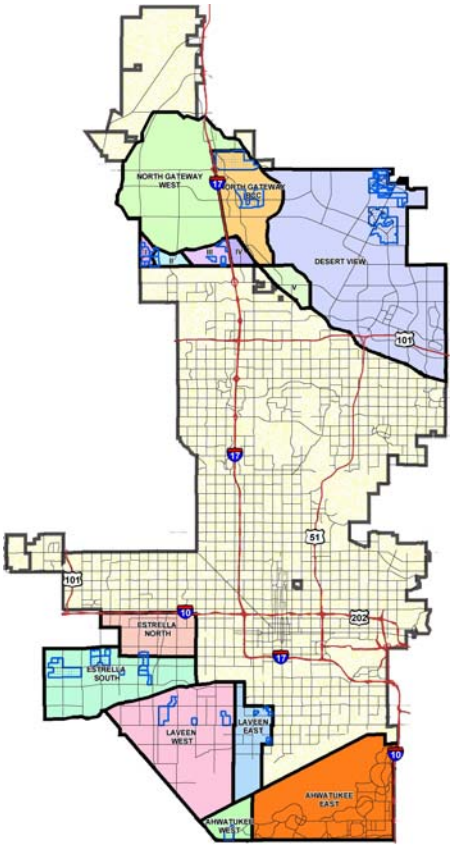
Impact Fee Update: Policy Memorandum

prepared for

The City of Phoenix, Arizona



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EXECUTIVE SUMMARY

The purpose of this study is to evaluate the City's existing development impact fee system, identify policy issues and present alternatives for the City and stakeholders to consider when updating the impact fees. This memorandum represents the first phase of a two-phase process to update the major streets and bridges, parks and trails and open space impact fees. This first phase consists of a diagnostic review and policy evaluation, and the second phase will consist of the preparation of an updated infrastructure financing plan that will be presented to the City for consideration in 2008. While the focus of this policy memorandum is on the major streets and bridges, parks and trails and open space impact fees that will be updated in the second phase of this project, many of the issues addressed in this study have broader implications and should be applied where appropriate to the subsequent impact fee updates.

The City of Phoenix first established its development impact fee program in 1988. Most of the current impact fees are based on the *Infrastructure Financing Plan* that was developed by City staff in November 2006. However, the City's current major streets and bridges impact fee schedule is still based on the 2003 cost calculations, since the 2006 *Infrastructure Financing Plan* for streets was not adopted by the City Council. In addition, the fees for parks and trails and open space are based on roughly two-thirds of the costs calculated in the 2006 update.

In the past, the City's impact fee updates occurred sporadically due to the complexity involved in preparing the *Infrastructure Financing Plan* and *Offsets Report*. At the conclusion of the 2006 update, the City Council directed City staff to update the impact fees for one-third of the City's impact fee categories each year starting in 2007. This update will include a detailed review of the major streets and bridges, parks and trails and open space impact fees. In 2008, the police, fire protection, library and storm drainage fees will be updated. In 2009, the water, wastewater, equipment repair and solid waste fees will be updated.

The major recommendations of this report are summarized below.

Create a Single, Unified Report

The City's development impact fee system is fragmented into three separate documents, with EDU multipliers contained in the ordinance, costs per EDU calculated in the *Infrastructure Financing Plan* and "offsets"[1] calculated in the *Offsets Report*. There is no reason not to combine all of the elements into one document that calculates the impact fees. This is the recommended approach for the update of the major streets and bridges, parks and trails and open space impact fees. And as the other fees are updated in subsequent cycles, unified reports should be prepared for those fees as well.

Prepare, Publish and Adopt Impact Fee Schedules

Most impact fee systems have published fee schedules, whether included as part of the ordinance or promulgated separately. This is not the case for Phoenix. There are no fee schedules in the City's ordinance, and the City only publishes impact fee schedules for a standard-density single-family

[1] Offsets represent the present value of future payments of other taxes and fees that are used to provide the same types of facilities as the impact fees. The impact fees are the cost per unit of development less appropriate offsets.

detached unit utilizing a 1" or less water meter. Current fee schedules for all land use categories were prepared as part of this report and are shown in Appendix A.

It would be good government practice to have the City Council actually adopt the fees that are to be charged, and have the adopted fee schedules included in the impact fee ordinance. Currently, the City Council adopts the *Infrastructure Financing Plan*, and thus determines the cost per EDU for each facility type for each service area. The offsets for each land use type and type of facility are calculated in a document called the *Offsets Report for the Development Impact Fee Areas of Phoenix*. The *Offsets Report*, however, is not adopted by the City Council, but is prepared by City staff.

Reduce the Number of Streets and Bridges Service Areas

Part of the complexity of the City's impact fee system is the number of service areas. The number of service areas varies depending on the type of facility, with wastewater having the largest number at 12 service areas. As each of the fees is updated, the service areas should be reviewed for possible consolidation. In this update, we recommend that the seven major streets and bridges service areas be consolidated into two, one in the Northern Growth Area and one in the Southern Growth Area, which would include Estrella, Laveen and Ahwatukee West (street fees are not charged in Ahwatukee East). We do not recommend any changes to the parks and trails and open space impact fee service areas.

Simplify Developer Credit System

The City's current system of developer credits is difficult to track and administer, creates uncertainty about the City's ability to expend funds collected, and results in some developers reaping windfalls while others find difficulty utilizing them. To address these issues, we recommend the following:

- **Require credit approval prior to construction.** Currently, developers may apply for credits after the development has begun, and receive a refund of impact fees already paid. The City ends up refunding 41 cents for every dollar in major streets and bridges impact fees collected (see Table 5). This makes it difficult for City staff to program the expenditure of impact fees. Credits should be applied for and approved prior to the application for the initial building permit for the development.

- **De-link credit value.** Credits should be based solely on the value of improvements and should not be linked to changes in the impact fees. If the policy of adjustable credit values is maintained, the adjustment should be based on an index of construction costs rather than on the change in the adopted cost per EDU. In addition, the value of credits should not be affected when fees are adopted at less than full cost.

- **Prohibit transfer of excess credits.** The City currently allows excess credits to be transferred to contiguous developments with staff approval or to noncontiguous development through a City Council-approved developer agreement. Transferable credits are difficult to track and create additional uncertainty about future impact fee revenue. We recommend that the City prohibit the transfer of excess credits and, instead, allow excess credits only pursuant to a Council-approved developer agreement or a staff-administered agreement that sets forth a schedule of reimbursements from the impact fee fund. This recommendation would not affect existing excess credits, which should be grandfathered so

that developers or subsequent interests in a development with outstanding excess credits would remain eligible to redeem those credits under the City's existing excess credit policy.

Charge Full Cost Fees

Charging a fraction of the full cost to serve growth, as the City currently does with the major streets and bridges, parks and trails and open space impact fees, makes it difficult to fully fund the needed improvements and also makes it difficult to compensate developers fully for the costs they incur in providing necessary improvements. Further, charging less than full cost will ultimately require the City to identify other funding sources for necessary growth-related improvements if the planned facility level-of-service is to be achieved in the growth areas. Alternatively, if full-cost fees are unacceptably high, the City could consider the following options:

- **Remove some of the cost components used in calculating the fees.** For example, the City could take right-of-way (ROW) costs out of the major streets impact fee; if such a change was made, developers would not receive credit for ROW dedication.

- **Eliminate the major streets and bridges fee.** If it's a choice between full-cost road fees or full-cost park fees, keep the park fees, since developers will continue to build some of the major streets. However, it does not appear that developers are building most of the needed roads and impact fees are simply serving to level the playing field between developers. While this is true to a certain extent, net impact fees collected and available for City-initiated improvements account for 55 percent of total developer contributions (both in-kind for credit and actual fee payment—see Table 5).

- **Eliminate the street construction and ROW costs from the streets and bridges fee.** This study examined the feasibility of converting the streets and bridges impact fee into a bridges and regional connections impact fee based on the cost of planned major bridges and major transportation projects that connect the arterial road system to regional freeways (such as ramp connections and frontage roads). Based on the costs in the 2006 update, this would likely result in fees that are close to the fees that the City is currently charging based on the 2003 update. Under this approach, developers would not receive credit for ROW dedication or major street improvements.

We don't necessarily recommend any of the above approaches; however, we do feel that these options would be better than charging a fee that appears to be intended to pay for the entire arterial street system or park system when in fact it covers only a fraction of the full cost.

Correct the Impact Fee Methodology

The City of Phoenix nominally utilizes the plan-based approach in developing the impact fees in that the calculation of the cost is based on a list of planned major improvements needed over a fixed planning horizon (e.g., 2006-2030). However, the City's approach differs from the traditional plan-based approach because it divides planned costs by total service units, rather than by new service units over the planning horizon. Also, in some cases, planned improvements are those needed by build-out of the service area, rather than 2030.

- **Divide by growth.** Since the planned improvements are designed to serve new growth rather than existing development, the cost of growth's portion of the new improvements should be divided by new service units expected over the planning horizon, not existing plus new service units as is currently done.

- **Analyze the existing level of service.** Dividing the planned costs by new service units rather than dividing by ultimate (existing and new) service units raises the possibility that the final increment of development could be required to pay for more than its share of the cost (e.g., the last 10 percent of growth paying for 50 percent of the cost). To ensure that this does not happen, it will be necessary to perform an existing level of service analysis in each service area. If the level of service at build-out is lower than the existing level of service, the cost per service unit will be calculated by dividing remaining growth-related project costs by new service units. If the level of service at build-out is higher than the existing level of service, the cost per service unit will be based on the existing level of service (i.e., replacement value of current facilities per existing service unit).

- **Use build-out planning horizon.** We recommend that the fee calculation utilize development at build-out rather than 2030. The streets and bridges plan upon which the impact fee is based was developed for build-out, not 2030. The build-out planning horizon is also recommended for the parks and trails and open space impact fees in order to provide a consistent basis for calculating all fees.

- **Base secondary property tax offset on outstanding debt.** The City's current approach provides an offset for the portion of future facilities that may be funded with debt. We think this misses the point. Instead, the impact fee should be reduced to account for the amount that new development will pay to retire outstanding debt for capital facilities that serve existing development. In addition, since the outstanding debt is retired by all development in the city, the offset should be calculated city-wide.

- **Create a uniform secondary property tax offset.** Under the City's current approach, the secondary property tax offset varies for each land use category based on typical property values. This is unnecessarily cumbersome. The recommended approach will create a uniform offset per EDU by dividing the outstanding city-wide debt by the existing city-wide service units.

Refine the Service Units (EDU Factors)

In order to assess fees, development of different types must be converted into a common demand equivalent, known as a service unit. The service unit used for all of the City's impact fees is the Equivalent Dwelling Unit, or EDU. An EDU represents the demand for service represented by a typical single-family detached dwelling unit. We recommend the following refinements to the EDU factors:

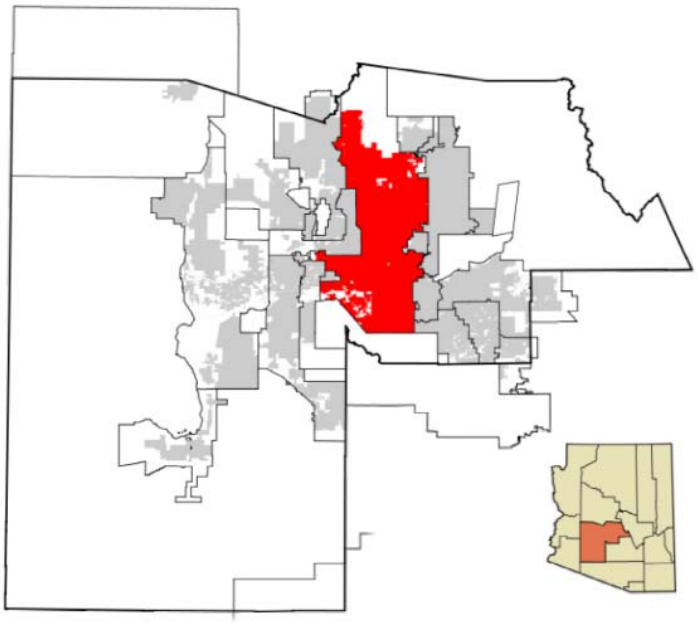
- **Simplify EDU factors.** For the major street EDU factors, eliminate multiple size categories for retail and office land uses, eliminate duplicative land uses and establish consistent EDU characteristics based on 1,000s of square feet for nonresidential land uses. Reduce the number of residential land use categories used in the assessing the parks and trails and open space impact fees.

- **Eliminate occupancy and usage factors.** We recommend eliminating the occupancy and park usage factor from the parks and trails EDU calculation for residential land uses, and, instead, base the EDU factors on the relative number of occupants between various housing types as is currently done for open space.

- **Eliminate nonresidential park EDUs.** We recommend that the City continue the current practice of assessing the parks and trails and open space impact fees only on residential land uses; as a result, nonresidential land uses should not be used in calculating the total service units used in the parks and trails impact fee calculation.

INTRODUCTION

Figure 1. Phoenix Location Map



The City of Phoenix established its development impact fee program in 1988. Most of the current impact fees are based on the *Infrastructure Financing Plan* that was developed by City staff and adopted by the City Council in November 2006. However, the City's current major streets and bridges impact fee schedule is still based on the 2003 update, since the City Council did not adopt the 2006 costs.

In the past, the City's impact fee updates occurred sporadically due to the complexity involved in preparing the *Infrastructure Financing Plan* and *Offsets Report*. At the conclusion of the 2006 update, the City Council directed City staff to update the impact fees for one-third of the City's impact fee categories each year starting in 2007. The 2007 update will include a detailed review of the major streets and bridges, parks and trails and open space impact fees. In 2008, the police, fire protection, library and storm drainage fees will be updated. In 2009, the water, wastewater, equipment repair and solid waste fees will be updated.

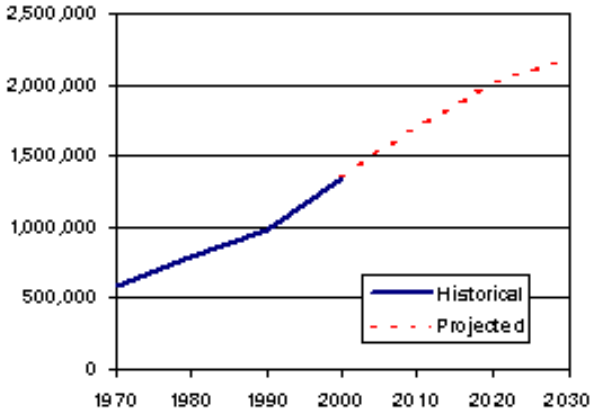
The purpose of this study is to evaluate the City's existing impact fee system, identify policy issues and present alternatives for the City and stakeholders to consider when updating the impact fees. This memorandum represents the first phase of a two-phase process to update the major streets and bridges, parks and trails and open space impact fees. This first phase consists of a diagnostic review and policy evaluation, and the second phase will consist of the preparation of an updated infrastructure financing plan that will be presented to the City for consideration in 2008. While the focus of this policy memorandum is on the impact fees that will be updated in the second phase, many of the issues addressed in this study have broader implications and will be applied where appropriate to the subsequent impact fee updates.

