds, FHA, HURF	$1,762,700	$1,762,700
Country Club Rd: Broadway to 22nd St (lighting)	GO Bonds, Sp Assess	$550,000	$0
Downtown Pedestrian Improvements	PAG, Rev Bonds, HURF	$1,600,000	$0
El Vado Wash Drainage Improvements	GO Bonds	$2,000,000	$0
Emergency Preemption Sys. Expansion (signals)	Rev Bonds, PAG, FHA	$363,000	$0
Euclid Ave: Broadway to Speedway (lighting)	GO Bonds, Sp Assess	$900,000	$0
Freeway Management System (signals)	Cap Agreement Fund	$445,000	$0
Glenn: Oracle to Craycroft Bike Detection (signals)	Rev Bonds	$20,000	$0
Golf Links & Craycroft Intersection	Rev Bonds	$1,500,000	$1,500,000
Golf Links & Kolb Int. Intersection	Rev Bonds, PAG	$1,280,000	$1,280,000
Grant Road and Campbell Ave Intersection	PAG	$1,000,000	$1,000,000
Greasewood & Ironwood Hills (signal)	Rev Bonds, HURF	$200,000	$200,000
Harrison Rd: Speedway Blvd to Old Spanish Tr	Rev Bonds, PAG, FHA, Sp As	$12,253,000	$12,253,000
Highland Ave Bicycle and Ped Improvements	HURF, FHA, Rev Bonds	$1,250,000	$0
Houghton and Escalante (signal)	Rev Bond, HURF	$212,000	$212,000
Intelligent Transportation Sys: ER Link (signal)	FHA	$1,936,200	$1,936,200
Intelligent Transportation Sys. Imp. (signal)	Rev bonds, Cap Agr, FHA	$591,800	$591,800
Intersection Operational Improvements	Rev Bonds	$2,133,500	$2,133,500
Irvington Rd: Kolb Rd to Camino Seco Blvd	HURF, FHA	$1,377,000	$1,377,000
Jefferson Park Drainage Improvements	GO Bonds, Cap Agreement	$1,689,000	$0
Life Extension and Electrical Upgrades (lighting)	HURF	$739,000	$0
Living Transportation Lab (signal)	Rev Bonds, FHA, HURF	$904,000	$904,000
Machine Vision Detection Sys Upgrds (signals)	Rev Bonds	$2,133,000	$2,133,000
Midvale and Irvington (signal)	Rev Bonds	$150,000	$150,000
Misc On-Call Street and Spot Improvements	HURF	$2,005,000	$0
Misc Developer-Funded Improvements	Cap Agreement	$3,000,000	$0

Improvement	Funding Sources	Total	Capacity
Misc Drainage Improvement Program	GO Bonds	$1,214,700	$0
Misc Traffic Improvements (signals)	Rev Bonds, HURF	$154,000	$154,000
Mission View Wash Det/Ret Facility	GO Bonds	$1,400,000	$0
Mountain Ave: Ft Lowell to Roger (reconstruct)	PAG, HURF	$7,000,000	$0
Neighborhood District Lighting Improvements	HURF, Sp Assess	$2,506,000	$0
Nogales Hwy: Drexel to Irvington (lighting)	GO Bonds, Sp Assess	$320,000	$0
Old Nogales Hwy Pedestrian Overpass	Cap Agreement, HURF	$1,969,000	$0
Oracle, Drachman and Main Intersections	PAG	$2,200,000	$2,200,000
Park Ave/Euclid Ave Multiple Use Bridge	HURF, PAG, FHA	$1,358,100	$0
Park Ave: Valencia to Irvington (lighting)	GO Bonds, Sp Assess	$23,875,600	$0
Pantano Rd: Speedway to 22nd Street (lighting)	GO Bonds, Sp Assess	$642,600	$0
Pantano Wash: Broadway Bank Improvement	Sp Assess	$250,000	$0
Park Ave Detention Basin	GO Bonds	$150,000	$0
Pedestrian Improvements	Rev Bonds	$1,638,000	$0
Resurfacing, Restoration and Rehab	HURF, FHA	$22,686,000	$0
Rillito Creek Habitat Restoration	GO Bonds, Misc Grants	$695,500	$0
Rita Rd & Nexis (signal)	Rev Bonds	$220,000	$220,000
Roger Rd & Fairview Ave (signal)	Rev Bonds, PAG, HURF	$435,100	$435,100
Santa Cruz River Park Extension	GO Bonds, Misc Grants	$1,232,000	$0
School Flashers Construction (signal)	Rev Bonds, Cap Agt, HURF	$1,257,000	$0
School Flashers: Grande @ Fresno (signal)	Rev bonds, Cap Agr, HURF	$64,000	$0
South 10th Ave Bike and Ped Enhancement	PAG, FHA	$1,237,000	$0
South 10th Ave Revitalization	FHA, Cap Agreement	$484,000	$0
South 4th Ave Streetscape Enhancement	HURF, FHA	$509,000	$0
South Yard Drill Track (for new I-10 front rds)	HURF	$231,000	$0
Speedway and Main Intersection	PAG	$200,000	$200,000
Speedway/Stone Ave Gateway Intersection	PAG, FHA, Rev Bonds	$4,000,000	$4,000,000
Starr Pass Blvd Improvements	HURF	$2,000,000	$2,000,000
Stone & Limberlost Intersection Improvements	FHA	$260,000	$260,000
Stone Ave: 6th St. to Speedway	FHA	$474,000	$0
Stone Ave: Speedway to Ft. Lowell Rd.	PAG	$1,280,000	$0
Stone Ave: Ft. Lowell Rd to Wetmore Rd.	PAG	$750,000	$0
Stormwater Quality Program	GO Bonds	$560,000	$0
Tanque Verde/Pima	Rev Bonds, HURF	$300,000	$300,000
Traffic Flasher Construction	Rev Bonds, HURF	$400,000	$400,000
Traffic Signal and Control Equipment Upgrades	Rev Bonds, PAG, FHA, HURF	$423,000	$0
Traffic Signal Construction	Rev Bonds, Cap Agr, HURF	$1,208,000	$1,208,000
Traffic Signal Conversions	Rev Bonds	$1,250,000	$0
Traffic Signal Upgrades	Rev Bonds, HURF	$1,514,000	$0
Transportation Enhancements	HURF, ADOT	$2,750,000	$0
Tucson Stormwater Management Study Imp.	Unfunded	$48,000,000	$0
Turn Signal Modifications and Geometrics	Rev Bonds, HURF	$237,100	$237,100
Wyoming Wash Drainage Improvements	GO Bonds	$200,000	$0
Total		$238,034,300	$66,556,400

Source: City of Tucson, *Approved Five-Year Capital Improvement Program, Fiscal Years 2004 through 2008*, July 1, 2003.

A possible source of funding not reflected in the City's CIP is Pima County transportation bonds. Voters approved a County bond issue in 1997 that included funding for a number of City streets. The bonds are repaid with the County's allocation of HURF funds, which is based on the population of the unincorporated area of Pima County. Credit for the portion of this funding going to City street improvements is not required, since development inside the Tucson city limits does not result in increased funding. Nevertheless, to be conservative, a credit will be calculated.

The bond authorization included 19 projects that were totally or partially located within the City of Tucson corporate limits. Taking away one project that was eliminated by the County Board of Supervisors, the remaining City projects total $158 million. Of these, two have been completed with City assistance, one has been partially completed with County funds and three are moving forward and are assumed not to need additional City assistance. Of the remaining projects, the City is primarily interested in six, and is urging the County to fund high priority initial phases and let the City participate in later stages as funding becomes available (the County has not accepted this option). It is difficult to know precisely which projects will be funded in what time-frame. Historically, the three projects that have been funded so far total about $12.4 million, which works out to about $2 million per year. Alternatively, if it is assumed that the money for City projects will be spent over 20 years, that works out to about $7.9 million annually. This somewhat more optimistic level of funding will be assumed for the purposes of calculating a revenue credit. The County bond program for City streets is summarized in Table 22.

Table 22
PIMA COUNTY TRANSPORTATION BONDS FOR CITY STREETS

Project Number	Project Name	Status	Bond Funding
DOT-55	Golf Links Road, Bonanza to Houghton	Completed	$2,500,000
DOT-39	Valencia Rd, I-19 to S 12th Ave	Completed	$900,000
DOT 43	12th Ave, Veterans to Los Reales	Underway	$9,000,000
DOT-11	Drexel Rd, Tucson to Alvernon	Pending	$6,500,000
DOT-12	Country Club, 36th St to Irvington	Pending	$7,000,000
DOT-29	Houghton Rd, Golf Links to Speedway	Pending	$20,000,000
DOT-05	Alvernon Way, Ft Lowell to River Rd	Requested by City	$6,000,000
DOT-28	Sppedway Blvd, Camino Seco to Hougton	Requested by City	$8,000,000
DOT-31	Tanque Verde, Caalina Hwy to Houghton	Requested by City	$7,100,000
DOT-40	Grant Dr, Oracle to Park Ave	Requested by City	$10,000,000
DOT-49	Valencia Rd, Mission ot I-19	Requested by City	$4,000,000
DOT-56	Broadway Blvd, Euclid to Country Club	Requested by City	$15,000,000
DOT-010	River Rd, First to Campbell	Lower Priority	$15,500,000
DOT-04	River Rd, Campbell to Alvernon	Lower Priority	$13,500,000
DOT-14	Wetmore/Ruthraff, La Cholla to Fairview	Lower Priority	$7,800,000
DOT-15	River Rd, Thornydale to Shannon	Lower Priority	$4,000,000
DOT-20	La Cholla Blvd, I-10 to Ruthraff	Lower Priority	$15,000,000
DOT-30	Catalina Hwy, Tanque Verde to Houghton	Lower Priority	$6,200,000
Total			$158,000,000
Total, Completely or Partially Funded to-Date			$12,400,000

Source: City of Tucson, *Approved Five-Year Capital Improvement Program, Fiscal Years 2003-2007*, p. B-118 and *Approved Five-Year Capital Improvement Program, Fiscal Years 2004-2008*, p. B-112.

As shown in Table 23, the CIP/County funding credit per service unit is based on the present value of the anticipated capacity funding per peak hour VMT over the typical 20-year life of roadway improvements.

Table 23
ROAD FUNDING CREDIT PER SERVICE UNIT

Annual CIP Capacity Funding	$13,311,280
Assumed Annual Pima County Bond Funding	$7,900,000
Total Annual Capacity Funding	$21,211,280
Total Peak Hour VMT on Major Road System	764,660
Annual Capacity Funding per Peak Hour VMT	$27.74
Present Value Factor (4.88% for 20 years)	$12.59
Revenue Credit per Peak Hour VMT	$349

Source: Annual CIP funding is one-fifth of capacity funding from Table 21; annual Pima County bond funding is one-sixth of $12.4 million spent on City projects since 1997 authorization; total peak hour VMT from Table 22; present value factor based on 4.88% discount rate, which is the average interest rate on 20-year AAA municipal bonds cited on bloomberg.com, bondsonline.com, fmsbonds.com and bonds.yahoo.com on June 4, 2004.

The revenue credit per service unit is subtracted from the cost per service unit to determine the net cost per service unit on which potential impact fees may be based. The net cost per service unit for the road impact fees is shown in Table 24.

Table 24
ROAD NET COST PER SERVICE UNIT

Cost per Peak Hour VMT	$1,980
Debt Credit per Peak Hour VMT	$164
CIP/County Funding Cedit per Peak Hour VMT	$349
Net Cost per Peak Hour VMT	$1,467

Source: Cost per VMT from Table 19; debt credit per VMT from Table 20; CIP credit per VMT from Table 23.

POTENTIAL FEE SCHEDULE

Using the impact fee formula and the inputs calculated in this report, the maximum potential road impact fees per unit of development for various land uses are shown in Table 25 (residential uses in the Central Core would be assessed somewhat lower fees). Two residential fee assessment options are shown: charging by dwelling size or housing type. The impact fee ordinance will contain a provision allowing the option of independent fee determination studies for those applicants who can demonstrate that their development will have less impact on the need for road facilities than indicated by the fee schedule. Impact fees could be adopted at less than 100 percent of the level shown in the net cost schedule, provided that the reduction is applied uniformly across all land use categories in order to retain the proportionality of the fees.

Table 25
ROAD NET COST SCHEDULE

Land Use Type	Unit	Pk Hr VMT	Net Cost / VMT	Net Cost / Unit
Progressive Residential Fees by Unit Size:				
Less than 500 sq. ft.	Dwelling	1.49	$1,467	$2,186
500 - 749 sq. ft.	Dwelling	1.87	$1,467	$2,743
750 - 999 sq. ft.	Dwelling	2.18	$1,467	$3,198
1,000 - 1,249 sq. ft.	Dwelling	2.36	$1,467	$3,462
1,250 - 1,499 sq. ft.	Dwelling	2.61	$1,467	$3,829
1,500 - 1,999 sq. ft.	Dwelling	2.86	$1,467	$4,196
2,000 - 2,999 sq. ft.	Dwelling	2.99	$1,467	$4,386
3,000 - 3,999 sq. ft.	Dwelling	3.11	$1,467	$4,562
4,000 sq. ft. or more	Dwelling	3.23	$1,467	$4,738
Single-Family Detached*	Dwelling	2.74	$1,467	$4,020
Multi-Family*	Dwelling	1.93	$1,467	$2,831
Mobile Home Park*	Pad	1.74	$1,467	$2,553
Hotel/Motel	Room	0.82	$1,467	$1,203
NONRESIDENTIAL				
General Retail/Commercial	1000 sq. ft.	2.71	$1,467	$3,976
Office/Institutional	1000 sq. ft.	3.22	$1,467	$4,724
Hospital	1000 sq. ft.	2.23	$1,467	$3,271
Nursing Home	1000 sq. ft.	0.79	$1,467	$1,159
Church	1000 sq. ft.	0.94	$1,467	$1,379
Elementary/Sec. School	1000 sq. ft.	0.45	$1,467	$660
Industrial/Warehousing	1000 sq. ft.	1.39	$1,467	$2,039

* fees lower in Central Core area by 0.77 reduction factor from Table 5
Source: Peak hour VMT per unit from Table 14; net cost per VMT from Table 24.

PARKS

Tucson residents currently have access to 126 parks, including two regional parks, 15 metro parks, 16 community parks, 57 neighborhood parks, 24 school parks and 12 mini-parks. The City also provides 15 recreation centers, two special service centers and 26 swimming pools (including seven year-round pools). While none of the jurisdictions in Pima County currently assess a park impact fee, the County charges a park fee in-lieu of dedication of $1,500 per unit. Outside of Pima County, however, park impact fees are charged by many Arizona cities.

SERVICE UNIT

Most park impact fees are assessed only on new residential development.. For example, of the 18 Arizona municipalities that charge park impact fees, only two (Phoenix and Sedona) assess them on nonresidential development. Because it is more difficult to demonstrate the nexus between nonresidential development and the need for additional park facilities, it is recommended that Tucson assess park impact fees only on residential development.

The common unit of measurement that reflects the impact of new development on the demand for capital facilities is called the "service unit." The most common service unit used in park impact fee analysis is population. Population estimates are based on three factors: the number of dwelling units, average household sizes for various types of units and occupancy rates. The number of dwelling units can be estimated with some degree of precision, and average household size has been declining somewhat predictably but has been stabilizing in recent years. Occupancy rates, on the other hand, tend to vary significantly over time, and not in predictable directions. Consequently, this report recommends the use of a service unit that avoids the need to make assumptions about occupancy rates. Instead of population, the recommended service unit is the "equivalent dwelling unit" or EDU, which represents the impact of a typical single-family dwelling. By definition, a typical single-family unit represents, on average, one EDU. Other types of units each represent a fraction of an EDU, based on their relative average household sizes.

Much of the differential in average household sizes between housing types is due to differences in the size of the dwelling units (e.g., single family homes tend to have more people than apartments because they tend to be larger). The possibility of varying the fees by the size of the unit is provided as a policy alternative.

When calculating an impact fee, data on average household size for various types of housing units is a critical component. The most recent and reliable data on average household size in the City of Tucson is the 2000 U.S. Census. As shown in Table 26 below, average household size varies significantly by housing type, ranging from 2.04 persons per multi-family unit to 2.76 persons per single-family detached unit.

Table 26
AVERAGE HOUSEHOLD SIZE BY HOUSING TYPE

Housing Type	Household Population	Occupied Units	Avg. HH Size
Single-Family Detached	269,684	97,843	2.76
Multi-Family	165,644	81,361	2.04
Mobile home	31,127	13,127	2.37
All Housing Types	466,455	192,331	2.43

Source: 2000 U.S. Census for the City of Tucson, Summary File 3 (1 in 6 sample data).

The City may desire to vary the fees by the size of the dwelling unit. While the Census Bureau does not collect data on the square footage of dwelling units, it does collect data on the number of bedrooms and rooms[5] in the unit, characteristics that are related to dwelling unit size. If the calculated fees are based on dwelling unit size, it is recommended that the fees be based on square footage rather than number of bedrooms or rooms. This cost per square foot approach will not only avoid any type of confusion that might arise when trying to establish how many bedrooms or rooms a new unit might have, it also avoids sharp jumps in the fee that will occur at thresholds between the different size categories.

The most recent and reliable data on average household size by number of bedrooms or rooms is the five percent sample data from 2000 U.S. Census. The five percent sample data for the City of Tucson is combined with sample data for some other cities and unincorporated portions of Pima County. However, the City of Tucson makes up 73 percent of the total population sampled. The results obtained should therefore be representative of the City of Tucson. The average household size for all single-family units from the two samples is identical, and for multi-family is almost identical. Because of the nature of the data sources for unit size in square feet, the average household size was varied by rooms for single-family units and by bedrooms for multi-family, as shown in Table 27.

Table 27
AVERAGE HOUSEHOLD SIZE BY ROOMS AND BEDROOMS

Housing Type	Sample Households	Weighted Population	Weighted Households	Avg. HH Size
Single-Family, 4 Rooms or Fewer	1,245	58,662	24,141	2.43
Single-Family, 5 Rooms	1,744	91,937	34,494	2.67
Single-Family, 6 Rooms	1,674	93,632	33,617	2.79
Single-Family, 7 Rooms	1,010	60,023	20,513	2.93
Single-Family, 8 Rooms or More	657	44646	13585	3.29
All Single-Family Detached Units	6,330	348,900	126,350	2.76
Multi-Family, Efficiency	433	15,132	10,140	1.49
Multi-Family, One Bedroom	1,409	53,483	32,345	1.65
Multi-Family, Two Bedrooms	1,533	78,925	34,582	2.28
Multi-Family, Three Bedrooms	353	23,902	7,885	3.03
Multi-Family, Four Bedrooms or more	72	6,014	1,533	3.92
All Multi-Family Units	3,800	177,456	86,485	2.05

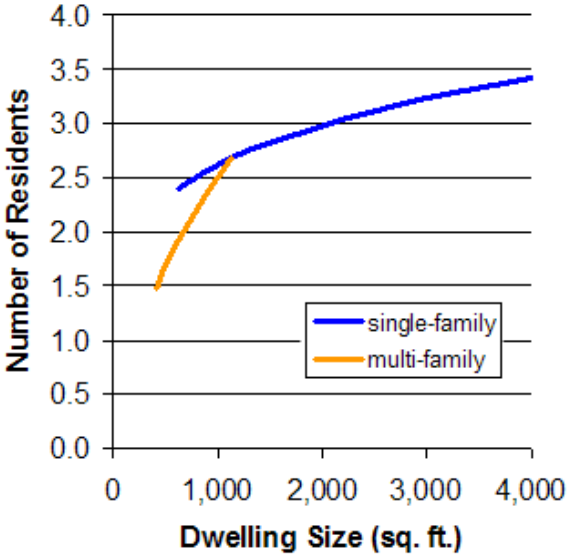
Source: U.S. Census Bureau, 2000 Public Use Microdata Sample (PUMS), 5 percent weighted sample data for portions of Pima County including the City of Tucson (PUMAs 201, 202, 204, 206 and 207) for households occupying single-family detached and multi-family units.

[5] The Census Bureau defines rooms as excluding hallways, bathrooms, porches and unfinished attics and basements.

To determine a relationship between the unit square footage and household population, the consultant compiled a data set with information on the square footage of dwelling units from single-family detached and multi-family units derived from two different data sources. For single-family detached units, the consultant analyzed Pima County Tax Assessor data for the 2004 tax year. Tax Assessor data gives total living space in square feet and the total number of rooms for the majority of single-family homes in the City of Tucson. Data from the Arizona Multi-Family Housing Association provides information on all apartment complexes in the City of Tucson consisting of 20 or more units. This information includes the number of dwelling units by floor plan, and the floor plan information includes number of bedrooms and square footage. From these two data sources, a stratified random sample was taken that was distributed in the same proportion by housing type and size (rooms for single-family and bedrooms for multi-family) as households from the 2000 Census.

The combined data base consisted of information on 10,000 single-family detached and multi-family dwelling units. To this data base, a variable for average household size was added, consisting of the average household size multipliers by housing type and number of bedrooms or rooms derived from 2000 U.S. Census sample data. Regression analysis was then performed to determine the relationship between unit size in square feet and persons residing in the unit. Housing type turned out to be significant, with single-family and multi-family units displaying much different relationships.

Figure 6
HOUSEHOLD SIZE BY UNIT SIZE



Both linear and logarithmic regressions were performed.[6] The logarithmic equations had somewhat better explanatory power, accounting for 59.5 percent of the variation in single-family household size, compared to 52.6 percent for the linear equation, and accounting for 73.8 percent of the variation in multi-family household size, compared to 72.3 percent for the linear equation.

While the equations for single-family detached and apartment units are very different, there is actually relatively little overlap and at 1,125 square feet, the midpoint of the 1,000 to 1,250 square feet category, the two equations produce the identical result. Only 2.2 percent of the apartment units in the sample are larger than 1,250 square feet, and while 21.6 percent of the single-family units in the sample are less than 1,000 square feet, it is unlikely that very many homes that size are being built in Tucson today. Consequently, the progressive residential rates will be based on the multi-family equation for up to 1,000 square feet, and on the single-family equation for the larger size categories (see Table 28).

[6] The linear equation for single-family detached units is y = 0.000336 * x + 2.30 (0.0526 r-square), where x is square feet of living area and y is household size. The logarithmic equation for single-family is ln(y) = 0.191 * ln(x) - 0.356 (0.595 r-square). The linear equation for multi-family units is y = 0.00181 * x +0.75 (r-square = 0.726). The logarithmic equation for multi-family is ln(y) = 0.579 * ln(x) - 3.087 (r-square = 0.738).

As described earlier, the proposed service unit for the park impact fees is defined as an equivalent dwelling unit, or EDU. An EDU is a unit that has an average household size equivalent to a typical single-family unit in Tucson. The EDUs associated with each housing type and with various dwelling size categories are shown in Table 28.

Table 28
PARK EQUIVALENT DWELLING UNIT MULTIPLIERS

Housing Type or Unit Size	Midpoint (sq. ft.)	Avg. HH Size	EDUs/Unit
Single-Family Detached	n/a	2.76	1.00
Multi-Family	n/a	2.04	0.74
Mobile Home	n/a	2.37	0.86
Unit Size Alternative:			
Less than 500 sq. ft.	375	1.41	0.51
500 - 749 sq. ft.	625	1.90	0.69
750 - 999 sq. ft.	875	2.31	0.84
1,000 - 1,249 sq. ft.	1,125	2.68	0.97
1,250 - 1,499 sq. ft.	1,375	2.78	1.01
1,500 - 1,999 sq. ft.	1,750	2.91	1.05
2,000 - 2,999 sq. ft.	2,500	3.12	1.13
3,000 - 3,999 sq. ft.	3,500	3.32	1.20
4,000 sq. ft. or more	4,500	3.49	1.26

Source: Average household size for all sizes of single-family detached, multi-family and mobile home units from Table 26; average household sizes by square footage category based on multi-family logarithmic formula for less than 1,000 square feet and on single-family logarithmic formula for 1,000 square feet and larger units (see footnote on preceding page for formulas); EDUs per unit is ratio of average household size to single-family detached average household size.

The number of existing park service units can be determined by multiplying the number of dwelling units by the park service units per dwelling unit for each housing type. This is done in Table 29.

Table 29
EXISTING PARK SERVICE UNITS

Land Use	Dwelling Units	EDUs/ Unit	Park EDUs
Single-Family Detached	112,141	1.00	112,141
Multi-Family	93,457	0.74	69,158
Mobile Home	18,415	0.86	15,837
Total	224,013		197,136

Source: Existing units from Table 41; EDUs/unit from Table 28.

SERVICE AREAS AND BENEFIT DISTRICTS

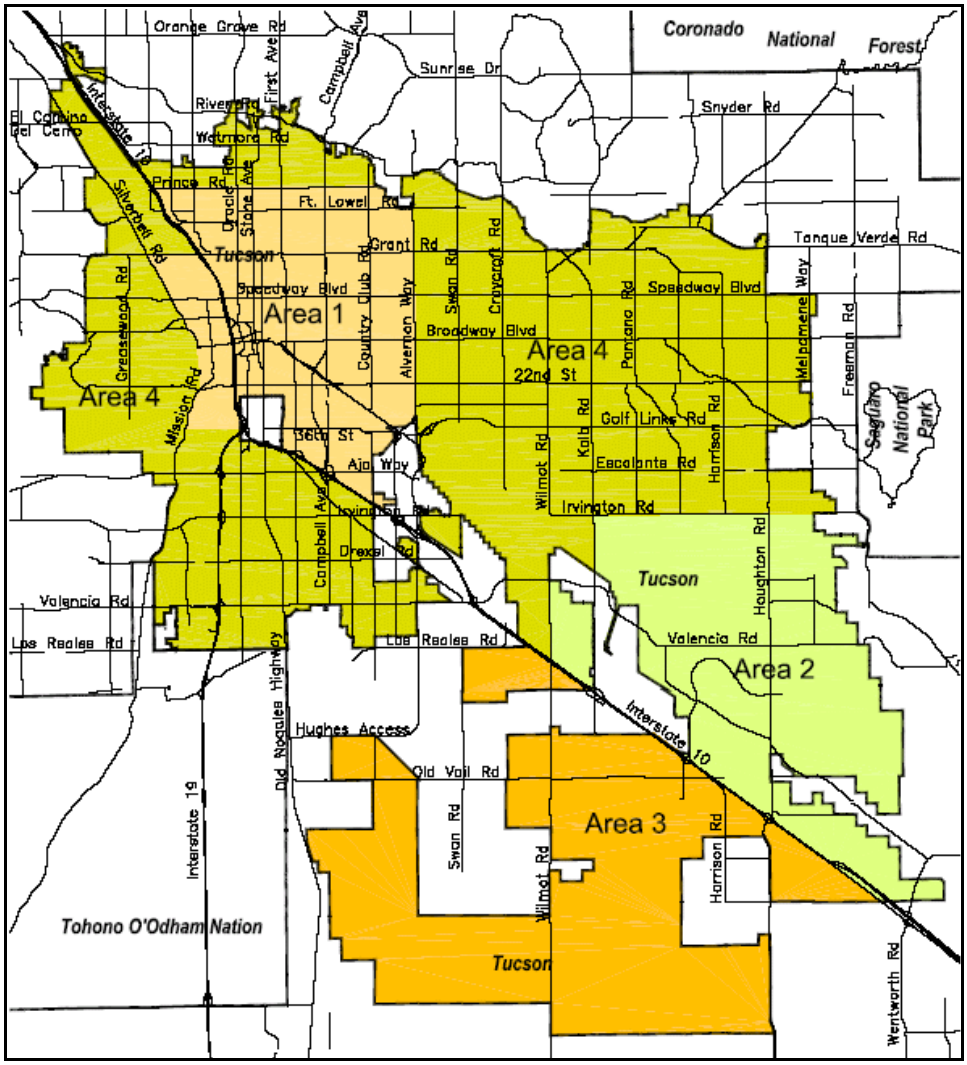
The concept of service areas and benefit districts was described in the section on roads. Service areas are geographic areas subject to a single fee schedule. Service areas may be divided into multiple benefit districts, which are areas where fees collected are earmarked to be spent.

The consultant recommends using a single city-wide service area for calculating park impact fees, but dividing the city into a number of benefit districts to ensure that funds are spent in reasonable proximity

to the development that pays the fees. The primary rationale for multiple service areas would be a significant variation in land costs between different parts of the city. Since additional park land is likely to be purchased in newly-developing areas, it is the difference in land costs between such areas that is most relevant. Based on discussion with City staff, there are unlikely to be significant variations in land cost between various growth areas.

As noted above, it is recommended that the city be divided into several benefit districts in order to better demonstrate reasonable benefit to fee-paying developments. The impact fee stakeholder group appointed by the City Council has recommended dividing the city into four districts as illustrated in Figure 7. Since the proposed Area 4 encircles Area 1, it may be advisable to divide it into two areas that are somewhat more compact.

Figure 7
POTENTIAL PARK BENEFIT DISTRICTS



COST PER SERVICE UNIT

The major choice in methodology for park impact fees is not improvements-driven versus consumption-based, but the choice between basing the fees on the existing level of service or on a desired future level of service. Most park master plans strive to achieve a desired level of service, and the City's draft park master plan is no exception. While this is appropriate for planning purposes, it is not always desirable for impact fees. A fundamental principle of impact fees is that new development should not be charged for a higher level of service than is being provided to existing development. If the fees are based on a higher level of service, a source of funding other than impact fees must be found to bring the level of service provided to existing development up to the standard on which the impact fees for new development is based. Since in most cases new development will be contributing to the alternative revenue source being used to remedy the deficiency, the impact fees must be reduced to account for this. Because of these considerations, it is generally advisable to base the park impact fees on the existing level of service.

The level of service in park plans is often couched in terms of acres per 1,000 population. However, since the capital investment represented by an acre of passive park land is much different from an acre of intensively improved park land, a better measure of level of service for impact fee purposes is existing replacement costs per service unit. As previously discussed, the recommended service unit for Tucson's park impact fees is the equivalent dwelling unit, or EDU.

Another consideration is what types of park facilities to include in a park impact fee. The City provides a wide range of park facilities, ranging from mini-parks to regional parks. Based on discussion with City staff, the City Council may wish to consider excluding the cost of neighborhood parks from the park impact fee calculations. To allow for this option, this report calculates the fees separately for neighborhood/mini parks and for community/metro/regional parks.

The City's existing parks are listed in Table 30. Specialized facilities, such as the Rodeo Grounds and golf courses, have been excluded from the list. The Colorado Rockies' spring training stadium and surrounding practice fields also are not included in calculating the existing level of service for the park impact fee. Finally, City park improvements located on school sites are not shown, because the City does not own the land (the school parks are included in the improvements inventory in Appendix C).

Table 30
EXISTING PARK ACRES

Park	Acres	Park	Acres
Cherokee Avenue	0.58	Rolling Hills	4.50
Jardin de Cesar Chavez	0.13	Santa Rosa	6.01
Manuel Valenzuela Alvarez	0.21	Sears	9.72
Mariposa	0.48	Stefan Gollob	7.40
Riverview	0.92	Swan	5.53
San Augustine	0.44	Swanway	2.28
San Gabriel	0.46	Tahoe	2.08
Seminole	0.45	Tierra Del Sol	3.53
Street Scene	0.61	Toumey	6.62
Sunset	0.34	Villa Serena	1.58
Verdugo	0.47	Vista del Prado	8.64
Subtotal, Mini Parks	5.09	Vista del Pueblo	3.71
		Vista del Rio	3.00
20/30	5.45	Wilshire Heights	2.37
Alvernon	2.76	Subtotal, Neighborhood Parks	254.86
Amphi Neighborhood	1.79		
Balboa Heights	1.16	Ada McCormick	17.97
Bravo	5.30	Freedom	34.46
Catalina	4.19	Himmel	26.36
Cherry Avenue	5.00	Jesse Owens	39.10
Conner	1.97	Joaquin Murrieta	38.00
Country Club Annex	2.71	Juhan	16.88
David G. Herrera and Ramon Quiroz	6.36	Mansfield	20.39
De Anza	5.44	Michael Perry	34.92
Desert Aire	1.73	Mission Manor	38.12
Desert Shadows	6.40	North Central	38.65
Don Hummel	6.55	Palo Verde	30.69
Eastmoor	2.40	Purple Heart	36.34
El Pueblo	8.68	San Juan	38.79
Escalante	4.90	Santa Rita	22.70
Estevan	7.79	Sunnyside	32.01
Fiesta	3.20	Subtotal, Community Parks	465.38
Francisco Elias Esquer	1.39		
Groves	10.00	Case	40.50
Harold Bell Wright	2.50	Charles Ford-Lakeside	50.53
Harriet Johnson	1.39	Fort Lowell	58.94
Hoffman	3.76	Gene C. Reid	131.32
Iron Horse	5.00	Golf Links Sports Complex	54.00
Jacinto	1.59	Greasewood	160.00
James Thomas	9.04	Houghton	70.00
La Madera	5.19	Jacobs	49.22
La Mar	2.36	John F. Kennedy	167.59
Linden	3.42	Kino/36th St	52.80
Menlo	11.49	Abe Lincoln	190.81
Mesa Village	2.38	Morris K. Udall	172.80
Military Plaza	4.05	Rudy Garcia	49.95
Miracle Mile Manor	1.09	Santa Cruz	125.12
Mirasol	5.48	Valle Allegre	77.00
Mitchell	1.84	Subtotal, Metro Parks	1,450.58
Oaktree	7.29		
Ormsby	4.77	Christopher Columbus	346.19
Parkview	3.50	Sentinel Peak	272.93
Pinecrest	1.49	Subtotal, Regional Parks	619.12
Pueblo Gardens	5.24		
Rodeo Wash	9.85	Total	2,795.03

Source: Tables 44 and 45 in Appendix C (neighborhood school parks not shown).

Land costs are the most difficult to determine because the City has not purchased very many parcels for park purposes in recent years. The Parks and Recreation Department estimates that future purchases will cost in the neighborhood of $50,000 per acre. Four acquisitions dating back to 1987 averaged about $45,000 per acre in current dollars (see Table 31). This appears to be a conservative figure, and it will be used in the impact fee calculations.

Table 31
AVERAGE PARK COST PER ACRE

Parcel	Acres	Original Cost	Year	CPI	Current Cost	Cost/Acre
Case Park	54.49	$1,850,472	1987	1.655	$3,062,531	$56,204
Juhan Park	17.50	$500,000	1991	1.380	$690,000	$39,429
Kino/36th	35.13	$1,059,068	1999	1.128	$1,194,629	$34,006
Kino/36th	14.83	$525,000	2000	1.092	$573,300	$38,658
Total	121.95	$3,934,540			$5,520,460	$45,268

Source: Parcel descriptions and costs from Real Estate Division, Tucson Department of Transportation, December 23, 2003; "CPI" is cost inflation factor based on U.S. Bureau of Labor Statistics, Consumer Price Index, All Urban Customers, U.S. City Average, All Items (1982-1984=100) for April 2004 from http://data.bls.gov/cgi-bin/surveymost.

In addition to land costs, a park impact fee needs to consider the capital cost of developing a park (the cost of providing tennis courts, soccer fields, baseball fields, barbeque pits etc.). In order to incorporate the cost of park development into an impact fee, a detailed inventory of facilities for each park was provided by the Parks and Recreation Department (see Tables 44 and 45 in Appendix C). City park staff also provided current replacement costs for the various types of improvements. As can be seen in Table 32, the current replacement cost of mini and neighborhood park improvements is about $112 million, and the replacement cost of community, metro and regional park improvements is about $220 million.

Table 32
EXISTING PARK IMPROVEMENT COSTS

Improvement	Mini/NH Parks	Comm/ Regional	Unit Cost	Mini/NH Cost	Comm/ Reg. Cost
Turf (acres)	173.40	512.83	$27,225	$4,720,815	$13,961,797
Youth Baseball w/Lights	3	17	$460,000	$1,380,000	$7,820,000
Youth Baseball w/o Lights	17	5	$350,000	$5,950,000	$1,750,000
Adult Baseball w/Lights	6	12	$625,000	$3,750,000	$7,500,000
Adult Baseball w/o Lights	5	7.5	$400,000	$2,000,000	$3,000,000
Public Restrooms	14	56	$175,000	$2,450,000	$9,800,000
Bocci Courts w/ Lights	0	4	$20,000	$0	$80,000
Recreation Center (sq. ft.)	91,802	177,694	$235	$21,573,470	$41,758,090
Neighborhood Center (sq. ft.)	3,415	56,561	$235	$802,525	$13,291,835
Concessions	2	15	$20,000	$40,000	$300,000
Dog Off-leash Area	0	1	$200,000	$0	$200,000
Exercise Center	2	1	$35,000	$70,000	$35,000
Exercise Course	1	4	$45,000	$45,000	$180,000
Soccer w/Lights	2	15	$550,000	$1,100,000	$8,250,000
Soccer w/o Lights	3	13	$400,000	$1,200,000	$5,200,000
Frisbee Golf Course	0	1	$35,000	$0	$35,000
Handball/Racquetball w/Lights	8	4	$30,000	$240,000	$120,000
Handball/Racquetball w/o Lights	0	8	$36,000	$0	$288,000
Horseshoe Pits w/Lights	0	2	$20,000	$0	$40,000
Horseshoe Pits w/o Lights	5	12	$32,000	$160,000	$384,000
Basketball Court w/Lights	43.5	11.5	$50,000	$2,175,000	$575,000
Basketball Court w/o Lights	22	8	$40,000	$860,000	$320,000
Multiple Use Field w/Lights	1	5	$550,000	$550,000	$2,750,000
Multiple Use Field w/o Lights	22	28	$400,000	$8,800,000	$11,200,000
Orienteering Course	0	1	$25,000	$0	$25,000
Amphitheater	4	5	$1,500,000	$6,000,000	$7,500,000
Picnic Site (Ramada, Tables, Grill)	89	107	$75,000	$6,675,000	$8,025,000
Playground	65	40	$95,000	$6,175,000	$3,800,000
Group Ramada	0	7	$40,000	$0	$280,000
Roller Blading/Skating	2	1	$4,000,000	$8,000,000	$4,000,000
Softball Field w/Lights	8	25	$500,000	$4,000,000	$12,500,000
Softball Field w/o Lights	0	3	$375,000	$0	$1,125,000
Swimming Pool	10	18	$1,700,000	$17,000,000	$30,600,000
Waterslide	1	5	$150,000	$150,000	$750,000
Tennis Courts w/Lights	51	16	$50,000	$2,550,000	$800,000
Tennis Courts w/o Lights	18	32	$37,000	$666,000	$1,184,000
Volleyball Court (Grass)	1	4	$6,000	$6,000	$24,000
Volleyball Court (Sand) w/Lights	51	16	$18,000	$918,000	$288,000
Volleyball Court (Sand) w/o Lights	3	1	$12,000	$36,000	$12,000
Drinking Fountain	82	173	$1,800	$147,600	$311,400
BBQ Grill	80	205	$800	$64,000	$164,000
Dusk-to-Dawn Lights	45	22	$3,000	$135,000	$66,000
Parking, Lighted (spaces)	108	4,538	$3,000	$324,000	$13,614,000
Parking, Unlighted (spaces)	302	1,675	$1,900	$573,800	$3,182,500
Multi-Use Path (miles)	1.58	25.15	$115,000	$181,700	$2,892,250
Reclaimed Irrigation (acres)	17	16	$25,000	$425,000	$400,000
Total Replacement Cost				$111,893,910	$220,381,872

Source: Quantities from Table 44 for mini and neighborhood parks and Table 45 for community, metro and regional parks.

Based on the historical average cost per acre calculated above, the City's existing mini and neighborhood park land is estimated to have a value of about $12 million. Adding that to the current replacement cost of existing improvements results in a total existing neighborhood park replacement cost of about $124 million. Dividing the total replacement cost by the number of existing park service units results in a cost of $627 per EDU for neighborhood parks. The City's existing community, metro and regional park land is estimated to have a value of about $115 million. Adding that to the current replacement cost of existing community, metro and regional park improvements results in a total existing park replacement cost of about $335 million. Dividing the total replacement cost by the number of existing park service units results in a cost of $1,700 per EDU for community, metro and regional parks. These calculations are summarized in Table 33.

Table 33
PARK COST PER SERVICE UNIT

	Neighborhood / Mini Parks	Community / Reg. Parks
Total Existing Park Acres	259.95	2,535.08
Average Land Cost per Acre	$45,268	$45,268
Estimated Land Value	$11,767,417	$114,758,001
Improvement Replacement Cost	$111,893,910	$220,381,872
Total Existing Park Replacement Cost	$123,661,327	$335,139,873
Existing Service Units (EDUs)	197,136	197,136
Park Cost per EDU	$627	$1,700

Source: Existing acres from Table 30; cost per acre from Table 31; improvement replacement costs from Table 32; existing EDUs from Table 29.

REVENUE CREDITS

Credit against the cost per service unit would need to be given for outstanding debt for past park improvements, and for anticipated grant funding and other outside funding that could pay some of the costs of growth-related park improvements.

The City's outstanding general obligation bond debt is summarized in Table 34. Remaining bond issues from the 1984, 1994 and 2000 bond authorizations included funding for $35 million in park-related projects. Of this amount, $29 million was for capacity improvements, as opposed to maintenance, and of this, $21 million remains outstanding.

Table 34
OUTSTANDING DEBT FOR PAST PARK IMPROVEMENTS

Author-ization	Bond Issue	Original Amount	Outstanding Principal	Total Park Amount	Park Capacity	Outstanding Park Capacity
1984	1992 E/F	$24,999,710	$2,143,060	$2,335,000	$2,335,000	$200,164
1994	1995 A	$23,600,000	$19,100,000	$7,000,000	$7,000,000	$5,665,254
1994	1996 B	$24,745,000	$3,745,000	$5,690,000	$5,690,000	$861,146
1994	1997 C	$10,510,000	$10,510,000	$3,200,000	$3,200,000	$3,200,000
1994	1998 D	$11,010,000	$11,010,000	$7,210,000	$7,210,000	$7,210,000
1994	1999 E	$11,035,000	$11,035,000	$0	$0	$0
1994	Subtotal	$80,900,000	$55,400,000	$23,100,000	$23,100,000	$16,936,400
2000	2000 A	$18,840,000	$18,840,000	$2,116,000	$1,301,200	$1,301,200
2000	2001 B	$26,680,000	$26,680,000	$7,884,000	$2,613,800	$2,613,800
2000	Subtotal	$45,520,000	$45,520,000	$10,000,000	$3,915,000	$3,915,000
Total		$151,419,710	$103,063,060	$35,435,000	$29,350,000	$21,051,564

Source: City of Tucson Finance Department, June 13, 2003 memorandum.

There also needs to be recognition of the fact the Pima County has provided funding for some City park improvements in the past, and may do so again in the future. The funding was provided from $17.85 million in County park bonds authorized in 1997. Of that amount, about $3 million was earmarked for four of the City's community and metro parks, as summarized in Table 35.

Table 35
COUNTY FUNDING FOR CITY PARKS

Park	Improvement Description	Co. Funding
Freedom Park	Construction of recreation center	$1,400,000
Santa Rita	Lighting for existing baseball field	$200,000
Morris Udall	Lighted soccer field, restrooms, parking	$500,000
Santa Cruz	Sports field complex	$850,000
Total		$2,950,000

Source: Bond improvement plan for Pima County May 1997 special election (http://www.dot.co.pima.az.us/bonds/may97/tablecon.html.

In addition, some credit will need to be provided for State and Federal park grants. Credit should be given for grant funding used for capacity improvements to the City's community, metro and regional park system. The City has not used Community Development Block Grant money for park improvements since 1999. The Land and Water Conservation Fund grant program ended in the 1980s, and was replaced by Arizona Heritage Fund grants. Rather than attempting to project future grant funding, historical funding can be used to calculate a credit that takes into account the fact that some of the cost of growth-related improvements will be defrayed by outside funding sources. The Federal and State grants that the City has received and used for capacity-expanding improvements to municipal parks since 1966, adjusted to current dollars, are presented in Table 36.

Table 36
HISTORICAL PARK GRANT FUNDING

Year	Project Description	Source*	Original Amount	CPI Factor	NH Parks	Com/Reg Parks
1966	Palo Verde Swimming Pool and Bathhouse	LWCF	$29,128	5.802		$169,001
1966	Mission and Jacobs Park Playfields	LWCF	$25,987	5.802		$150,777
1966	Mansfield Swimming Pool and Bathhouse	LWCF	$36,921	5.802		$214,216
1966	Pueblo Gardens Bathhouse	LWCF	$9,476	5.802	$54,980	
1966	Night Lighting and Multiple-Use Court Lights	LWCF	$30,634	5.802		$177,738
1967	Jesse Owens Swimming Pool and Bathhouse	LWCF	$38,709	5.629		$217,893
1967	Palo Verde Playfield Lights	LWCF	$10,079	5.629		$56,735
1970	Jacobs Park Improvements	LWCF	$14,169	4.845		$68,649
1970	Vista del Pueblo Park Improvements	LWCF	$923	4.845	$4,472	
1970	Mirasol Park Improvements	LWCF	$12,763	4.845	$61,837	
1970	Kennedy Park Improvements	LWCF	$4,495	4.845		$21,778
1970	Palo Verde Park Improvements	LWCF	$946	4.845		$4,583
1970	Rodeo Park Improvements	LWCF	$11,845	4.845		$57,389
1970	Mission Park Improvements	LWCF	$11,416	4.845		$55,311
1970	Mansfield Park Improvements	LWCF	$3,782	4.845		$18,324
1970	Jess Owens Park Improvements	LWCF	$12,699	4.845		$61,527
1971	Street Scene Park Acquisition	LWCF	$19,000	4.642	$88,198	
1971	Street Scene Park Development	LWCF	$8,540	4.642	$39,643	
1971	Northwest District Park Acquisition	LWCF	$82,032	4.642		$380,793
1971	Northwest District Park Development	LWCF	$70,530	4.642		$327,400
1971	Oury Park Acquisition	LWCF	$16,500	4.642	$76,593	
1971	Oury Park Development	LWCF	$26,215	4.642	$121,690	
1971	Kennedy Lake	LWCF	$57,094	4.642		$265,030
1971	Diving Bays at (3) Municipal Pools	LWCF	$79,068	4.642		$367,034
1971	Randolph Park Tennis Court Lighting	LWCF	$14,776	4.642		$68,590
1971	Mission Park Baseball Field Lighting	LWCF	$69,960	4.642		$324,754
1971	Santa Rita Park Softball Field Lighting	LWCF	$25,371	4.642		$117,772
1971	Reid Park Tennis Court Lighting	LWCF	$14,776	4.642		$68,590
1971	Reid Park Tennis and Handball	LWCF	$83,525	4.642		$387,723
1971	Jesse Owens Baseball Field Lights and Misc	LWCF	$50,000	4.642		$232,100
1971	Rodeo Park Irrigation, Turf and Trees	LWCF	$5,000	4.642		$23,210
1971	Prudence (Gollub) Land Acquisition	LWCF	$28,800	4.642		$133,690
1971	Randolph Tennis and Handball	LWCF	$83,525	4.642		$387,723
1971	Manuel Valenzuela Alvarez Mini Park Dev't	LWCF	$3,606	4.642	$16,739	
1971	Jacobs Park Irrigation	LWCF	$7,500	4.642		$34,815
1972	Northwest District Park Acquisition	LWCF	$57,300	4.498		$257,735
1972	El Rio Swimming Pool	LWCF	$103,653	4.498		$466,231
1972	Francisco Elias Esquer Mini Park Dev't	LWCF	$3,567	4.498		$16,044
1972	Verdugo Park Development	LWCF	$14,167	4.498		$63,723
1972	Riverview Mini Park Development	LWCF	$7,150	4.498		$32,161
1973	Lakeside Park Acquisition	LWCF	$40,500	4.234		$171,477
1973	Kennedy Park Swimming Pool	LWCF	$75,771	4.234		$320,814
1973	Manana Grande Park Acquistion	LWCF	$13,750	4.234	$58,218	
1973	Hermosa Park Acquisition	LWCF	$12,500	4.234	$52,925	
1973	Hearthstone (Michael Perry) Park Acquisition	LWCF	$22,500	4.234		$95,265

Year	Project Description	Source*	Original Amount	CPI Factor	NH Parks	Com/Reg Parks
1973	Escalante Park Swimming Pool	LWCF	$102,073	4.234	$432,177	
1974	Randolph Center Swim Pool and Bathhouse	LWCF	$67,901	3.813		$258,907
1974	Mansfield Park Acquisition	LWCF	$41,950	3.813		$159,955
1974	Rodeo Park Softball Field Lighting	LWCF	$12,231	3.813		$46,637
1974	NW District Park Lighted Softball Field	LWCF	$18,437	3.813		$70,300
1974	Lakeside Park Phase II Development	LWCF	$53,830	3.813		$205,254
1974	Casa del Sol Park Acquisition	LWCF	$11,250	3.813	$42,896	
1974	Bravo Park Acquisition and Development	LWCF	$49,725	3.813	$189,601	
1975	Freedom Park Phase I Development	LWCF	$83,935	3.494		$293,269
1975	Doolen J.H.S. Softball Field Lighting	LWCF	$13,004	3.494	$45,436	
1975	Utterback J.H.S. MUC Lighting	LWCF	$3,212	3.494	$11,223	
1975	Flowing Wells H.S. Tennis Court Lighting	LWCF	$8,174	3.494	$28,560	
1975	Sunnyside J.H.S. MUC Lighting	LWCF	$4,000	3.494	$13,976	
1975	Amphi H.S. Swim Pool/Tennis Court Lights	LWCF	$56,500	3.494	$197,411	
1975	Catalina H.S. Swim Pool/Tennis Court Lights	LWCF	$201,150	3.494	$702,818	
1975	Tucson H.S. Tennis Court Lighting	LWCF	$12,175	3.494	$42,539	
1975	Santa Cruz Greenbelt	LWCF	$76,252	3.494		$266,424
1976	Sunnyside District Park	LWCF	$265,000	3.304		$875,560
1976	Oury Park Pool	LWCF	$120,057	3.304	$396,668	
1976	Rincon H.S. MUC Lighting	LWCF	$2,000	3.304	$6,608	
1976	Vail J.H.S MUC Lighting	LWCF	$2,000	3.304	$6,608	
1976	Gridley J.H.S. MUC Lighting	LWCF	$3,000	3.304	$9,912	
1976	Amphi H.S. Pool Project	LWCF	$202,600	3.304	$669,390	
1977	Freedom Park Pool and Tennis Court Lighting	LWCF	$145,142	3.102		$450,230
1977	Santa Cruz Riverpark Development Phase II	LWCF	$130,000	3.102		$403,260
1977	Santa Cruz Riverpark Land Acquisition	LWCF	$296,184	3.102		$918,763
1977	Santa Rita H.S. Baseball Field Lighting	LWCF	$34,995	3.102	$108,554	
1977	Flowing Wells School District Baseball Lights	LWCF	$40,087	3.102	$124,350	
1977	Utterback J.H.S. Playfield Lighting	LWCF	$10,390	3.102	$32,230	
1977	Fickett J.H.S. MUC Lighting	LWCF	$3,510	3.102	$10,888	
1977	Catalina H.S. MUC Lighting	LWCF	$6,000	3.102	$18,612	
1977	Sahuaro H.S. MUC Lighting	LWCF	$3,490	3.102	$10,826	
1977	Palo Verde H.S. MUC Lighting	LWCF	$4,984	3.102	$15,460	
1977	Magee J.H.S MUC Lighting	LWCF	$3,489	3.102	$10,823	
1977	Hearthstone (Michael Perry) Park Dev't	LWCF	$46,533	3.102		$144,345
1977	Santa Rita H.S. Tennis Court Lighting	LWCF	$7,927	3.102	$24,590	
1977	Magee J.H.S. Playfield Lighting	LWCF	$14,693	3.102	$45,578	
1979	Himmel Park Tennis Court Lighting	LWCF	$32,090	2.590		$83,113
1979	Lakeside Park Phase III Development	LWCF	$30,617	2.590		$79,298
1979	Lincoln Regional Park Phase I Development	LWCF	$300,000	2.590		$777,000
1979	Reid Park Baseball Field Lights	LWCF	$163,777	2.590		$424,182
1979	Reid Park Tennis and Handball Facility	LWCF	$281,010	2.590		$727,816
1979	Silverbell Regional Park Ph I Development	LWCF	$52,070	2.590		$134,861
1979	Desert Shadows Neighborhood Park	LWCF	$47,944	2.590	$124,175	
1979	Menlo Park Landscaping and Lighting	LWCF	$33,845	2.590	$87,659	
1979	Ormsby Park Lighting	LWCF	$25,592	2.590	$66,283	
1979	Park Renovation-Catalina and Armory Parks	LWCF	$52,070	2.590	$134,861	

Year	Project Description	Source*	Original Amount	CPI Factor	NH Parks	Com/Reg Parks
1980	Amphi J.H.S. Playfield Lights	LWCF	$20,000	2.282	$45,640	
1980	Reid Park and Zoo Improvements	LWCF	$215,000	2.282		$490,630
1980	JF Kennedy Regional Park	LWCF	$150,000	2.282		$342,300
1981	Udall Regional Park, Phase I	LWCF	$75,000	2.068		$155,100
1981	Helen Keating Elem School Lighting	LWCF	$10,000	2.068	$20,680	
1981	Reid Regional Park Renovation	LWCF	$65,400	2.068		$135,247
1983	Udall Park Phase II	LWCF	$72,000	1.888		$135,936
1983	Northwest Park Baseball Field Lights	LWCF	$37,500	1.888		$70,800
1984	Santa Rita Park Comfort Station	LWCF	$20,000	1.809		$36,180
1984	Lakeside Spillway	SLIF	$485,000	1.809		$877,365
1984	Silverbell Lake Improvements	SLIF	$85,000	1.809		$153,765
1985	Kennedy Regional Park Lake Improvements	SLIF	$210,000	1.747		$366,870
1985	Kennedy, Lincoln and Udall	LWCF	$395,000	1.747		$690,065
1986	Greasewood Park Development	LWCF	$75,000	1.715		$128,625
1986	Lakeside Park Development	LWCF	$75,000	1.715		$128,625
1986	Mansfield Park Development	LWCF	$71,000	1.715		$121,765
1988	Udall Park Picnic and Baseball Facility	LWCF	$75,000	1.589		$119,175
1991	Freedom/Kennedy/Lakeside/Murietta Renov	AHF	$371,250	1.380		$512,325
1991	Randolph (Gene Reid) Tennis Ctr Renov	AHF	$179,000	1.380		$247,020
1991	Reid Park Renovation	AHF	$115,500	1.380		$159,390
1992	Rodeo Park Renovation	AHF	$130,000	1.340		$174,200
1992	Golf Links Sport Park Development	AHF	$246,500	1.340		$330,310
1992	Jefferson Park School Development	AHF	$28,000	1.340	$37,520	
1992	Jefferson Park School Nhood Park Dev't	CDBG	$43,000	1.340	$57,620	
1992	Kino Coalition Pueblo Gardens/Thomas Park	CDBG	$25,000	1.340		$33,500
1992	W Hills/Thomas Park Parking Lot Lights	CDBG	$17,256	1.340	$23,123	
1993	Northwest Center - Air Conditioning	CDBG	$105,000	1.301		$136,605
1993	Mission Park Sunnyside Little League Field	CDBG	$60,000	1.301		$78,060
1993	Cherry, Oury, Lakeside & Rodeo Park	AHF	$100,000	1.301		$130,100
1993	Jacobs Park Soccer Complex	AHF	$400,000	1.301		$520,400
1993	Water Slides for Mansfield and Menlo Pools	AHF	$136,500	1.301		$177,587
1993	El Pueblo Neighborhood Center - Land Acquis	CDBG	$350,000	1.301	$455,350	
1993	El Pueblo Neighborhood Center - Pool	CDBG	$1,010,122	1.301	$1,314,169	
1993	AYSO Region 224 Safe Play at Rodeo Park	CDBG	$100,000	1.301		$130,100
1994	Soccer Fields Lights Golf Links Sports Park	CDBG	$150,000	1.269		$190,350
1994	Santa Rosa Park Development	CDBG	$105,000	1.269		$133,245
1994	Juhan Park Development	AHF	$500,000	1.269		$634,500
1994	Santa Rosa Acquisition and Development	AHF	$200,000	1.269		$253,800
1994	Rodeo Park Baseball/Softball Field Upgrades	CDBG	$75,000	1.269		$95,175
1995	Golf Links Softball and Soccer Fields	AHF	$500,000	1.234		$617,000
1995	Rolling Hills Park Development	AHF	$200,000	1.234	$246,800	
1995	Santa Rosa Park Development	CDBG	$200,000	1.234		$246,800
1995	El Pueblo Center Recreation Facility	CDBG	$180,000	1.234	$222,120	
1995	Midtown Neighborhood/Wright School	CDBG	$70,000	1.234	$86,380	
1996	Santa Rita Park Revit of Children's Area	CDBG	$60,000	1.198		$71,880
1996	Freedom Park Center	CDBG	$200,000	1.198		$239,600
1996	Richey Elem School Playground Equipment	CDBG	$55,000	1.198	$65,890	

Year	Project Description	Source*	Original Amount	CPI Factor	NH Parks	Com/Reg Parks
1997	Freedom Park Neighborhood Center	CDBG	$200,000	1.171		$234,200
1997	Community Adaptive Aquatics (Gene Reid)	CDBG	$150,000	1.171		$175,650
1997	William M. Clements Regional Rec (Lincoln)	CDBG	$75,000	1.171		$87,825
1998	Kino and 36th Street Park Development	AHF	$700,000	1.153		$807,100
2001	North Central Park, Ph 1	AHF	$191,802	1.062		$203,694
2001	Case Park Development, Ph 2	AHF	$127,868	1.062		$135,796
Total			$14,020,241		$6,761,299	$22,844,429

* LWCF stands for Land and Water Conservation Fund, AHF stands for Arizona Heritage Fund, SLIF stands for State Lake Improvement Fund and CDBG stands for Community Development Block Grant

Source: City of Tucson Parks and Recreation Department, December 15, 2003; CPI index based on U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Index, U.S. City Average (All Urban Consumers, All Items, 1982-84=100) from http://data.bls.gov/cgi-bin/surveymost for April 2004.