Growth Context

The City of Phoenix is Arizona's capital and the fifth largest city in the United States, with more than 1.5 million residents. The city encompasses more than 500 square miles and is the center of the 13th largest metropolitan area in the United States.

The city's desert location and sunny, warm climate have attracted visitors and residents since its incorporation in 1881. The city's quality of life has attracted a steady inflow of residents since the mid 20th century. Since 1950, when the Phoenix population was approximately 100,000 residents, the city has maintained one of the fastest growth rates for a large municipality in the country.

Figure 2. City Population, 1970-2030



The city's rapid growth creates demands for new infrastructure and facilities in order to maintain acceptable levels of service. There is every indication that the strong growth the city has experienced in recent years will continue. As shown in Figure 2, the population is projected to continue increasing at approximately 2 percent annually through 2020. Only after 2020 will the growth begin to taper off, with a growth rate of approximately one percent annually expected between 2020 and 2030.[2]

Overview of Current System

The City charges development impact fees for the following facilities: major streets and bridges, parks and trails, open space, equipment repair, fire, libraries, police, stormwater drainage, water and wastewater. The City also nominally charges a solid waste fee, although the fees have been zero since the 2006 update.

The impact fees do not apply city-wide, but are assessed only on new development located within growth areas. Impact fees are calculated for two general geographic areas, the Northern Growth Area and Southern Growth Area. The growth areas are divided further into additional service areas for certain facility types. The impact fees are charged at building permit and are based on the land use and service area in which the development is located. The water and wastewater impact fees are charged when the permit is issued for the water meter if the meters or fixture units cannot be identified when the building permit is issued.

In order to assess fees, development of different types must be converted into a common demand equivalent, known as a service unit. The service unit used for all of the City's impact fees is the

[2] Population growth based on data from Maricopa Association of Governments, Interim Projections, June 25, 2003.

Equivalent Dwelling Unit, or EDU. An EDU represents the demand for service represented by a typical single-family detached dwelling unit.

The actual impact fee charged is the cost to provide the capital facilities needed to serve the development, less applicable "offsets." Offsets represent the present value of future payments of other taxes and fees that are used to provide the same types of facilities as the impact fees. The cost is the product of the EDUs represented by the development and the cost per EDU to provide the facilities. The EDU factors for different types of land uses are set out in the City's impact fee ordinance (Chapter 29 of the City Code). The costs per EDU for each type of facility and for each service area are calculated in a document called the *Infrastructure Financing Plan for the Development Impact Fee Areas of Phoenix*.

Most impact fee systems have published fee schedules, whether included as part of the ordinance or promulgated separately. This is not the case for Phoenix. There are no impact fee schedules in the City's impact fee ordinance. The City Council adopts the *Infrastructure Financing Plan*, and thus determines the cost per EDU for each facility type for each service area. The offsets for each land use type and type of facility are calculated in a document called the *Offsets Report for the Development Impact Fee Areas of Phoenix*. The *Offsets Report*, however, is not adopted by the City Council, but is prepared by City staff. The impact fee ordinance notes that the impact fee charged is less offsets for "alternative revenue," but is silent on how the offsets are to be calculated.

Currently, a developer must contact the City and have them calculate the impact fee for most fee types since the City does not publish impact fee schedules other than for a standard-density single-family detached unit utilizing a 1" or less water meter. For all other land uses, the fee must be calculated based on the EDU multipliers in the ordinance, the cost per EDU for the facility and service area in question from the *Infrastructure Financing Plan* and the offsets by type and facility and land use from the *Offsets Report*. While calculating the fee in this manner is not an insurmountable task, the current system is unnecessarily cumbersome and difficult to understand for the development community and the interested public. As part of this policy memorandum, the consultant prepared current fee schedules for major streets and bridges, parks and trails, open space, libraries, fire, police, equipment repair, water, wastewater and drainage (see Appendix A); these fee schedules could be published by the City on its web site.

It would be good government practice to have the City Council actually adopt the fees that are to be charged, and have the adopted fee schedules included in the impact fee ordinance. Currently, the City Council adopts the *Infrastructure Financing Plan*, and thus determines the cost per EDU for each facility type for each service area. The offsets for each land use type and type of facility are calculated in a document called the *Offsets Report for the Development Impact Fee Areas of Phoenix*. The *Offsets Report*, however, is not adopted by the City Council, but is prepared by City staff. Starting with the update of the major streets and bridges, parks and trails and open space impact fees, the City should adopt the updated impact fee schedules and include them in the ordinance.

In addition to the development impact fees charged in the growth areas, the City levies two other types of assessments that perform a similar function. All new water and wastewater customers, whether located inside or outside the growth areas where impact fees are charged, are assessed a water and wastewater "development occupational fee" to reimburse the City for costs to expand the water and wastewater systems to accommodate new customers (the fees are higher for new customers located outside the city limits). New customers in growth areas are given an offset against

their water and wastewater impact fees to avoid double-charging. The City also charges all new water customers a "water resources acquisition fee" to recover costs associated with securing water for future customers and reducing water demand. Since these types of costs are not covered by the water or wastewater impact fees, no offsets are provided for water resources acquisition fee payments.

The City's current average impact fees (for all service areas) for a typical single-family dwelling are compared with fees charged by other Arizona jurisdictions in Table 1. The City's total current fees are in the upper tier, but are not the highest in the state. Note that the City's average fees are below the state-wide average for roads, and are considerably higher than the state average for parks, trails and open space.

Table 1. Comparative Arizona Impact Fees, Single-Family Dwelling

Jurisdiction	Water	Waste-water	Roads	Parks	Library	Fire	Police	General Gov't	Solid Wste	Storm Drain	Total
Bullhead City	$711										$711
Yavapai Co.			$1,150								$1,150
*Tempe	$1,266	$1,558									$2,824
*Fountain Hills			$609	$2,388			$32	$466			$3,495
Chino Valley (1)			$2,697	$487	$131	$358	$270	$138			$4,081
Prescott	$2,010		$469	$1,116	$253	$167	$84	$275			$4,374
Sierra Vista			$1,390	$1,804	$553	$396	$461				$4,604
Show Low	$1,696	$2,314		$476	$154						$4,640
*Buckeye	$1,331	$3,252				$379					$4,962
Payson	$3,785		$600	$647							$5,032
*Apache Junction	$921	$2,000	$1,485	$564	$262		$133	$83			$5,448
Florence	$777	$993	$114	$1,205	$450	$483	$513	$745	$255		$5,535
Pima Co.	$1,416		$3,581	$1,500							$6,497
Tucson	$1,416		$3,540	$1,600							$6,556
*Scottsdale	$3,771	$2,953								$906	$7,630
Oro Valley	$4,837		$3,040								$7,877
Sedona		$4,700	$811	$2,377			$66	$153		$369	$8,476
Mesa (4)	$2,220	$2,659		$1,340	$464	$272	$402	$598	$178	$366	$8,499
Casa Grande (3)		$3,612	$887	$2,767		$556	$266	$659			$8,747
Marana (2)	$1,416		$4,582	$3,028							$9,026
*Surprise (North)	$3,335	$2,245	$885	$1,127	$266	$454	$424	$314			$9,050
*Goodyear (5)	$3,803	$1,952	$824	$1,187	$229	$429	$323	$391		$327	$9,465
*Glendale	$4,200	$1,740	$613	$1,091	$514	$339	$359	$660	$264		$9,780
*Avondale	$3,289	$3,254	$873	$791	$264	$489	$187	$585	$267		$9,999
*Peoria (North)	$3,289	$2,053	$3,592	$1,896	$369	$415	$200	$539			$12,353
***Phoenix (6)**	**$3,918**	**$2,462**	**$1,166**	**$3,990**	**$261**	**$181**	**$217**	**$68**		**$1,037**	**$13,298**
*Queen Creek		$4,781	$459	$5,142	$1,074		$640	$1,407			$13,503
*Gilbert	$4,652	$4,351	$280	$2,449		$663	$586	$595			$13,576
*Chandler	$5,542	$2,490	$2,353	$6,658		$362	$296	$294			$17,995
State Average	$2,709	$2,743	$1,565	$1,984	$375	$396	$303	$469	$241	$601	$7,558
*Valley Average	$3,024	$2,507	$1,095	$2,274	$360	$371	$283	$450	$177	$567	$8,892

(1) Fire fee assessed by the Chino Valley Fire District
(2) Developments in unincorporated Pima County and Marana typically use Tucson water
(3) Park fee is community service fee, which includes parks, library and recreation
(4) Solid waste fee is actually residential development tax; park fee includes cultural fee
(5) Drainage fee is called public works
(6) Average of all impact fee service areas with fees
Source: Duncan Associates, telephone and internet survey, August 2007 (Mesa's fees effective September 4, 2007).

Overview of Major Streets and Bridges Fees

The City's major streets and bridges impact fees were originally calculated in 1988 to cover the cost of arterial roads, regional transportation connections and bridges in the impact fee growth areas. Subsequent updates have added the cost of major drainage structures associated with road construction in determining the fee.

The major streets and bridges impact fee was last updated in 2003. The costs per EDU were recalculated in 2006, but because the City Council decided against adopting the updated costs per EDU, the offsets were not updated. Consequently, we don't know exactly what the fees would be based on the 2006 calculations. However, it is clear that the fees would have increased significantly. The costs per EDU calculated in 2006 are compared with the costs calculated in 2003 in Table 2. The current fees per single-family unit are about $600 per unit less than the 2003 costs per EDU shown (offsets calculated in 2003 were $559 in the Northern Growth Areas and $639 in the Southern Growth Areas – the difference is due to the fact that there were no drainage costs and therefore no drainage credits in the north).

Table 2. Street Costs per EDU by Service Area, 2003 and 2006

Service Area	2003 Update	2006 Update
North Growth Area:		
North Gateway/Deer Valley 1-3	$1,554	$8,029
North Black Canyon/Deer Valley 4	$1,928	$4,793
Desert View/Deer Valley 5	$2,735	$8,128
South Growth Area:		
Estrella North	$697	$1,509
Estrella South	$1,393	$4,827
Laveen	$1,389	$6,178
Ahwatukee West	$2,616	$9,560

Source: City of Phoenix, *Infrastructure Financing Plan,* 2003 and 2006.

The major streets and bridges impact fee is not charged in the Ahwatukee East area, which is 78 percent built out (in terms of street EDUs) and has most of its transportation infrastructure in place. The service areas in which street impact fees are charged are all at less than 50 percent of build-out (see Table 15 in the Service Area section).

Major streets and bridges impact fee revenue over the last four years is summarized in Table 3. In two of the seven service areas, North Gateway and Estrella North, average annual net revenue has been negative, meaning that the City paid out more in credit refunds than it received in fee payments during the four-year period.[3] Outstanding "available" credits (those that can be used to offset fees within a subdivision) are significantly higher than average annual revenue in several service areas. "Excess" credits (those in excess of what can be used to eliminate fees within the development for which the improvement was made) are many times annual revenue in all service areas except Laveen.

[3] Developers can apply for a credit for the value of improvements or the dedication of right-of-way at any time – if the credit is approved after impact fees have already been paid in the subdivision for which the improvement had been made, the developer can receive a refund of all or part of those impact fees paid.

Table 3. Streets Impact Fee Revenue, FY 2004-2007 and Outstanding Credits, 2006

	Annual Net Impact Fee Revenue (Less Refunds)					Outstanding Credits	
Service Area	FY 03/04	FY 04/05	FY 05/06	FY 06/07	Average	Available	Excess
North Gateway	-$315,379	$60,704	$30,656	-$461,014	-$171,258	$0	$2,441,680
North Black Canyon	$4,467,887	-$2,214,161	$733,045	$1,282,990	$1,067,440	$2,293,561	$8,015,969
Desert View	$1,462,039	$2,532,213	-$591,119	$6,281,093	$2,421,057	$3,855,409	$4,211,475
Subtotal, North	$5,614,547	$378,756	$172,582	$7,103,069	$3,317,239	$6,148,970	$14,669,124
Estrella North	-$499,201	$21,337	$138,343	$160,567	-$44,739	$267,087	$323,509
Estrella South	$222,305	$273,605	$1,391,552	$941,501	$707,241	$1,305,887	$4,136,607
Laveen	$2,635,914	$3,156,748	$2,034,910	$2,171,151	$2,499,681	$1,139,217	$2,277,104
Ahwatukee West	$0	$7,117	$22,935	$19,294	$12,337	$100,793	$1,719,729
Subtotal South	$2,359,018	$3,458,807	$3,587,740	$3,292,513	$3,174,519	$2,812,984	$8,456,949
Total	$7,973,565	$3,837,563	$3,760,322	$10,395,582	$6,491,758	$8,961,954	$23,126,073

Source: City of Phoenix Budget and Research Department, October 26, 2007 (outstanding credits are as of 2006).

It takes extensive analysis to determine the value of credits used versus cash fees paid. While the City maintains a record of every permit issued along with a breakdown of the impact fee paid and tracks credits by project, the City does not track or report total credits used for standard density single-family detached housing. Further complicating the analysis, the City reports single-family permits issued in impact fee areas by villages rather than the specific major streets and bridges service areas. Nevertheless, a reasonable estimate of credits used versus fees paid can be compiled from available reports. As summarized in Table 4, over the last four years that the current streets impact fee schedule has been in place, the City has collected net revenue (cash fees paid less refunds issued) of about $26 million. During this same period, it is estimated that developers have utilized about $21 million in credits.

Table 4. Streets Credits Used, FY 2004-2007

			Impact Fee Revenue		Estimated
Service Area	EDUs	Fee/EDU	Expected	Actual	Credits Used
Northern Growth Area:					
North Gateway/Deer Valley	7,791	$1,250	$9,738,750	$3,584,728	$6,154,022
Desert View	6,612	$2,240	$14,810,880	$9,684,226	$5,126,654
Subtotal, North	14,403		$24,549,630	$13,268,954	$11,280,676
Southern Growth Area:					
Estrella North & South	13,500	$510	$6,885,000	$2,650,009	$4,234,991
Laveen	16,376	$850	$13,919,600	$9,998,723	$3,920,877
Ahwatukee West	730	$2,130	$1,554,900	$49,346	$1,505,554
Subtotal, South	30,606		$22,359,500	$12,698,078	$9,661,422
Total	45,009		$46,909,130	$25,967,032	$20,942,098

Source: EDUs estimated based on single-family detached permits issued from City of Phoenix, "Summary of Impact Fee Permits Issued by Fiscal Year," plus non-single-family EDUs permitted from extract from City database (Streets Data-EDUs.xls); fee per EDU is cost per EDU from 2003 *Infrastructure Financing Plan* times average ratio of fee to cost per development unit for a single-family detached unit, multi-family unit, 1,000 sq. ft. of retail (100,000-sq.-ft. center), 1,000 sq. ft. of office (100,000-sq.-ft. building) and 1,000 sq. ft. of industrial (when data for two service areas is combined, the average of the two average fees is used); expected revenue is EDUs times fee per EDU; actual revenue is net revenue (less refunds) from Table 3; estimated credits used is difference between expected and actual revenue.

The City does keep track of refunds issued. During the last four years, the City has issued about $18 million in refunds of major streets and bridges impact fees previously paid. This indicates that about 86 percent of credits utilized by developers take the form of refunds ($18 million out of $21 million).