The credit for outstanding debt can be calculated by subtracting the outstanding debt principal from the total park system value, which results in the park system value that has been paid for by existing residents. This net park system value can then be further reduced by the amount of outside funding received from Pima County bonds and State and Federal grants to determine the net local cost of the park system. The net local cost is then divided by existing EDUs to determine the net park cost per service unit. As shown in Table 37, the net cost per equivalent single-family home is $564 for neighborhood and mini-parks and $1,491 for community, metro and regional parks, for a total of $2,055.

Table 37
PARK NET COST PER SERVICE UNIT

	Neighborhood/ Mini Parks	Community/ Reg. Parks	All City Parks
Total Park System Replacement Cost	$123,661,327	$335,139,873	$458,801,200
Outstanding Debt	$5,674,057	$15,377,507	$21,051,564
Net Park System Replacement Cost	$117,987,270	$319,762,366	$437,749,636
Pima County Park Bond Funding	$0	$2,950,000	$2,950,000
State and Federal Grant Funding	$6,761,299	$22,844,429	$29,605,728
Net Local Park System Replacement Cost	$111,225,971	$293,967,937	$405,193,908
Existing Park EDUs	197,136	197,136	197,136
Net Cost per Park EDU	$564	$1,491	$2,055

Source: Total replacement cost from Table 33; outstanding debt from Table 34 (allocated between mini/neighborhood versus community/metro/regional parks ; Pima County bond funding from Table 35; grant funding from table 36; existing EDUs from Table 29.

POTENTIAL FEE SCHEDULE

Using the impact fee formula and the inputs calculated in this report, the maximum potential park impact fees per unit of development for various residential housing types are shown in Table 38. Two assessment alternatives are presented: a flat rate by housing type and progressive rates by unit size (under both alternatives, mobile homes located outside of mobile home parks would be treated the same as single-family detached units). Impact fees could be adopted at less than 100 percent of the level shown in the net cost schedule, provided that the reduction is applied uniformly across all housing types in order to retain the proportionality of the fees.

Table 38
PARK NET COST SCHEDULE

			----------Net Cost per Unit----------		
Land Use Type	**Unit**	**EDUs/ Unit**	**NH/Mini Parks**	**Comm./Reg. Parks**	**All City Parks**
Single-Family Detached	Dwelling	1.00	$564	$1,491	$2,055
Multi-Family	Dwelling	0.74	$417	$1,103	$1,520
Mobile Home Park	Pad	0.86	$485	$1,282	$1,767
Progressive Fees by Unit Size:					
Less than 500 sq. ft.	Dwelling	0.51	$288	$760	$1,048
500 - 749 sq. ft.	Dwelling	0.69	$389	$1,029	$1,418
750 - 999 sq. ft.	Dwelling	0.84	$474	$1,252	$1,726
1,000 - 1,249 sq. ft.	Dwelling	0.97	$547	$1,446	$1,993
1,250 - 1,499 sq. ft.	Dwelling	1.01	$570	$1,506	$2,076
1,500 - 1,999 sq. ft.	Dwelling	1.05	$592	$1,566	$2,158
2,000 - 2,999 sq. ft.	Dwelling	1.13	$637	$1,685	$2,322
3,000 - 3,999 sq. ft.	Dwelling	1.20	$677	$1,789	$2,466
4,000 sq. ft. or more	Dwelling	1.26	$711	$1,879	$2,590

Source: EDUs per unit from Table 28; net cost per unit is EDUs per unit times net costs per EDU from Table 37.

APPENDIX A: LAND USE AND DEMOGRAPHIC DATA

The purpose of this section is to provide land use and demographic background data for the City of Tucson's Cost of Service Study. This section examines:

1) Annual growth rates by decade since 1980 for the City of Tucson and the remaining portions of Pima County;

2) Population projections for 2010 for the City of Tucson and the remaining portions of Pima County;

3) Estimates for 2003 dwelling units by type (i.e. single-family, multi-family or mobile home) for the City of Tucson based on the number of building permits issued over the last three years; and

4) Existing nonresidential land use data.

POPULATION

Tucson, the county seat of Pima County, is the second largest city in Arizona. The City originally incorporated as a two-square-mile village in 1877. It has now grown to accommodate approximately 226 square miles. The 2000 U.S. Census recorded the City's population as 486,699.

Tucson is currently the 30th largest city in the nation. Over the past two decades, Tucson's population growth has decreased slightly, from 2.06 percent a year in the 1980s to 1.84 percent annually in the 1990s. However, the City's annual growth rate is projected to increase over the next two decades, to 1.99 percent in the current decade and 2.17 percent in the next decade.

Pima County's population growth has remained remarkably constant over the last two decades. Since 1980, Pima County's population has increased by about 2.3 percent annually. The towns of Oro Valley and Marana have experienced exceptionally-rapid growth during the last two decades and were the two fastest growing incorporated communities in the State of Arizona during the 1990s.

Figure 8
POPULATION GROWTH, 1990-2020

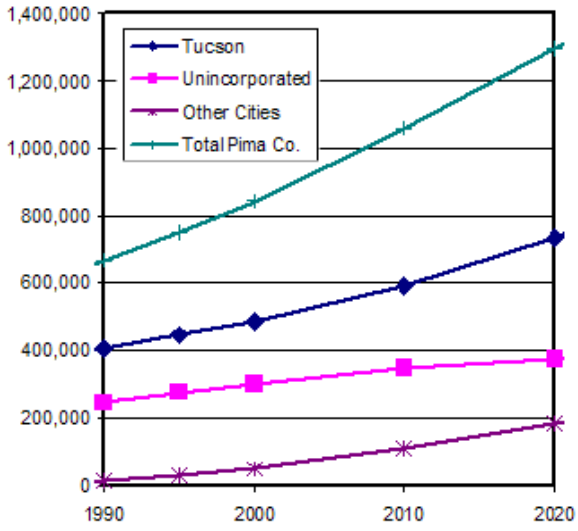


Table 39
PIMA COUNTY POPULATION GROWTH, 1990-2020

					Annual Growth Rate		
Jurisdiction	1990	2000	2010	2020	90-00	00-10	10-20
Tucson	405,390	486,699	592,672	734,595	1.84%	1.99%	2.17%
Oro Valley	6,670	29,700	44,191	59,389	16.11%	4.05%	3.00%
Marana	2,187	13,556	41,480	74,251	20.01%	11.83%	6.00%
South Tucson	5,093	5,490	5,800	6,125	0.75%	0.55%	0.55%
Sahuarita	1,622	3,242	24,094	45,104	7.17%	22.21%	6.47%
Unincorporated	245,918	305,059	352,344	376,536	2.18%	1.45%	0.67%
Total	666,880	843,746	1,060,581	1,296,000	2.38%	2.31%	2.02%

Source: City of Tucson Comprehensive Planning Task Force, May 22, 2003, memorandum (draft estimates–not official).

EXISTING RESIDENTIAL UNITS

Estimating the number of existing residential dwelling units is a key building block for any impact fee analysis, since it is essential for determining the existing level of service. This is critical because a fundamental principle of impact fees is that new development should not be charged for higher level of service than is being provided to existing development. Without an accurate estimate of existing residential units, it is impossible to accurately determine the existing level of service.

To estimate existing residential units, the consultant first analyzed the number of building permits issued since 2000. Over the last four years, the City has issued 10,118 permits for single-family detached units, 2,928 multi-family permits and 2,090 permits for mobile homes, for total of 15,136 new residential units.

Table 40
RESIDENTIAL BUILDING PERMITS, 2000-2003

Housing Type	2000	2001	2002	2003	Total
Single-Family Detached	2,876	2,534	2,355	2,353	10,118
Multi-Family	847	910	702	469	2,928
Mobile Home	559	611	547	373	2,090
Total	4,282	4,055	3,604	3,195	15,136

* data for January through October
Source: City of Tucson Planning Department, May 8 and November 19, 2003 memoranda.

The number of new building permits issued over the last four years were then added to the number of housing units recorded in the 2000 U.S. Census. Since the census enumeration occurred in April 2000, adding four years of building permits yields a reasonable estimate of dwelling units as of approximately April 2004. It is estimated Tucson currently has about 112,141 single-family units, 93,457 multi-family units and 18,415 mobile homes, for a total of about 224,013 existing dwelling units.

Table 41
RESIDENTIAL UNITS BY TYPE, 2004

Housing Type	4/2000 Units	2000-2003 Permits	4/2004 Estimate
Single-Family Detached	102,023	10,118	112,141
Multi-Family	90,529	2,928	93,457
Mobile Home	16,325	2,090	18,415
Total	208,877		224,013

Source: Units as of April 1, 2000 from the U.S. Census; building permits issued January 1, 2000 through October 31, 2003 by housing type from Table 40.

EXISTING NONRESIDENTIAL FLOOR AREA

In addition to estimating existing residential units, it will also be necessary to estimate existing nonresidential floor area in the City of Tucson. The consultant was able to obtain nonresidential floor area for existing parcels of land in Pima County from the County Tax Assessor. Corresponding land use codes were retrieved from the Pima County Department of Transportation. Using Arc View GIS, the two raw data files were joined together using corresponding parcel identification numbers. The joined data files were then queried to identify only those parcels in the City of Tucson.

The square footage for existing nonresidential development in the City of Tucson was estimated by summing the total square footage for all applicable parcels. Spot checks of individual parcels revealed that the Tax Assessor data was undercounting square footage for major public uses, such as the University of Arizona, public elementary and secondary schools and the Davis Monthan Air Force Base. The results after several corrections to obvious under-counts are presented in Table 42 below. It is estimated that the city currently has about 110 million square feet of nonresidential development, of which 44 million square feet is commercial/retail space, 17 million square feet is office space, 26 million is institutional space and 23 million is industrial/warehouse space.

Table 42
EXISTING NONRESIDENTIAL LAND USE

Land Use	Existing Sq. Ft.
Banks, Savings and Loan and Credit Union	581,950
Convenience Store, Service Station, Vehicle Repair	1,548,287
Hotel/Motel	5,219,799
Nightclub/Bar	359,007
Restaurant, Fast Food	452,173
Restaurant, Sit-down	946,359
Theaters and Amusement Facilities	912,033
Vehicle Sales, Leasing, Storage, Parts	1,894,948
Shopping Center/Misc. Retail	31,647,343
Subtotal, Commercial/Retail	43,561,899
Office, Medical	6,853,319
Office, General	10,539,679
Subtotal, Office	17,392,998
Care Facilities	2,238,470
Church, Cemetery, Mausoleum	1,102,415
Day Care/Preschool Center	291,424
Hospital	688,708
Police/Fire Facility	345,515
Community College/University (1)	12,602,517
Elementary and Secondary School (2)	8,521,155
Subtotal, Institutional	25,790,204
Mini-Storage	2,878,385
Warehousing, Truck Terminal and Cold Storage	13,673,280
Manufacturing and Industrial	6,806,543
Subtotal, Industrial and Warehousing	23,358,208
Total Nonresidential Square Footage	110,103,309

Notes: (1) 9 million square feet added per Comprehensive Planning Task Force, May 20, 2003 memorandum, to correct Tax Assessor undercount; (2) 2.6 million square feet added to correct Tax Assessor undercount based on comparison with reliable data on public schools from Lee County, Florida (440,000 population in 2000); category also includes private and religious-owned academic and vocational schools.
Source: Square footage data from Pima County Tax Assessor database for 2004 Tax Year; land use codes from the Pima County Department of Transportation-Geographic Information Systems.

APPENDIX B: ARTERIAL STREET INVENTORY

Table 43
ARTERIAL STREET INVENTORY

					Lane-Miles					
Route Name	From	To	Miles	Lns	Total	Count	Cap.	Vol.	VMC	VMT
1st Ave	795N-CL River	250N-CL River Rd	0.103	5	0.52	0.52	3,120	2,870	321	296
1st Ave	250N-CL River Rd	926S-CL River Rd	0.186	4	0.74	0.74	3,120	3,150	580	586
1st Ave	926S-CL River Rd	N Side of Rillito Br	0.204	5	1.02	1.02	3,120	3,150	636	643
1st Ave	N Edge Rillito Bridg	250S-CL Wetmore	0.259	4	1.04	1.04	3,120	3,150	808	816
1st Ave	250S-CL Wetmore Rd	250N-CL Limberlost	0.156	5	0.78	0.78	3,120	3,860	487	602
1st Ave	SPI Limberlost Dr	250S-CL Limberlost	0.043	4	0.17	0.17	3,120	3,860	134	166
1st Ave	250S-CL Limberlost	250N-CL Roger Rd	0.156	5	0.78	0.78	3,120	3,860	487	602
1st Ave	250N-CL Roger Rd	NPI Roger Rd	0.043	4	0.17	0.17	3,120	3,860	134	166
1st Ave	250S-CL Roger Rd	250N-CL Glenn St	1.383	5	6.92	6.92	3,120	3,630	4,315	5,020
1st Ave	250S-CL Glenn St	250N-CL Grant Rd	0.407	5	2.03	2.03	3,120	3,410	1,270	1,388
1st Ave	SPI Grant Rd	250S-CL Grant Rd	0.041	4	0.16	0.16	3,120	2,910	128	119
3rd St	CL Campbell Ave	250E-CL Campbell	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
4th Ave	250N-CL 6th St	250S-CL 6th St	0.084	4	0.34	n/a	3,120	n/a	n/a	n/a
4th Ave	250N-CL Speedway	250S-CL Speedway	0.084	4	0.34	n/a	3,120	n/a	n/a	n/a
4th Ave	170N of Broadway	NPI Line	0.027	4	0.11	n/a	3,120	n/a	n/a	n/a
5th Ave	250N-CL Congress St	250S-CL Broadway	0.142	4	0.57	n/a	3,120	n/a	n/a	n/a
5th St	CL Country Club	250E-CL Country Club	0.047	5	0.24	0.24	3,120	1,820	147	86
5th St	250E-CL Country Club	WPI Dodge Blvd	0.687	4	2.75	2.75	3,120	1,820	2,143	1,250
5th St	WPI Dodge Blvd	250W-CL Alvernon	0.206	5	1.03	1.03	3,120	1,820	643	375
5th St	250W-CL Alvernon	CL Alvernon	0.047	4	0.19	0.19	3,120	1,820	147	86
5th St	CL Alvernon	250E-CL Alvernon	0.047	5	0.24	0.24	3,120	1,880	147	88
5th St	250E-CL Alvernon	250W-CL Swan Rd	0.890	4	3.56	3.56	3,120	1,880	2,777	1,673
5th St	CL Swan Rd	250E-CL Swan Rd	0.047	4	0.19	0.19	3,120	1,920	147	90
5th St	250E-CL Swan Rd	1719E of Swan Rd C	0.278	5	1.39	1.39	3,120	1,920	867	534
5th St	1719E-CL Swan Rd	CL Rosemont Blvd	0.163	4	0.65	0.65	3,120	1,920	509	313
5th St	250E-CL Rosemont	EPI Wilmot Rd	1.481	4	5.92	5.92	3,120	1,620	4,621	2,399
6th Ave	NPI Drachman St	250N-CL Speedway	0.211	3	0.63	n/a	1,554	n/a	n/a	n/a
6th Ave	250N-CL Speedway	250S-CL Speedway	0.084	4	0.34	0.34	3,120	660	262	55
6th Ave	250S-CL Speedway	674S-CL 6th St	0.634	3	1.90	1.90	1,554	800	985	507
6th Ave	SPI Broadway Blvd	250S-CL Broadway	0.042	4	0.17	0.17	3,120	870	131	37
6th Ave	250S-CL Broadway	250N-CL 18th St	0.535	3	1.61	1.61	1,554	870	831	465
6th Ave	250S-CL 18th St	250N-CL 22nd St	0.269	5	1.35	1.35	3,120	1,610	839	433
6th Ave	250N-CL 22nd St	NPI 22nd St	0.042	4	0.17	0.17	3,120	1,610	131	68
6th Ave	250S-CL 22nd St	250N-CL 29th St	0.407	5	2.03	2.03	3,120	2,150	1,270	875
6th Ave	250N-CL 29th St	NPI 29th St	0.043	3	0.13	0.13	1,554	2,150	67	92
6th Ave	250S-CL 29th St	250N-CL 36th St	0.397	5	1.99	1.99	3,120	2,560	1,239	1,016
6th Ave	250N-CL 36th St	NPI 36th St	0.044	4	0.18	0.18	3,120	2,560	137	113
6th Ave	250S-CL 36th St	250N-CL Ajo Way	0.788	5	3.94	3.94	3,120	2,660	2,459	2,096
6th Ave	250N-CL Ajo Way	250S-CL Ajo Way	0.080	4	0.32	0.32	3,120	3,120	250	250
6th Ave	250S-CL Ajo Way	CL Rodeo Wash Rcbc	0.608	5	3.04	3.04	3,120	2,430	1,897	1,477
6th Ave	250N-CL Irvington Rd	250S-CL Irvington Rd	0.079	4	0.32	0.32	3,120	2,095	246	166
6th Ave	CL 1st Ave	250E-CL 1st Ave	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
6th Ave	SPI Pennington St	250S-CL Pennington	0.044	4	0.18	0.18	3,120	800	137	35

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
6th Ave	250N-CL Congress St	156S-CL Congress St	0.067	4	0.27	0.27	3,120	935	209	63
6th Ave	115''N of CL 19th St	383'N-CL 22nd St	0.223	4	0.89	0.89	3,120	1,610	696	359
6th Ave	250N-CL Valencia Rd	NPI Valencia Rd	0.039	4	0.16	n/a	3,120	n/a	n/a	n/a
6th Ave	SPI Grant Rd	250S-CL Grant Ave	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
6th Ave	SPI Alameda/Toole	181S-CL Alameda/Tle	0.029	4	0.12	0.12	3,120	800	90	23
6th St	250E-CL Granada Ave	250W-CL 6th Ave	0.463	4	1.85	1.85	3,120	2,180	1,445	1,009
6th St	250W-CL Granada Ave	250E-CL Granada Ave	0.095	4	0.38	0.38	3,120	2,180	296	207
6th St	250W-CL 6th Ave	CL 6th Ave	0.047	5	0.24	0.24	3,120	2,260	147	106
6th St	250E-CL 6th Ave	250W-CL 4th Ave	0.087	5	0.43	0.43	3,120	2,270	271	197
6th St	CL 4th Ave	250E-CL 4th Ave	0.047	4	0.19	0.19	3,120	2,270	147	107
6th St	250E-CL 4th Ave	250W-CL Euclid Ave	0.265	5	1.33	1.33	3,120	2,270	827	602
6th St	CL Euclid Ave	250E-CL Euclid Ave	0.047	4	0.19	0.19	3,120	2,650	147	125
6th St	250E-CL Euclid Ave	250W-CL Fremont Ave	0.179	5	0.90	0.90	3,120	2,650	558	474
6th St	250E-CL Fremont Ave	250W-CL Highland Ave	0.130	5	0.65	0.65	3,120	2,650	406	345
6th St	CL Highland Ave	250E-CL Highland Ave	0.047	4	0.19	0.19	3,120	2,650	147	125
6th St	250E-CL Highland Ave	250W-CL Campbell	0.325	5	1.63	1.63	3,120	2,650	1,014	861
6th St	250E-CL Campbell Ave	CL Country Club	0.976	4	3.90	3.90	3,120	2,260	3,045	2,206
10th Ave	250N-CL 22nd St	250S-CL 22nd St	0.083	4	0.33	0.33	3,120	670	259	56
10th Ave	250S-CL 22nd St	NPI 29th St	0.444	3	1.33	1.33	1,554	670	690	297
10th Ave	SPI 29th St	250S-CL 29th St	0.043	4	0.17	0.17	3,120	950	134	41
10th Ave	250S-CL 29th St	SPI 37th St	0.510	3	1.53	1.53	1,554	950	793	485
10th Ave	SPI 37th St	NPI 42nd St	0.302	4	1.21	n/a	3,120	n/a	n/a	n/a
10th Ave	NPI 42nd St	EPI 12th Ave	0.242	5	1.21	n/a	3,120	n/a	n/a	n/a
12th Ave	250N-CL 29th St	337S of 44th St NPI	0.083	2	0.17	n/a	1,480	n/a	n/a	n/a
12th Ave	337S of 44th St NPI	250N-CL Ajo Way	0.403	4	1.61	1.61	3,120	1,170	1,257	472
12th Ave	250N-CL Ajo Way	250N-CL Irvington	0.999	5	5.00	5.00	3,120	2,070	3,117	2,068
12th Ave	250N-CL Irvington Rd	250S-CL Irvington Rd	0.081	4	0.32	0.32	3,120	2,170	253	176
12th Ave	250S-CL Irvington Rd	250N-CL Drexel Rd	0.910	5	4.55	4.55	3,120	2,170	2,839	1,975
12th Ave	250N-CL Drexel Rd	NPI Drexel Rd	0.041	4	0.16	0.16	3,120	2,170	128	89
12th Ave	250S-CL Drexel Rd	250N-CL Snta Rsa/bil	0.421	4	1.68	n/a	3,120	n/a	n/a	n/a
12th Ave	250N-CL Bilby Rd	NPI Bilby Rd	0.043	6	0.26	n/a	4,690	n/a	n/a	n/a
12th Ave	SPI Bilby Rd	250N-CL Valencia Rd	0.780	4	3.12	n/a	3,120	n/a	n/a	n/a
12th Ave	SPI Santa Paula	92S-CL Calle Lerdo	0.377	5	1.89	n/a	3,120	n/a	n/a	n/a
15th St	Begin Taper to 3 Lan	250 W Kino Blvd Cl	0.117	3	0.35	n/a	1,554	n/a	n/a	n/a
15th/Winsett	CL Kino Pkwy	WPI Campbell Ave	0.165	4	0.66	n/a	3,120	n/a	n/a	n/a
22nd St	E Edge Santa Cruz Br	CL 10th Ave	0.816	5	4.08	4.08	3,120	2,170	2,546	1,771
22nd St	CL 10th Ave	250E-CL 10th Ave	0.047	4	0.19	0.19	3,120	3,120	147	147
22nd St	250E-CL 10th Ave	250W-CL 6th Ave	0.261	5	1.31	1.31	3,120	3,120	814	814
22nd St	250W-CL 6th Ave	250E-CL 6th Ave	0.095	4	0.38	0.38	3,120	3,280	296	312
22nd St	250E-CL 6th Ave	250E-CL Kino Pkwy	1.093	5	5.47	5.47	3,120	3,555	3,410	3,886
22nd St	East Edge Bridge	250W-CL Tucson Blvd	0.257	6	1.54	1.54	4,690	4,270	1,205	1,097
22nd St	250W-CL Tucson Blvd	CL Tucson Blvd	0.047	7	0.33	0.33	3,120	4,360	147	205
22nd St	250E-CL Tucson Blvd	250W-CL Country Club	0.403	6	2.42	2.42	4,690	4,360	1,890	1,757
22nd St	CL Country Club	250E-CL Country Club	0.047	8	0.38	0.38	3,120	4,300	147	202
22nd St	250E-CL Country Club	250W-CL Alvernon	0.915	7	6.41	6.41	3,120	4,300	2,855	3,935
22nd St	250W-CL Alvernon	250E-CL Alvernon	0.095	4	0.38	0.38	3,120	4,595	296	437
22nd St	250E-CL Alvernon	250W-CL Columbus	0.419	6	2.51	2.51	4,690	4,890	1,965	2,049

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
22nd St	250W-CL Columbus Bvd	250E-CL Columbus	0.095	4	0.38	0.38	3,120	4,890	296	465
22nd St	250E-CL Columbus Bvd	250W-CL Swan Rd	0.405	6	2.43	2.43	4,690	4,890	1,899	1,980
22nd St	CL Swan Rd	250E-CL Swan Rd	0.047	4	0.19	0.19	3,120	4,700	147	221
22nd St	250E-CL Swan Rd	250W-CL Craycroft Rd	0.917	6	5.50	5.50	4,690	4,700	4,301	4,310
22nd St	250W-CL Craycroft Rd	CL Craycroft Rd	0.047	4	0.19	0.19	3,120	4,700	147	221
22nd St	250E-CL Craycroft	250W-CL Wilmot Rd	0.909	6	5.45	5.45	4,690	4,800	4,263	4,363
22nd St	250W-CL Wilmot Rd	CL Wilmot Rd	0.047	4	0.19	0.19	3,120	4,800	147	226
22nd St	CL Wilmot Rd	250W-CL Sarnoff Rd	2.365	6	14.19	14.19	4,690	3,816	11,092	9,025
22nd St	250W-CL Sarnoff Dr	CL Sarnoff Dr	0.047	7	0.33	0.33	3,120	2,910	147	137
22nd St	CL Sarnoff Dr	250E-CL Sarnoff Dr	0.047	3	0.14	0.14	1,554	2,910	73	137
22nd St	250E-CL Sarnoff Rd	250E-CL Camino Seco	0.550	6	3.30	3.30	4,690	2,910	2,580	1,601
22nd St	250E-CL Camino Seco	700e Camino Sec	0.085	5	0.43	0.43	3,120	1,990	265	169
22nd St	700e Camino Sec	1000W-CL Harrison	0.680	4	2.72	2.72	3,120	1,990	2,122	1,353
22nd St	1000W-CL Harrison Rd	250W-CL Harrison Rd	0.142	5	0.71	0.71	3,120	1,990	443	283
22nd St	250W-CL Harrison Rd	CL Harrison Rd	0.047	4	0.19	0.19	3,120	1,990	147	94
22nd St	CL Harrison Rd	250E-CL Harrison Rd	0.047	5	0.24	0.24	3,120	800	147	38
22nd St	250E-CL Harrison Rd	EPI Old Spanish Tr	0.155	4	0.62	0.62	3,120	800	484	124
22nd St	EPI Old Spanish	1361E Old Spanish Tr	0.258	2	0.52	0.52	1,480	800	382	206
22nd St	1361E Old Spanish Tr	250W-CL Houghton	0.494	3	1.48	1.48	1,554	800	768	395
22nd St	250W-CL Houghton Rd	CL Houghton Rd	0.047	4	0.19	0.19	3,120	800	147	38
22nd St	CL Houghton Rd	WPI Ridgeside Dr	0.749	3	2.25	n/a	1,554	n/a	n/a	n/a
22nd St	WPI Ridgeside Dr	WPI Melpomene Way	0.255	2	0.51	n/a	1,480	n/a	n/a	n/a
22nd St	WPI Mission Rd(cu	250E-CL Mission	0.056	6	0.34	0.34	4,690	2,170	263	122
22nd St	250W-CL I-10 ramp	CL On/off Ramp (I	0.047	5	0.24	0.24	3,120	2,170	147	102
22nd St	130W On/off Ramp	CL On/off Ramp	0.025	6	0.15	0.15	4,690	2,170	117	54
22nd St	CL On/off Ramp	250E-CL On/off Ramp	0.047	4	0.19	0.19	3,120	2,170	147	102
22nd St	SPI 22nd St	250S-CL Wilmot Rd	0.047	6	0.28	0.28	4,690	2,170	220	102
22nd St	267W-CL Cherry Ave	CL Cherry Ave	0.051	5	0.26	0.26	3,120	4,270	159	218
22nd St	CL Cherry Ave	250E-CL Cherry Ave	0.047	6	0.28	0.28	4,690	4,270	220	201
22nd St	250E-CL Cherry	West Edge Bridge	0.140	4	0.56	0.56	3,120	4,270	437	598
22nd St	250W-CL 4th Ave	250E-CL 4th Ave	0.095	5	0.48	0.48	3,120	3,470	296	330
29th St	CL Alvernon	250W-CL Swan Rd	0.970	5	4.85	4.85	3,120	1,910	3,026	1,853
29th St	CL Swan Rd	CL Craycroft Rd	1.032	5	5.16	5.16	3,120	1,770	3,220	1,827
29th St	East Edge Bridge	250W-CL of I-10	0.392	2	0.78	n/a	1,480	n/a	n/a	n/a
29th St	WPI Mission Rd	250E-CL Mission R	0.056	5	0.28	0.28	3,120	1,200	175	67
29th St	250E-CL Mission Rd	West Edge Bridge	0.434	3	1.30	n/a	1,554	n/a	n/a	n/a
29th St	East Edge Bridge	CL W I-10 Frnt	0.439	5	2.19	n/a	3,120	n/a	n/a	n/a
29th St	CL W I-10 Frnt	250E of W CL I-10 Fr	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
29th St	250W-CL 6th Ave	CL 6th Ave	0.047	4	0.19	0.19	3,120	1,030	147	48
29th St	250E-CL 6th Ave	2550E of 6th Ave	0.436	3	1.31	n/a	1,554	n/a	n/a	n/a
29th St	CL Kino Pkwy	250E-CL Kino Pkwy	0.047	5	0.24	n/a	3,120	n/a	n/a	n/a
29th St	CL 10th Ave	250E-CL 10th Ave	0.047	3	0.14	0.14	1,554	1,030	73	48
29th St	CL Park Ave	250E-CL Park Ave	0.043	4	0.17	n/a	3,120	n/a	n/a	n/a
29th St	250W-CL S 12th Ave	CL 12th Ave	0.047	5	0.24	n/a	3,120	n/a	n/a	n/a
32nd St	EPI Chrysler	250W-CL Alvernon	0.201	2	0.40	n/a	1,480	n/a	n/a	n/a
32nd St	250W-CL Alvernon	CL Alvernon	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
36th St	250W-CL Mission Rd	250E-CL 6th Ave	0.107	4	0.43	n/a	3,120	n/a	n/a	n/a

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
36th St	250E-CL 6th Ave	WPI 4th Ave	0.129	2	0.26	n/a	1,480	n/a	n/a	n/a
36th St	WPI 4th Ave	250W-CL Kino Pkwy	1.029	4	4.12	n/a	3,120	n/a	n/a	n/a
36th St	250W-CL Kino Pkwy	250E-CL Kino Pkwy	0.095	6	0.57	n/a	4,690	n/a	n/a	n/a
36th St	250E-CL Kino Pkwy	WPI Kramer Ave	0.270	5	1.35	n/a	3,120	n/a	n/a	n/a
36th St	WPI Kramer Ave	373E of CClub, E C	1.609	4	6.44	n/a	3,120	n/a	n/a	n/a
Ajo Way	4124E Mission Rd	5297E of Mission R	0.222	5	1.11	1.11	3,120	3,490	693	775
Ajo Way	5555E Mission R	WPI 16th Ave	0.226	4	0.90	0.90	3,120	3,490	705	789
Ajo Way	250W-CL 16th Ave	250E-CL 16th Ave	0.095	5	0.48	0.48	3,120	3,080	296	293
Ajo Way	WPI 16th Ave	250W-CL 6th Ave	0.711	5	3.56	3.56	3,120	2,805	2,218	1,994
Ajo Way	250W-CL 6th Ave	250E-CL 6th Ave	0.095	4	0.38	0.38	3,120	2,630	296	250
Ajo Way	250E-CL 6th Ave	250W-CL Park Ave	0.596	5	2.98	2.98	3,120	2,730	1,860	1,627
Ajo Way	250W-CL Park Ave	250E-CL Park Ave	0.095	4	0.38	0.38	3,120	2,540	296	241
Ajo Way	250E-CL of Park Ave	250W-CL Benson Hwy	0.135	5	0.68	0.68	3,120	2,350	421	317
Ajo Way	250W-CL Benson Hwy	250E-CL Benson Hwy	0.095	4	0.38	0.38	3,120	2,280	296	217
Ajo Way	250E of Benson Hwy	1699E of Benson Hwy	0.274	5	1.37	1.37	3,120	2,210	855	606
Ajo Way	2343E of Benson Hwy	250W-CL Kino Pkwy	0.152	4	0.61	0.61	3,120	2,210	474	336
Ajo Way	250W-CL Forgeus Cl	250E-CL Forgeus	0.095	5	0.48	0.48	3,120	2,180	296	207
Ajo Way	250W-CL Kino Connect	250E-CL Country Club	0.966	6	5.80	5.80	4,690	2,180	4,531	2,106
Ajo Way	250E-CL Country Club	250W-CL Palo Verde	0.413	2	0.83	0.83	1,480	2,490	611	1,028
Ajo Way	CL Palo Verde Rd	250E-CL Palo Verde	0.047	6	0.28	0.28	4,690	1,870	220	88
Ajo Way	250E-CL Palo Verde	250W-CL Alvernon Way	0.361	4	1.44	1.44	3,120	1,870	1,126	675
Ajo Way	250W-CL Alvernon Way	250E-CL Alvernon Way	0.095	9	0.86	0.86	3,120	1,870	296	178
Ajo Way	250E-CL Alvernon Way	W Edge Contractor's	0.096	4	0.38	n/a	3,120	n/a	300	0
Alameda St	CL Stone Ave	250E-CL Stone Ave	0.047	4	0.19	0.19	3,120	340	147	16
Alameda St	250E-CL Stone Ave	250W-CL 6th Ave	0.080	2	0.16	0.16	1,480	340	118	27
Alameda St	CL Granada Ave	250E-CL Granada Ave	0.047	5	0.24	0.24	3,120	470	147	22
Alameda St	CL Church Ave	223E of Church Ave	0.042	4	0.17	n/a	3,120	n/a	n/a	n/a
Allen Rd	CL Campbell Ave	250E-CL Campbell	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Alvernon	250N-CL Ft Lowell Rd	NPI Grant Rd	1.018	5	5.09	5.09	3,120	1,940	3,176	1,975
Alvernon	250S-CL Grant Rd	250N-CL Pima	0.396	5	1.98	1.98	3,120	3,000	1,236	1,188
Alvernon	250N-CL Pima St	NPI Pima St	0.041	3	0.12	0.12	1,554	3,000	64	123
Alvernon	250S-CL Pima St	160N of S Curb Ma	0.233	5	1.17	1.17	3,120	3,140	727	732
Alvernon	160N of S Curb Ma	250N-CL Speedway	0.163	6	0.98	0.98	4,690	3,140	764	512
Alvernon	250S-CL Speedway	SPI 3rd St	0.210	6	1.26	1.26	4,690	3,620	985	760
Alvernon	SPI 3rd St	250N-CL 5th St	0.197	4	0.79	0.79	3,120	3,620	615	713
Alvernon	250N-CL 5th St	250S-CL 5th St	0.083	5	0.42	0.42	3,120	3,540	259	294
Alvernon	250S-CL of 5th St	250N-CL Broadway	0.402	4	1.61	1.61	3,120	3,460	1,254	1,391
Alvernon	250N-CL Broadway	NPI Broadway Blvd	0.037	6	0.22	0.22	4,690	3,460	174	128
Alvernon	SPI Broadway Blvd	250S-CL 22nd St	1.016	4	4.06	4.06	3,120	3,560	3,170	3,617
Alvernon	250S-CL 22nd St	S Edge Crossover	0.783	6	4.70	4.70	4,690	4,120	3,672	3,226
Alvernon	SPI Irvington Rd	S Edge Crossover	0.041	7	0.29	0.29	3,120	3,680	128	151
Alvernon	S Edge Crossover	N Edge Palo Verde	0.043	6	0.26	n/a	4,690	n/a	n/a	n/a
Alvernon	S Edge Palo Verde Op	250N-CL Golf Links	0.215	4	0.86	0.86	3,120	910	671	196
Alvernon	Bullnose Alv. Way N of	Bullnose W of Contract	0.244	1	0.24	n/a	n/a	n/a	n/a	n/a
Alvernon	Bullnose W of Contracto	745N Contractors Wy	0.141	2	0.28	n/a	1,480	n/a	n/a	n/a
Alvernon	Bullnose W of Contracto	N Edge Concrete Brid	0.364	1	0.36	n/a	n/a	n/a	n/a	n/a
Alvernon	250S-CL Irvington	329S N Curb Olympia	0.221	4	0.88	0.88	3,120	3,680	690	813

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Alvernon	329S of N Curb Olympia	250N-CL I-10 Off-ramp	0.191	5	0.96	0.96	3,120	3,680	596	703
Alvernon	250N-CL I-10 Off-ramp	250S-CL I-10 Off-ramp	0.090	6	0.54	0.54	4,690	2,990	422	269
Alvernon	S ROW Julian Wash	250N-CL Drexel Rd	0.328	4	1.31	1.31	3,120	2,300	1,023	754
Alvernon	250S-CL I-10 Off-ramp	S ROW Julian Wash	0.055	4	0.22	0.22	3,120	2,300	172	127
Alvernon	SPI Drexel Rd	NPI Benson Hwy	0.128	4	0.51	0.51	3,120	2,300	399	294
Alvernon	2669N of Valencia	250S-CL Valencia Rd	1.363	4	5.45	5.45	3,120	1,790	4,253	2,440
Alvernon	250S-CL SR 210	Bullnose W of Contract	0.361	4	1.44	1.44	3,120	3,740	1,126	1,350
Alvernon	S Side Pcc Bridge	250N-CL Ajo Way	0.165	7	1.16	1.16	3,120	4,700	515	776
Alvernon	250N-CL Ajo Way	250S-CL Ajo Way	0.082	9	0.74	0.74	3,120	4,220	256	346
Alvernon	250S-CL Ajo Way	250N-CL Irvington	0.781	6	4.69	4.69	4,690	3,740	3,663	2,921
Alvernon	250N-CL Irvington Rd	NPI Irvington Rd	0.041	7	0.29	0.29	3,120	3,740	128	153
Anklam Rd	City Limit W	919 E of W City Limit	0.174	2	0.35	n/a	1,480	n/a	n/a	n/a
Anklam Rd	919E of W City Lim	1528E of W City Limit	0.115	3	0.35	n/a	1,554	n/a	n/a	n/a
Anklam Rd	1528E of W City Lim	250W-CL Greasewood	0.687	2	1.37	n/a	1,480	n/a	n/a	n/a
Anklam Rd	CL Greasewood Rd	2500E of Greasewood	0.473	4	1.89	1.89	3,120	1,550	1,476	733
Anklam Rd	2500E of Greasewood	250W-CL Silverbell	0.830	5	4.15	4.15	3,120	1,550	2,590	1,287
Auto Mall Dr	250W-CL Oracle Rd	65E-CL Oracle Rd	0.060	6	0.36	n/a	4,690	n/a	n/a	n/a
Aviation Pkwy	CL Richey Ave	250E of Richey Ave	0.047	5	0.24	0.24	3,120	2,840	147	133
Bear Canyon	250N-CL Tanque Vrde	30S of SPI Tanque	0.044	6	0.26	0.26	4,690	820	206	36
Benson Hwy	250N of W-CL Park Ave	EPI Masterson Ave	2.166	4	8.66	8.66	3,120	1,090	6,758	2,361
Benson Hwy	SPI Irvington Rd	250S-CL Irvington Rd	0.041	4	0.16	0.16	3,120	710	128	29
Benson Hwy	250W-CL Benson Hwy	CL Benson Hwy	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Benson Hwy	CL Alvernon Way	WPI Hartford Strav	0.297	4	1.19	1.19	3,120	590	927	175
Benson Hwy	250SofW-CL Kino/Cpbl	250N of W-CL Irvington	0.502	4	2.01	2.01	3,120	1,730	1,566	868
Bilby Rd	CL 12th Ave	250E-CL 12th Ave	0.047	4	0.19	0.19	3,120	510	147	24
Bilby Rd	250W-CL Nogales Hwy	250E-CL Nogales Hwy	0.095	4	0.38	0.38	3,120	510	296	48
Bilby Rd	250E-CL Campbell Ave	WPI Country Club Rd	0.945	4	3.78	3.78	3,120	170	2,948	161
Bilby Rd	CL Park Ave	250E-CL Park Ave	0.047	4	0.19	0.19	3,120	630	147	30
Bilby Rd	EPI Del Moral Blvd	250W-CL Campbell Ave	0.215	4	0.86	0.86	3,120	630	671	135
Broadway Blvd	WPI Ridgeside Dr	End taper (pvmt chng)	0.151	3	0.45	0.45	1,554	440	235	66
Broadway Blvd	4417E of Houghton	City Limits Sign	0.137	2	0.27	0.27	1,480	440	203	60
Broadway Blvd	E End Pccp	CL Euclid Ave	0.131	6	0.79	0.79	4,690	3,310	614	434
Broadway Blvd	250E-CL Euclid Ave	WPI Park Ave	0.136	6	0.82	0.82	4,690	3,450	638	469
Broadway Blvd	WPI Park Ave	250W-CL Highland	0.265	5	1.33	1.33	3,120	3,450	827	914
Broadway Blvd	250W-CL Highland Ave	250E-CL Highland	0.095	4	0.38	0.38	3,120	3,450	296	328
Broadway Blvd	250E-CL Highland Ave	250W-CL Campbell	0.265	5	1.33	1.33	3,120	3,450	827	914
Broadway Blvd	CL Campbell Ave	250W-CL Tucson Blvd	0.467	5	2.34	2.34	3,120	3,960	1,457	1,849
Broadway Blvd	CL Tucson Blvd	CL Country Club	0.504	5	2.52	2.52	3,120	3,960	1,572	1,996
Broadway Blvd	250E of Country Club	2741E of Country Club	0.472	6	2.83	2.83	4,690	4,310	2,214	2,034
Broadway Blvd	Ecr of Randolph Way	250W-CL Alvernon	0.423	6	2.54	2.54	4,690	4,310	1,984	1,823
Broadway Blvd	250W-CL Alvernon	CL Alvernon	0.047	4	0.19	0.19	3,120	4,310	147	203
Broadway Blvd	CL Alvernon	250W-CL Columbus	0.457	6	2.74	2.74	4,690	4,720	2,143	2,157
Broadway Blvd	250W-CL Columbus Bvd	250E-CL Columbus	0.095	4	0.38	0.38	3,120	4,720	296	448
Broadway Blvd	250e Columbus Blvd	250W-CL Swan Rd	0.404	6	2.42	2.42	4,690	4,720	1,895	1,907
Broadway Blvd	250W-CL Swan Rd	CL Swan Rd	0.047	4	0.19	0.19	3,120	4,720	147	222
Broadway Blvd	250E-CL Swan Rd	250W-CL Rosemont	0.410	8	3.28	3.28	3,120	5,110	1,279	2,095
Broadway Blvd	250W-CL Rosemont	250E-CL Rosemont	0.047	4	0.19	0.19	3,120	5,100	147	240

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Broadway Blvd	250E-CL Rosemont	250W-CL Craycroft Rd	0.393	8	3.14	3.14	3,120	5,100	1,226	2,004
Broadway Blvd	CL Craycroft Rd	250E-CL Craycroft Rd	0.047	4	0.19	0.19	3,120	5,030	147	236
Broadway Blvd	250E of Craycroft Rd	250W-CL Wilmot Rd	0.909	8	7.27	7.27	3,120	5,030	2,836	4,572
Broadway Blvd	250W-CL Wilmot Rd	250E-CL Wilmot Rd	0.095	4	0.38	0.38	3,120	4,550	296	432
Broadway Blvd	250E-CL Wilmot Rd	CL Kolb Rd	0.935	6	5.61	5.61	4,690	4,070	4,385	3,805
Broadway Blvd	CL Kolb Rd	250E-CL Kolb Rd	0.047	4	0.19	0.19	3,120	4,830	147	227
Broadway Blvd	250E-CL Kolb Rd	250W-CL Prudence Rd	0.409	6	2.45	2.45	4,690	4,830	1,918	1,975
Broadway Blvd	250W-CL Prudence R	CL Prudence Rd	0.047	4	0.19	0.19	3,120	4,830	147	227
Broadway Blvd	CL Prudence Rd	250E-CL Prudence Rd	0.047	5	0.24	0.24	3,120	4,830	147	227
Broadway Blvd	250E-CL Prudence Rd	250W-CL Pantano Rd	0.415	6	2.49	2.49	4,690	4,830	1,946	2,004
Broadway Blvd	250W-CL Pantano Rd	CL Pantano Rd	0.047	4	0.19	0.19	3,120	4,830	147	227
Broadway Blvd	CL Pantano Rd	250E-CL Pantano Rd	0.047	7	0.33	0.33	3,120	3,890	147	183
Broadway Blvd	250E-CL Pantano Rd	CL Sarnoff Dr	0.452	6	2.71	2.71	4,690	3,890	2,120	1,758
Broadway Blvd	250E-CL Sarnoff Rd	250W-CL Camino Seco	0.406	6	2.44	2.44	4,690	3,890	1,904	1,579
Broadway Blvd	250W-CL Camino Seco	CL Camino Seco Rd	0.047	4	0.19	0.19	3,120	3,890	147	183
Broadway Blvd	250E-CL Camino Seco	474W of Gollob Rd	0.363	4	1.45	1.45	3,120	2,340	1,133	849
Broadway Blvd	474W of Gollob Rd	390E of Gollob Rd	0.164	5	0.82	0.82	3,120	2,340	512	384
Broadway Blvd	390E of Gollob Rd	250E-CL Harrison Rd	0.480	4	1.92	1.92	3,120	2,340	1,498	1,123
Broadway Blvd	250E-CL Harrison Rd	W edge Vozack Lane	0.201	3	0.60	0.60	1,554	1,680	312	338
Broadway Blvd	W edge Vozack Lane	697W Bonanza Av CL	0.186	2	0.37	0.37	1,480	1,680	275	312
Broadway Blvd	697W of Bonanza CL	WPI London Station	0.242	3	0.73	0.73	1,554	1,680	376	407
Broadway Blvd	250E-CL Granada Ave	250W-CL Church Ave	0.119	6	0.71	0.71	4,690	2,790	558	332
Broadway Blvd	CL Church Ave	215E of Church St	0.041	3	0.12	0.12	1,554	1,840	64	75
Broadway Blvd	215W of Stone Ave	217E of Stone Ave C	0.082	3	0.25	0.25	1,554	2,070	127	170
Broadway Blvd	238W-CL 5th Ave	CL 5th Ave	0.045	4	0.18	0.18	3,120	2,300	140	104
Broadway Blvd	100W-CL 4th Ave	CL 4th Ave	0.149	3	0.45	0.45	1,554	2,250	232	335
Broadway Blvd	CL 4th Ave	250E-CL 4th Ave	0.047	4	0.19	0.19	3,120	2,250	147	106
Broadway Blvd	CL Williams	250E-CL Williams	0.047	6	0.28	0.28	4,690	5,110	220	240
Broadway Blvd	250W-CL Houghton Rd	WPI Ridgeside Dr	0.723	3	2.17	2.17	1,554	440	1,124	318
Broadway Blvd	217W of Scott St	CL Scott St	0.041	3	0.12	0.12	1,554	1,840	64	75
Broadway Blvd	CL Scott Ave	170E of Scott Ave C	0.032	4	0.13	0.13	3,120	1,840	100	59
Broadway Blvd	170W-CL 6th Ave	238E of 6th Ave Cl	0.077	4	0.31	0.31	3,120	2,275	240	175
Broadway Blvd	250W-CL Indian	250E-CL Indian House	0.095	6	0.57	0.57	4,690	5,030	446	478
Broadway Blvd	250W-CL Jessica	250E-CL Jessica	0.095	6	0.57	0.57	4,690	4,070	446	387
Calle Polar	SPI Nicaragua Dr	NPI Escalante Rd	0.207	2	0.41	n/a	1,480	n/a	n/a	n/a
Camino Seco	SPI Wrightstown Rd	738n Speedway Blvd	0.427	2	0.85	0.85	1,480	520	632	222
Camino Seco	738N of Speedway Blvd	250N-CL Speedway	0.092	3	0.28	0.28	1,554	520	143	48
Camino Seco	250N-CL Speedway	250S-CL Speedway	0.078	5	0.39	0.39	3,120	1,190	243	93
Camino Seco	250S-CL Speedway	250N-CL Broadway	0.911	4	3.64	3.64	3,120	1,860	2,842	1,694
Camino Seco	250N-CL Broadway	250S-CL Broadway	0.075	6	0.45	0.45	4,690	1,600	352	120
Camino Seco	250S-CL Broadway	250N-CL 22nd St	0.899	5	4.50	4.50	3,120	1,340	2,805	1,205
Camino Seco	SPI 22nd St	250S-CL 22nd St	0.039	3	0.12	n/a	1,554	n/a	n/a	n/a
Camino Seco	250N-CL Kenyon Dr	NPI Kenyon Dr	0.042	5	0.21	n/a	3,120	n/a	n/a	n/a
Camino Seco	SPI Golf Links Rd	250S-CL Golf Links	0.038	3	0.11	0.11	1,554	840	59	32
Camp Lowell	890E of Columbus Blvd	250W-CL Swan Rd	0.289	4	1.16	1.16	3,120	1,990	902	575
Camp Lowell	250W-CL Swan Rd	250E-CL Swan Rd	0.095	3	0.29	0.29	1,554	1,990	148	189
Campbell Ave	250S-CL Elm St	250N-CL Speedway	0.362	6	2.17	2.17	4,690	3,210	1,698	1,162

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Campbell Ave	SPI Speedway Blvd	250N-CL 3rd St	0.238	6	1.43	1.43	4,690	4,060	1,116	966
Campbell Ave	SPI 3rd St	250S-CL 3rd St	0.045	4	0.18	0.18	3,120	4,060	140	183
Campbell Ave	250S-CL 3rd St	250N-CL 6th St	0.176	6	1.06	1.06	4,690	4,060	825	715
Campbell Ave	250S-CL 6th St	250N-CL Broadway	0.349	6	2.09	2.09	4,690	3,230	1,637	1,127
Campbell Ave	250N-CL Broadway	250S-CL Broadway	0.081	8	0.65	0.65	3,120	3,250	253	263
Campbell Ave	250N-CL River Rd	250S-CL River Rd	0.084	8	0.67	0.67	3,120	2,275	262	191
Campbell Ave	250S-CL River Rd	NPI Roger Rd	0.474	5	2.37	2.37	3,120	3,550	1,479	1,683
Campbell Ave	250S-CL Roger Rd	250N-CL Prince Rd	0.314	5	1.57	1.57	3,120	3,550	980	1,115
Campbell Ave	250N-CL Prince Rd	NPI Prince Rd	0.041	4	0.16	0.16	3,120	3,550	128	146
Campbell Ave	250S-CL Prince Rd	250N-CL Glenn St	0.904	5	4.52	4.52	3,120	3,495	2,820	3,159
Campbell Ave	SPI Glenn St	250S-CL Glenn St	0.043	3	0.13	0.13	1,554	3,430	67	147
Campbell Ave	250S-CL Glenn St	326N-CL Grant Rd	0.413	5	2.07	2.07	3,120	3,430	1,289	1,417
Campbell Ave	SPI Grant Rd	250S-CL Elm St	0.556	4	2.22	2.22	3,120	3,210	1,735	1,785
Campbell Ave	SPI Benson Hwy	250S-CL Benson Hwy	0.040	6	0.24	0.24	4,690	2,650	188	106
Campbell Ave	250S-CL Benson Hwy	250N-CL Drexel Rd	1.293	5	6.47	6.47	3,120	2,650	4,034	3,426
Campbell Ave	SPI Drexel Rd	250S-CL Bilby Rd	0.536	5	2.68	2.68	3,120	1,770	1,672	949
Campbell Ave	250N-CL Valencia Rd	NPI Valencia Rd	0.039	5	0.20	0.20	3,120	1,770	122	69
Campbell Ave	SPI Allen Rd	250S-CL Allen Rd	0.044	4	0.18	0.18	3,120	3,860	137	170
Catalina Hwy	1490n Tanque Verde	NPI Tanque Verde	0.275	5	1.38	1.38	3,120	1,490	858	410
Cherry Ave	250N-CL Speedway	250S-CL 22nd St	0.121	4	0.48	n/a	3,120	n/a	n/a	n/a
Church Ave	SPI 6th St	250N-CL Alameda St	0.227	4	0.91	0.91	3,120	560	708	127
Church Ave	158.5S of Pennington	250S-CL Broadway	0.103	4	0.41	0.41	3,120	1,850	321	191
Church Ave	250S-CL Broadway	NPI Cushing St	0.228	5	1.14	1.14	3,120	490	711	112
Civano Blvd	EPI Houghton Rd	120N-CL Drexel Rd	1.396	2	2.79	n/a	1,480	n/a	n/a	n/a
Columbus Blvd	250N-CL Ft Lowell Rd	NPI Ft Lowell Rd	0.042	4	0.17	n/a	3,120	n/a	n/a	n/a
Columbus Blvd	250N-CL Grant Rd	250S-CL Grant Rd	0.081	4	0.32	n/a	3,120	n/a	n/a	n/a
Columbus Blvd	250N-CL Speedway	250S-CL Speedway	0.079	2	0.16	n/a	1,480	n/a	n/a	n/a
Columbus Blvd	250N-CL 5th St	NPI 5th St	0.041	6	0.25	n/a	4,690	n/a	n/a	n/a
Columbus Blvd	SPI 5th St	250S-CL 5th St	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
Columbus Blvd	250N-CL 22nd St	250S-CL 22nd St	0.076	4	0.30	n/a	3,120	n/a	n/a	n/a
Columbus Blvd	SPI Pima St	250S-CL Pima St	0.041	3	0.12	n/a	1,554	n/a	n/a	n/a
Columbus Blvd	250N-CL Broadway	250S-CL Broadway	0.074	4	0.30	n/a	3,120	n/a	n/a	n/a
Columbus Blvd	SPI 29th St	250S-CL 29th St	0.041	3	0.12	n/a	1,554	n/a	n/a	n/a
Congress St	250E-CL of I-10	250W-CL Granada	0.148	7	1.04	1.04	3,120	1,850	462	274
Congress St	250W-CL Granada Ave	250E-CL Granada Ave	0.095	4	0.38	0.38	3,120	1,850	296	176
Congress St	250E-CL Granada Ave	250W-CL Church Ave	0.126	3	0.38	0.38	1,554	1,850	196	233
Congress St	250W-CL Church Ave	CL Church St	0.047	4	0.19	0.19	3,120	1,850	147	87
Congress St	EPI Silverbell Rd	250W-CL Grande Ave	0.259	5	1.30	1.30	3,120	1,720	808	445
Congress St	CL Grande Ave	West Edge Bridge	0.373	4	1.49	1.49	3,120	1,720	1,164	642
Congress St	250W-CL I-10 On-ramp	135E On/off Ramp	0.098	4	0.39	0.39	3,120	1,785	306	175
Congress St	178W-CL Stone Ave	CL Stone Ave	0.034	3	0.10	0.10	1,554	1,850	53	63
Congress St	224W of Scott Ave	192E of Scott Ave C	0.079	3	0.24	0.24	1,554	1,910	123	151
Congress St	CL 6th Ave	240E of 6th Ave Cl	0.045	3	0.14	0.14	1,554	1,970	70	89
Congress St	240W-CL 5th Ave	CL 5th Ave	0.045	3	0.14	0.14	1,554	1,970	70	89
Country Club Rd	NPI 1st St	250N-CL 5th/6th St	0.402	4	1.61	1.61	3,120	2,250	1,254	905
Country Club Rd	SPI 5th/6th St	250S-CL 5th/6th St	0.041	5	0.21	0.21	3,120	2,110	128	87
Country Club Rd	250S-CL 5th/6th St	250N-CL Broadway	0.382	4	1.53	1.53	3,120	2,110	1,192	806