It also indicates that about 41 cents out of every dollar in major streets and bridges impact fees collected is eventually refunded. An additional $3 million was never collected by the City, since these credits were utilized by developers at time of permit application. As summarized in Table 5, the net revenue collected by the City and available to fund projects amounts to about 55 percent of the total amount of developer contributions (fees paid and credits utilized) – the other 45 percent represents developer credits for projects they constructed or right-of-way they dedicated.

Table 5. Streets Revenue and Credit Summary, FY 2004-2007

Net Fees Collected, FY 2004-2007	$25,967,032
Refunds Issued, FY 2004-2007	$17,934,764
Total Fees Collected, FY 2004-2007	$43,901,796
Percent Refunded	41%
Estimated Credits Used, FY 2004-2007	$20,942,098
Refunds Issued, FY 2004-2007	$17,934,764
Estimated Non-Refund Credits Used	$3,007,334
Net Fees Collected, FY 2004-2007	$25,967,032
Total Fees and Credits, FY 2004-2007	$46,909,130
Percent Net Fees	55%

Source: Net fees collected derived from Table 3; refunds issued from City of Phoenix; estimated credits used from Table 4; total fees and credits is sum of total fees collected and estimated non-refund credits used.

This overview of the major streets and bridges impact fees reveals several key aspects of the current system. First, the current fees significantly understate the actual cost of installing the arterial street system required to serve the growth areas. This is due to a number of factors, including the fact that the methodology for calculating the costs per EDU divides remaining project costs by build-out rather than by remaining development (since the growth areas are an average of one-quarter developed, this tends to understate the fees by about one-fourth overall); the fact that the fees were not updated in 2006 to account for the significant road construction cost increases of the last several years; and the fact that the Southern Growth Area fees did not include drainage costs in the 2003 update. That fees are low relative to actual costs is attested to by the fact that there are $23 million in excess credits (see Table 3), which reflect the costs of improvements that developers have made beyond the amount of fees that were due for their projects.

A second salient aspect of the major streets and bridges impact fee system is that current fees serve primarily as a mechanism to level the playing field between developers, and only secondarily to provide an independent source of funding for City-initiated improvements. This is partially a function of the relatively low level of the fees, but it also reflects the reality that developers are installing the majority of the arterial system in the growth areas. However, a negative consequence of the relatively low level of the fees, coupled with the restrictions on the use of excess credits, is that the current fee system does not level the playing field as well as it should. Apparently, many developers have to make improvements that cost far in excess of the amount of the major streets and bridges impact fees that their subdivisions would generate, and are often not compensated for this excess cost.

A third key characteristic of the current system is that allowing developers to claim credits anytime after starting their development creates enormous uncertainty for the City in budgeting the expenditure of its impact fee receipts. Since on average about one-half of fees collected will

eventually need to be refunded, and since major refunds can result in negative revenue for a service area in a given year, it is difficult for the City to program the expenditure of the funds that it receives.

Overview of Parks and Trails Impact Fees

The City has charged a parks and trails impact fee since 1988 to cover the cost of land acquisition, park development and associated improvements. The parks and trails impact fees were last updated in 2006. The parks and trails fees are levied on residential land uses based on the EDUs per unit; prior to the 2006 update, the City also charged nonresidential development parks and trails impact fees. However, even though the decision was made not to charge nonresidential uses, the fees were calculated by dividing the cost of planned parks and trails by the total EDUs for all development in the service area.

The *Infrastructure Financing Plan* for trails is based on a city-wide level-of-service standard of one mile of trail per 760 EDUs. While not stated explicitly, the parks plan appears to be based on the following standards per 1,000 EDUs: 5.43 acres of neighborhood parks, 3.33 acres of community parks and 3.85 acres of district parks.

Construction costs per acre for neighborhood, community and district parks are uniform for all four service areas, as are the unit costs for community and aquatic centers. The land costs used in the 2006 study, on the other hand, vary significantly between service areas, ranging from a low of $114,000 per acre in Estrella/Laveen to a high of $370,000 per acre in Desert View/Deer Valley 5. The park land costs increased significantly in the 2006 update (see Table 6).

Since the fees are based on the same levels of service and construction costs, one might expect the fees to vary between service areas primarily due to differences in land costs. However, this does not explain why the North Gateway/Deer Valley 1-4 service area has the highest cost per EDU, even though it has the second-lowest land costs. Both of the northern service areas are at about 16 percent of residential build-out, yet the North Gateway service area has only 6.5 percent of the park acres it will need at build-out, while the Desert View service area has over half of the park acres it will need. Since the fee is based on remaining costs divided by build-out EDUs, service areas with more complete infrastructure will tend to have lower fees.

Table 6. Parks and Trails Impact Fee Characteristics

	Cost per Acre		% of Parks	2006 Cost per EDU		Adopted
Service Area	2003	2006	Completed	Calculated	Adopted	Percent
Northern Growth Area						
North Gateway/Deer Valley 1-4*	$76,800	$129,781	6%	$6,489	$4,539	70%
Desert View/Deer Valley 5	$76,800	$370,424	54%	$4,560	$3,377	74%
Southern Growth Area						
Estrella/Laveen	$42,700	$113,874	48%	$3,327	$2,502	75%
Ahwatukee	$83,500	$230,979	47%	$4,647	$2,977	64%

* 2006 cost per acre for North Gateway/Deer Valley 1-4 is weighted average of $53,153 for neighborhood parks and $190,766 for community/district parks

Source: Costs per acre from *Infrastructure Financing Plans*, 2003 and 2006; percent of park acres completed and costs per EDU from Infrastructure Financing Plan, 2006.

As shown in Table 6 above, the parks and trail fees were adopted at less than the full amounts calculated in the 2006 update, the adopted percent of the cost per EDU calculated in the *Infrastructure Financing Plan* range from a low of 64 percent in Ahwatukee to a high of 75 percent in Estrella/Laveen.[4]

Even though the costs per EDU were adopted at only about 70 percent of the calculated amount, the resulting residential impact fees increased by 39 to 82 percent, depending on the service area. However, it should be noted that the City also ceased collecting parks and trails impact fees from nonresidential development at the same time. The updated fee schedule went into effect on February 19, 2007, and so was in place for only four months of the last fiscal year. Very little revenue is being received in the Ahwatukee service area, which is at 93 percent of residential build-out.

Table 7. Parks and Trails Current Fees and FY 2007 Revenue by Service Area

	Single-Family Fee		Percent	% Res.	FY 2007
Service Area	2003	2006	Increase	Build-Out	Revenue
Northern Growth Area					
North Gateway/Deer Valley 1-4	$2,751	$4,072	48%	16%	$3,912,495
Desert View/Deer Valley 5	$2,101	$2,910	39%	16%	$4,148,589
Southern Growth Area					
Estrella/Laveen	$1,464	$2,035	39%	37%	$3,996,357
Ahwatukee	$1,377	$2,510	82%	93%	$169,290
Total, All Service Areas				33%	$12,226,731

Source: Single-family fees from Table 26; % of residential build-out derived from Table 13; net revenue (total cash receipts less refunds) for FY 2006/07 from City of Phoenix Budget and Research Department, October 26, 2007.

Net parks and trails impact fee revenue has averaged $13.3 million over the last four years. Including refunds issued, the combination of fees paid and developer credits used has been averaging at least $14.3 million (there likely were some additional non-refund credits utilized, but we don't have information on those). This is considerably higher than total fees and credits for major streets and bridges, which has been averaging about $11.7 million annually.[5]

[4] City Council actually adopted the trails component, which is calculated separately, at 100 percent, and adopted the parks component at lower percentages than shown here.

[5] One-fourth of the $46.9 million in fees collected and credits used during FY 2004-2007 from Table 5.

Table 8. Parks and Trails Impact Fee Revenue, FY 2004-2007

Service Area	FY 03/04	FY 04/05	FY 05/06	FY 06/07	Average
Northern Growth Area					
North Gateway/Deer Valley 1-4	$4,652,527	$4,535,215	$3,383,282	$3,912,495	$4,120,880
Desert View/Deer Valley 5	$1,336,953	$1,540,377	$1,516,019	$4,148,589	$2,135,485
Southern Growth Area					
Estrella/Laveen	$6,601,584	$8,970,585	$7,144,330	$3,996,357	$6,678,214
Ahwatukee	$456,366	$326,552	$219,686	$169,290	$292,974
Total Net Revenue	$13,047,430	$15,372,729	$12,263,317	$12,226,731	$13,227,552
Credit Refunds	$776,452	$1,641,285	$848,040	$909,722	$1,043,875
Total Fees Paid/Credits Used	$13,823,882	$17,014,014	$13,111,357	$13,136,453	$14,271,426

Source: City of Phoenix Budget and Research Department, October 26, 2007

Overview of Open Space Impact Fees

The open space impact fees are charged only in the Northern Growth Area, which comprises the single open space service area. Similar to parks and trails, the demand for open space is attributed entirely to residential development. The EDU factors for open space are still based on the household population data from the 1990 U.S. Census, and are not adjusted for vacancy rates or usage factors. The City does not include the nonresidential uses in the calculation of the total EDUs for open space.

The level-of-service standard for open space is one acre for every 15.86 residential EDUs. The standard of service is based on the provision of open space in other parts of the City and was developed for the Northern Growth Area as part of the Sonoran Preserve Master Plan.

In developing the open space cost, the City reduced the open space demand to reflect the portion that would be satisfied with the purchase of State land with dedicated sales tax funds. It was estimated that sales tax funds would be sufficient to acquire 78.1 percent of the land needed. Privately-owned land already acquired was subtracted to determine the privately-owned open space remaining to be acquired.

In Table 9 below, the open space impact fee calculations are summarized from the 2003 and 2006 updates. A major change was the significant increase in land costs. The 2003 update utilized an average land cost of $76,800 for the 53 percent of land estimated to be fully developable and lower costs of $18,000 and $1,000 for partially developable and non-developable land (the weighted average cost is shown in the table). In developing the cost per EDU for the 2006 update, the City utilized a land cost of $197,560 per acre. The number used in the 2006 update does not match the appraiser report, which shows 2007 open space land costs that range from $74,611 to $124,347 per acre in the northern service area.[6] This discrepancy is not explained in the 2006 *Infrastructure Financing Plan*.

Another major change made during the 2006 update was to include only improvement costs related to private land. The 2003 update included the cost of improving all of the open space land in the fee calculations. As a result, the improvement costs in the 2006 update are 81 percent lower than in the 2003 update.

A final difference is that the City Council did not adopt the maximum fee calculated in the 2006 update. Instead, they adopted a cost per EDU of $1,137, which is 63.6 percent of the calculated maximum cost of $1,789 per EDU.

[6] Barry Page, MAI, *Land Cost Analysis for the Northern Development Impact Area*, April 28, 2006, p. 25.

Table 9. Open Space Fee Calculations, 2003 and 2006

	2003 Update	2006 Update	Change
Projected EDUs	112,306	147,409	31%
Level of Service (EDUs/Acre)	15.86	15.86	0%
Total Acres Needed	7,082	9,294	31%
Percent Private	21.9%	21.9%	0%
Private Acres Needed	1,548	2,035	31%
Land Already Acquired	430	708	65%
Remaining Private Acres Needed	1,118	1,327	19%
Land Cost per Acre	$46,444	$197,560	325%
Total Land Cost	$51,934,273	$262,162,120	405%
Acres to Be Improved	7,082	1,327	-81%
Improvement Cost per Acre	$3,821	$3,821	0%
Total Improvement Cost	$27,062,032	$5,070,467	-81%
Total Cost	$78,996,305	$267,232,587	238%
Less Existing Balance	$0	$3,518,130	na
Total Needed Funding	$78,996,305	$263,714,457	234%
EDUs	112,306	147,409	31%
Cost per EDU	$703	$1,789	154%
Adopted Cost per EDU	$703	$1,137	62%
Offset per Single-Family Unit	$16	$29	81%
Fee per Single-Family Unit	$687	$1,108	61%

Source: City of Phoenix, *Infrastructure Financing Plans,* 2003 and 2006 and *Offsets Reports,* 2003 and 2006.

LEGAL FRAMEWORK

Development impact fees are charges that are assessed on new development to help pay for the capital facility costs they impose on the community. Unlike other types of developer exactions, impact fees are based on a standard formula and a pre-determined fee schedule. Essentially, impact fees require that each new residential or commercial project pay its pro-rata share of the cost of new facilities required to serve that development.

This section discusses the legal parameters and general principles that govern impact fees based on both state law and national case law and how those principles guide the standards and procedures used in assessing development impact fees and administering the development impact fee program. This section also includes a description of the City's current development impact fee ordinance along with some general recommendations. The legal framework and the City's current ordinance provide a basis for analyzing other elements of the City's development impact fee program and *Infrastructure Financing Plan* discussed in subsequent sections of this report.

State Law

Arizona is one of more than a dozen states that have adopted specific enabling legislation authorizing the use of impact fees, also called "development fees," as a method of financing improvements to public facilities necessitated by the increased demands resulting from new development. The Arizona impact fee enabling act for cities, Section 9-463.05, Arizona Revised Statutes (A.R.S.), provides that:

> *A municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings and other personality (A.R.S. 9-463.05.A).*

While this is a broad grant of authority, the Arizona Supreme Court has ruled that facilities that are not directly provided by a municipality, such as schools, do not represent "costs to the municipality" and therefore are not eligible for impact fees.[7]

To conform to State law, a municipal impact fee must meet the following standards, which are set forth in Section 9-463.05.B:

1. *Development fees shall result in a beneficial use to the development.*

2. *Monies received from the development fees...shall be placed in a separate fund...and may only be used for the purposes authorized by this section....*

3. *The schedule for payment of fees shall be provided by the municipality. The municipality shall provide a credit toward the payment of a development fee for the required dedication of public sites, improvements and*

[7] Homebuilders of Central Arizona, et. al. v. City of Apache Junction, 2000.

other necessary public services included in the infrastructure improvement plan and for which a development fee is assessed to the extent the public sites, improvements and necessary public services are provided by the developer....

4. *The amount of any development fee...must bear a reasonable relationship to the burden imposed upon the municipality to provide additional necessary public services to the development. The municipality, in determining the extent of the burden imposed by the development, shall consider, among other things, the contribution made or to be made in the future in cash or by taxes, fees or assessments by the property owner towards the capital costs of the necessary public service covered by the development fee.*

5. *If development fees are assessed by a municipality, such fees shall be assessed in a nondiscriminatory manner.*

The State statute relating to municipal impact fees was amended during the 2007 legislative session (Senate Bill 1423). In addition to expanding and clarifying some of the impact fee requirement standards, the revised statute amends the public notice periods necessary for the assessment of a new or modified impact fee. The revised statute requires that "before the assessment of a new or modified fee, the governing body of the municipality shall adopt or amend an infrastructure improvements plan." The infrastructure improvements plan may be adopted concurrently with the impact fee update, and it must include an estimate of future facilities that will be required as a result of new development, a forecast of the infrastructure costs and a schedule of planned infrastructure construction. The amended act also allows municipalities to automatically adjust an impact fee annually based on a nationally recognized cost index without a public hearing, provided that the municipality provides public notice of the adjustment at least thirty days prior to its effective date.

Case Law

The adoption of impact fee legislation in Arizona and its interpretation by the Arizona courts has taken place in the larger context of the evolution of development financing methods nationally. Since impact fees were pioneered in states like Florida that lacked specific enabling legislation, such fees have generally been legally defended as an exercise of local government's broad "police power" to protect the health, safety and welfare of the community. The courts have gradually developed guidelines for constitutionally valid impact fees, based on a "rational nexus" that must exist between the regulatory fee or exaction and the development activity that is being regulated. The standards set by court cases generally require that an impact fee meet a two-part test:

1) The amount of the fee must be proportional to the need for new facilities created by the new development; and

2) The expenditure of impact fee revenues must provide benefit to the fee-paying development.

Of key importance in calculating legally-valid development impact fees in Arizona is the proper interpretation of the phrase "must be a reasonable relationship to the burden imposed upon the municipality to provide additional necessary public services." The following four principles developed from case law provide guidance for interpreting this issue:

1) Fees should not exceed the cost of needed facilities;

2) Fees should be proportional to the demand generated by the development;

3) Fees should not charge new development for a higher level-of-service; and

4) New development should not be charged twice for the same level-of-service.

The first principle was often linked to the second principle in early impact fee cases. For example, the Florida Supreme Court in the 1976 Dunedin case held that water and sewer connection fees charged for the purpose of funding system capacity expansion were permissible if they "do not exceed a pro rata share of reasonable anticipated costs of expansion."

The second principle sets a somewhat different standard; not only is it necessary not to overcharge new development generally, each particular development must pay no more than its proportionate share of the costs. Impact fees for various types of developments should be proportional to the impact of each development on the need to construct additional or expanded facilities. The fees do not have to recover the full cost, but if the fees are reduced by a percentage from the full cost, the percentage reduction should apply evenly to all types of developments.

The third principle of impact fees is that impact fees should not charge new development for a higher level of service than is provided to existing development. While the impact fees could be based on a higher level of service than the one existing at the time of the adoption of the fees, two things are required if this is done. First, another source of funding other than impact fees must be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development.

Finally, under the fourth principle, new development should not have to pay twice for the same level of service. As noted above, if impact fees are based on a higher-than-existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when the existing level of service has not been fully paid for. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development. To avoid requiring new development to pay more than its proportional share, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities.

In general, offsets against impact fees are not required for other types of funding that have historically been used for, or that are committed to be used for growth-related, capacity-expanding improvements. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. To insist that historical capacity funding patterns must be continued after the adoption of impact fees, and that new development is entitled to a credit for its contribution to those funding sources, would be to argue that local governments cannot require "growth to pay for growth" unless they have always done so. As long as the fees are based on new development paying to maintain existing levels of service that have been paid for in full by existing development, and additional funding can reasonably be used to raise the level of service for existing and new development alike, no additional revenue credits are warranted.

City Ordinance

The City charges impact fees for the following facilities: major streets and bridges, parks and trails, open space, equipment repair, fire, libraries, police, solid waste, stormwater drainage, wastewater and water. Chapter 29 of the City's Code of Ordinances contains the standards and procedures relating to the development impact fee program. Key provisions of the ordinance include the circumstances under which impact fees will be imposed; specific infrastructure financing plans; administration of development impact fees; method for computation of fees; and rules for the issuance of development credits and development agreements.

The impact fees do not apply city-wide, but are assessed only on new development located within growth areas. Impact fees are calculated for two general geographic areas, the Northern Growth Area and Southern Growth Area; the growth areas are divided further into additional service areas for certain facility types. The fees are charged at building permit and are based on the land use and impact fee service area in which the development is located. These practices conform to standard impact fee principles and the State Act.

The City currently uses the "Specific Area Plan" authority as the regulatory authority for its impact fee system. Specific plans are a statutory mechanism to make land-use plans specific to a limited geographic area, and any change to a specific plan requires planning commission and council approval. Originally the specific plan authority was used as legal rationale to justify charging impact fees in only certain areas of the city. At that time, there was no State enabling act. The current development impact fee act requires that fees be applied in a non-discriminatory manner. The act's language arguably does not prohibit the imposition of development impact fees in only part of a municipality's jurisdiction. Indeed, several Phoenix-area cities, including Gilbert and Chandler, have development impact fees that do not apply throughout the jurisdiction and have not used the specific plan authority. The specific plan provisions of the City's ordinance impose somewhat onerous provisions, including posting of signs throughout the affected area. To avoid these burdensome requirements and to be consistent with the practice of the other local governments in the state, we recommend that the City base its fees on the authority of the impact fee enabling act and cease operating under the specific plan authority.

The development impact fee ordinance specifies that the impact fee program is to be administered by the Planning Department and Development Services Department. The Planning Department's primary responsibilities include preparing the infrastructure financing plans and alternative revenue offset reports, updating the ordinance, providing coordination and assistance to operating departments and overall representation of the program. The Development Services Department is responsible for collecting the impact fees and providing impact fee credits. The City's line departments, such as Street Transportation, Parks and Recreation and Water Services, are responsible for budgeting and expending individual impact fee funds in their areas and assisting in updating the calculations of the impact fees.

In order to assess fees, development of different types must be converted into a common demand equivalent, known as a service unit. The service unit used for all of the City's impact fees is the Equivalent Dwelling Unit, or EDU. An EDU represents the demand for service represented by a typical single-family detached dwelling unit. The EDU factors are listed in the City's impact fee ordinance.

The actual impact fee schedules are not contained in the ordinance. In fact, they are not even adopted by the City Council. Instead, the City Council adopts the *Infrastructure Financing Plan*, which calculates the cost per EDU for each facility type and service area. The cost that is attributable to a development is the product of the EDUs represented by the development and the cost per EDU to provide the facilities. However, the actual impact fee charged is the cost attributable to a development, less applicable "offsets." Offsets represent the present value of current and future payments of other taxes and fees that are used to provide the same types of facilities as the impact fees. The impact fee ordinance notes that the impact fee charged is less offsets for "alternative revenue," but is silent on how the offsets are to be calculated. The offsets are calculated in the *Offsets Report*, which is prepared by City staff and is not adopted by the City Council.

One of the major recommendations of this memorandum is that the EDU factors and offsets should be included in the *Infrastructure Financing Plan*, which should calculate maximum fee schedules. The City Council can then adopt fee schedules at up to 100 percent of the maximum fees calculated, and the adopted fee schedules should be included in the impact fee ordinance.

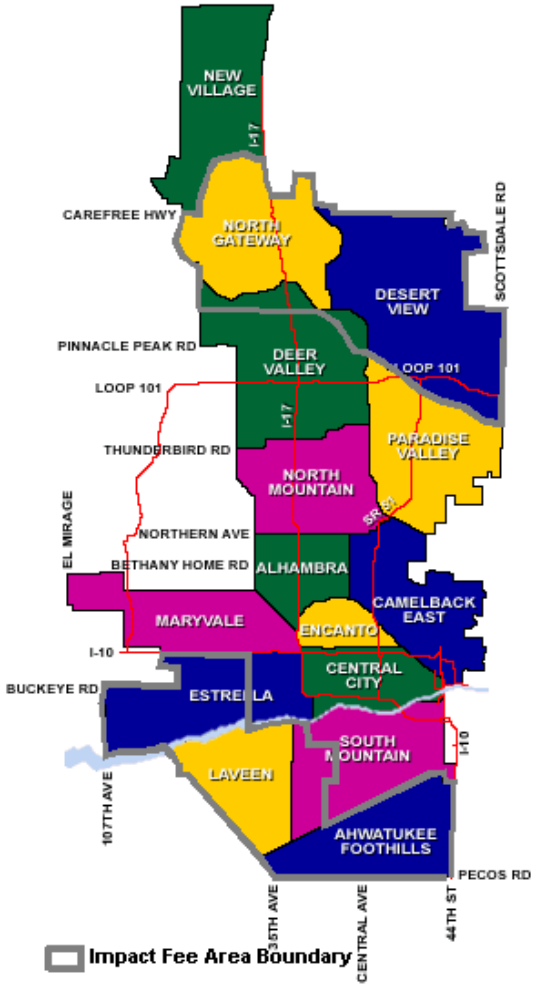
SERVICE AREAS

In an impact fee system, it is important to clearly define the geographic areas within which impact fees will be collected and within which the fees collected will be spent. There are really two types of geographic areas that serve different functions in an impact fee system: service areas and benefit districts. A service area, which may also be called an assessment district, defines the area within which a set of common capital facilities provides service, and for which a fee schedule based on average costs within that district is calculated. Benefit districts, on the other hand, represent an area within which the fees collected must be spent. The benefit districts ensure that improvements funded with impact fees are constructed in reasonable proximity of the fee-paying developments, which in turn helps to ensure that development benefits from the improvements. The City's existing impact fee service areas each serve both of these functions.

City Growth Patterns

As illustrated in Figure 3, the City is divided into fifteen "village" planning areas. The City's impact fees are currently charged in all of the North Gateway and Desert View planning areas and parts of Deer Valley in the northern part of the city. In the southern part of the city, the impact fees are charged in Laveen, Ahwatukee Foothills, the western two-thirds of Estrella and a portion of the South Mountain planning area.

Figure 3. City of Phoenix Planning Areas



The City of Phoenix has expanded through annexations of unincorporated areas of Maricopa County. The annexations generally involve undeveloped land at the periphery of the City. New development typically follows areas of annexation, with most of the City's residential growth occurring in Ahwatukee, Estrella and Laveen in the southern and southwestern areas of Phoenix and Deer Valley, Desert View and North Gateway in the northern area of the city. In general, most of the area included in the City's development impact fee zones was annexed over the past 20 years and represent large areas of undeveloped land that will require extensive infrastructure over the next few decades.

As shown in Table 10, the City added more than 13,000 new single-family and multi-family housing units in 2006. The impact fee growth areas now account for 65 percent of all new dwelling unit constructed in Phoenix. This represents a

significant shift from 1990, when only 36 percent of new units were built in the growth areas. Outside of the growth areas, residential development is relatively scattered, with only the non-impact fee portion of Deer Valley experiencing significant construction activity.

Table 10. New Dwelling Units, 1990, 1995, 2000 and 2006

Village Area	1990	1995	2000	2006
North Gateway	0	0	0	1,234
Desert View	107	949	778	698
Deer Valley I - IV	0	1	24	586
Estrella (part)	1	13	505	2,392
Laveen (incl. part of S Mountain)	1	7	119	3,684
Ahwatukee	1,109	2,650	407	165
Subtotal, Growth Areas	1,218	3,620	1,833	8,759
Percent of New Units	36%	38%	22%	65%
Alhambra	19	53	433	81
Camelback East	398	522	298	574
Central City	10	11	476	311
Deer Valley (remainder)	293	1,710	1,321	1,335
Encanto	0	173	644	179
Estrella (remainder)	0	3	7	37
Maryvale	168	717	993	736
New Village	0	0	0	467
North Mountain	105	511	418	94
Paradise Valley	1,125	1,884	948	373
South Mountain (remainder)	49	354	902	463
Subtotal, Rest of City	2,167	5,938	6,440	4,650
Percent of New Units	64%	62%	78%	35%
Total New Units	3,385	9,558	8,273	13,409

Source: City of Phoenix Planning Department, October 25, 2007.

Existing Service Areas

As mentioned above, the City of Phoenix charges impact fees for new development that occurs in one of two general geographic areas, which are referred to as the Northern Growth Area and Southern Growth Area. These two areas serve both as the primary geographic service areas and benefit districts for the City's impact fee program. For certain facilities, the growth areas are further divided into additional service areas. The service areas are shown in greater detail in Figure 4 and Figure 5. As shown in Table 11, the Northern and Southern Growth Areas are divided up into smaller service areas for most of the impact fee facilities, with the wastewater impact fee subdivided into the largest number of service areas.

Table 11. City of Phoenix Impact Fee Service Areas

Facility Type	Northern Growth Area	Southern Growth Area
Equipment Repair	Northern Growth Area	Southern Growth Area
Fire Protection	Northern Growth Area	Estrella/Laveen Ahwatukee
Libraries	North Gateway/Deer Valley 1-4 Desert View/Deer Valley 5	Estrella/Laveen Ahwatukee
Open Space	Northern Growth Area	NA
Parks and Trails	North Gateway/Deer Valley 1-4 Desert View/Deer Valley 5	Estrella/Laveen Ahwatukee
Police	Northern Growth Area	Estrella/Laveen Ahwatukee
Solid Waste	Northern Growth Area	Southern Growth Area
Storm Drainage	NA	Estrella* Laveen*
Streets	North Gateway West/Deer Valley 1-3 NBCC/Deer Valley 4 Desert View/Deer Valley 5	Estrella North Estrella South Laveen Ahwatukee West**
Wastewater	North Gateway Desert View Deer Valley 1 Deer Valley 2 Deer Valley 3 Deer Valley 4 Deer Valley 5	Estrella North Estrella South Laveen West Laveen East Ahwatukee
Water	Northern Growth Area	Southern Growth Area

* No storm drainage fee in Ahwatukee
** No street fee in Ahwatukee East

The City charges the major streets and bridges impact fee in all of the service areas except Ahwatukee East, which has reached about 78 percent of build-out (see Table 15). The Northern growth area is subdivided into three major streets and bridges service areas, and there are four service areas in the Southern Growth Area. Each of the service areas has a separate impact fee schedule and separate funds in which the fee revenue is allocated for improvements in those areas.

The parks and trails impact fee is charged in all parts of the Northern and Southern Growth Areas, which are each divided into two parks and trails service areas. As with the street fee, the City currently has a separate fee schedule for each service area.

The open space impact fee currently applies in all of the Northern Growth Area, but it is not charged in the southern areas. The entire Northern Growth Area comprises a single open space service area.