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Country Club Rd	SPI Broadway Blvd	NPI 18th St	0.623	4	2.49	2.49	3,120	1,530	1,944	953
Country Club Rd	NPI 18th St	250S-CL 22nd St	0.412	5	2.06	2.06	3,120	1,530	1,285	630
Country Club Rd	250S-CL 22nd St	2258S-CL 22nd St	0.380	2	0.76	0.76	1,480	680	562	258
Country Club Rd	NPI Prince Rd	250N-CL Ft Lowell Rd	0.462	2	0.92	0.92	1,480	1,610	684	744
Country Club Rd	250N-CL Ft Lowell Rd	250S-CL Ft Lowell Rd	0.081	4	0.32	0.32	3,120	1,810	253	147
Country Club Rd	250S-CL Ft Lowell Rd	250N-CL Glenn St	0.406	5	2.03	2.03	3,120	2,010	1,267	816
Country Club Rd	250S-CL Glenn St	250N-CL Elm/pima	0.889	4	3.56	3.56	3,120	2,120	2,774	1,885
Country Club Rd	250S-CL Elm/Pima	250N-CL Speedway	0.395	4	1.58	1.58	3,120	2,230	1,232	881
Country Club Rd	250N-CL Speedway	250S-CL Speedway	0.070	6	0.42	0.42	4,690	2,240	328	157
Country Club Rd	Pvmt Chg, Begin Curb	NPI SR-210 (Aviation	0.187	2	0.37	0.37	1,480	680	277	127
Country Club Rd	SPI 36th St	250N-CL Ajo Way	0.847	2	1.69	n/a	1,480	n/a	n/a	n/a
Country Club Rd	250N-CL Ajo Way	250S-CL Ajo Way	0.078	5	0.39	n/a	3,120	n/a	n/a	n/a
Country Club Rd	250S-CL Ajo Way	250N-CL Irvington	0.924	2	1.85	n/a	1,480	n/a	n/a	n/a
Country Club Rd	250N-CL Irvington Rd	250S-CL Irvington Rd	0.077	5	0.39	n/a	3,120	n/a	n/a	n/a
Country Club Rd	250S-CL Irvington Rd	250N-CL Benson Hwy	0.325	2	0.65	n/a	1,480	n/a	n/a	n/a
Country Club Rd	250N-CL Benson Hwy	NPI Benson Hwy	0.040	3	0.12	n/a	1,554	n/a	n/a	n/a
Country Club Rd	SPI Benson Hwy	250N-CL Valencia Rd	1.563	2	3.13	n/a	1,480	n/a	n/a	n/a
Country Club Rd	250N-CL Valencia Rd	250S-CL Valencia Rd	0.078	4	0.31	n/a	3,120	n/a	n/a	n/a
Country Club Rd	250S-CL Valencia Rd	SPI Corona Rd	0.713	2	1.43	n/a	1,480	n/a	n/a	n/a
Country Club Rd	250N-CL Drexel Rd	NPI Drexel Rd	0.044	5	0.22	n/a	3,120	n/a	n/a	n/a
Craycroft Blvd	SPI Ft Lowell	250N-CL Glenn St	0.182	5	0.91	0.91	3,120	3,260	568	593
Craycroft Blvd	SPI Glenn St	250S-CL Glenn St	0.043	4	0.17	0.17	3,120	3,260	134	140
Craycroft Blvd	250S-CL Glenn St	NPI Grant Rd	0.439	5	2.19	2.19	3,120	3,260	1,370	1,431
Craycroft Blvd	SPI Grant Rd	250S-CL Grant Rd	0.039	4	0.16	0.16	3,120	3,050	122	119
Craycroft Blvd	250S-CL Grant Rd	250N-CL Pima St	0.396	5	1.98	1.98	3,120	3,050	1,236	1,208
Craycroft Blvd	250S-CL Pima St	250N-CL Speedway	0.401	5	2.01	2.01	3,120	3,340	1,251	1,339
Craycroft Blvd	250N-CL Speedway	250N-CL 5th St	0.488	4	1.95	1.95	3,120	3,490	1,523	1,703
Craycroft Blvd	250N-CL 5th St	NPI 5th St	0.041	6	0.25	0.25	4,690	3,490	192	143
Craycroft Blvd	SPI 5th St	250N-CL Broadway	0.447	4	1.79	1.79	3,120	3,520	1,395	1,573
Craycroft Blvd	250N-CL Broadway	250S-CL 22nd St	1.067	6	6.40	6.40	4,690	4,130	5,004	4,407
Craycroft Blvd	250S-CL 22nd St	250N-CL Golf Links	0.911	5	4.56	4.56	3,120	3,140	2,842	2,861
Craycroft Blvd	250N-CL Golf Links	250S-CL Golf Links	0.076	6	0.46	0.46	4,690	270	356	21
Craycroft Blvd	S Bridge Abutment Ri	SPI Ft Lowell	0.456	5	2.28	2.28	3,120	2,480	1,423	1,131
Dodge Blvd	SPI Glenn St	NPI Grant Rd	0.490	2	0.98	n/a	1,480	n/a	n/a	n/a
Dodge Blvd	SPI Pima St	NPI Speedway Blvd	0.480	2	0.96	n/a	1,480	n/a	n/a	n/a
Dodge Blvd	250N-CL Ft Lowell Rd	250S-CL Ft Lowell Rd	0.081	4	0.32	0.32	3,120	1,640	253	133
Drachman	250E-CL Stone Ave	WPI 6th Ave	0.128	3	0.38	n/a	1,554	n/a	n/a	n/a
Drachman	NW Corner Island, Ma	CL Stone Ave	0.357	4	1.43	n/a	3,120	n/a	n/a	n/a
Dragoon Ave	SPI Grant Rd	NPI El Rio Dr	0.505	2	1.01	n/a	1,480	n/a	n/a	n/a
Drexel Rd	250W-CL Mission Rd	250E-CL Mission Rd	0.095	3	0.29	0.29	1,554	1,010	148	96
Drexel Rd	CL Nogales Hwy	250E-CL Nogales Hwy	0.047	4	0.19	0.19	3,120	1,030	147	48
Drexel Rd	250W-CL Park Ave	250E-CL Park Ave	0.095	3	0.29	0.29	1,554	945	148	90
Drexel Rd	CL Campbell Ave	250E-CL Campbell	0.047	4	0.19	0.19	3,120	710	147	33
Drexel Rd	250E-CL Campbell Ave	WPI Country Club Rd	0.902	2	1.80	1.80	1,480	710	1,335	640
El Camino Cerro	600 W-CL Silverbell	250W-CL Silverbell	0.114	2	0.23	n/a	1,480	n/a	n/a	n/a
El Camino Cerro	250W-CL Silverbell	CL Silverbell Rd	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
El Camino Cerro	250E-CL Silverbell	SE Corner Island	0.647	2	1.29	n/a	1,480	n/a	n/a	n/a

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
El Rio Dr	WPI Dragoon	NPI Riverview Blvd	0.701	2	1.40	n/a	1,480	n/a	n/a	n/a
Elm St	250W-CL Campbell Ave	250E-CL Campbell	0.095	4	0.38	n/a	3,120	n/a	n/a	n/a
Elm St	250W-CL Tucson Blvd	W Bcr Elm St	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Escalante Rd	EPI Calle Polar	250W-CL Kolb Rd	0.686	2	1.37	1.37	1,480	1,060	1,015	727
Escalante Rd	250W-CL Kolb Rd	250E-CL Kolb Rd	0.095	5	0.48	0.48	3,120	1,145	296	109
Escalante Rd	250E-CL Kolb Rd	250W-CL Pantano Rd	0.908	4	3.63	3.63	3,120	1,230	2,833	1,117
Escalante Rd	250W-CL Pantano Rd	250E-CL Pantano Rd	0.095	5	0.48	0.48	3,120	845	296	80
Escalante Rd	250E-CL Pantano Rd	WPI Camino Seco	0.944	2	1.89	1.89	1,480	460	1,397	434
Euclid Ave	250S-CL Grant Rd	250N-CL University	1.199	5	6.00	6.00	3,120	2,910	3,741	3,489
Euclid Ave	SPI University Blvd	250N-CL 6th St	0.218	5	1.09	1.09	3,120	2,930	680	639
Euclid Ave	250N-CL 6th St	250S-CL 6th St	0.084	4	0.34	0.34	3,120	3,210	262	270
Euclid Ave	250S-CL 6th St	250N-CL Broadway	0.056	5	0.28	0.28	3,120	3,490	175	195
Euclid Ave	SPI Broadway Blvd	250S-CL Broadway	0.042	6	0.25	0.25	4,690	1,760	197	74
Euclid Ave	250S-CL Broadway	N Edge RRTracks	0.405	5	2.03	2.03	3,120	1,760	1,264	713
Fairview Ave	SPI Wetmore Rd	250S-CL Wetmore Rd	0.038	4	0.15	n/a	3,120	n/a	n/a	n/a
Fairview Ave	SPI Prince Rd	250S-CL Prince Rd	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
Fairview Ave	250N-CL Miracle Mile	250S-CL Miracle Mile	0.080	4	0.32	n/a	3,120	n/a	n/a	n/a
Fairview Ave	250N-CL Grant Rd	250S-CL Grant Rd	0.077	4	0.31	n/a	3,120	n/a	n/a	n/a
Flowing Wells	250S-CL Roger Rd	250N-CL Prince Rd	0.407	5	2.03	2.03	3,120	2,490	1,270	1,013
Flowing Wells	250N-CL Prince Rd	250S-CL Prince Rd	0.082	4	0.33	0.33	3,120	2,245	256	184
Flowing Well	250S-CL Prince Rd	250N-CL Miracle Mile	0.671	5	3.36	3.36	3,120	2,000	2,094	1,342
Flowing Well	250N-CL Miracle Mile	250S-CL Miracle Mile	0.080	4	0.32	0.32	3,120	2,000	250	160
Fontana Ave	250N-CL Grant Rd	NPI Grant Rd	0.041	3	0.12	n/a	1,554	n/a	n/a	n/a
Forbes	SPI Grant Rd	250S-CL Grant Rd	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
Fremont Ave	250N-CL 6th St	NPI 6th St	0.042	2	0.08	n/a	1,480	n/a	n/a	n/a
Fresno St	EPI Silverbell Rd	WPI Wstmrln Ave	0.168	2	0.34	n/a	1,480	n/a	n/a	n/a
Ft Lowell	250E-CL Stone Ave	250W-CL 1st Ave	0.553	5	2.77	2.77	3,120	2,140	1,725	1,183
Ft Lowell	250W-CL 1st Ave	CL 1st Ave	0.047	4	0.19	0.19	3,120	2,140	147	101
Ft Lowell	CL 1st Ave	250W-CL Mountain	0.459	5	2.30	2.30	3,120	2,180	1,432	1,001
Ft Lowell	250W-CL Mountain Ave	250E-CL Mountain	0.095	4	0.38	0.38	3,120	2,180	296	207
Ft Lowell	250E-CL Mountain Ave	250W-CL Campbell	0.407	5	2.03	2.03	3,120	2,180	1,270	887
Ft Lowell	CL Campbell Ave	250W-CL Country Club	0.952	5	4.76	4.76	3,120	3,270	2,970	3,113
Ft Lowell	CL Country Club	250W-CL Alvernon Wy	0.897	5	4.49	4.49	3,120	3,390	2,799	3,041
Ft Lowell	CL Alvernon	250E-CL Alvernon Wy	0.047	5	0.24	0.24	3,120	3,450	147	162
Ft Lowell	250E-CL Alvernon	890e Columbus Blvd	0.642	4	2.57	2.57	3,120	3,450	2,003	2,215
Ft Lowell	250W-CL Swan Rd	CL Swan Rd	0.047	3	0.14	0.14	1,554	1,990	73	94
Ft Lowell	WPI Oracle Rd	250E-CL Oracle Rd	0.055	4	0.22	0.22	3,120	1,920	172	106
Ft Lowell	250E-CL Oracle Rd	CL Stone Ave	0.307	4	1.23	1.23	3,120	1,920	958	589
Ft Lowell	CL Stone Ave	250E-CL Stone Ave	0.047	5	0.24	0.24	3,120	2,290	147	108
Ft Lowell	EPI Romero Rd	EPI Shwanee Ave	0.375	2	0.75	n/a	1,480	n/a	n/a	n/a
Glenn St	CL Stone Ave	250E-CL 1st Ave	0.694	3	2.08	n/a	1,554	n/a	n/a	n/a
Glenn St	CL Campbell Ave	250E-CL Campbell	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Glenn St	250W-CL Alvernon	CL Alvernon	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Glenn St	250W-CL Swan Rd	250E-CL Swan Rd	0.095	3	0.29	n/a	1,554	n/a	n/a	n/a
Glenn St	CL Craycroft Rd	250E-CL Craycroft	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Glenn St	EPI Fairview	1266E-CL Fairview	0.240	2	0.48	n/a	1,480	n/a	n/a	n/a
Glenn St	CL Oracle Rd	250E-CL Oracle Rd	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Glenn St	250W-CL Tucson Blvd	CL Tucson Blvd	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Glenn St	CL Country Club	250E-CL Country Club	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Golf Links	NPI Aviation Pkwy	7993n Ajo Way C	0.413	7	2.89	2.89	3,120	5,850	1,289	2,416
Golf Links	7993N of Ajo Way CL	250W-CL Prudence Rd	4.050	6	24.30	24.30	4,690	4,788	18,995	19,391
Golf Links	250W-CL Prudence R	250E-CL Prudence Rd	0.095	4	0.38	0.38	3,120	3,680	296	350
Golf Links	250E-CL Prudence Rd	250W-CL Pantano Rd	0.405	6	2.43	2.43	4,690	3,680	1,899	1,490
Golf Links	250W-CL Pantano Rd	250E-CL Pantano Rd	0.095	7	0.67	0.67	3,120	3,220	296	306
Golf Links	250E-CL Pantano Rd	250W-CL Camino Seco	0.630	6	3.78	3.78	4,690	2,760	2,955	1,739
Golf Links	250W-CL Camino Seco	CL Camino Seco Rd	0.047	7	0.33	0.33	3,120	2,760	147	130
Golf Links	126W of Pantano Pk	CL Pantano Pkwy	0.024	7	0.17	0.17	3,120	2,760	75	66
Golf Links	CL Pantano Pkwy	250E-CL Pantano Pkw	0.047	4	0.19	0.19	3,120	2,760	147	130
Golf Links	250E-CL Pantano Pk	WPI Palm Springs	0.534	5	2.67	2.67	3,120	2,760	1,666	1,474
Golf Links	WPI Palm Springs	CL Harrison Rd	1.578	4	6.31	6.31	3,120	2,760	4,923	4,355
Golf Links	CL Harrison Rd	250E-CL Harrison Rd	0.047	3	0.14	0.14	1,554	1,150	73	54
Golf Links	250E-CL Harrison Rd	250W-CL Houghton	0.907	2	1.81	1.81	1,480	1,150	1,342	1,043
Golf Links	250W-CL Houghton Rd	EPI Houghton Rd	0.052	3	0.16	0.16	1,554	1,150	81	60
Golf Links	397E-CL Bonanza	CL Houghton Rd	0.468	4	1.87	1.87	3,120	1,150	1,460	538
Golf Links	N Edge Concrete B	3132N of Ajo Way CL	0.320	6	1.92	1.92	4,690	4,700	1,501	1,504
Golf Links	3313N-CL Ajo Way	5534N of Ajo Way Cl	0.421	6	2.53	2.53	4,690	4,700	1,974	1,979
Golf Links	CL Hearthstone	250E of Hearthstone	0.047	4	0.19	0.19	3,120	2,760	147	130
Granada Ave	250N-CL 6th St	250S-CL 6th St	0.081	4	0.32	0.32	3,120	1,140	253	92
Granada Ave	250N-CL Alameda St	NPI Alameda St	0.042	4	0.17	0.17	3,120	1,080	131	45
Granada Ave	215S of Alameda St	250S-CL Congress St	0.076	4	0.30	0.30	3,120	1,270	237	97
Grande Ave	SPI Speedway Blvd	Begin taper to 3 lane	0.617	5	3.09	n/a	3,120	n/a	n/a	n/a
Grande Ave	Begin taper to 3 Lane	250N-CL Congress S	0.398	4	1.59	n/a	3,120	n/a	n/a	n/a
Grant Rd	824W of Fairview Ave	250W-CL Fairview Ave	0.109	6	0.65	0.65	4,690	3,880	511	423
Grant Rd	250W-CL Fairview Ave	250E-CL Fairview Ave	0.095	4	0.38	0.38	3,120	3,880	296	369
Grant Rd	250E-CL Fairview Ave	250W-CL Oracle Rd	0.397	6	2.38	2.38	4,690	3,880	1,862	1,540
Grant Rd	CL Oracle Rd	250E-CL Oracle Rd	0.047	4	0.19	0.19	3,120	3,870	147	182
Grant Rd	250E-CL Oracle Rd	250W-CL Fontana/6th	0.516	5	2.58	2.58	3,120	4,015	1,610	2,072
Grant Rd	250W-CL 6th Ave	250E-CL 6th Ave	0.095	4	0.38	0.38	3,120	4,160	296	395
Grant Rd	250e Fontana/6th	250W-CL First Ave	0.302	5	1.51	1.51	3,120	4,160	942	1,256
Grant Rd	250W-CL 1st Ave	CL 1st Ave	0.047	4	0.19	0.19	3,120	4,160	147	196
Grant Rd	250E-CL First Ave	250W-CL Park Ave	0.150	5	0.75	0.75	3,120	4,190	468	629
Grant Rd	250W-CL Park Ave	CL Park Ave	0.047	4	0.19	0.19	3,120	4,190	147	197
Grant Rd	250E-CL of Park Ave	250W-CL Mountain	0.160	5	0.80	0.80	3,120	4,190	499	670
Grant Rd	250W-CL Mountain Ave	CL Mountain Ave	0.047	4	0.19	0.19	3,120	4,190	147	197
Grant Rd	250E-CL Mountain Ave	250W-CL Campbell	0.412	5	2.06	2.06	3,120	4,190	1,285	1,726
Grant Rd	CL Campbell Ave	250E-CL Campbell	0.047	4	0.19	0.19	3,120	4,265	147	200
Grant Rd	250E-CL Campbell Ave	250W-CL Tucson Blvd	0.407	5	2.03	2.03	3,120	4,340	1,270	1,766
Grant Rd	250W-CL Tucson Blvd	CL Tucson Blvd	0.047	4	0.19	0.19	3,120	4,340	147	204
Grant Rd	250E-CL Tucson Blvd	250W-CL Country Club	0.408	5	2.04	2.04	3,120	5,420	1,273	2,211
Grant Rd	CL Country Club	250E-CL Country Club	0.047	4	0.19	0.19	3,120	4,330	147	204
Grant Rd	250E-CL Country Club	CL Alvernon	0.953	5	4.76	4.76	3,120	4,330	2,973	4,126
Grant Rd	250E-CL Alvernon	CL Columbus Blvd	0.440	5	2.20	2.20	3,120	4,180	1,373	1,839
Grant Rd	CL Columbus Blvd	250E-CL Columbus	0.047	4	0.19	0.19	3,120	4,180	147	196
Grant Rd	250E of Columbus Blvd	250W-CL Swan Rd	0.400	5	2.00	2.00	3,120	4,180	1,248	1,672

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Grant Rd	250W-CL Swan Rd	250E-CL Swan Rd	0.095	4	0.38	0.38	3,120	4,575	296	435
Grant Rd	250E-CL Swan Rd	CL Wilmot Rd	1.945	6	11.67	11.67	4,690	4,970	9,122	9,667
Grant Rd	CL Wilmot Rd	250E-CL Wilmot Rd	0.047	3	0.14	0.14	1,554	4,920	73	231
Grant Rd	250E-CL Wilmot Rd	250N of W-CL Tanque	0.441	6	2.65	2.65	4,690	4,920	2,068	2,170
Grant Rd	CL Silverbell Rd	W edge Santa Cruz Br	0.952	5	4.76	4.76	3,120	3,000	2,970	2,856
Grant Rd	W edge Santa Cruz Br	250W-CL Forbes Blvd	0.062	4	0.25	0.25	3,120	3,000	193	186
Grant Rd	250W-CL Forbes Blvd	250E-CL Forbes Blvd	0.095	5	0.48	0.48	3,120	3,000	296	285
Grant Rd	250W-CL I-10	250E-CL I-10	0.142	6	0.85	0.85	4,690	3,440	666	488
Grant Rd	250W-CL Dodge Blvd	CL of Dodge Blvd	0.047	5	0.24	0.24	3,120	4,330	147	204
Grant Rd	250W-CL Beverly	CL of Beverly	0.047	6	0.28	0.28	4,690	4,970	220	234
Greasewood	SPI Starr Pass Rd	250S-CL Starr Pass	0.043	4	0.17	n/a	3,120	n/a	n/a	n/a
Greasewood	SPI Speedway Blvd	250S-CL Speedway	0.041	4	0.16	0.16	3,120	1,540	128	63
Greasewood	250N-CL Anklam Rd	250S-CL Anklam Rd	0.084	4	0.34	0.34	3,120	1,540	262	129
Harrison Rd	275N of Calle Bolivar	250N-CL Speedway	0.321	2	0.64	0.64	1,480	680	475	218
Harrison Rd	250N-CL Speedway	250S-CL Speedway	0.083	4	0.33	0.33	3,120	900	259	75
Harrison Rd	250S-CL Speedway	293S of Fifth St	0.519	2	1.04	1.04	1,480	1,120	768	581
Harrison Rd	293S of Fifth St	1223N-CL Broadway	0.212	3	0.64	0.64	1,554	1,120	329	237
Harrison Rd	1223n Broadway	250N-CL Broadway	0.184	2	0.37	0.37	1,480	1,120	272	206
Harrison Rd	250N-CL Broadway	NPI Broadway Blvd	0.043	4	0.17	0.17	3,120	1,120	134	48
Harrison Rd	250S-CL Broadway	250N-CL 22nd St	0.910	2	1.82	1.82	1,480	1,140	1,347	1,037
Harrison Rd	SPI 22nd St	250S-CL 22nd St	0.041	4	0.16	0.16	3,120	1,340	128	55
Harrison Rd	250S-CL 22nd St	250N-CL Golf Links	0.907	2	1.81	1.81	1,480	1,340	1,342	1,215
Harrison Rd	250N-CL Golf Links	NPI Golf Links Rd	0.040	5	0.20	0.20	3,120	1,340	125	54
Harrison Rd	SPI Golf Links Rd	250S-CL Golf Links	0.040	4	0.16	0.16	3,120	690	125	28
Harrison Rd	250S-CL Golf Links R	5336S of Golf Links	0.963	2	1.93	1.93	1,480	690	1,425	664
Harrison Rd	6240S of Golf Links Rd	9373S of Golf Links	0.593	2	1.19	1.19	1,480	690	878	409
Harrison Rd	9373S of Golf Links Rd	NPI Irvington Rd	0.218	3	0.65	0.65	1,554	690	339	150
Harrison Rd	EPI Rita Rd	2640N of Brekke Rd	2.073	2	4.15	n/a	1,480	n/a	n/a	n/a
Hermans Rd	EPI Farmcreek Dr	WPI Wilmot Rd	0.928	2	1.86	n/a	1,480	n/a	n/a	n/a
Highland Ave	250N-CL Broadway	250S-CL Broadway	0.083	2	0.17	n/a	1,480	n/a	n/a	n/a
Highland Ave	SPI 1st St	CL 1st St.	0.067	2	0.13	n/a	1,480	n/a	n/a	n/a
Houghton Rd	75S of Speedway Bl	NPI Fifth St	0.491	3	1.47	1.47	1,554	1,430	763	702
Houghton Rd	NPI Fifth St	Start of Taper	0.405	2	0.81	0.81	1,480	1,430	599	579
Houghton Rd	Start Taper	NPI Broadway Blvd	0.062	3	0.19	0.19	1,554	1,430	96	89
Houghton Rd	SPI Broadway Blvd	250S-CL Broadway	0.044	4	0.18	0.18	3,120	1,700	137	75
Houghton Rd	250S-CL Broadway	NPI Foxmore Dr	0.236	2	0.47	0.47	1,480	1,700	349	401
Houghton Rd	NPI Foxmore Dr	NPI 22nd St	0.718	3	2.15	2.15	1,554	1,700	1,116	1,221
Houghton Rd	SPI 22nd St	250S-CL 22nd St	0.043	4	0.17	0.17	3,120	1,440	134	62
Houghton Rd	250S-CL 22nd St	250N-CL Old Spnsh Tr	0.611	3	1.83	1.83	1,554	1,440	949	880
Houghton Rd	250N-CL Old Spnsh Tr	250S-CL Old Spnsh Tr	0.081	4	0.32	0.32	3,120	1,440	253	117
Houghton Rd	CL Sign S-Old Spanish	250N-CL Golf Links	0.198	3	0.59	0.59	1,554	1,440	308	285
Houghton Rd	250N-CL Golf Links	250S-CL Golf Links	0.080	4	0.32	0.32	3,120	1,440	250	115
Houghton Rd	250S-CL Golf Links R	City Limits Sign	0.088	3	0.26	0.26	1,554	1,440	137	127
Houghton Rd	CL Sign S of Escala	Begin taper (road wi	0.297	2	0.59	0.59	1,480	1,450	440	431
Houghton Rd	Begin taper (road wi	N Edge Pantano Wash	0.347	3	1.04	1.04	1,554	1,450	539	503
Houghton Rd	N edge Pantano Wash	Pvmt chng (N of Vale	2.146	2	4.29	4.29	1,480	1,440	3,176	3,090
Houghton Rd	Pvmt change	End taper, top of hi	0.342	3	1.03	1.03	1,554	1,430	531	489