Figure 4. Northern Phoenix Growth Area Map

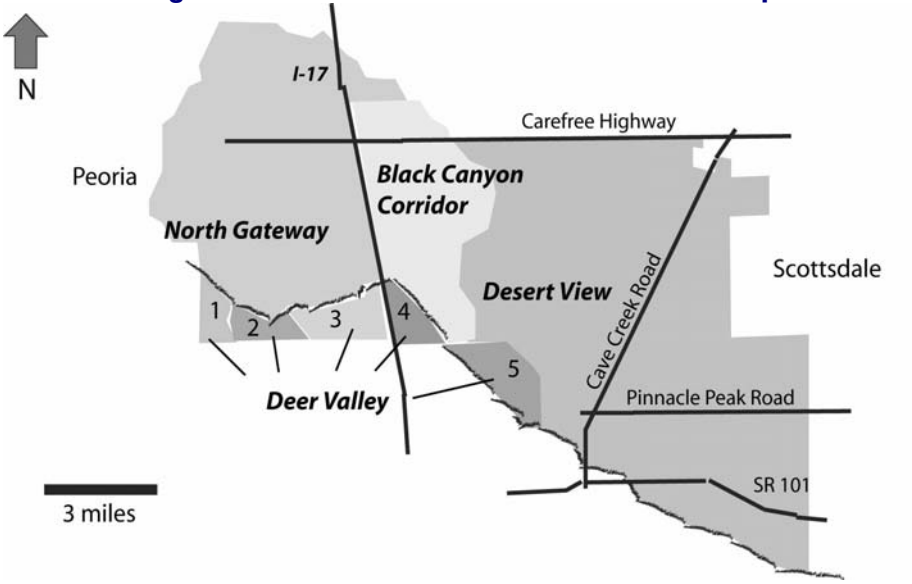
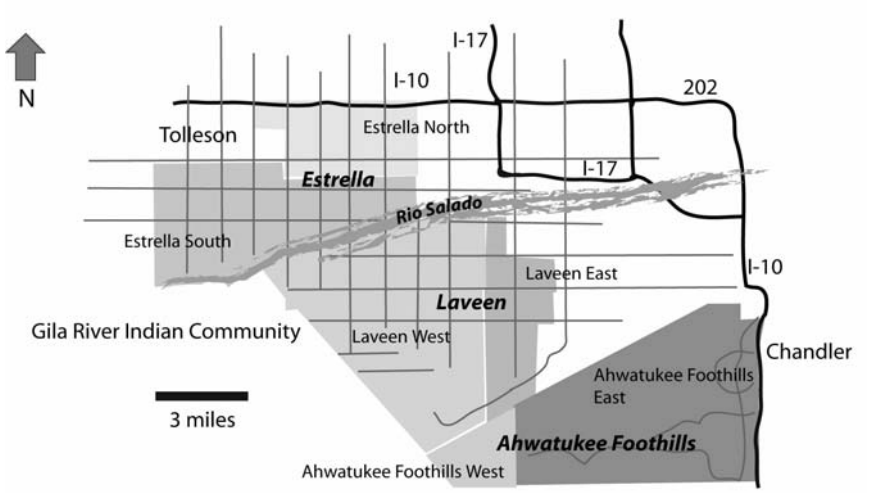


Figure 5. Southern Phoenix Growth Area Map



Service Area Analysis

The upcoming update of the *Infrastructure Financing Plan* provides an opportunity to examine the existing service area boundaries. This section examines current and future city-wide growth compared to growth within the existing impact fee service areas, provides general service area recommendations for all fees and specific recommendations for major streets and bridges, parks and trails and open space.

Service Area Recommendations

- Combine the three northern growth area impact fee service areas into one unified service area.
- Combine the four southern growth areas in which the streets and bridges impact fee is charged into one unified service area.

Current Growth

As discussed in the prior section, the four village areas of the city with the largest increase in residential units in 2006 were Laveen, Estrella, Deer Valley and North Gateway. Each of the high-growth areas is included in the City's impact fee service area, although a rapidly-growing portion of Deer Valley is excluded. Based on the village area residential growth shown earlier, the only other areas with more than 500 units annually that are not included in the impact fee service area are Camelback East and Maryvale.

As shown in Table 12, the impact fee area currently accounts for approximately two-thirds of the city-wide residential growth. The share of residential development occurring in the impact fee areas has increased significantly over this decade as the older areas of the city are getting built-out; rising from approximately one-third of total growth in the 1990s and accounting for more than half of the new residential growth since 2003. Only the Ahwatukee East service area has experienced an overall reduction in the amount of new construction since the 1990s, while other areas, most notably Estrella South and Laveen West, have experienced rapid growth in the number of new units added over the same time period.

Table 12. Service Area Residential Unit Growth, 1990-2006

	1990	1995	2000	2001	2002	2003	2004	2005	2006
Ahwatukee West	0	0	0	2	70	107	142	109	96
Ahwatukee East	1,109	2,650	407	397	144	56	118	129	69
Estrella North	1	13	23	84	176	53	233	89	90
Estrella South	0	0	482	988	1,422	1,334	1,247	2,104	2,302
Laveen East	0	4	88	137	530	863	914	700	246
Laveen West	1	3	31	141	500	838	1,521	3,306	3,438
Southern Subtotal	1,111	2,670	1,031	1,749	2,842	3,251	4,175	6,437	6,241
Deer Valley I	0	0	0	24	136	187	227	202	88
Deer Valley II	0	0	0	2	129	78	15	0	85
Deer Valley III	0	1	24	244	354	144	2	4	8
Deer Valley IV	0	0	0	0	269	170	94	267	405
Deer Valley V	0	0	0	0	0	0	0	0	0
Desert View	107	949	778	625	372	223	428	477	698
North Gateway	0	0	0	0	0	0	0	0	0
Black Canyon Corridor	0	0	0	12	214	515	1,007	1,583	1,234
Northern Subtotal	107	950	802	907	1,474	1,317	1,773	2,533	2,518
Total Growth Areas	1,218	3,620	1,833	2,656	4,316	4,568	5,948	8,970	8,759
Citywide	3,385	9,558	8,273	7,362	9,505	8,567	9,667	14,029	13,409
Share of City	36%	38%	22%	36%	45%	53%	62%	64%	65%

Source: City of Phoenix Planning Department, Village New DUs.xls, October 25, 2007.

Build-Out Analysis

A build-out analysis provides a sense for how fully-developed the impact fee areas are compared to the entire city and how much of the future growth will be captured within the current impact fee area boundaries. As shown in Table 13 and Table 14, the City of Phoenix is approximately half built-out based on the ultimate residential development, and about 38 percent build-out based on nonresidential development. The impact fee areas are one-third built-out residentially, and about 14 percent non-residentially. Only Ahwatukee East is approaching full build-out with 95 percent of the residential units and 64 percent of the nonresidential square footage already developed. Deer Valley #1 and #3 and Laveen East are the only other impact fee areas that are currently more than half built-out residentially.

Table 13. Existing and Future Residential Development

Service Area	Existing Units	Build-out Units	Percent Built-out	Future Units
Ahwatukee East	31,343	33,100	95%	1,757
Ahwatukee West	557	1,300	43%	743
Deer Valley 1	869	1,300	67%	431
Deer Valley 2	374	1,700	22%	1,326
Deer Valley 3	853	1,600	53%	747
Deer Valley 4	1,321	3,000	44%	1,679
Deer Valley 5	116	500	23%	384
Desert View	13,711	87,000	16%	73,289
Estrella North	3,324	8,100	41%	4,776
Estrella South	11,189	29,900	37%	18,711
Laveen East	4,922	9,100	54%	4,178
Laveen West	13,837	42,700	32%	28,863
North Gateway West	431	32,700	1%	32,269
North Gateway NBCC	4,864	15,000	32%	10,136
Service Area Total	87,711	267,000	33%	179,289
Outside Fee Areas	506,034	925,700	55%	419,666
City-wide Total	593,745	1,192,700	50%	598,955

Source: Existing units compiled by City of Phoenix Planning Department, November 14, 2007; build-out data from Maricopa Association of Governments based on 2007 socio-economic projections, provided November 7, 2007.

Table 14. Existing and Future Nonresidential Development

Service Area	Existing Sq. Feet (1,000s)	Build-out Sq. Feet (1,000s)	Percent Built-out	Future Sq. Feet (1,000s)
Ahwatukee East	15,717	24,500	64%	8,783
Ahwatukee West	0	900	0%	900
Deer Valley 1	0	500	0%	500
Deer Valley 2	63	200	32%	137
Deer Valley 3	0	0	0%	0
Deer Valley 4	9	700	1%	691
Deer Valley 5	24	10,800	0%	10,776
Desert View	4,956	80,800	6%	75,844
Estrella North	29,772	64,800	46%	35,028
Estrella South	3,185	54,000	6%	50,815
Laveen East	1,451	2,800	52%	1,349
Laveen West	2,372	22,100	11%	19,728
North Gateway West	1,039	145,000	1%	143,961
North Gateway NBCC	1	6,700	0%	6,699
Service Area Total	58,589	413,800	14%	355,211
Outside Fee Areas	590,970	1,316,600	45%	725,630
City-wide Total	649,559	1,730,400	38%	1,080,841

Source: Existing units compiled by City of Phoenix Planning Department, November 26, 2007; build-out data from Maricopa Association of Governments based on 2007 socio-economic projections, provided November 7, 2007.

The build-out analysis indicates that the Ahwatukee East service area is approaching residential build-out. This area is already excluded from the major streets and bridges impact fees, presumably because the infrastructure that would be funded with this fee is already in place. This area is not a separate service area for any of the other facilities. It is grouped in the larger Ahwatukee service area for wastewater, fire protection, police, libraries, and parks and trails, and it is grouped in the larger Southern Growth Area for water, equipment repair and solid waste fees.

As areas like Ahwatukee East approach build-out, the City could consider removing them from the impact fee program. However, as long as there are improvements to be funded, there will be a strong argument against letting the latecomers completely off the hook for paying their share of the costs of their infrastructure.

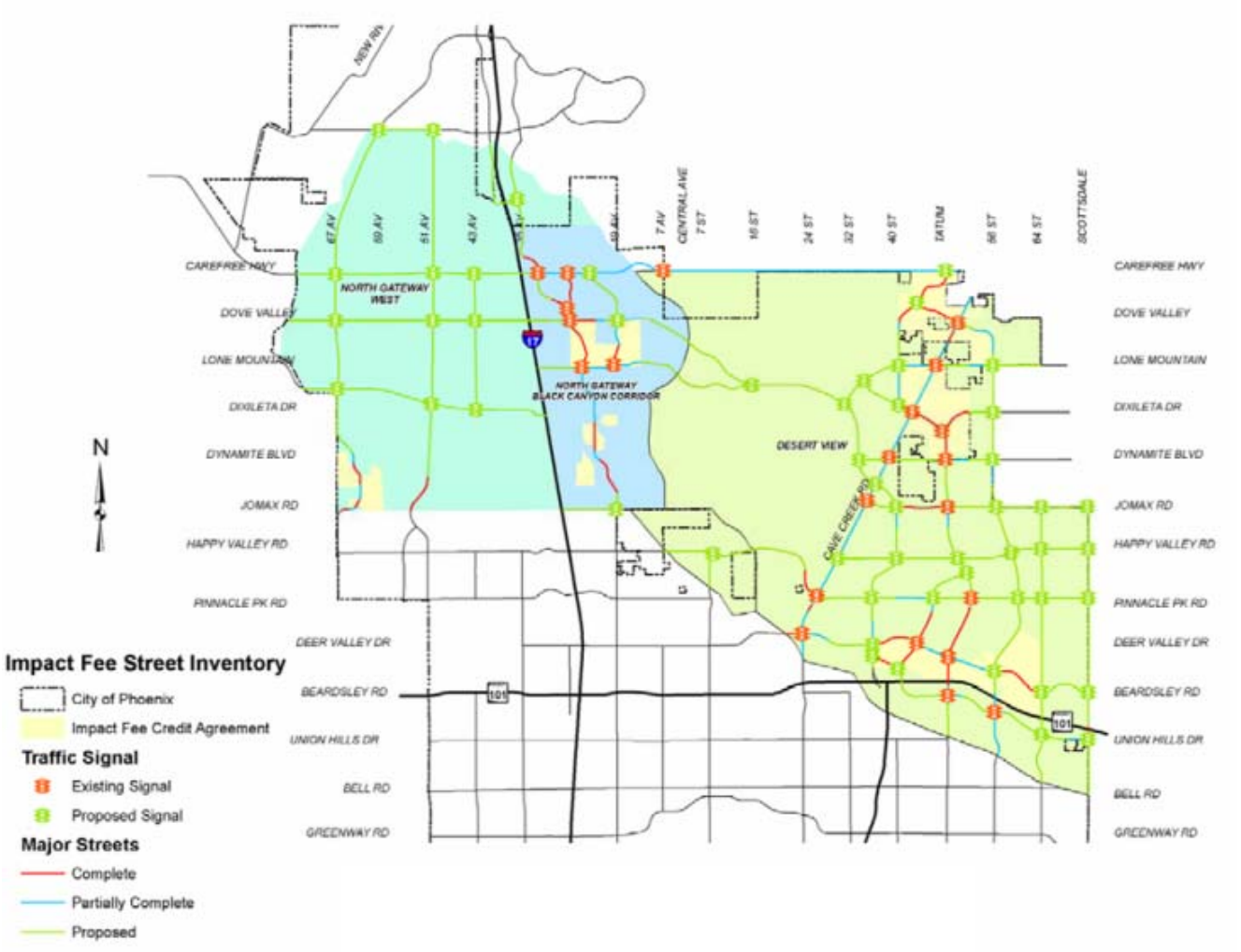
The current share of build-out for the areas of the city outside of the impact fee service areas suggest that certain areas of the City have the potential for significant growth. About 70 percent of future city-wide residential growth is projected to occur outside of the impact fee service areas. Based on future growth projection data, future growth outside of the impact fee areas is likely to occur in the far northern part of the City's planning area that is currently outside of the municipal boundary and through infill and redevelopment growth in the central city area. Specific areas with significant growth potential could be identified in order to develop infrastructure finance plans to accommodate future growth and include them in future impact fee updates.

Major Streets and Bridges Service Areas

As previously discussed, the City currently has seven separate major streets and bridges service areas. The service areas and the planned and existing arterial road networks are illustrated in Figure 6 and Figure 7. Where appropriate, service areas should be combined in order to simplify the existing streets and bridges impact fee schedule. It is recommended in this section that the City should consider combining all three service areas in the Northern Growth Area into one unified northern service area and combine Estrella North, Estrella South, Laveen and Ahwatukee West into one unified southern service area.

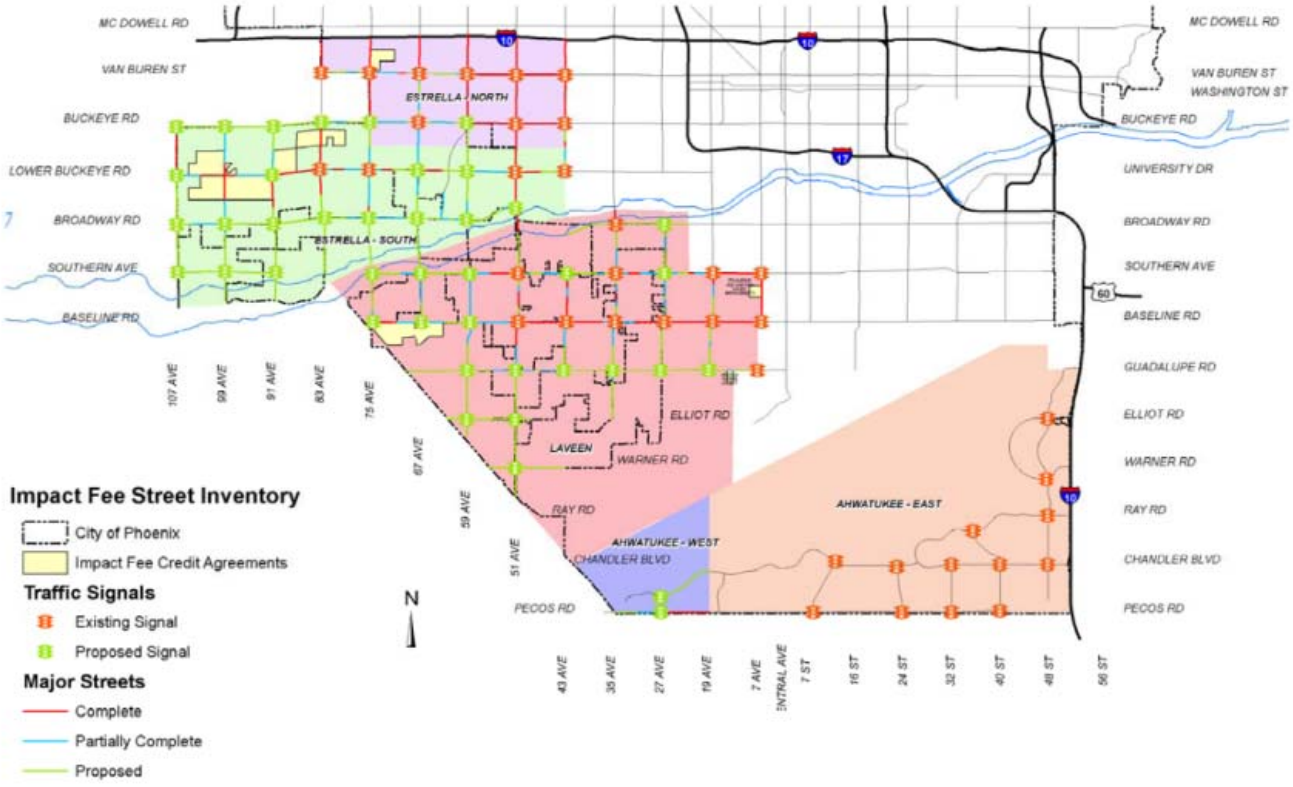
As shown in Figure 6, most of the arterial street network in the Northern Growth Area has not been completed. The arterial network in North Gateway and most of Desert View is largely incomplete, which reflects the current level of build-out and the future development potential in these areas. The Black Canyon Corridor area is less than half built-out and all of the major east-west arterials still need to be completed. The major east-west arterials will connect all three service areas in the Northern Growth Area.

Figure 6. Northern Growth Area, Streets and Bridges Service Areas



Most of the planned arterial road network in the Southern Growth Area is also still incomplete, as illustrated in Figure 7. The exception to this is Ahwatukee East, which is excluded from the major streets and bridges impact fee. Due to the absence of freeways in this area, the arterial street network in the Southern Growth Area will carry most of the future traffic in these areas and represents an integrated transportation system.

Figure 7. Southern Growth Area, Streets and Bridges Service Areas



In order to evaluate existing and future development in each of the service areas, dwelling units and nonresidential square footage estimates have been converted into estimates of major streets and bridges EDUs in Table 15. The Southern Growth Area is more developed than the Northern Growth Area, although none of the service areas are over 50 percent developed (Ahwatukee East is 78 percent developed, but street impact fees are not charged there).

Table 15. Percent Build-Out, Street Service Areas

Service Area	Existing Street EDUs	Build-out Street EDUs	Percent Built-out	Future Street EDUs
Northern Growth Area:				
North Gateway/Deer Valley 1-3	3,751	245,212	2%	241,461
North Black Canyon/Deer Valley 4	5,241	26,064	20%	20,823
Desert View/Deer Valley 5	18,988	208,285	9%	189,297
Subtotal, Northern Growth Area	27,980	479,561	6%	451,581
Southern Growth Area:				
Estrella North	46,474	101,885	46%	55,411
Estrella South	14,126	104,466	14%	90,340
Laveen	21,459	80,291	27%	58,832
Ahwatukee West	471	2,419	19%	1,948
Subtotal, Southern Growth Area	82,530	289,061	29%	206,531
Total, Impact Fee Areas	110,510	768,622	14%	658,112
Ahwatukee East (no street fee)	49,536	63,903	78%	14,367

Source: EDUs estimated based on housing units and nonresidential square footage (existing compiled by City of Phoenix Planning Department, November 14 and 27, 2007; build-out from Maricopa Association of Governments based on MAG 2007 socio-economic projections provided on Nov. 7, 2007) and average of 0.85 EDUs per housing unit and 1.47 EDUs per 1,000 square feet (residential is average of 1.00 typical single-family and 0.69 multi-family, nonresidential is average of 2.00 retail, 1.58 office and 0.82 retail).

Generally, arterial street impact fees tend to have a single service area and a uniform fee schedule. That is because the arterial 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.

As in Phoenix, an alternative to a city-wide street impact fee is one that is assessed only in a defined "growth area." A variant of the City's current approach is to calculate what is essentially a city-wide fee, but to exclude the "developed area" where existing infrastructure is adequate to support infill and redevelopment from the service area.

However, the City's current approach recognizes the physical differences between the northern and southern service areas that require different levels of infrastructure investment. For example, the southern area has a greater need for bridges and drainage facilities, which increase the overall infrastructure costs in those areas. Our recommendation is to simplify the current fee schedule and recognize the integrated nature of the planned arterial street system by combining the three northern service areas into one unified service area in the Northern Growth Area, and combining Estrella North, Estrella South, Laveen and Ahwatukee West into one unified service area in the Southern Growth Area. This approach recognizes the physical separation of the two major growth areas and the unique infrastructure needs associated with each area.

Parks and Trails Service Areas

The City of Phoenix charges impact fees for new development that occurs in one of two general geographic areas, which are referred to as the Northern Growth Area and Southern Growth Area. These two areas serve both as the primary geographic service areas and benefit districts for the City's impact fee program. The park and trails components are charged in all areas of the Northern and Southern Growth Areas with each of these service areas currently divided into two service areas for the parks and trails impact fee. The City's four parks and trails service areas roughly divide each of the northern and southern areas in half.

The City's four parks and trails service areas roughly divide each of the northern and southern areas in half. Given that the City's park fee includes neighborhood and community parks, the smaller service area and corresponding benefit districts assure that impact fee funds are spent in reasonable proximity to the development that pays the fees.

In addition, the differences in the land costs between each of the service areas in the northern and southern growth areas support maintaining separate impact fee service areas for parks. Since additional park land will be purchased in each of the existing service areas, it is the difference in land costs between such areas that is most relevant. As part of this update, the City retained a land appraiser to determine acquisition costs per acre for the three categories of park land and trails. As shown in Table 16, the park land cost estimates for the northern growth area differ by approximately 15 percent while the southern service area land costs differ by approximately 45 percent. The differences in the land costs, particularly between the two southern service areas, do not support combining service areas. Consequently, the City should retain the existing parks and trails service areas.

Table 16. Park Land Costs

Park Type	N. Gateway/ Deer Valley 1-4	Desert View/ Deer Valley 5	% Difference	Estrella/ Laveen	Ahwatukee	% Difference
Neighborhood Park	$169,001	$143,863	15%	$102,685	$149,529	46%
Community Park	$169,001	$143,863	15%	$102,685	$149,529	46%
District Park	$103,429	$88,044	15%	$62,843	$91,512	46%
Trails	$114,921	$97,827	15%	$69,826	$101,680	46%

Source: Brekan – Nava Group, *Land Cost Analysis for the Northern Development Impact Area* and *Land Cost Analysis for the Southern Development Impact Area,* December 1, 2007.

Open Space Service Areas

The City currently charges a uniform open space impact fee in the Northern Growth Area only. The open space impact fee is used to purchase land and develop trails and access to the planned Sonoran Preserve. The Sonoran Preserve plan was based on the city-wide level of service for open space and developed to preserve sensitive desert environment and maintain the amount of open space that is provided to existing residents as the City grows. The Sonoran Preserve is modeled after the successful South Mountain Park in the southern area of Phoenix, which contains more than 16,300 acres of desert open space and attracts more than 1.5 million visitors annually. Aside from South Mountain Park, the City of Phoenix currently operates and maintains an additional 11,000 acres of mountain preserves and desert parks throughout the city.

While the open space acquired for the preserve is intended for use by all City residents, similar to the South Mountain Park in the southern part of the city, development in the Northern Growth Area will benefit from its proximity to the Sonoran Preserve. It is not necessarily problematic that new development in the Northern Growth Area is not the exclusive or even primary beneficiary of the open space to be acquired with the open space impact fees. The City policy that is implemented by the impact fee system is that new development in the growth areas should pay its way in terms of the capital facilities needed to support it. The fact that some of these growth-related capital improvements are not exclusively serving the growth areas is not problematic as long as growth is not paying for a higher level service for open space than is provided to existing city-wide development as well as existing development in the growth areas. As discussed in more detail in the discussion of the proposed open space methodology section of this report, the updated *Infrastructure Financing Plan* will include a level-of-service analysis in order to ensure that new development does not pay for a higher level of service than existing development.

SERVICE UNITS

In impact fee analysis, disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for facilities. This unit of measurement is called a "service unit." The service unit factors are used both in calculating the impact fees and assessing impact fees for a particular development. The service unit factors for generalized land use categories used by the City in estimating total existing and projected service units for each service area are provided in the City's Ordinance (Ch. 29, Sec. 29-5 E). The assessment of impact fees for a particular development is based on a schedule of service unit factors that are also listed in the City's Ordinance (Sec. 29-8 D and E) for each land use and capital facility category, with the exception of certain land uses that require an independent impact fee analysis.

The City of Phoenix utilizes the Equivalent Dwelling Unit, or EDU, to standardize the demand generated by each land use type for the calculation and assessment of the impact fee. The number of EDUs associated with individual land uses represent the demand that it generates for each capital facility category compared to the demand created by a single-family housing unit. Thus, an EDU factor is a ratio determined by dividing an indicator of the demand by an indicator of the single-family dwelling unit demand.

This section analyzes the City's service units that are used both in calculating and assessing the major streets and bridges, parks and trails and open space impact fees for new development. The analysis includes recommended changes to the service unit factors.

Major Streets and Bridges Service Units

The City's EDUs for the major streets and bridges impact fee are specified in the City's impact fee ordinance and are based on the average weekday vehicle trips adjusted by primary trip rate and trip length associated with each land use. The denominator used in calculating the EDU factors is the daily travel generated by the standard density single-family housing unit. While plan-based road development fees can use only vehicle trips as the basis of the service unit, EDU factors that take into account trip length and new trips are generally preferred, since this approach takes into consideration that land uses that generate more trips also generally generate shorter trips and attract more pass-by trips. The overall approach to calculating the EDU factors is sound; however, elements of the EDU calculation should be updated to reflect the most current and applicable data available.

Major Streets and Bridges Service Unit Recommendations

- Update the EDU calculation to reflect most current ITE trip generation rate data.
- Review primary trip factor assumptions.
- Eliminate multiple size categories for retail and office land use EDU factors.
- Eliminate duplicative EDU factors.
- Establish consistent EDU characteristics based on 1,000s of square feet for non-residential land uses.
- Maintain original estimate of total EDUs within a development used to calculate the credit per EDU.

Travel Demand

Trip generation rates represent trip ends, or driveway crossings at the site of a land use. The trip generation data used in the calculation for major land use EDU factors are based on the average weekday trip rate from the Institute of Transportation Engineers (ITE), *Trip Generation, 6th Edition*, which was published in 1997, or the San Diego Association of Governments (SANDAG), *Traffic Generators*, which was published in 1990.[8] The City's EDU factors should be updated to reflect the most recent average daily trip rates from ITE's *Trip Generation, 7th Edition,* which was published 2003. While for most land uses the updated ITE rates were similar to the old rates, there were several notable exceptions: trip rates increased more than ten percent for mobile homes, fast-food restaurants with drive-through windows and elementary schools, and trip rates decreased for general retail and car sales.

Adjustments to the trip rate are made to reflect the proportion of trips that are primary trips, and to exclude pass-by and diverted-link trips. This adjustment is intended to reduce the possibility of over-counting additional travel induced by a new development. Pass-by trips are those trips that are already on a particular route for a different purpose and simply stop at a 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 City's current primary trip factors were drawn from SANDAG's *Traffic Generators,* published in 1990.

More recent primary trip factors are available for retail land uses from the ITE *Trip Generation Handbook*, published in 2001. The *Trip Generation Handbook* contains data on primary trip, pass-by trip and diverted-link trip percentages based on national studies for almost twenty different retail categories. For non-retail categories, however, no national data are available.

The major road and bridge impact fee EDU update will review the assumptions used by SANDAG in determining the primary trip factor and update factors based on the most recently available data and professional judgment. While most of the SANDAG factors for non-retail categories appear quite reasonable, the residential land use primary trip factor of only 86 percent is much lower than those used in other impact fee studies. Residential units do not typically experience pass-by trips or diverted-link trips.

Finally, the City's transportation demand factor is adjusted to reflect the average length of a trip for each land use, which was derived from local household travel surveys conducted almost 20 years ago.[9] More current national data are available from the U.S. Department of Transportation, *National Household Travel Survey,* published in 2001. If more current local trip length data are available for specific land uses, they will be used in the EDU update. If more current local data are not available, the choice will need to be made between using the 18-year old local data or more recent national data.

[8] San Diego Association of Governments, *Traffic Generators*, January 1990, cited in City of Phoenix Planning Department, *Derivation of Equivalent Dwelling Unit Factors for Development Impact Fees*, February 27, 2002..
[9] Maricopa Association of Governments Transportation Planning Office, *1988/1989 Household Travel Survey*, 1989.

EDU Schedule Simplification

The City's current EDU schedule includes numerous nonresidential categories, including more than 14 retail center size categories and 17 general office building size categories. Among retail categories, the EDU factors vary from 1.60 to 2.83 per 1,000 square feet, with higher EDU factors associated with retail centers smaller than 42,500 square feet and larger than 700,000 square feet. The general office rates vary from 0.89 to 2.70 EDUs per 1,000 square feet, with the lowest factors associated with larger office buildings. The City's EDU schedule could be simplified if the numerous general retail and general office categories were collapsed into one general retail category and one general office category as is the practice in most Phoenix-area communities. As currently provided in the City's Ordinance, developers who feel their development will generate less traffic have the option of conducting an independent impact analysis.

The land use categories should also be based on uniform characteristics across all fees in order to make a more unified EDU table and develop a fee schedule. The major streets and bridges impact fee EDU schedule currently includes several land use characteristics that are unique to major streets and bridges. These include vehicle fueling stations for service station, acres for garden nursery, rooms for hotels and beds for nursing homes. If possible, these EDU factors should be based on building square feet to be consistent with other types of fees.

Finally, some of the land use categories used in the current EDU schedule could be merged with similar land uses under more generalized land use headings. For example, the City's EDU schedule includes duplicative categories for convenience markets with gasoline pumps and service stations with a convenience market; these categories could be combined. The low-density single-family detached (0-2 dwelling units per acre) category is also unique to streets. It may be difficult to update this factor, since ITE and most other available trip demand data sources do not distinguish by density. The low-density single-family category should be combined with standard-density single-family units in the update.

Infrastructure Financing Plan EDU Factors

The EDU factors used in estimating the future service units used in the *Infrastructure Financing Plan* are derived from the EDU factor analysis used in assessing the impact fee. The City utilizes a simplified land-use schedule in preparing the *Infrastructure Financing Plan* since the data used in the forecast are only available for generalized land use categories. For single-family and multi-family units, the City uses a weighted average approach to determine the EDU factor applied to the more generalized land use data used in the service unit projection. The nonresidential EDU factors utilized in estimating total service units are based on generalized major land use categories for which land use data are available; however, the actual impact fee schedule utilizes much more detailed EDU factors that are based on the same methodology. Such an approach is consistent with the recommended simplification of the EDU schedule used in assessing the impact fee.

Ordinance Issues

The City's impact fee ordinance requires that the City spread outstanding credits evenly on a per EDU basis across a development. The recommendations will result in a modified EDU schedule for most major land uses, which could affect the total amount of EDUs associated with approved developments with outstanding credits. In order to allow the City the flexibility to respond to changes in EDU factors within the framework of outstanding credit and developer agreements, it is recommended that the City maintain the original EDU basis used in assigning EDUs to a

development. Under this recommendation, the credit per EDU will not change, even though the EDUs per dwelling unit or per 1,000 square feet could change.