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Houghton Rd	End taper, top of hi	1017N-CL Seven Gen	0.213	2	0.43	0.43	1,480	1,430	315	305
Houghton Rd	1058N-CL Valencia	700S-CL Valencia Rd	0.333	3	1.00	1.00	1,554	1,430	517	476
Houghton Rd	700s Valencia Rd	4003S of Valencia R	0.626	2	1.25	1.25	1,480	940	926	588
Houghton Rd	1920N-CL Rita Rd	1458S-CL Rita Rd	0.640	3	1.92	1.92	1,554	940	995	602
Houghton Rd	1458S-CL Rita Rd	4632'S-CL Rita Rd	0.601	2	1.20	1.20	1,480	940	889	565
Houghton Rd	666N Old Vail Rd	822S Old Vail Rd	0.280	3	0.84	n/a	1,554	n/a	n/a	n/a
Houghton Rd	822S of Old Vail Rd	1914S of Old Vail R	0.207	2	0.41	n/a	1,480	n/a	n/a	n/a
Houghton Rd	485S of Old Vail Conn	Cattle Guard (N.I-10	0.705	2	1.41	n/a	1,480	n/a	n/a	n/a
Houghton Rd	CL Flintlock Tr	NPI Rancho Del Este	0.129	2	0.26	0.26	1,480	720	191	93
Houghton Rd	NPI Rancho Del Este	250N-CL Tanque Verde	0.111	3	0.33	0.33	1,554	1,990	172	221
Houghton Rd	SPI Tanque Verde Rd	250S-CL Tanque Verde	0.040	3	0.12	0.12	1,554	1,270	62	51
Houghton Rd	673S I-10 Cattle Guard	2640N of Brekke Rd	0.346	3	1.04	n/a	1,554	n/a	n/a	n/a
Houghton Rd	250N-CL Broadway	NPI Broadway Blvd	0.044	4	0.18	0.18	3,120	1,430	137	63
Ironwood Hill Dr	CL Painted Hills Dr	735E of Painted Hills	0.139	3	0.42	0.42	1,554	660	216	92
Ironwood Hill Dr	735E of Painted Hills	2456E of Painted Hill	0.326	2	0.65	0.65	1,480	660	482	215
Ironwood Hill Dr	2456E of Painted Hill	250W-CL Silverbell	0.808	3	2.42	2.42	1,554	2,150	1,256	1,737
Irvington Rd	CL Park Ave	250E-CL Tucson Blvd	1.254	5	6.27	6.27	3,120	3,130	3,912	3,925
Irvington Rd	250E-CL Tucson Blvd	250E-CL Country Club	0.547	4	2.19	n/a	3,120	n/a	n/a	n/a
Irvington Rd	250E-CL Benson Hwy	724E of Benson Hwy	0.090	5	0.45	n/a	3,120	n/a	n/a	n/a
Irvington Rd	724E of Benson Hwy	WPI Country Club Rd	0.268	4	1.07	n/a	3,120	n/a	n/a	n/a
Irvington Rd	250E-CL Country Clb	250E-CL Palo Verde	0.514	4	2.06	n/a	3,120	n/a	n/a	n/a
Irvington Rd	250E-CL Rosemont	250W-CL Alvernon	0.305	4	1.22	n/a	3,120	n/a	n/a	n/a
Irvington Rd	250E-CL Alvernon	1428e Alvernon W	0.223	4	0.89	n/a	3,120	n/a	n/a	n/a
Irvington Rd	1428E of Alvernon	5143E of Alvernon W	0.704	2	1.41	n/a	1,480	n/a	n/a	n/a
Irvington Rd	250E-CL Kolb Rd	EPI Harrison Rd	2.959	2	5.92	5.92	1,480	1,223	4,379	3,619
Irvington Rd	EPI Harrison Rd	E edge of Bridge	0.517	3	1.55	1.55	1,554	760	803	393
Irvington Rd	E edge of Bridge	WPI Houghton Rd	0.478	2	0.96	0.96	1,480	760	707	363
Irvington Rd	E edge Santa Cruz Br	CL 6th Ave	1.358	5	6.79	6.79	3,120	3,520	4,237	4,780
Irvington Rd	CL 6th Ave	250E-CL 6th Ave	0.047	4	0.19	0.19	3,120	3,330	147	157
Irvington Rd	250E-CL 6th Ave	250W-CL Park Ave	0.603	5	3.01	3.01	3,120	3,330	1,881	2,008
Irvington Rd	250W-CL Mission Rd	250E-CL Mission Rd	0.095	6	0.57	0.57	4,690	2,265	446	215
Irvington Rd	250E-CL Mission Rd	800e Mission Rd	0.104	4	0.42	0.42	3,120	3,780	324	393
Irvington Rd	1016E-CL Mission Rd	2778E of Midvale Pa	0.728	4	2.91	2.91	3,120	3,780	2,271	2,752
Irvington Rd	CL	250E-CL I-10 ramp	0.047	5	0.24	n/a	3,120	n/a	n/a	n/a
Kenyon Dr	250W-CL Pantano Rd	CL Pantano Rd	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Kino Prky	250S-CL Broadway	250N-CL 22nd St	0.834	6	5.00	5.00	4,690	3,325	3,911	2,773
Kino Prky	250N-CL 22nd St	NPI 22nd St	0.041	8	0.33	0.33	3,120	3,380	128	139
Kino Prky	SPI 22nd St	250S-CL 22nd St	0.041	9	0.37	0.37	3,120	3,220	128	132
Kino Prky	250S-CL 22nd St	250N-CL Silverlake	0.414	6	2.48	2.48	4,690	3,220	1,942	1,333
Kino Prky	250S-CL Silverlake R	250N-CL 36th St	0.437	6	2.62	2.62	4,690	3,220	2,050	1,407
Kino Prky	250N-CL 36th St	NPI 36th St	0.040	9	0.36	0.36	3,120	3,220	125	129
Kino Prky	SPI 36th St	250S-CL 36th St	0.040	8	0.32	0.32	3,120	3,220	125	129
Kino Prky	250S-CL 36th St	N Edge I-10 Overpass	0.904	6	5.42	5.42	4,690	3,220	4,240	2,911
Kino Prky	SPI I-10 Op	NPI Op-7050S-CL 36th	0.143	4	0.57	0.57	3,120	3,220	446	460
Kino Prky	SPI 29th St	250S-CL 29th St	0.041	7	0.29	0.29	3,120	3,220	128	132
Kino Prky	SPI Concrete Op	250N-CL Benson Hwy	0.239	4	0.96	0.96	3,120	3,390	746	810
Kino Prky	250N-CL Benson Hwy	NPI Benson Hwy	0.040	6	0.24	0.24	4,690	3,390	188	136

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Kino Prky	SPI 15th/Winsett St	250S-CL 15th/Winsett	0.041	6	0.25	0.25	4,690	3,270	192	134
Kino Prky	250N-CL Ajo Way	250S-CL Ajo Way	0.079	4	0.32	0.32	3,120	3,305	246	261
Kolb Rd	250sE-CL Tnqe Verde	250N-CL Speedway	0.945	6	5.67	5.67	4,690	3,980	4,432	3,761
Kolb Rd	250N-CL Speedway	250S-CL Speedway	0.072	4	0.29	0.29	3,120	5,135	225	370
Kolb Rd	250S-CL Speedway	250N-CL 22nd St	1.886	6	11.32	11.32	4,690	5,520	8,845	10,411
Kolb Rd	250N-CL 22nd St	250S-CL 22nd St	0.074	9	0.67	0.67	3,120	4,930	231	365
Kolb Rd	250S-CL 22nd St	250N-CL Stella Rd	1.354	6	8.12	8.12	4,690	4,515	6,350	6,113
Kolb Rd	250N-CL Stella Rd	250S-CL Stella Rd	0.086	3	0.26	0.26	1,554	3,920	134	337
Kolb Rd	250S-CL Stella Rd	250S-CL Escalante	0.488	6	2.93	2.93	4,690	3,920	2,289	1,913
Kolb Rd	250S-CL Escalante	7094S of Irvington	2.291	4	9.16	9.16	3,120	4,195	7,148	9,611
Kolb Rd	250N-CL 29th St	250S of 29th St	0.095	6	0.57	0.57	4,690	5,110	446	485
Kolb Rd Access	EPI Kolb Rd	WPI Ring Rd	2.004	2	4.01	n/a	1,480	n/a	n/a	n/a
La Cholla	250N-CL Ajo Way	NPI Ajo Way	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
Laurel Ave.	SPI Ft Lowell	NPI Blacklidge St.	0.244	2	0.49	n/a	1,480	n/a	n/a	n/a
Limberlost Rd	250W-CL Oracle Rd	CL Oracle Rd	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Limberlost Rd	CL Oracle Rd	CL Stone Ave	0.095	5	0.48	n/a	3,120	n/a	n/a	n/a
Limberlost Rd	CL Stone Ave	CL 1st Ave	0.095	3	0.29	n/a	1,554	n/a	n/a	n/a
Limberlost Rd	250E-CL 1st Ave	WPI Mountain Ave	0.466	2	0.93	n/a	1,480	n/a	n/a	n/a
Los Reales Rd	WPI 6th Ave	250W-CL Nogales Hwy	0.371	2	0.74	n/a	1,480	n/a	n/a	n/a
Los Reales Rd	250W-CL Nogales Hwy	EPI Nogales Hwy	0.056	3	0.17	n/a	1,554	n/a	n/a	n/a
Main Ave	SPI Drachman St	250N-CL Speedway	0.216	5	1.08	n/a	3,120	n/a	n/a	n/a
Main Ave	250N-CL Speedway	250S-CL Speedway	0.076	6	0.46	n/a	4,690	n/a	n/a	n/a
Main Ave	250S-CL Speedway	250N-CL 6th St	0.474	5	2.37	n/a	3,120	n/a	n/a	n/a
Midvale Park	SPI Irvington Rd	250S-CL Irvington Rd	0.040	6	0.24	n/a	4,690	n/a	n/a	n/a
Midvale Park	250S-CL Irvington Rd	NPI Deacon Dr	0.188	4	0.75	n/a	3,120	n/a	n/a	n/a
Midvale Park	250S-CL Irvington Rd	NPI Deacon D	0.159	2	0.32	n/a	1,480	n/a	n/a	n/a
Midvale Park	NPI Deacon D	250N-CL Valencia Rd	1.659	4	6.64	n/a	3,120	n/a	n/a	n/a
Midvale Park	250N-CL Valencia Rd	250S-CL Valencia Rd	0.073	6	0.44	n/a	4,690	n/a	n/a	n/a
Mission C Ramp	250N-CL Starr Pass	NPI Starr Pass Blvd	0.041	5	0.21	n/a	3,120	n/a	n/a	n/a
Mission Rd	250S-CL Starr Pass	250N-CL Silverlake	0.490	6	2.94	2.94	4,690	2,490	2,298	1,220
Mission Rd	250N-CL Silverlake	250S-CL Silverlake	0.082	3	0.25	0.25	1,554	2,435	127	200
Mission Rd	250S-CL Silverlake R	250N-CL 36th St	0.451	6	2.71	2.71	4,690	2,380	2,115	1,073
Mission Rd	SPI 36th St	N Curb, S Ent Missio	0.238	6	1.43	1.43	4,690	2,380	1,116	566
Mission Rd	NPI S Ent Missio	250N-CL Drexel Rd	2.839	4	11.36	11.36	3,120	2,496	8,858	7,086
Mission Rd	SPI Drexel Rd	250S-CL Drexel Rd	0.044	3	0.13	0.13	1,554	1,330	68	59
Mountain Ave	250N-CL Ft Lowell Rd	250S-CL Ft Lowell Rd	0.081	4	0.32	0.32	3,120	905	253	73
Mountain Ave	SPI Ft Lowell	NPI Glenn St	0.482	2	0.96	0.96	1,480	920	713	443
Mountain Ave	250N-CL Prince Rd	NPI Prince Rd	0.041	4	0.16	n/a	3,120	n/a	n/a	n/a
Mountain Ave	SPI Prince Rd	250S-CL Prince Rd	0.041	4	0.16	0.16	3,120	890	128	36
Mountain Ave	250N-CL Grant Rd	NPI Grant Rd	0.041	2	0.08	n/a	1,480	n/a	n/a	n/a
Mountain Ave	SPI Grant Rd	250S-CL Grant Rd	0.041	2	0.08	n/a	1,480	n/a	n/a	n/a
Mountain Ave	250N-CL Speedway	250S-CL Speedway	0.077	5	0.39	0.39	3,120	950	240	73
Nicaragua	EPI Wilmot Rd	WPI Calle Polar	0.260	3	0.78	n/a	1,554	n/a	n/a	n/a
Nogales Hwy	250S-CL Irvington Rd	NPI Drexel Rd	1.036	5	5.18	5.18	3,120	1,760	3,232	1,823
Nogales Hwy	250S-CL Drexel Rd	250N-CL Bilby Rd	0.407	5	2.03	n/a	3,120	n/a	n/a	n/a
Nogales Hwy	250S-CL Bilby Rd	250N-CL Valencia Rd	0.385	5	1.93	n/a	3,120	n/a	n/a	n/a
Nogales Hwy	250N-CL Valencia Rd	250S-CL Valencia Rd	0.074	4	0.30	0.30	3,120	2,530	231	187

					Lane-Miles					
Route Name	From	To	Miles	Lns	Total	Count	Cap.	Vol.	VMC	VMT
Nogales Hwy	250S-CL Valencia Rd	250N-CL Los Reales	0.902	6	5.41	5.41	4,690	2,530	4,230	2,282
Nogales Hwy	250N-CL Los Reales	250S-CL Los Reales	0.086	4	0.34	0.34	3,120	2,530	268	218
Old Spanish Tr	SPI 22nd St	250W-CL Houghton Rd	1.047	2	2.09	2.09	1,480	720	1,550	754
Old Spanish Tr	250W-CL Houghton Rd	CL Houghton Rd	0.047	4	0.19	0.19	3,120	720	147	34
Old Spanish Tr	CL Houghton Rd	250E-CL Houghton Rd	0.047	3	0.14	0.14	1,554	720	73	34
Old Spanish Tr	250E-CL Houghton Rd	WPI Melpomene Way	1.084	2	2.17	n/a	1,480	n/a	n/a	n/a
Old Spanish Tr	250W-CL Camino Seco	CL Camino Seco Rd	0.047	5	0.24	0.24	3,120	30	147	1
Old Spanish Tr	CL Camino Seco Rd	250E-CL Camino Seco	0.047	3	0.14	0.14	1,554	570	73	27
Old Vail Rd	SPI Valencia Rd	250E-CL Rita Rd	1.677	5	8.39	n/a	3,120	n/a	n/a	n/a
Old Vail Rd	250E-CL Rita Rd	WPI Houghton Rd	1.879	3	5.64	n/a	1,554	n/a	n/a	n/a
Oracle Rd	250N-CL River Rd	250S-CL River Rd	0.075	4	0.30	0.30	3,120	5,215	234	391
Oracle Rd	250S-CL River Rd	250N-CL Wetmore Rd	0.584	6	3.50	3.50	4,690	5,280	2,739	3,084
Oracle Rd	250N-CL Wetmore Rd	NPI Wetmore Rd	0.040	4	0.16	0.16	3,120	5,280	125	211
Oracle Rd	250S-CL Wetmore Rd	250N-CL Limberlost	0.157	6	0.94	0.94	4,690	5,490	736	862
Oracle Rd	250N-CL Limberlost	250S-CL Limberlost	0.084	4	0.34	0.34	3,120	5,490	262	461
Oracle Rd	250S-CL Limberlost	250N-CL Roger Rd	0.155	6	0.93	0.93	4,690	5,490	727	851
Oracle Rd	250N-CL Roger Rd	250S-CL Prince Rd	0.083	4	0.33	0.33	3,120	5,490	259	456
Oracle Rd	250S-CL Prince Rd	250N-CL Ft Lowell Rd	0.405	6	2.43	2.43	4,690	5,510	1,899	2,232
Oracle Rd	250S-CL Ft Lowell Rd	250N-CL Prince Rd	0.566	6	3.40	3.40	4,690	5,510	2,655	3,119
Oracle Rd	250N-CL Prince Rd	250S-CL Miracle Mile	0.082	4	0.33	0.33	3,120	5,285	256	433
Palo Verde	SPI Concrete Op	NPI Ajo Way	0.848	4	3.39	3.39	3,120	4,950	2,646	4,198
Palo Verde	250S-CL Ajo Way	888S-CL Ajo Way	0.121	4	0.48	0.48	3,120	4,450	378	538
Palo Verde	888S of Ajo Way Cl	4672S of Ajo Way Cl	0.717	5	3.59	3.59	3,120	4,450	2,237	3,191
Palo Verde	4672S-CL of Ajo Way	1730S of Irvington Rd	0.458	4	1.83	1.83	3,120	3,175	1,429	1,454
Palo Verde	1179S of Alv Way/32nd	E Edge Concrete over	0.523	4	2.09	2.09	3,120	4,450	1,632	2,327
Palo Verde	1730S of Irvington	SPI Nebraska St	0.192	5	0.96	0.96	3,120	3,175	599	610
Palo Verde	2705N of Valencia	250N-CL Valencia Rd	0.465	5	2.33	2.33	3,120	1,790	1,451	832
Palo Verde	250N-CL Valencia Rd	NPI Valencia Rd	0.038	4	0.15	0.15	3,120	1,790	119	68
Palo Verde	SPI Valencia Rd	250S-CL Valencia Rd	0.038	3	0.11	0.11	1,554	1,510	59	57
Palo Verde	637 N Gas Rd Cl	SPI Gas Rd	0.123	5	0.62	0.62	3,120	4,450	384	547
Pantano Rd	95S Wrightstown	250N-CL Speedway	0.986	4	3.94	3.94	3,120	2,670	3,076	2,633
Pantano Rd	250N-CL Speedway	250S-CL Speedway	0.075	8	0.60	0.60	3,120	2,915	234	219
Pantano Rd	250S-CL Speedway	250N-CL Broadway	0.910	5	4.55	4.55	3,120	3,160	2,839	2,876
Pantano Rd	SPI Broadway Blvd	250N-CL Kenyon Dr	0.447	5	2.24	2.24	3,120	2,910	1,395	1,301
Pantano Rd	250S-CL Kenyon Dr	NPI 22nd St	0.441	5	2.21	2.21	3,120	2,910	1,376	1,283
Pantano Pkwy	250S-CL 22nd St	250S-CL Golf Links	1.290	4	5.16	5.16	3,120	2,910	4,025	3,754
Pantano Rd	250S-CL 22nd St	250N-CL Golf Links	1.015	2	2.03	2.03	1,480	2,910	1,502	2,954
Pantano Rd	SPI Golf Links Rd	250S-CL Golf Links	0.077	6	0.46	n/a	4,690	n/a	n/a	n/a
Pantano Rd	250S-CL Golf Links R	250N-CL Stella Rd	0.412	4	1.65	n/a	3,120	n/a	n/a	n/a
Pantano Rd	250S-CL Golf Links R	250N-CL Stella Rd	0.412	4	1.65	n/a	3,120	n/a	n/a	n/a
Pantano Rd	250N-CL Stella Rd	250S-CL Stella Rd	0.086	5	0.43	n/a	3,120	n/a	n/a	n/a
Pantano Rd	SPI Stella Rd	250S-CL Stella Rd	0.043	6	0.26	n/a	4,690	n/a	n/a	n/a
Pantano Rd	250S-CL Stella Rd	250N-CL Escalante	0.408	4	1.63	n/a	3,120	n/a	n/a	n/a
Pantano Rd	250N-CL Escalante	NPI Escalante	0.041	6	0.25	n/a	4,690	n/a	n/a	n/a
Pantano Rd	250S-CL Escalante	35S of SPI Poinciana	0.608	4	2.43	n/a	3,120	n/a	n/a	n/a
Pantano Rd	35S of SPI Poinciana D	NPI Irv Rd(S-Bnd Onl	0.338	2	0.68	n/a	1,480	n/a	n/a	n/a
Park Ave	N edge RR Tracks	250N-CL 22nd St	0.099	5	0.50	0.50	3,120	1,760	309	174

					Lane-Miles					
Route Name	From	To	Miles	Lns	Total	Count	Cap.	Vol.	VMC	VMT
Park Ave	250N-CL 22nd St	NPI 22nd St	0.041	4	0.16	0.16	3,120	1,760	128	72
Park Ave	SPI 22nd St	79N-CL 25th St	0.227	5	1.14	n/a	3,120	n/a	n/a	n/a
Park Ave	79N-CL 25th St	NPI Silverlake Rd	0.262	4	1.05	n/a	3,120	n/a	n/a	n/a
Park Ave	250S-CL Silverlake R	NPI 36th St	0.445	4	1.78	n/a	3,120	n/a	n/a	n/a
Park Ave	250S-CL 36th St	End Ac N I-10 Op	0.445	3	1.34	1.34	1,554	2,200	692	979
Park Ave	250S-CL Ajo Way	250N-CL Irvington	0.905	5	4.53	4.53	3,120	2,380	2,824	2,154
Park Ave	250N-CL Irvington Rd	250N-CL Drexel Rd	1.002	4	4.01	4.01	3,120	1,680	3,126	1,683
Park Ave	250S-CL Drexel Rd	250N-CL Bilby Rd	0.406	4	1.62	1.62	3,120	1,070	1,267	434
Park Ave	SPI Bilby Rd	NPI Valencia Rd	0.527	4	2.11	2.11	3,120	1,070	1,644	564
Park Ave	SPI Valencia Rd	250S-CL Valencia Rd	0.039	3	0.12	n/a	1,554	n/a	n/a	n/a
Park Ave	250N-CL Benson Hwy	NPI Benson Hwy	0.033	6	0.20	0.20	4,690	220	155	7
Park Ave	SPI Benson Hwy	250S-CL Benson Hwy	0.039	7	0.27	0.27	3,120	2,640	122	103
Park Ave	250S-CL Benson Hwy	NPI Ajo Way	0.219	5	1.10	1.10	3,120	2,640	683	578
Park Ave	SPI Ajo Way	250S-CL Ajo Way	0.040	6	0.24	0.24	4,690	2,380	188	95
Park Ave	SPI Speedway Blvd	250S-CL Speedway	0.038	5	0.19	n/a	3,120	n/a	n/a	n/a
Park Ave	SPI Grant Rd	NPI Grant Rd	0.082	4	0.33	n/a	3,120	n/a	n/a	n/a
Pennington St	250W-CL Church Ave	CL Church St	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Pennington St	CL Church Ave	186E-CL Church Ave	0.035	2	0.07	n/a	1,480	n/a	n/a	n/a
Pennington St	186'W-CL Stone Ave	250E-CL Stone Ave	0.083	3	0.25	n/a	1,554	n/a	n/a	n/a
Pennington St	250W-CL 6th Ave	CL 6th Ave	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Pima St	250W-CL Alvernon	CL Alvernon	0.047	3	0.14	0.14	1,554	860	73	40
Pima St	CL Alvernon	250E-CL Alvernon Wy	0.047	5	0.24	0.24	3,120	1,620	147	76
Pima St	CL Columbus Blvd	250E-CL Columbus	0.047	4	0.19	0.19	3,120	1,620	147	76
Pima St	250E-CL Swan Rd	250E-CL Craycroft Rd	0.497	4	1.99	1.99	3,120	2,150	1,551	1,069
Pima St	EPI Pantano Rd	WPI Sarnoff Rd	0.615	2	1.23	1.23	1,480	5,010	910	3,081
Pima St	250W-CL Country Club	CL Country Club	0.047	3	0.14	0.14	1,554	5,210	73	245
Players Club Dr	Median Bullnose N	NPI Starr Pass Blvd	0.792	2	1.58	n/a	1,480	n/a	n/a	n/a
Plumer	250N-CL Broadway	NPI Broadway Blvd	0.041	2	0.08	n/a	1,480	n/a	n/a	n/a
Prince Rd	CL Flowing Wells	CL Oracle Rd	0.989	5	4.95	4.95	3,120	2,750	3,086	2,720
Prince Rd	250E-CL Oracle Rd	250W-CL Stone Ave	0.259	5	1.30	1.30	3,120	1,920	808	497
Prince Rd	250W-CL Stone Ave	CL Stone Ave	0.047	4	0.19	0.19	3,120	1,920	147	90
Prince Rd	CL Stone Ave	CL Campbell Ave	1.656	5	8.28	8.28	3,120	2,140	5,167	3,544
Prince Rd	CL Campbell Ave	250E-CL Campbell Ave	0.047	4	0.19	0.19	3,120	1,980	147	93
Prince Rd	250E-CL Campbell Ave	250W-CL Tucson Blvd	0.407	3	1.22	1.22	1,554	1,980	632	806
Prince Rd	250W-CL Tucson Blvd	250E-CL Tucson Blvd	0.095	4	0.38	0.38	3,120	1,980	296	188
Prince Rd	250E-CL Tucson Blvd	WPI Country Club Rd	0.399	3	1.20	1.20	1,554	1,980	620	790
Prince Rd	250E-CL I-10 E or	250W-CL Flowing Wls	0.834	5	4.17	4.17	3,120	2,445	2,602	2,039
Prince Rd	137W-CL I-10 R	CL I-10 Ramp	0.026	3	0.08	n/a	1,554	n/a	n/a	n/a
Prince Rd	CL I-10 On-ramp CL	137e On-ramp CL O	0.026	3	0.08	0.08	1,554	2,300	40	60
Prince Rd	CL I-10	250E-CL I-10	0.047	8	0.38	0.38	3,120	2,300	147	108
Prudence	250N-CL Broadway	250S-CL Broadway	0.074	6	0.44	n/a	4,690	n/a	n/a	n/a
Prudence	250N-CL 22nd St	NPI 22nd St	0.038	5	0.19	n/a	3,120	n/a	n/a	n/a
Prudence	250N-CL Golf Links	NPI Golf Links Rd	0.039	7	0.27	n/a	3,120	n/a	n/a	n/a
Prudence	SPI Golf Links Rd	250S-CL Golf Links	0.039	5	0.20	n/a	3,120	n/a	n/a	n/a
Rita Rd	WPI Houghton Rd	250N-CL Old Vail Rd	2.905	4	11.62	11.62	3,120	820	9,064	2,382
Rita Rd	250N-CL Old Vail Rd	250S-CL Old Vail Rd	0.083	5	0.42	0.42	3,120	910	259	76
Rita Rd	250S-CL Old Vail Rd	Cattleguard S of Valen	0.120	4	0.48	0.48	3,120	910	374	109