Parks, Trails and Open Space Service Units

As with the other impact fee calculations, the demand for parks, trails and open space is calculated using an EDU factor that relates facility demand for each land use to the demand of a single-family detached residence. The EDU factors for parks and trails are derived from data on park usage, average household size, vacancy rates and employees per 1,000 square feet. The open space EDU calculation does not include adjustments for usage or vacancy rates, and is based solely on average household size. While the City currently only charges residential development the parks and trails and open space impact fees, the City utilized both residential and nonresidential service units in developing the total service units on which the parks and trails fees were derived in the 2006 update.

Parks, Trails and Open Space Service Unit Recommendations

- Update the household size data with 2000 U.S. Census data.
- Eliminate the occupancy factor from the parks and trails EDU calculation.
- Eliminate the usage factor from the parks and trails EDU calculation.
- Maintain practice of assessing the parks and trails and open space impact fees to residential land use.
- Eliminate nonresidential land use from total service units used in the parks and trails impact fee calculation.
- Simplify the EDU schedule to eliminate redundant land uses.

Parks and Trails EDU Factor

As mentioned above, the parks and trails EDU factors are derived from household size, vacancy rate, employment and park use data. The residential EDUs used in the City's current parks and trails impact fee are based on average household size, which is based on 1990 U.S. Census data for occupied units from census tracts in the City of Phoenix that had at least 60 percent of the housing inventory built since 1984. The household size data were then adjusted by long-range vacancy rates and park usage factors for each housing type.

The average household sizes should be updated based on the 2000 U.S. Census. While it is possible that average household sizes vary somewhat between newer and older areas of the city, it is unlikely that the *relative* average household sizes for various housing types vary significantly between areas of the city. Consequently, the use of city-wide average household size data would be reasonable

Vacancy rates tend to vary significantly over time, and not in predictable directions. Determining long-term vacancy rates may be difficult, and long-term rates are not likely to differ significantly by housing type. Since it is the *relative* number of occupants between various housing types that determines differences in residential EDUs by housing type, vacancy rates are not a critical factor, and should be removed from the EDU calculation for parks and trails.

Finally, the City's parks and trails EDU factors consider park usage rates that were developed by an outside consultant based on user surveys designed to estimate the relative per-capita likelihood of park use for each land use.[10] This study was undertaken primarily to support the assessment of parks and trails and library impact fees on nonresidential land uses. As of the 2006 update, however,

[10] Hausrath Economics Group, *Phoenix Park and Library EDU Factors*, September 1998.

the City no longer assesses parks and trails fees on nonresidential land uses. Unless the City decides to charge nonresidential land uses for the park fees, it is difficult to justify the time and expense that would be required to update the nine-year-old study of park usage. Consequently, it is recommended that the usage factor be eliminated and that the EDU factors be based strictly on population, as is standard in impact fee practice, both in the Phoenix area and nationally.

Park impact fees are usually assessed only on residential uses, because the nexus between park use and land use is generally easier to establish for residential uses than for nonresidential uses. Like Phoenix's past practice, some jurisdictions do assess park fees on nonresidential uses. However, such jurisdictions are generally central cities within major metropolitan areas, since the added influx of daytime commuters places extra demand and strain on park facilities and services. The City of Phoenix's current practice of exempting nonresidential land use from the park impact fee is consistent with standard impact fee practice. As a result, the calculation of future park service units should exclude nonresidential land uses and, instead, be based solely on residential units, since the users of those units most directly benefit from the community's parks and recreational facilities.

Open Space EDU Factors

The EDU factor for open space is based on the household population data from the 1990 U.S. Census, and it is not adjusted for vacancy rates or use factors. In addition, the City does not include the nonresidential uses in the calculation of the total EDUs. As with the parks and trails impact fee, the household size data should be updated with the 2000 U.S. Census data.

EDU Schedule Simplification

The timeshare category is unique to the parks and trails, open space and library categories. Since timeshare is a form of ownership rather than a type of structure, the separate timeshare category should be eliminated from the EDU schedule.

COST PER SERVICE UNIT

This section reviews the methodology used in the *Infrastructure Financing Plan* to calculate the cost per service unit (Equivalent Dwelling Unit or EDU). The other major factor in the fee calculation is offsets, which are reductions of the fee to account for other revenue that will be generated by new development. Offsets are addressed in a subsequent chapter.

Methodology Overview

There are two main alternative methodologies used in impact fee analysis: "plan-based" and "standards-based."

The plan-based methodology, also called an "improvements-based" approach, essentially divides the cost of growth-related improvements required over a fixed planning horizon by the number of new service units projected to be generated by growth over the same planning horizon in order to determine a cost per service unit.

General Methodology Recommendations

- Use build-out as the impact fee planning horizon rather than 2030.
- Divide the cost of remaining improvements needed in each service area by remaining EDUs, rather than total EDUs at the end of the planning period.
- Analyze the existing level of service in order to ensure that the fees cover only those costs that can be attributed to new development.

The City of Phoenix nominally utilizes the plan-based approach in developing the impact fees. The calculation of the cost is based on a list of planned major improvements in each service area. The cost of the improvements is then divided by projected EDUs for each service area.

The City's approach differs from the traditional plan-based approach in that the City utilizes total future service units expected to be in the service area in 2030 as the basis for the impact fee calculation, rather than the expected new growth in service units added through 2030, which is the planning horizon on which the improvements are based. Since the planned improvements are designed to serve new growth rather than existing development, the cost of growth's share of the improvements should be divided by new EDUs over the planning horizon, not existing plus new EDUs as is currently done.

Generally, a plan-based approach must be based on a facility master plan that ensures that the listed improvements are going to be needed over the planning horizon on which the fees are based. However, a time-specific plan is not required if the planning horizon is build-out and the community has determined the ultimate facilities needed to accommodate build-out conditions.

The population and employment projections provided by Maricopa Association of Governments (MAG) serve as the basis for the City's 2030 equivalent dwelling unit (EDU) projections. MAG has also provided build-out estimates for the impact fee service areas.

At least for the major streets and bridges impact fee, where the planned improvements reflect build-out conditions rather than a specific planning horizon, the updated impact fees should be based on

build-out land use projections. For consistency, it is recommended that the other fees be based on build-out as well.

One of the principles of impact fees is that new development should not be charged for a higher level of service than is provided to existing development. The City has not needed to measure the existing level of service in previous updates, since its methodology (dividing cost of improvements needed over a planning period by total EDUs at the end of the planning period) was so conservative. However, if the methodology is revised as recommended, it will be necessary to determine the existing level of service. The recommended methodology raises the possibility that the final increment of development could be required to pay for more than its share of the cost (e.g., the last 10 percent of growth paying for 50 percent of the cost of facilities). To ensure that this does not happen, it will be necessary to perform an existing level of service analysis. If the level of service at build-out is lower than the existing level of service, the cost per service unit will be calculated by dividing remaining project costs by new service units. If the level of service at build-out is higher than the existing level of service, the cost per service unit will be based on the existing level of service (i.e., replacement value of current facilities per existing service unit).

Major Streets and Bridges Methodology

The City of Phoenix utilizes the major streets and bridges impact fee to fund growth-related improvements to the major street system in the growth areas. The impact fee funding is used for construction of arterial streets within the impact fee planning areas. The fee calculation includes bridges, culverts and drainage facilities and regional transportation connections that are part of the arterial street system. Regional transportation facilities include parkways that primarily serve growth areas (these include Avenida Rio Salado and portions of Sonoran Parkway) as well as frontage roads and ramps that connect to regional freeways and expressways.

Major Streets and Bridges Methodology Recommendations

- Use build-out as the impact fee planning horizon rather than 2030.
- Divide the cost of remaining improvements needed in each service area by remaining EDUs, rather than total EDUs at the end of the planning period.
- Analyze the existing arterial road system level of service in each service area in order to ensure that the fees cover only those costs that can be attributed to new development.
- Update cost components based on an analysis of recent bid tabulation data from similar projects.

This section analyzes the City's methodology used to calculate the impact fee, the level of service standard used in developing the fees, and the cost components utilized in developing the impact fee.

Level of Service

One of the principles of impact fees is that new development should not be charged for a higher level of service (LOS) than is provided to existing development. Traditional road impact fees define LOS in terms of operational characteristics of individual roadway segments or intersections; the LOS is measured on a scale of A through F, with LOS A being the best measure of operation and LOS F representing disrupted flow. The City's *Infrastructure Financing Plan* indicates that the Street Transportation Department developed the street classification map, which specifies the major road improvements necessary in the Northern and Southern Growth Areas to maintain LOS D for the evening peak-hour period. The list of improvements in the City's *Infrastructure Financing Plan* for each

growth area is based on the City's approved Street Classification Map that defines the future arterial street network and the street cross-section. The classification map is not based on a fixed planning horizon, and, instead, represents the future arterial network that will be in place at build-out.

One of the fundamental principles of impact fees, central to the "rational nexus" standard enunciated by the courts and echoed in Arizona's "reasonable relationship" language, is that new development cannot be asked to pay for a higher level of service than existing development. The *Infrastructure Financing Plan* does not measure the existing level of service for major roads and bridges in each of the impact fee service areas. Normally, this might make it difficult to determine whether new development in these areas is being charged for a higher level of service than has been provided for existing development. However, under the City's approach the total cost of remaining planned improvements is divided by total service units (including both new and existing development), which ensures that new growth does not pay more than its share of the costs. As a result, a detailed level of service analysis is not necessary under the City's existing approach, since there is no danger that new development will be charged for a higher level of service.

If the fees are calculated as recommended in this report, however, the update will require an analysis of the existing arterial road system LOS in order to ensure that the fees cover only those costs that can be attributed to new development, and specifically exclude costs attributable to remedying existing deficiencies. As discussed in the prior section, the update will divide growth's portion of the planned improvement cost by the net increase in service units associated with new development. To determine if development fees are equitable, it will be necessary to determine what level of service is currently being provided by the City for existing residents and businesses. Rather than examining the LOS of individual arterial street sections, the proposed level of service analysis is based on the system-wide ratio of the road capacity (vehicle-miles of capacity or VMC) at LOS D to EDUs for each major streets and bridges impact fee service area. Vehicle-miles of capacity for existing and planned improvements can be determined by multiplying miles of arterial roadway of each type of cross-section (e.g., 2-lane undivided, 4-lane divided) by the generalized daily capacity at LOS D of the cross-section and summing for the service area.

The ratio of VMC per EDU for existing arterials will be compared to the ratio of planned new VMC per anticipated new EDUs to ensure that new development is not charged for a higher level of service. If it turns out that the planned ratio is higher than the existing ratio, the cost per EDU will be reduced accordingly. For example, suppose that for a given service area, the existing system provides only 10 VMC per EDU, but planned improvements will provide 20 VMC per new EDU. In this case, the cost per EDU based on planned improvements would be reduced by one-half. On the other hand, if the situation was reversed, and the planned improvements provided only one-half the VMC per EDU as existing facilities, there would be no adjustment of the cost per EDU.

Cost Components

The City utilizes the major streets and bridges impact fee to fund arterial street improvements. The arterial street network provides the backbone of the Phoenix street system and is primarily designed to provide long distance travel, with access to abutting land uses a secondary function. The arterial roads are generally four- or six-lane roadways with a median or center turn lane.

In order to develop separate impact fee calculations for each service area, the City allocates the cost of planned improvement projects based on the geographic location of the improvement. The costs

include right-of-way (ROW) acquisition, roadway construction (including pavement, curb and gutter, sidewalks, landscaping, signs, lighting, traffic control and traffic signals) and construction administration. In addition, bridges, culverts and drainage facilities are necessary for the crossing of rivers and washes and regional transportation connections are necessary to connect new arterial streets to the limited access freeway system. However, the limited access highways themselves are excluded from the impact fee, since they are typically funded by Federal and State governments.

The street impact fee cost components were last updated in 2006 as part of the most recent *Infrastructure Financing Plan* and were based on a cost analysis conducted by an engineering firm, but the updated *Infrastructure Financing Plan* for streets was not adopted by City Council. Instead, the City Council retained the impact fee schedule adopted in 2003 that is based on 2003 cost estimates, which do not reflect current costs and do not include most of the planned storm drainage facilities.

Roadway and intersection construction cost estimates in the 2006 update were based on planned facilities and unit cost estimates developed by 3 D/I based on 2003-2005 bid tabs.[11] The culvert and storm drainage costs are based on a detailed analysis of drainage needs and projects that were prepared as part of the 2006 update by JE Fuller Hydrology and Geo-Morphology, Inc. (the 2003 *Infrastructure Financing Plan* calculation did not include a detailed list of necessary drainage improvements). As part of the 2006 update, staff identified facilities that still needed to be constructed and updated the estimated costs to 2007 values based on recent bid tabulations from similar projects and the anticipated inflation rate. The construction costs included in the impact fee also include an adjustment for administrative overhead related to design, engineering and legal costs.

Since the City updated the costs in 2006 as part of the *Infrastructure Financing Plan*, the 2008 update will retain the basis for the cost estimates and update the costs based on an analysis of recent bid tabulation data from similar projects and the anticipated inflation rate based on the change in the *Engineering New Record* (ENR), Building Cost Index (BCI). This approach to updating the component costs is similar to the methodology used by the City to update the bridge and drainage construction costs as part of the 2006 update.

As part of the update, the City will need to identify road segments, bridges and drainage facilities that remain to be constructed. Partially-completed facilities will need to be addressed in both the LOS analysis and the fee calculation. The cost to complete partially-completed projects and projects receiving credits can be included in the impact fee calculation, but the incomplete capacity will need to be excluded from the LOS analysis. The value and available capacity of partially completed projects will be based on the estimate of a facility's percent-to-completion status.

As part of the 2006 *Infrastructure Financing Plan*, the City developed ROW cost estimates based on a blended land value developed from a professional land appraisal study conducted for each impact fee area. The land costs have recently been updated as part of the 2008 impact fee update (See Table 22); the current values will be used in developing the updated *Infrastructure Financing Plan*.

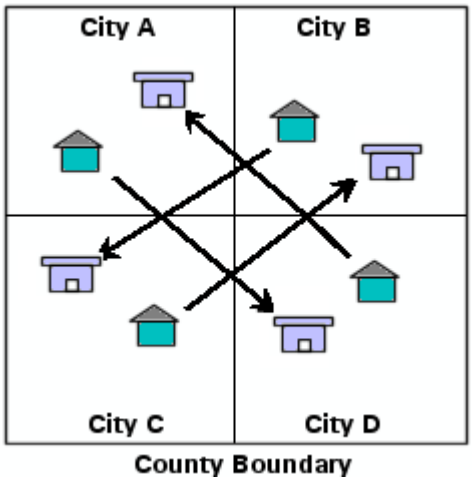
Pass-Through Factor

The City's major streets and bridges impact fee formula includes a reduction for pass-through traffic (22 percent in the northern growth areas and 33 percent in the southern growth areas), which is based on local traffic modeling. The use of transportation modeling analysis, however, should occur

[11] 3 D/I, *Construction Cost Analysis and Recommendations for the City of Phoenix*, 2006.

within a coherent overall analytical perspective. When a road impact fee covers major corridors such as arterials, dividing a jurisdiction into sub-areas for the purposes of fee assessment creates boundary issues, since such facilities tend to serve long-distance travel and to form jurisdiction-wide and even regional systems. While drawing such boundaries is often essential, it is also somewhat artificial, since travel patterns generally do not conform to jurisdictional boundaries. To a lesser extent, one confronts the same issues of having to deal with "spill-over" effects even in the context of jurisdiction-wide fees.