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Rita Rd	RR ROW - South	N I-10 ROW	1.093	4	4.37	n/a	3,120	n/a	n/a	n/a
Rita Rd	1212S-CL I-10 -Ctlgd	4882Sof I-10 CL	0.695	2	1.39	n/a	1,480	n/a	n/a	n/a
River Rd	City Limit W of Ston	250W-CL Oracle Rd	0.168	5	0.84	0.84	3,120	3,630	524	610
River Rd	250W-CL Oracle Rd	250E-CL Oracle Rd	0.095	6	0.57	0.57	4,690	3,720	446	353
River Rd	250E-CL Oracle Rd	250W-CL Stone Ave	0.380	5	1.90	1.90	3,120	3,810	1,186	1,448
River Rd	250W-CL Stone Ave	250E-CL Stone Ave	0.095	3	0.29	0.29	1,554	3,670	148	349
River Rd	250E-CL Stone Ave	680'E-CL 1st Ave	0.353	4	1.41	1.41	3,120	3,530	1,101	1,246
River Rd	250E-CL First Ave	CL Via Entrada	0.668	3	2.00	2.00	1,554	3,645	1,038	2,435
River Rd	250W-CL Via Entrada	250E-CL Via Entrada	0.095	6	0.57	0.57	4,690	3,760	446	357
River Rd	250E-CL Via Entrada	250W-CL Campbell	0.405	3	1.22	1.22	1,554	3,760	629	1,523
River Rd	250W-CL Campbell Ave	CL Campbell Ave	0.047	6	0.28	0.28	4,690	3,760	220	177
River Rd	CL Campbell Ave	250E-CL Campbell	0.047	4	0.19	0.19	3,120	2,570	147	121
River Rd	EPI Camino Esquela	570EPI Camino Esq	0.108	3	0.32	n/a	1,554	n/a	n/a	n/a
Roger Rd	CL Stone Ave	250W-CL First Ave	0.602	3	1.81	1.81	1,554	1,010	936	608
Roger Rd	250W-CL 1st Ave	CL 1st Ave	0.047	4	0.19	0.19	3,120	1,010	147	47
Roger Rd	WPI Romero Rd	250E-CL Romero R	0.051	4	0.20	0.20	3,120	720	159	37
Roger Rd	250W-CL Flowing Well	CL Flowing Wells	0.047	4	0.19	0.19	3,120	720	147	34
Roger Rd	CL Campbell Ave	250E-CL Campbell	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Romero Rd	250N-CL Roger Rd	NPI Line	0.043	3	0.13	0.13	1,554	950	67	41
Romero Rd	SPI Line	250S-CL Prince Rd	0.124	4	0.50	n/a	3,120	n/a	n/a	n/a
Rosemont Blvd	250N-CL Speedway	NPI Speedway Blvd	0.040	6	0.24	n/a	4,690	n/a	n/a	n/a
Rosemont Blvd	250N-CL 5th St	250S-CL 5th St	0.083	4	0.33	n/a	3,120	n/a	n/a	n/a
Rosemont Blvd	SPI Pima St	250S-CL Broadway	0.078	4	0.31	n/a	3,120	n/a	n/a	n/a
Sabino Canyon	City Limit Sign N	250S-CL Tanque Verd	0.437	4	1.75	1.75	3,120	4,010	1,363	1,752
Santa Clara Ave	250N-CL Valencia Rd	250S-CL Valencia Rd	0.083	4	0.33	n/a	3,120	n/a	n/a	n/a
Santa Rosa St	250W-CL 12th Ave	CL 12th Ave	0.047	3	0.14	n/a	1,554	n/a	n/a	n/a
Sarnoff Rd	250N-CL 22nd St	NPI 22nd St	0.038	4	0.15	n/a	3,120	n/a	n/a	n/a
Sarnoff Rd	SPI 22nd St	250S-CL 22nd St	0.038	3	0.11	n/a	1,554	n/a	n/a	n/a
Sarnoff Rd	250N-CL Broadway	250S-CL Broadway	0.075	4	0.30	n/a	3,120	n/a	n/a	n/a
Scott Ave	250N-CL Congress St	NPI Congress St	0.044	2	0.09	n/a	1,480	n/a	n/a	n/a
Scott Ave	SPI Congress St	NPI Broadway Blvd	0.067	3	0.20	n/a	1,554	n/a	n/a	n/a
Scott Ave	SPI Broadway Blvd	250S-CL Broadway	0.042	4	0.17	n/a	3,120	n/a	n/a	n/a
Silverbell Rd	CL Sunset Rd	250N-CL Cam Del Cro	1.121	2	2.24	n/a	1,480	n/a	n/a	n/a
Silverbell Rd	250N-CL Cam Del Cro	250S-CL Cam Del Cro	0.086	5	0.43	n/a	3,120	n/a	n/a	n/a
Silverbell Rd	Camino Del Cerro Cl	Sweetwater Dr Cl	1.150	4	4.60	4.60	3,120	1,330	3,588	1,529
Silverbell Rd	CL Sweetwater Dr	250N-CL Grant Rd	2.294	2	4.59	4.59	1,480	1,380	3,395	3,166
Silverbell Rd	250S-CL Grant Rd	250N-CL Speedway	1.085	4	4.34	4.34	3,120	2,290	3,385	2,485
Silverbell Rd	SPI Speedway Blvd	250S-CL Speedway	0.041	8	0.33	0.33	3,120	2,050	128	84
Silverbell Rd	250S-CL Speedway	250N-CL St Marys	0.466	4	1.86	1.86	3,120	2,050	1,454	955
Silverbell Rd	SPI St Marys Rd	250S-CL St Marys Rd	0.040	4	0.16	n/a	3,120	n/a	n/a	n/a
Silverbell Rd	250S-CL St Marys	3957S of St Mary's	0.702	3	2.11	n/a	1,554	n/a	n/a	n/a
Speedway Blvd	Begin Asphalt, 476'W	250W-CL Main Ave	0.043	5	0.21	0.21	3,120	4,070	134	175
Speedway Blvd	250W-CL Main Ave	250W-CL Stone Ave	0.361	6	2.17	2.17	4,690	3,610	1,693	1,303
Speedway Blvd	250W-CL Stone Ave	250E-CL Stone Ave	0.095	4	0.38	0.38	3,120	3,895	296	370
Speedway Blvd	250E-CL Stone Ave	CL 7th Ave	0.042	6	0.25	0.25	4,690	4,180	197	176
Speedway Blvd	CL 7th Ave	250W-CL 6th Ave	0.044	5	0.22	0.22	3,120	4,180	137	184
Speedway Blvd	250W-CL 6th Ave	250E-CL 6th Ave	0.095	4	0.38	0.38	3,120	4,315	296	410

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Speedway Blvd	250E-CL 6th Ave	250W-CL 4th Ave	0.087	5	0.43	0.43	3,120	4,450	271	387
Speedway Blvd	250W-CL 4th Ave	250E-CL 4th Ave	0.095	4	0.38	0.38	3,120	4,450	296	423
Speedway Blvd	250E-CL 4th Ave	250W-CL Euclid Ave	0.268	5	1.34	1.34	3,120	4,450	836	1,193
Speedway Blvd	CL Euclid Ave	CL Park Ave	0.160	7	1.12	1.12	3,120	5,550	499	888
Speedway Blvd	250E-CL of Park Ave	CL Cherry Ave	0.415	6	2.49	2.49	4,690	5,550	1,946	2,303
Speedway Blvd	250E-CL Cherry	250W-CL Tucson Blvd	0.700	6	4.20	4.20	4,690	5,550	3,283	3,885
Speedway Blvd	250E-CL Tucson Blvd	250W-CL Country Club	0.402	6	2.41	2.41	4,690	5,210	1,885	2,094
Speedway Blvd	CL Country Club	250W-CL Swan Rd	1.915	6	11.49	11.49	4,690	5,220	8,981	9,996
Speedway Blvd	CL Swan Rd	250W-CL Craycroft Rd	0.941	6	5.65	5.65	4,690	4,930	4,413	4,639
Speedway Blvd	CL Craycroft Rd	250E-CL Craycroft Rd	0.047	4	0.19	0.19	3,120	4,760	147	224
Speedway Blvd	250E-CL Craycroft	250W-CL Wilmot Rd	0.920	6	5.52	5.52	4,690	4,760	4,315	4,379
Speedway Blvd	250W-CL Wilmot Rd	CL Wilmot Rd	0.047	4	0.19	0.19	3,120	4,760	147	224
Speedway Blvd	250E-CL Wilmot Rd	250W-CL Kolb Rd	0.878	6	5.27	5.27	4,690	4,200	4,118	3,688
Speedway Blvd	250W-CL Kolb Rd	250E-CL of Kolb Rd	0.095	4	0.38	0.38	3,120	4,605	296	437
Speedway Blvd	250E-CL Kolb Rd	250W-CL Pantano Rd	0.842	6	5.05	5.05	4,690	5,010	3,949	4,218
Speedway Blvd	250W-CL Pantano Rd	CL Pantano Rd	0.047	4	0.19	0.19	3,120	5,010	147	235
Speedway Blvd	250E-CL Pantano Rd	CL Camino Seco Rd	0.951	6	5.71	5.71	4,690	2,810	4,460	2,672
Speedway Blvd	CL Camino Seco Rd	250E-CL Camino Seco	0.047	6	0.28	0.28	4,690	1,820	220	86
Speedway Blvd	250E-CL Camino Seco	250W-CL Harrison Rd	0.909	3	2.73	2.73	1,554	1,820	1,413	1,654
Speedway Blvd	250W-CL Harrison Rd	250E-CL Harrison Rd	0.095	4	0.38	0.38	3,120	1,570	296	149
Speedway Blvd	250E-CL Harrison Rd	40E of Shrader Lane,	0.757	2	1.51	1.51	1,480	1,320	1,120	999
Speedway Blvd	CL Painted Hills Dr	CL Camino De Juan	0.502	2	1.00	n/a	1,480	n/a	n/a	n/a
Speedway Blvd	CL Camino De Juan	250W-CL Greasewood	0.392	3	1.18	n/a	1,554	n/a	n/a	n/a
Speedway Blvd	250W-CL Greasewood	667W of Silverbell	0.953	4	3.81	3.81	3,120	1,540	2,973	1,468
Speedway Blvd	667W of Silverbell	250W-CL Silverbell	0.079	5	0.40	0.40	3,120	1,540	246	122
Speedway Blvd	250W-CL Silverbell	250E-CL Silverbell	0.095	6	0.57	0.57	4,690	2,250	446	214
Speedway Blvd	250E-CL Silverbell	250W-CL Grande Ave	0.715	4	2.86	2.86	3,120	2,960	2,231	2,116
Speedway Blvd	250W-CL Grande Ave	CL Grande Ave	0.047	6	0.28	0.28	4,690	2,960	220	139
Speedway Blvd	250E-CL Grande Ave	W Edge Santa Cruz Br	0.175	5	0.88	0.88	3,120	2,960	546	518
Speedway Blvd	250W-CL I-10 ramp	250E-CL I-10 on Ramp	0.095	4	0.38	0.38	3,120	3,515	296	334
Speedway Blvd	CL I-10 Ramp	250E-CL I-10 Ramp	0.045	6	0.27	0.27	4,690	4,070	211	183
Speedway Blvd	250N-CL Speedway	NPI Speedway Blvd	0.038	5	0.19	n/a	3,120	n/a	n/a	n/a
St Marys	250W-CL Silverbell	CL Silverbell Rd	0.047	4	0.19	0.19	3,120	1,550	147	73
St Marys	250E-CL Silverbell	250W-CL Grande Ave	0.461	5	2.31	2.31	3,120	2,630	1,438	1,212
St Marys	250W-CL Grande Ave	CL Grande Ave	0.047	4	0.19	0.19	3,120	2,630	147	124
St Marys	250E-CL Grande Ave	W Edge of Bridge	0.227	5	1.14	1.14	3,120	2,630	708	597
St Marys	E Edge of Bridge	250E-CL On/off Ramp	0.191	4	0.76	0.76	3,120	2,630	596	502
St Marys	250E-CL of I-10	250W-CL Granada Ave	0.180	5	0.90	0.90	3,120	2,405	562	433
Starr Pass	CL Greasewood Rd	250E-CL Greasewood	0.047	4	0.19	n/a	3,120	n/a	n/a	n/a
Starr Pass	250E-CL Greasewood	WPI La Cholla	0.437	3	1.31	n/a	1,554	n/a	n/a	n/a
Starr Pass	WPI La Cholla	EPI Santiago	0.250	4	1.00	1.00	3,120	1,200	780	300
Starr Pass	EPI Santiago	250W-CL "C" Ramp	1.010	3	3.03	3.03	1,554	1,200	1,570	1,212
Starr Pass	250W-CL "C" Ramp	88E-CL "C" Ramp	0.064	5	0.32	0.32	3,120	1,200	200	77
Stella Rd	250W-CL Pantano Rd	250E-CL Pantano Rd	0.095	4	0.38	n/a	3,120	n/a	n/a	n/a
Stella Rd	250W-CL Kolb Rd	250E-CL of Kolb Rd	0.095	3	0.29	n/a	1,554	n/a	n/a	n/a
Stone Ave	157N of Tucson Mall	NPI Wetmore Rd	0.161	4	0.64	0.64	3,120	1,720	502	277
Stone Ave	SPI Wetmore Rd	250S-CL Wetmore Rd	0.039	5	0.20	0.20	3,120	2,180	122	85

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Stone Ave	250S-CL Wetmore Rd	387N of Limberlost Dr	0.134	4	0.54	0.54	3,120	2,180	418	292
Stone Ave	387N of Limberlost Dr	250N-CL Limberlost Dr	0.026	5	0.13	0.13	3,120	2,180	81	57
Stone Ave	SPI Limberlost Dr	250N-CL Roger Rd	0.270	5	1.35	1.35	3,120	2,180	842	589
Stone Ave	SPI Roger Rd	NPI Prince Rd	0.486	5	2.43	2.43	3,120	2,180	1,516	1,059
Stone Ave	250S-CL Prince Rd	250N-CL Yavapai Rd	0.073	5	0.37	0.37	3,120	2,400	228	175
Stone Ave	SPI Yavapai Rd	250S-CL Yavapai Rd	0.044	4	0.18	0.18	3,120	2,400	137	106
Stone Ave	250S-CL Yavapai Rd	250N-CL Ft Lowell Rd	0.236	5	1.18	1.18	3,120	2,400	736	566
Stone Ave	250N-CL Ft Lowell Rd	250S-CL Ft Lowell Rd	0.083	4	0.33	0.33	3,120	2,395	259	199
Stone Ave	250S-CL Ft Lowell Rd	250N-CL Glenn St	0.397	5	1.99	1.99	3,120	2,390	1,239	949
Stone Ave	250N-CL Glenn St	NPI Glenn St	0.043	4	0.17	0.17	3,120	2,390	134	103
Stone Ave	250S-CL Glenn St	250N-CL Grant Rd	0.408	5	2.04	2.04	3,120	2,390	1,273	975
Stone Ave	250N-CL Grant Rd	NPI Grant Rd	0.041	4	0.16	0.16	3,120	2,390	128	98
Stone Ave	250S-CL Grant Rd	250N-CL Drachman S	0.656	5	3.28	3.28	3,120	2,270	2,047	1,489
Stone Ave	250N-CL Drachman St	NPI Drachman St	0.043	4	0.17	0.17	3,120	2,270	134	98
Stone Ave	250S-CL Drachman St	250N-CL Speedway	0.147	5	0.74	0.74	3,120	3,090	459	454
Stone Ave	250N-CL Speedway	250S-CL Speedway	0.077	4	0.31	0.31	3,120	2,905	240	224
Stone Ave	250S-CL Speedway	250N-CL 6th St	0.472	5	2.36	2.36	3,120	2,720	1,473	1,284
Stone Ave	250N-CL 6th St	NPI 6th St	0.042	4	0.17	0.17	3,120	2,720	131	114
Stone Ave	SPI 6th St	250S-CL 6th St	0.034	3	0.10	0.10	1,554	2,720	53	92
Stone Ave	250S-CL Broadway	250N of W-CL 6th Av	0.552	3	1.66	1.66	1,554	920	858	508
Stone Ave	62N-CL Toole Ave CL	384S of Toole Ave	0.074	4	0.30	0.30	3,120	1,820	231	135
Stone Ave	266.5n Pennington	NPI Pennington St	0.047	3	0.14	0.14	1,554	1,440	73	68
Stone Ave	178N of Congress St	NPI Congress St	0.043	3	0.13	0.13	1,554	1,440	67	62
Stone Ave	SPI Congress St	159S of Congress St	0.022	4	0.09	0.09	3,120	1,270	69	28
Stone Ave	250N-CL River Rd	N Edge of Rillito Br	0.446	4	1.78	1.78	3,120	1,270	1,392	566
Stone Ave	167N of Broadway Blvd	NPI Broadway Blvd	0.028	4	0.11	0.11	3,120	1,270	87	36
Swan Rd	S End of Rillito Bri	NPI Ft Lowell Rd	0.634	4	2.54	2.54	3,120	3,320	1,978	2,105
Swan Rd	SPI Ft Lowell	250N-CL Glenn St	0.196	5	0.98	0.98	3,120	4,570	612	896
Swan Rd	250S-CL Glenn St	250N-CL Grant Rd	0.401	5	2.01	2.01	3,120	4,570	1,251	1,833
Swan Rd	SPI Grant Rd	250S-CL Grant Rd	0.039	4	0.16	0.16	3,120	3,640	122	142
Swan Rd	250S-CL Grant Rd	250N-CL Pima St	0.407	5	2.03	2.03	3,120	3,640	1,270	1,481
Swan Rd	250N-CL Pima St	NPI Pima St	0.039	4	0.16	0.16	3,120	3,640	122	142
Swan Rd	250S-CL Pima St	250N-CL Speedway	0.406	5	2.03	2.03	3,120	3,670	1,267	1,490
Swan Rd	250N-CL Speedway	250N-CL 29th St	2.457	4	9.83	9.83	3,120	3,102	7,666	7,622
Swan Rd	250N-CL 29th St	250S-CL 29th St	0.081	5	0.41	0.41	3,120	2,115	253	171
Swan Rd	250S-CL 29th St	250N-CL Golf Links	0.215	4	0.86	0.86	3,120	1,990	671	428
Swan Rd	250N-CL Golf Links	250S-CL Golf Links	0.073	6	0.44	0.44	4,690	1,990	342	145
Tanque Verde	250N-CL Pima/Wilmot	NPI Pima/Wilmot	0.041	5	0.21	0.21	3,120	4,140	128	170
Tanque Verde	250N of E-CL Pima/W	250S of W-CL Grant	0.455	6	2.73	2.73	4,690	4,140	2,134	1,884
Tanque Verde	CL Grant/Kolb	250E-CL Grant/Kolb	0.047	4	0.19	0.19	3,120	5,590	147	263
Tanque Verde	250E-CL Grant/Kolb	250W-CL Sabino Cnyn	0.479	6	2.87	2.87	4,690	5,590	2,247	2,678
Tanque Verde	250W-CL Sabino Cnyn	CL Sabino Canyon	0.047	4	0.19	0.19	3,120	5,590	147	263
Tanque Verde	250E-CL Sabino Cnyn	250W-CL Pio Decimo	0.524	6	3.14	3.14	4,690	5,080	2,458	2,662
Tanque Verde	E Edge Tanque Verde	250W-CL Bear Canyon	1.017	4	4.07	4.07	3,120	3,620	3,173	3,682
Tanque Verde	250W-CL Bear Canyon	250E-CL Bear Canyon	0.095	6	0.57	0.57	4,690	3,620	446	344
Tanque Verde	250E-CL Bear Canyon	250W-CL Catalina Hwy	0.091	4	0.36	0.36	3,120	3,620	284	329
Tanque Verde	CL Catalina Hwy	250E-CL Catalina Hwy	0.047	3	0.14	0.14	1,554	1,390	73	65

Route Name	From	To	Miles	Lns	Lane-Miles Total	Count	Cap.	Vol.	VMC	VMT
Tanque Verde	250E-CL Catalina Hwy	EPI Castle Rock	0.149	3	0.45	0.45	1,554	1,390	232	207
Tanque Verde	EPI Castle Rock	335E Amberwood EPI	1.108	2	2.22	2.22	1,480	1,390	1,640	1,540
Tanque Verde	250W-CL Houghton Rd	250E-CL Houghton Rd	0.095	2	0.19	0.19	1,480	1,180	141	112
Tanque Verde	250N of W-CL Tanque V	CL Tanque Verde Rd	0.047	8	0.38	n/a	3,120	n/a	n/a	n/a
Thoroughbred	EPI 6th Ave	WPI Nogales Hwy	0.057	2	0.11	n/a	1,480	n/a	n/a	n/a
Toole Ave	250W-CL Stone Ave	CL Stone Ave	0.047	4	0.19	0.19	3,120	910	147	43
Toole Ave	250N of W-CL 6th Ave	159E of 6th Ave CL	0.077	4	0.31	0.31	3,120	1,090	240	84
Toole Ave	159N of Pennington	250S-CL Pennington	0.069	4	0.28	0.28	3,120	1,280	215	88
Tucson Blvd	250N-CL Irvington Rd	250S-CL Valencia Rd	2.073	4	8.29	8.29	3,120	1,600	6,468	3,317
Tucson Blvd	250S-CL Valencia Rd	SPI Corona Rd	0.715	6	4.29	4.29	4,690	1,920	3,353	1,373
Tucson Blvd	250N-CL Prince Rd	NPI Prince Rd	0.043	4	0.17	n/a	3,120	n/a	n/a	n/a
Tucson Blvd	250N-CL Ft Lowell Rd	NPI Ft Lowell Rd	0.041	5	0.21	0.21	3,120	600	128	25
Tucson Blvd	250N-CL Glenn St	NPI Glenn St	0.043	3	0.13	0.13	1,554	1,310	67	56
Tucson Blvd	250N-CL Speedway	250S-CL Speedway	0.072	6	0.43	0.43	4,690	1,650	338	119
Tucson Blvd	SPI 6th St	250S-CL 6th St	0.043	4	0.17	0.17	3,120	1,160	134	50
Tucson Blvd	250N-CL 22nd St	NPI 22nd St	0.038	4	0.15	0.15	3,120	950	119	36
Tucson Blvd	250N-CL Grant Rd	250S-CL Grant Rd	0.082	4	0.33	0.33	3,120	1,590	256	130
Tucson Blvd	250N-CL Elm St	NPI Line	0.044	4	0.18	0.18	3,120	1,870	137	82
Tucson Blvd	250N-CL Broadway	250S-CL Broadway	0.083	4	0.33	0.33	3,120	1,055	259	88
Tucson Mall Dr	CL Stone Ave	50E of Stone Ave CL	0.009	4	0.04	n/a	3,120	n/a	n/a	n/a
University Blvd	EPI Stone Ave	1650E of Stone Ave	0.313	3	0.94	n/a	1,554	n/a	n/a	n/a
University Blvd	250W-CL Euclid Ave	250E-CL Euclid Ave	0.095	4	0.38	n/a	3,120	n/a	n/a	n/a
Valencia Rd	E End Pccp	250E-CL C.Santa Clara	0.688	4	2.75	2.75	3,120	4,140	2,147	2,848
Valencia Rd	250E-CL C Santa Clara	250W-CL 12th Ave	0.152	6	0.91	0.91	4,690	4,140	713	629
Valencia Rd	250W-CL 12th Ave	250E-CL 12th Ave	0.095	4	0.38	0.38	3,120	3,930	296	373
Valencia Rd	250E-CL 12th Ave	250W-CL 6th Ave	0.477	6	2.86	2.86	4,690	3,720	2,237	1,774
Valencia Rd	250W-CL 6th Ave	CL 6th Ave	0.047	4	0.19	0.19	3,120	3,720	147	175
Valencia Rd	250E-CL 6th Ave	250W-CL Nogales Hw	0.279	6	1.67	1.67	4,690	3,720	1,309	1,038
Valencia Rd	CL Nogales Hwy	250E-CL Nogales Hwy	0.047	4	0.19	0.19	3,120	4,660	147	219
Valencia Rd	250E-CL Nogales Hwy	250W-CL Park Ave	0.208	6	1.25	1.25	4,690	4,660	976	969
Valencia Rd	250W-CL Park Ave	CL Park Ave	0.047	4	0.19	0.19	3,120	4,660	147	219
Valencia Rd	250E-CL Park Ave	250E-CL Campbell	0.501	6	3.01	3.01	4,690	4,370	2,350	2,189
Valencia Rd	250W-CL Tucson Blvd	250E-CL Tucson Blvd	0.095	4	0.38	0.38	3,120	4,100	296	390
Valencia Rd	250E-CL Tucson Blvd	250W-CL Country Club	0.399	6	2.39	2.39	4,690	4,010	1,871	1,600
Valencia Rd	250W-CL Country Club	250E-CL Country Club	0.095	4	0.38	0.38	3,120	4,010	296	381
Valencia Rd	250E-CL Country Club	250W-CL Palo Ver	0.393	6	2.36	2.36	4,690	4,010	1,843	1,576
Valencia Rd	CL Palo Verde Rd	250E-CL Alvernon Wy	0.519	6	3.11	3.11	4,690	3,230	2,434	1,676
Valencia Rd	EPI Craycroft Rd	WPI Wilmot Rd	0.998	4	3.99	3.99	3,120	2,050	3,114	2,046
Valencia Rd	250W-CL I-19	250E of CL I-19	0.095	6	0.57	0.57	4,690	4,005	446	380
Valencia Rd	EPI Pantano Rd	250W-CL Houghton Rd	3.167	2	6.33	6.33	1,480	1,080	4,687	3,420
Valencia Rd	250W-CL Houghton Rd	CL Houghton Rd	0.047	4	0.19	0.19	3,120	470	147	22
Valencia Rd	250W-CL Air Guard	250E of CL Air Guard	0.095	6	0.57	0.57	4,690	4,370	446	415
Valencia Rd	250W-CL I-10	CL of I-10	0.047	6	0.28	0.28	4,690	2,810	220	132
Valencia Rd	CL I-10	250E of CL I-10	0.047	4	0.19	0.19	3,120	2,440	147	115
Valley Rd	SPI Ajo Way	NPI River Rd	0.726	2	1.45	n/a	1,480	n/a	n/a	n/a
Wetmore Rd	250W-CL Fairview Ave	250E-CL Fairview Ave	0.095	5	0.48	0.48	3,120	2,040	296	194
Wetmore Rd	250E-CL Fairview Ave	250W-CL Oracle Rd	0.403	3	1.21	1.21	1,554	2,040	626	822

					Lane-Miles					
Route Name	From	To	Miles	Lns	Total	Count	Cap.	Vol.	VMC	VMT
Wetmore Rd	250W-CL Oracle Rd	CL Oracle Rd	0.047	4	0.19	0.19	3,120	2,040	147	96
Wetmore Rd	250E-CL Oracle Rd	CL Stone Ave	0.449	5	2.25	2.25	3,120	2,010	1,401	902
Wetmore Rd	250E-CL Stone Ave	250W-CL First Ave	0.367	5	1.84	1.84	3,120	1,540	1,145	565
Wetmore Rd	250W-CL 1st Ave	CL 1st Ave	0.047	4	0.19	0.19	3,120	1,540	147	72
Wilmot Rd	250S-CL Pima/Wilmot	NPI Speedway Blvd	0.454	6	2.72	2.72	4,690	4,500	2,129	2,043
Wilmot Rd	SPI Speedway Blvd	250S-CL Speedway	0.037	4	0.15	0.15	3,120	4,750	115	176
Wilmot Rd	250S-CL Speedway	250N-CL 5th St	0.391	6	2.35	2.35	4,690	4,750	1,834	1,857
Wilmot Rd	250N-CL 5th St	NPI 5th St	0.041	4	0.16	0.16	3,120	4,750	128	195
Wilmot Rd	SPI 5th St	250S-CL 5th St	0.041	5	0.21	0.21	3,120	4,840	128	198
Wilmot Rd	250S-CL 5th St	250N-CL Broadway	0.431	6	2.59	2.59	4,690	4,840	2,021	2,086
Wilmot Rd	250N-CL Broadway	250S-CL Broadway	0.073	4	0.29	0.29	3,120	4,310	228	315
Wilmot Rd	250S-CL Broadway	NPI 22nd St	0.958	6	5.75	5.75	4,690	3,780	4,493	3,621
Wilmot Rd	250S-CL 22nd St	250N-CL 29th St	0.394	6	2.36	2.36	4,690	2,940	1,848	1,158
Wilmot Rd	250N-CL 29th St	250S-CL 29th St	0.087	3	0.26	0.26	1,554	2,940	135	256
Wilmot Rd	250S-CL 29th St	250S-CL Golf Links	0.507	6	3.04	3.04	4,690	2,940	2,378	1,491
Wilmot Rd	250S-CL Golf Links R	SPI Nigaragua Dr	0.711	3	2.13	2.13	1,554	1,720	1,105	1,223
Wilmot Rd	SPI Valencia Rd	3410S of I-10 CL	2.297	2	4.59	4.59	1,480	210	3,400	482
Wilmot Rd	7818S of I-10CL City L	17553S of I-10 CL	1.844	2	3.69	n/a	1,480	n/a	n/a	n/a
Wilmot Rd	72N-CL Grant Rd	NPI Grant Rd	0.006	6	0.04	n/a	4,690	n/a	n/a	n/a
Wilmot Rd	SPI Grant Rd	250S-CL Grant Rd	0.039	3	0.12	n/a	1,554	n/a	n/a	n/a
Wrightstown	83E of Pantano Rd	EPI Wrightstown	0.355	3	1.07	1.07	1,554	1,020	552	362
Wrightstown	EPI Wrightstown Ter	270E of Day Rd (E	1.008	2	2.02	2.02	1,480	1,020	1,492	1,028
Wrightstown	270E of Day Rd, E	214E of Hidden Glen	0.425	3	1.27	1.27	1,554	630	660	268
Wrightstown	214E of Hidden Glen	275N of Calle Bolivar	0.488	2	0.98	0.98	1,480	630	722	307
Yavapai Rd	WPI Stone Ave	250E-CL Stone Ave	0.054	3	0.16	n/a	1,554	n/a	n/a	n/a
Total					1,256	1,075			759,051	654,815

Source: Segment descriptions (250N-CL means 250' north of centerline, EPI means east pavement intersection, etc.), lengths and number of lanes from City of Tucson Pavement Management System; "Lane-Miles" is product of number of lanes times length of segment in miles; "Total" is total lane-miles; "Count" is lane-miles of segments with traffic counts; "Cap." is hourly capacity from Table 16; "Vol." is estimated PM peak hour traffic, based on 1/10 of average daily traffic volumes from Pima Association of Governments website (www.pagnet.org/tpd/ Volumesmap); "VMC" is product of miles times capacity; "VMT" is product of miles times volume.

APPENDIX C: PARK INVENTORY

Table 44
EXISTING MINI-PARKS AND NEIGHBORHOOD PARKS

Improvement Type	Cherokee Avenue	Cesar Chavez	Manuel Alvarez	Mari-posa	River-view	San Augustine	San Gabriel	Semi-nole
Total Acres	0.58	0.13	0.21	0.48	0.92	0.44	0.46	0.45
Turf (acres)	0.25		0.21	0.14	0.92		0.00	0.30
Youth Baseball, Lit								
Youth Baseball, Unlit								
Adult Baseball, Lit								
Adult Baseball, Unlit								
Public Restrooms								
Bocci Courts, Lit								
Bocci Courts, Lit								
Recreation Ctr (sq. ft.)								
N'hood Center (sq. ft.)								
Concessions								
Dog Off-leash Area								
Exercise Center								
Exercise Course								
Soccer Field, Lit								
Soccer Field, Unlit								
Frisbee Golf Course								
Hand/Racquetball, Lit								
Hand/Racquetball, Unlit								
Horseshoe Pits, Lit								
Horseshoe Pits, Unlit								
Basketball Court, Lit								
Basketball Court, Unlit					1			
Multiple Use Field, Lit								
Multiple Use Field, Unlit								
Orienteering Course								
Amphitheater				1				
Picnic Site	1			1	1		1	
Playground			1	1	1			
Group Ramada								
Roller Blading/Skating								
Softball Field, Lit								
Softball Field, Unlit								
Swimming Pool								
Waterslide								
Tennis Court, Lit								
Tennis Court, Unlit								
Volleyball (Grass)								
Volleyball (Sand), Lit								
Volleyball (Sand), Unlit								
Drinking Fountain		1			1		1	
BBQ Grill	1				2			
Dusk-to-Dawn Lights	1		1	1	1			
Parking, Lit (spaces)								
Parking, Unlit (spaces)								
Multi-Use Path (miles)				0.07			0.11	
Reclaimed Irrig. (acres)								

Improvement Type	Street Scene	Sunset	Verdugo	20/30 Park	Alver-non	Amphi	Balboa Heights	Bravo	Cata-lina
Total Acres	0.61	0.34	0.47	5.45	2.76	1.79	1.16	5.30	4.19
Turf (acres)	0.46	0.07	0.43	2.42	2.66	0.50	0.25	2.50	3.79
Youth Baseball, Lit									
Youth Baseball, Unlit									
Adult Baseball, Lit									
Adult Baseball, Unlit									
Public Restrooms							1		1
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)									
N'hood Center (sq. ft.)							3,415		
Concessions									
Dog Off-leash Area									
Exercise Center									
Exercise Course									
Soccer Field, Lit									
Soccer Field, Unlit									
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit									
Basketball Court, Lit					1	1	0.5		
Basketball Court, Unlit								1	
Multiple Use Field, Lit									
Multiple Use Field, Unlit				1				1	
Orienteering Course									
Amphitheater	1								
Picnic Site		2	1	2	3	1	1	1	1
Playground	1		1	1	1	1	2	1	1
Group Ramada									
Roller Blading/Skating									
Softball Field, Lit									
Softball Field, Unlit									
Swimming Pool									1
Waterslide									
Tennis Court, Lit									
Tennis Court, Unlit									
Volleyball (Grass)									
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit					1				
Drinking Fountain	1		1	2	1		1	1	1
BBQ Grill	1		1	2	3	1	1	1	
Dusk-to-Dawn Lights		1	1	1	1	1		1	1
Parking, Lit (spaces)									
Parking, Unlit (spaces)				60			17		
Multi-Use Path (miles)						0.20			
Reclaimed Irrig. (acres)									

Improvement Type	Cherry Avenue	Conner	Country Club Annex	Herrera & Quiroz	De Anza	Desert Aire	Desert Shadows	Don Hummel
Total Acres	5.00	1.97	2.71	6.36	5.44	1.73	6.40	6.55
Turf (acres)		1.84	2.71	2.22	5.40	1.73	3.14	4.35
Youth Baseball, Lit								
Youth Baseball, Unlit			1				1	
Adult Baseball, Lit								
Adult Baseball, Unlit								
Public Restrooms		1		1	1			
Bocci Courts, Lit								
Bocci Courts, Lit								
Recreation Ctr (sq. ft.)	5,615			3,838				
N'hood Center (sq. ft.)								
Concessions								
Dog Off-leash Area								
Exercise Center			1		1			
Exercise Course								
Soccer Field, Lit								
Soccer Field, Unlit								
Frisbee Golf Course								
Hand/Racquetball, Lit								
Hand/Racquetball, Unlit								
Horseshoe Pits, Lit								
Horseshoe Pits, Unlit				1				
Basketball Court, Lit				1				
Basketball Court, Unlit								0.5
Multiple Use Field, Lit								
Multiple Use Field, Unlit		1			1			
Orienteering Course								
Amphitheater								
Picnic Site	1	3	1		7	1	1	2
Playground	1	1	1	1	1	1	1	1
Group Ramada								
Roller Blading/Skating								
Softball Field, Lit				2				
Softball Field, Unlit								
Swimming Pool				1				
Waterslide								
Tennis Court, Lit								
Tennis Court, Unlit								
Volleyball (Grass)								
Volleyball (Sand), Lit					4			
Volleyball (Sand), Unlit				1				
Drinking Fountain	1	2	1	4	2	1		1
BBQ Grill	1		1	1		2		
Dusk-to-Dawn Lights	1	1	1	1	1	1		1
Parking, Lit (spaces)	1			20				10
Parking, Unlit (spaces)	25			14				
Multi-Use Path (miles)								
Reclaimed Irrig. (acres)								

Improvement Type	East-moor	El Pueblo	Esca-lante	Estevan	Fiesta	Francisco Elias Esquer	Groves	Harold Bell Wright	Harriet Johnson
Total Acres	2.40	8.68	4.90	7.79	3.20	1.39	10.00	2.50	1.39
Turf (acres)	2.21	1.33	4.42	4.61	0.80	1.39	9.50	2.45	1.39
Youth Baseball, Lit									
Youth Baseball, Unlit							1		1
Adult Baseball, Lit									
Adult Baseball, Unlit									
Public Restrooms									
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)		38,436							
N'hood Center (sq. ft.)									
Concessions									
Dog Off-leash Area									
Exercise Center									
Exercise Course						1			
Soccer Field, Lit									
Soccer Field, Unlit				1			1		
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit			1		1				
Basketball Court, Lit	1				1				
Basketball Court, Unlit				1		0.5			
Multiple Use Field, Lit									
Multiple Use Field, Unlit			1				2	1	
Orienteering Course									
Amphitheater					1				
Picnic Site	1	2	1			3	1	1	1
Playground	1	1	1	1		1	1	1	1
Group Ramada									
Roller Blading/Skating									
Softball Field, Lit									
Softball Field, Unlit									
Swimming Pool			3						
Waterslide									
Tennis Court, Lit									
Tennis Court, Unlit									
Volleyball (Grass)									
Volleyball (Sand), Lit		2							
Volleyball (Sand), Unlit									
Drinking Fountain	1	1	1		1	1	1	1	1
BBQ Grill	1		3	1	1	3	4		2
Dusk-to-Dawn Lights	1		1		1				
Parking, Lit (spaces)									
Parking, Unlit (spaces)			15	30					
Multi-Use Path (miles)									
Reclaimed Irrig. (acres)			1				1		

Improvement Type	Hoff-man	Iron Horse	Jacinto	James Thomas	La Madera	La Mar	Linden	Menlo	Mesa Village	Military Plaza
Total Acres	3.76	5.00	1.59	9.04	5.19	2.36	3.42	11.49	2.38	4.05
Turf (acres)	3.75		1.59	8.56	5.19		3.42	9.70	2.38	1.45
Youth Baseball, Lit										
Youth Baseball, Unlit	1								1	
Adult Baseball, Lit										
Adult Baseball, Unlit										
Public Restrooms	1				1			2		1
Bocci Courts, Lit										
Bocci Courts, Lit										2
Recreation Ctr (sq. ft.)										31,135
N'hood Center (sq. ft.)										
Concessions										
Dog Off-leash Area										
Exercise Center										
Exercise Course										
Soccer Field, Lit								1		
Soccer Field, Unlit										
Frisbee Golf Course										
Hand/Racquetball, Lit										
Hand/Racquetball, Unlit										
Horseshoe Pits, Lit										
Horseshoe Pits, Unlit										2
Basketball Court, Lit				1	1			1		
Basketball Court, Unlit										
Multiple Use Field, Lit										
Multiple Use Field, Unlit			1	1	1		1			
Orienteering Course										
Amphitheater										1
Picnic Site	2		1	2			1	3	2	
Playground	1	1	1	1	1		1	1	1	
Group Ramada										
Roller Blading/Skating										
Softball Field, Lit								1		
Softball Field, Unlit										
Swimming Pool								1		
Waterslide								1		
Tennis Court, Lit				1						
Tennis Court, Unlit										
Volleyball (Grass)	1									
Volleyball (Sand), Lit										
Volleyball (Sand), Unlit										
Drinking Fountain	1			3	2		1	4	2	1
BBQ Grill	1		1	2	1		1	3	2	
Dusk-to-Dawn Lights	1		1		1			1	1	1
Parking, Lit (spaces)										20
Parking, Unlit (spaces)				20	11			25		
Multi-Use Path (miles)		0.09								
Reclaimed Irrig. (acres)				1	1			1		

Improvement Type	Miracle Mile	Mira-sol	Mitchell	Oak-tree	Orms-by	Park-view	Pine-crest	Pueblo Gardens	Rodeo Wash	Rolling Hills
Total Acres	1.09	5.48	1.84	7.29	4.77	3.50	1.49	5.24	9.85	4.50
Turf (acres)		5.22	1.84	6.24	4.16	3.50	1.49	4.84		1.88
Youth Baseball, Lit										
Youth Baseball, Unlit						1	1			1
Adult Baseball, Lit										
Adult Baseball, Unlit										
Public Restrooms					1					
Bocci Courts, Lit										
Bocci Courts, Lit										
Recreation Ctr (sq. ft.)					3,161			1		
N'hood Center (sq. ft.)										
Concessions										
Dog Off-leash Area										
Exercise Center										
Exercise Course										
Soccer Field, Lit										
Soccer Field, Unlit										
Frisbee Golf Course										
Hand/Racquetball, Lit										
Hand/Racquetball, Unlit										
Horseshoe Pits, Lit										
Horseshoe Pits, Unlit										
Basketball Court, Lit		1		1	1			1		1
Basketball Court, Unlit									0.5	
Multiple Use Field, Lit										
Multiple Use Field, Unlit				1				1		
Orienteering Course										
Amphitheater										
Picnic Site		2	2	2	1	2	1	1	1	1
Playground		1	1	1	1	1	1	1	1	1
Group Ramada										
Roller Blading/Skating										
Softball Field, Lit		1			1					
Softball Field, Unlit										
Swimming Pool								1		
Waterslide										
Tennis Court, Lit										2
Tennis Court, Unlit										
Volleyball (Grass)										
Volleyball (Sand), Lit					1					
Volleyball (Sand), Unlit										
Drinking Fountain		2		1	2	1	1	2	1	2
BBQ Grill		2	1	1	1	2	2	2	1	2
Dusk-to-Dawn Lights		1	1	1	1		1	1	1	1
Parking, Lit (spaces)		13						7		25
Parking, Unlit (spaces)					40					
Multi-Use Path (miles)									0.10	
Reclaimed Irrig. (acres)										1

Improvement Type	Santa Rosa	Sears	Stefan Gollob	Swan	Swan-way	Tahoe	Tierra Del Sol	Toumey	Villa Serena
Total Acres	6.01	9.72	7.40	5.53	2.28	2.08	3.53	6.62	1.58
Turf (acres)	4.85	9.72	4.00	2.62	2.15	2.08	3.53	5.80	1.58
Youth Baseball, Lit									
Youth Baseball, Unlit	1	2	1		1			1	
Adult Baseball, Lit			1						
Adult Baseball, Unlit									
Public Restrooms			1						
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)	9,617								
N'hood Center (sq. ft.)									
Concessions			1						
Dog Off-leash Area									
Exercise Center									
Exercise Course									
Soccer Field, Lit									
Soccer Field, Unlit									
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit									
Basketball Court, Lit	1							1	
Basketball Court, Unlit									
Multiple Use Field, Lit									
Multiple Use Field, Unlit			2			1			
Orienteering Course									
Amphitheater									
Picnic Site	3	2	2	2	2	3	2	2	1
Playground	1	1	1	1	1	1	1	1	1
Group Ramada									
Roller Blading/Skating									
Softball Field, Lit									
Softball Field, Unlit									
Swimming Pool									
Waterslide									
Tennis Court, Lit			4						
Tennis Court, Unlit									
Volleyball (Grass)									
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit									
Drinking Fountain	3	2	2	1	1	1	1	2	1
BBQ Grill	3	2	2	2	2	2	2	3	
Dusk-to-Dawn Lights	1		1	1	1	1		1	1
Parking, Lit (spaces)									
Parking, Unlit (spaces)			45						
Multi-Use Path (miles)	0.40								
Reclaimed Irrig. (acres)	1		1	1					

Improvement Type	Vista del Prado	Vista del Pueblo	Vista del Rio	Wil-shire Heights	Amphi-theater High	Amphi-theater Middle	Blenman Elem	Booth-Fickett Middle	Catalina High
Total Acres	8.64	3.71	3.00	2.37	*	*	*	*	*
Turf (acres)	1.62	3.48		2.37	*	*	*	*	*
Youth Baseball, Lit	1					2			
Youth Baseball, Unlit				1					
Adult Baseball, Lit					1				
Adult Baseball, Unlit	1								2
Public Restrooms	1	1							
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)									
N'hood Center (sq. ft.)									
Concessions	1								
Dog Off-leash Area									
Exercise Center									
Exercise Course									
Soccer Field, Lit									
Soccer Field, Unlit							1		
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit									
Basketball Court, Lit		1						1	4
Basketball Court, Unlit							1		
Multiple Use Field, Lit	1								
Multiple Use Field, Unlit		1					1		
Orienteering Course									
Amphitheater									
Picnic Site	1	2		1					
Playground	1	1	1	1			1		1
Group Ramada									
Roller Blading/Skating									2
Softball Field, Lit									
Softball Field, Unlit									
Swimming Pool					1				1
Waterslide									
Tennis Court, Lit					8				10
Tennis Court, Unlit									
Volleyball (Grass)									
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit							1		
Drinking Fountain	2	2		1			1		4
BBQ Grill	1	2		1					
Dusk-to-Dawn Lights	1	1		1					
Parking, Lit (spaces)	12								
Parking, Unlit (spaces)									
Multi-Use Path (miles)									
Reclaimed Irrig. (acres)	1						1	1	1

Improvement Type	Cholla High	Doolen Middle	Drach-man Elem	E.C. Nash Elem	Flowing Wells High	Jefferson Elem	John B. Wright Elem	Magee Middle	Manzo Elem
Total Acres	*	*	*	*	*	*	*	*	*
Turf (acres)	*	*	*	*	*	*	*	*	*
Youth Baseball, Lit									
Youth Baseball, Unlit									
Adult Baseball, Lit					1				
Adult Baseball, Unlit	1				1				
Public Restrooms									
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)									
N'hood Center (sq. ft.)									
Concessions									
Dog Off-leash Area									
Exercise Center									
Exercise Course									
Soccer Field, Lit									
Soccer Field, Unlit									
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit									
Basketball Court, Lit		4						2	2
Basketball Court, Unlit				2		1	2		
Multiple Use Field, Lit									
Multiple Use Field, Unlit				1		1	1		
Orienteering Course									
Amphitheater									
Picnic Site									
Playground				1		1	1		
Group Ramada									
Roller Blading/Skating									
Softball Field, Lit		2							
Softball Field, Unlit									
Swimming Pool									
Waterslide									
Tennis Court, Lit									
Tennis Court, Unlit					8				
Volleyball (Grass)									
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit									
Drinking Fountain									
BBQ Grill									
Dusk-to-Dawn Lights									
Parking, Lit (spaces)									
Parking, Unlit (spaces)									
Multi-Use Path (miles)						0.16			
Reclaimed Irrig. (acres)		1							1

Improvement Type	Palo Verde High	Pima Community College (West)	Richey Elem	Rincon High	Rollin Gridley Middle	Sahuaro High	Santa Rita High	Sunny-side High
Total Acres	*	*	*	*	*	*	*	*
Turf (acres)	*	*	*	*	*	*	*	*
Youth Baseball, Lit								
Youth Baseball, Unlit								
Adult Baseball, Lit			1				1	1
Adult Baseball, Unlit								
Public Restrooms								
Bocci Courts, Lit								
Bocci Courts, Lit								
Recreation Ctr (sq. ft.)								
N'hood Center (sq. ft.)								
Concessions								
Dog Off-leash Area								
Exercise Center								
Exercise Course								
Soccer Field, Lit								
Soccer Field, Unlit								
Frisbee Golf Course								
Hand/Racquetball, Lit		8						
Hand/Racquetball, Unlit								
Horseshoe Pits, Lit								
Horseshoe Pits, Unlit								
Basketball Court, Lit	4			4				1
Basketball Court, Unlit			2		3	3		
Multiple Use Field, Lit								
Multiple Use Field, Unlit								
Orienteering Course								
Amphitheater								
Picnic Site								
Playground			2					
Group Ramada								
Roller Blading/Skating								
Softball Field, Lit								1
Softball Field, Unlit								
Swimming Pool								1
Waterslide								
Tennis Court, Lit	10	8						8
Tennis Court, Unlit							10	
Volleyball (Grass)								
Volleyball (Sand), Lit								
Volleyball (Sand), Unlit								
Drinking Fountain								
BBQ Grill								
Dusk-to-Dawn Lights								
Parking, Lit (spaces)								
Parking, Unlit (spaces)								
Multi-Use Path (miles)			0.20					
Reclaimed Irrig. (acres)							1	

Improvement Type	Townsend Middle	Utterback Middle	Wakefield Middle	Total
Total Acres	*	*	*	259.95
Turf (acres)	*	*	*	173.40
Youth Baseball, Lit				3
Youth Baseball, Unlit			1	17
Adult Baseball, Lit				6
Adult Baseball, Unlit				5
Public Restrooms				14
Bocci Courts, Lit				0
Bocci Courts, Unlit				2
Recreation Ctr (sq. ft.)				91,802
N'hood Center (sq. ft.)				3,415
Concessions				2
Dog Off-leash Area				0
Exercise Center				2
Exercise Course				1
Soccer Field, Lit	1			2
Soccer Field, Unlit				3
Frisbee Golf Course				0
Hand/Racquetball, Lit				8
Hand/Racquetball, Unlit				0
Horseshoe Pits, Lit				0
Horseshoe Pits, Unlit				5
Basketball Court, Lit		2	3	43.5
Basketball Court, Unlit			3	21.5
Multiple Use Field, Lit				1
Multiple Use Field, Unlit				22
Orienteering Course				0
Amphitheater				4
Picnic Site				89
Playground				65
Group Ramada				0
Roller Blading/Skating				2
Softball Field, Lit				8
Softball Field, Unlit				0
Swimming Pool				10
Waterslide				1
Tennis Court, Lit				51
Tennis Court, Unlit				18
Volleyball (Grass)				1
Volleyball (Sand), Lit				7
Volleyball (Sand), Unlit				3
Drinking Fountain			1	82
BBQ Grill				80
Dusk-to-Dawn Lights				45
Parking, Lit (spaces)				108
Parking, Unlit (spaces)				302
Multi-Use Path (miles)			0.25	1.58
Reclaimed Irrig. (acres)	1			17

* Land not owned by City of Tucson
Source: City of Tucson Parks and Recreation Department, May 12, 2003.

Table 45
EXISTING COMMUNITY, METRO AND REGIONAL PARKS

Improvement Type	Freedom	Himmel	Juhan	Mans-field	McCor-mick	Mission Manor	Joaquin Murrieta	Jesse Owens	Palo Verde
Total Acres	34.46	26.36	16.88	20.39	17.97	38.12	38.00	39.10	30.69
Turf (acres)	8.31	22.20	1.25	12.56	12.00	31.15	22.41	25.00	21.30
Youth Baseball, Lit	2					2	1		1
Youth Baseball, Unlit					1				
Adult Baseball, Lit						1	1	1	1
Adult Baseball, Unlit	1		1	1					
Public Restrooms	2	1	1		1	2	2	3	1
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)					21,500				
N'hood Center (sq. ft.)				12,721					
Concessions	2					1		2	1
Dog Off-leash Area									
Exercise Center									
Exercise Course		1			1				
Soccer Field, Lit				1				1	
Soccer Field, Unlit	2							1	
Frisbee Golf Course									
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit	1								
Basketball Court, Lit		0.5		3		1			1
Basketball Court, Unlit			1		1			1	
Multiple Use Field, Lit									1
Multiple Use Field, Unlit	2	2		1	1	1	1	4	1
Orienteering Course									
Amphitheater		1			1				
Picnic Site	4	4	2	3	2	9	3	4	4
Playground	1	3	1	1	2	1	1	1	2
Group Ramada	1								
Roller Blading/Skating									
Softball Field, Lit	1					1	3	2	
Softball Field, Unlit							1		
Swimming Pool	2	1		1		1	1	1	1
Waterslide	1			1			1		
Tennis Court, Lit		8							
Tennis Court, Unlit								1	2
Volleyball (Grass)		1						1	
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit									
Drinking Fountain	6	8	2	3		8	5	10	6
BBQ Grill	5	4	2	3	2	10	4	6	6
Dusk-to-Dawn Lights	1	1	1	1	1	1	1	1	1
Parking, Lit (spaces)	200	40		60	55	70	85	300	160
Parking, Unlit (spaces)	110	50	40			35			
Multi-Use Path (miles)	1.00					1.00			1.00
Reclaimed Irrig. (acres)	1	1	1		1		1	1	1

Improvement Type	Michael Perry	Purple Heart	San Juan	Santa Rita	Sunny-side	North Central	Fort Lowell	Rudy Garcia	Golf Links
Total Acres	34.92	36.34	38.79	22.70	32.01	38.65	58.94	49.95	54.00
Turf (acres)	1.50	2.18		16.25	30.00		28.00	32.97	18.75
Youth Baseball, Lit	2							1	
Youth Baseball, Unlit	1							1	
Adult Baseball, Lit					1			1	
Adult Baseball, Unlit				1	1		1		
Public Restrooms	1	1		2	1		4	2	2
Bocci Courts, Lit									
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)								14,687	
N'hood Center (sq. ft.)			27,076						
Concessions	1						1	1	
Dog Off-leash Area									
Exercise Center							1		
Exercise Course							1		
Soccer Field, Lit							2	1	2
Soccer Field, Unlit								2	3
Frisbee Golf Course									
Hand/Racquetball, Lit							4		
Hand/Racquetball, Unlit									
Horseshoe Pits, Lit									
Horseshoe Pits, Unlit									
Basketball Court, Lit			1					1	
Basketball Court, Unlit	1			1	1				
Multiple Use Field, Lit							2		
Multiple Use Field, Unlit		1		1	1		3	2	
Orienteering Course									
Amphitheater									
Picnic Site	2	2	2	3	1		3	4	2
Playground	1	1	1	1			2	2	1
Group Ramada									
Roller Blading/Skating		1							
Softball Field, Lit				2	2		1	1	4
Softball Field, Unlit		1						1	
Swimming Pool		1	1	1	1		1		
Waterslide			1						
Tennis Court, Lit							8		
Tennis Court, Unlit									
Volleyball (Grass)							2		
Volleyball (Sand), Lit									
Volleyball (Sand), Unlit							1		
Drinking Fountain	3	2		4	3		14	4	8
BBQ Grill	4	2	1	4	1		9	6	5
Dusk-to-Dawn Lights	1	1	1	1				1	
Parking, Lit (spaces)	35	40	56	30			30	80	120
Parking, Unlit (spaces)				110			190	90	40
Multi-Use Path (miles)		1.00	0.20				1.00	0.50	1.00
Reclaimed Irrig. (acres)							1		1

Improvement Type	Jacobs	John F. Kennedy	Kino / 36th St	Lake-side	Abe Lincoln	Gene Reid	Santa Cruz	Morris Udall	Case
Total Acres	49.22	167.59	52.80	50.53	190.81	131.32	125.12	172.80	40.50
Turf (acres)	34.90	25.50	25.00	19.62	20.36	73.66	0.72	23.04	
Youth Baseball, Lit		2	4			1		1	
Youth Baseball, Unlit				1				1	
Adult Baseball, Lit						5		1	
Adult Baseball, Unlit						1.5			
Public Restrooms	3	5	1	3	3	9		3	
Bocci Courts, Lit								4	
Bocci Courts, Lit									
Recreation Ctr (sq. ft.)	8,000				16,348	50,376		66,783	
N'hood Center (sq. ft.)			16,764						
Concessions		2	1		1	1		1	
Dog Off-leash Area									
Exercise Center									
Exercise Course							1		
Soccer Field, Lit	3			1	2			2	
Soccer Field, Unlit	2	1				1		1	
Frisbee Golf Course							1		
Hand/Racquetball, Lit									
Hand/Racquetball, Unlit						8			
Horseshoe Pits, Lit								2	
Horseshoe Pits, Unlit				1		10			
Basketball Court, Lit	1	1		1	1				
Basketball Court, Unlit	1				1				
Multiple Use Field, Lit	2								
Multiple Use Field, Unlit		2		1	1	2		1	
Orienteering Course									
Amphitheater		1				1		1	
Picnic Site	8	6		4	6	5	10	3	
Playground	2	4	1	2	2	4		1	1
Group Ramada		1			1	1	1	1	
Roller Blading/Skating									
Softball Field, Lit	1			1	4			2	
Softball Field, Unlit									
Swimming Pool	1	1			1	1		1	
Waterslide					1				
Tennis Court, Lit									
Tennis Court, Unlit	2	2				25			
Volleyball (Grass)									
Volleyball (Sand), Lit					4			4	
Volleyball (Sand), Unlit									
Drinking Fountain	12	17	1	6	8	22	4	12	
BBQ Grill	10	45		5	10	28	4	10	1
Dusk-to-Dawn Lights	1	1		1	1	1	1	1	
Parking, Lit (spaces)	140	645	1	75	290	1,620		405	
Parking, Unlit (spaces)	150	480			40		22	140	8
Multi-Use Path (miles)	2.00			1.00	0.60	3.00	11.00	0.60	
Reclaimed Irrig. (acres)	1		1	1	1	1	1	1	

Improvement Type	Grease-wood	Colum-bus	Sentinel Peak	Hough-ton	Valle Allegre	Total
Total Acres	160.00	346.19	272.93	70.00	77.00	2,535.08
Turf (acres)		4.20				512.83
Youth Baseball, Lit						17
Youth Baseball, Unlit						5
Adult Baseball, Lit						12
Adult Baseball, Unlit						8
Public Restrooms		3				56
Bocci Courts, Lit						4
Bocci Courts, Unlit						0
Recreation Ctr (sq. ft.)						177,694
N'hood Center (sq. ft.)						56,561
Concessions						15
Dog Off-leash Area		1				1
Exercise Center						1
Exercise Course						4
Soccer Field, Lit						15
Soccer Field, Unlit						13
Frisbee Golf Course						1
Hand/Racquetball, Lit						4
Hand/Racquetball, Unlit						8
Horseshoe Pits, Lit						2
Horseshoe Pits, Unlit						12
Basketball Court, Lit						11.5
Basketball Court, Unlit						8
Multiple Use Field, Lit						5
Multiple Use Field, Unlit						28
Orienteering Course	1					1
Amphitheater						5
Picnic Site	4	7				107
Playground		1				40
Group Ramada		1				7
Roller Blading/Skating						1
Softball Field, Lit						25
Softball Field, Unlit						3
Swimming Pool						18
Waterslide						5
Tennis Court, Lit						16
Tennis Court, Unlit						32
Volleyball (Grass)						4
Volleyball (Sand), Lit						8
Volleyball (Sand), Unlit						1
Drinking Fountain	1	4				173
BBQ Grill	5	13				205
Dusk-to-Dawn Lights		1				22
Parking, Lit (spaces)		1				4,538
Parking, Unlit (spaces)	15	110	45			1,675
Multi-Use Path (miles)	0.25					25.15
Reclaimed Irrig. (acres)						16

Source: City of Tucson Parks and Recreation Department, May 12, 2003.