Figure 8. Pass-Through Traffic



Take a hypothetical example of a square county that is composed of four square cities (see Figure 8). Each city has one house and one very small one-person office building. Each morning, the resident in each home drives to the office located in the opposite quadrant of the county. Each trip is three miles long: the first mile is in the jurisdiction that the house is located in, the second mile is on a road that passes through an adjacent city, and the third mile is in the city with the office building. From a countywide perspective, there are 12 vehicle-miles traveled every morning, and development in each city is responsible for 3 vehicle-miles. However, from each city's perspective, only two miles of travel on its roads are directly attributable to development inside its city limits--the third mile of travel on its streets is spill-over traffic from adjacent cities.

Since the spill-over effects tend to balance out (a city's streets are impacted by spill-over traffic from other jurisdictions, and traffic generated inside the city spills over to adjacent jurisdictions), it is often reasonable to assign responsibility for spillover traffic to development located within a jurisdiction or transportation zone. Of course, the reasonableness of this approach depends on the size of the zone and the homogeneity of the transportation system (it may not work for a small zone bisected by a major commuting corridor).

While it may be reasonable to eliminate the pass-through traffic factor from the impact fee calculation, we recommend that the update continue to utilize the pass-through factor. The continued use of a pass-through factor is a more conservative approach that reduces the net impact fee charged to new development. A more conservative approach is warranted given the historic reluctance to adopt a fee that reflects the full cost of the planned street improvements. In continuing to use the pass-through factor, the impact fee calculation pre-supposes that other funding will be used to pay for the portion of road costs related to the pass-through traffic that originates or terminates in areas without an impact fee or outside of the City's jurisdiction. In the absence of funding programmed for a portion of the roads from other funding sources, the City will not be able to fully fund the planned road system through impact fees.

Cost per EDU Calculation

In addition to the street construction and land cost components, the cost per EDU calculation includes several other factors. To the direct road costs are added the amount of outstanding credit agreements, which represent developer-funded road improvements in the planning area that the City will need to reimburse through the reduction or refund of impact fees. The existing impact fee account balances are subtracted from the total costs, since the fund balances will be used to pay for

a portion of the future infrastructure and will decrease the amount needed to be collected from the development fees. Finally, the total major road construction costs are reduced to reflect a pass-through traffic factor of 22 percent in the Northern Growth Area and 33 percent in the Southern Growth Area, based on the City's traffic model. (The pass-through reduction is not applied to the major bridge component of the cost.)

In the past, total value of the planned improvements for each component was considered in developing the cost per service. As shown in Table 17, the cost of most impact fee components increased rapidly between 2003 and 2006. In most instances, the cost components more than doubled in value, with net costs increasing most rapidly in North Gateway, Desert View, Estrella South and Laveen. The cost per EDU did not change at the same rate as the total costs because the number of EDUs increased in some service areas and decreased in others. However, the cost per EDU in all areas increased very rapidly; more than doubling in all areas and increasing by as much as four times the cost per EDU calculated in 2003. Despite the increased cost per EDU for each service area, the City Council retained the existing cost per EDU based on the 2003 data. As a result, the current fee structure is inadequate to fund all of the necessary growth-related road improvements in the impact fee service areas. The funding discrepancy may be further exacerbated by the practice of sometimes valuing developer credits and reimbursements at the current cost rather than the cost used as the basis of the fee.

If the cost components are retained and updated to reflect the full construction and administrative costs, the cost per EDU may be higher than the amount estimated in the 2006 update. Given the Council's reluctance to enact the full-cost fee in 2006, the updated cost will be politically challenging. Alternatively, the City could eliminate some of the cost components from the impact fee calculation and seek an alternative financing mechanism for certain components. The next section (Alternatives to Full-Cost Fees) analyzes some of the alternatives available to the City.

Table 17. Summary of Street Costs and Cost per EDU by Service Area, 2003-2006

Cost Item	North Gateway	North Black Canyon	Desert View	Estrella North	Estrella South	Laveen	Ahwatukee West
Road Costs	$80,101,792	$43,307,254	$152,802,888	$37,653,916	$105,684,619	$108,120,354	$9,524,639
ROW Costs	$45,530,764	$24,168,262	$84,350,604	na	na	na	na
Culverts and Minor Bridges	$42,883,108	$22,762,855	$79,445,538	$0	$0	$96,000	$1,126,400
Traffic Signals	$1,260,000	$1,500,000	$3,600,000	$0	$1,950,000	$3,030,000	$240,000
Drains and Tiling	$0	$0	$4,132,520	$1,104,064	$17,205,551	$3,350,700	$80,833
Subtotal, Major Streets	$169,775,664	$91,738,371	$324,331,550	$38,757,980	$124,840,170	$114,597,054	$10,971,872
Percent Non-Thru Traffic	78%	78%	78%	67%	67%	67%	67%
Attributable Major Streets	$132,425,018	$71,555,929	$252,978,609	$25,967,847	$83,642,914	$76,780,026	$7,351,154
Bridges and Interchanges	$37,520,000	$43,935,000	$48,455,000	$530,520	$7,585,080	$15,994,300	$0
Total Project Costs, 2003	$169,945,018	$115,490,929	$301,433,609	$26,498,367	$91,227,994	$92,774,326	$7,351,154
Existing Account Balance	$3,007,564	$4,117,809	$3,323,612	$1,503,501	$3,896,704	$2,814,031	$1,213,648
Net Project Costs, 2003	$166,937,454	$111,373,120	$298,109,997	$24,994,866	$87,331,290	$89,960,295	$6,137,506
EDUs	107,409	57,756	108,979	35,838	62,673	64,787	2,346
Cost per EDU, 2003	$1,554	$1,928	$2,735	$697	$1,393	$1,389	$2,616
Road Costs	$334,009,573	$101,406,504	$610,353,194	$44,820,918	$249,451,465	$277,627,985	$18,753,513
ROW Costs	$117,562,882	$26,956,635	$173,042,507	$6,446,531	$40,396,150	$46,262,811	$4,667,826
Culverts and Minor Bridges	$129,353,440	$30,138,382	$147,457,627	$478,400	$119,600	$1,614,600	$6,314,880
Traffic Signals	$1,560,000	$390,000	$4,810,000	$260,000	$2,470,000	$2,340,000	$260,000
Drains and Tiling	$0	$0	$0	$14,659,385	$79,204,932	$62,858,758	$580,862
Interchanges	$19,051,089	$22,054,353	$180,614,000	$0	$0	$155,391,750	$0
Credit Agreements	$3,403,855	$16,518,180	$11,598,739	$440,609	$11,107,805	$12,821,577	$3,114,185
Subtotal, Major Streets	$604,940,839	$197,464,054	$1,127,876,067	$67,105,843	$382,749,952	$558,917,481	$33,691,266
Percent Non-Thru Traffic	78%	78%	78%	67%	67%	67%	67%
Attributable Major Streets	$471,853,854	$154,021,962	$879,743,332	$44,960,915	$256,442,468	$374,474,712	$22,573,148
Major Bridges	$228,776,959	$115,725,507	$122,246,185	$1,331,148	$15,402,387	$53,620,044	$0
Total Project Costs, 2006	$700,630,813	$269,747,469	$1,001,989,517	$46,292,063	$271,844,855	$428,094,756	$22,573,148
Existing Account Balance	$4,168,207	$1,663,356	$5,324,254	$1,292,029	$5,058,813	$10,966,164	$39,969
Net Project Costs, 2003	$696,462,606	$268,084,113	$996,665,263	$45,000,034	$266,786,042	$417,128,592	$22,533,179
EDUs	86,738	55,930	122,623	29,814	55,270	67,517	2,357
Cost per EDU, 2006	$8,029	$4,793	$8,128	$1,509	$4,827	$6,178	$9,560
Percent Increase, 2003-2006:							
Road Costs	317%	134%	299%	36%	174%	200%	146%
ROW Costs	158%	12%	105%	na	na	na	na
Culverts and Minor Bridges	202%	32%	86%	na	na	1582%	461%
Traffic Signals	24%	-74%	34%	na	27%	-23%	8%
Drains and Tiling	na	na	-100%	1228%	360%	1776%	619%
Bridges and Interchanges	561%	214%	525%	151%	103%	1207%	na
Total Costs	312%	134%	232%	75%	198%	361%	207%
EDUs	-19%	-3%	13%	-17%	-12%	4%	0%
Cost per EDU	417%	149%	197%	116%	246%	345%	265%

Note: Break-down of ROW costs in Southern Growth Area not available in 2003, the % change in the road costs includes the ROW costs.
Source: City of Phoenix, *Infrastructure Financing Plan,* 2006; City of Phoenix, *Infrastructure Financing Plan—Northern and Southern Fee Areas*, 2003.

Parks and Trails Methodology

This section analyzes the City's methodology used to calculate the parks and trails costs per EDU. The parks and trails impact fees are based on the cost of acquiring land and constructing facilities necessary to serve development in 2030 based on the planned levels of service for acres of parkland and miles of trails. The current parks and trails impact fees were adopted in January 2007 and based on costs developed as part of the City's *Infrastructure Financing Plan* in 2006. However, the parks and trails costs per EDU were adopted at about two-thirds of the cost calculated in the 2006 *Infrastructure Financing Plan*.

Parks and Trails Methodology Recommendations

- Use build-out as the impact fee planning horizon, rather than 2030.
- Divide remaining improvement needs by growth in EDUs, rather than total EDUs.
- Analyze the existing parks and trails level of service in order to ensure that the fees cover only those costs that can be attributed to new development.
- Update the land cost component based on updated land appraisal data.
- Update the improvement costs based on recent park development and construction costs.

Methodology Overview

The City nominally utilizes a plan-based approach in developing all of the impact fees. However, unlike the major streets and bridges impact fee calculation, the parks and trails fees are not based on a defined list of projects through the 2030 planning horizon. The actual location of parks and trails cannot be determined in advance because they will be located in the growth areas as they develop and their actual location will depend on the availability of land. Thus, the fee is based on the level of service standards for each facility type and prototype facility costs.

The City's current approach to developing the impact fee utilizes total future service units expected to be in the service area in 2030, rather than the expected new growth in service units that will be added through 2030 due to new development. Since the planned parks and trails acquisition and improvements are designed to serve new growth rather than existing development, the fee should be based on the cost to serve new growth. In addition, the planned improvements should be based on the projected growth through build-out in order to be consistent with the major streets and bridges impact fee.

Level of Service

The City's parks and trails impact fees are based on level of service standards that were developed by the City for park planning purposes. For the purpose of the 2006 update, these were translated into the following acres per 1,000 EDUs: 5.43 acres of neighborhood parks, 3.33 acres of community parks and 3.85 acres of district parks. The trail standard is one mile of trail for every 760 EDUs.

As with the major streets and bridges impact fees, the updated parks and trails fees will be based on new development in the service area over the planning horizon, and will include an existing level of service analysis in order to avoid charging new development for a higher standard than provided to existing development. The existing level of service for each service area will be based on an inventory of completed and partially-completed park facilities and existing development.

The demand for future park facilities creates the basis upon which the park impact fee is calculated. The facility demand is based on level of service standards and population projections less existing parks within the service area. The projected facility demand is based on the LOS standards developed for each park type and the forecast increase in service units for each service area.

Regardless of the level of service established for planning purposes, the update will examine the existing provision of parks and trails in the development impact fee service areas based on the ratio of the replacement value of existing facilities to existing development in order to ensure that the impact fees are not based on a higher level of service than currently provided to residents in the service areas. The total cost per service unit for parks and trails consists of two components: the cost of land for the parks and trails and the cost of improvements to the facilities. The updated component costs for land and improvements will be applied to the existing park land to determine the total replacement value of the existing park system.

In general, the acquisition and development of parks occur after homes have already been developed in the area of the park facility. Often, the acquisition of park sites is a multi-year process, which naturally results in some lag-time between an area's development and the completion of a new park. In addition, the City generally waits to develop park sites until there are a sufficient number of neighborhood residents to give input into a park site's design and utilize the park. As a result, the impact fee service areas have numerous underdeveloped park sites, and the value of partially-completed facilities will be adjusted to reflect the City's investment in the facilities.

Cost Components

The facility development costs used in the *Infrastructure Financing Plan* were based on prototype facility costs and recent land acquisition cost estimates developed by a professional appraiser for each impact fee area. As noted earlier, the existing park and open space impact fee calculation is based on the cost of providing new development with facilities that meet the City's level of service standards.

The park facility components included in the park impact fee include land acquisition costs and development costs for prototypical neighborhood, community and district parks. In addition to the park costs, the fee includes community and aquatic centers, which are typically provided as amenities in community parks. The prototypical park cost is based on recent park construction for each facility type, as shown in Table 18. The park cost components include park equipment, landscaping,

athletic fields, parking, lighting, paths, restrooms and picnic facilities. In addition to the direct costs, the park development costs include design, construction management, taxes, insurance and other administrative costs. The aquatic park construction costs include competition, play and diving pools; the community centers include the costs related to the gymnasium. While community centers often include a neighborhood police station component, the prototype facility cost excludes the portion of the costs related to the police station.

Table 18. Park Facility Component Cost

Cost Component	Facility Cost	Acres	Cost per Acre
Neighborhood Park	$6,210,988	15.0	$414,066
Community Park	$13,204,822	40.0	$330,121
District Park	$28,500,316	100.0	$285,003
Community Center	$7,496,788	5.5	$1,363,052
Aquatic Center	$12,018,330	5.0	$2,403,666

Source: City of Phoenix, *Infrastructure Financing Plan Appendices,* Appendix E, November 15, 2006.

For the update, the cost to develop prototypical facilities will be updated based on recent cost experience indexed to current values for increases in construction costs. The updated costs should include new requirements for the provision of separate reclaimed water lines, since the City's reclaimed water ordinance now requires that all large turf water users connect to the City's non-potable water system.

As with the park costs, the trail costs are based on typical development costs associated with different types of trail materials and typical trail crossing costs, as shown in Table 19. The cost per mile of trail varies by the trail surface material. As with the park amenities, the study will include an update of the trail costs based on recent cost experience for each trail type.

Table 19. Trail Costs

Cost Component	Facility Cost
Multi-use Trail, Gravel (mile)	$164,917
Shared-use Trail, Concrete (mile)	$416,681
Trail Crossing (per crossing)	$469,800

Source: City of Phoenix, *Infrastructure Financing Plan Appendices,* Appendix G, November 15, 2006.

For the 2006 *Infrastructure Financing Plan*, the City utilized a professional appraiser to develop land cost estimates for each service area and capital facility category. The appraisal report included a separate analysis of park land values for each service area and the value of open space. The land values used in the City's impact fee calculation were derived from the appraisal report. As shown in Table 20, the values used in the 2006 update range from a low of $53,153 for neighborhood park land in the North Gateway area to $370,424 per acre for park land in the Desert View service area.

As part of the 2008 impact fee update, the City retained a professional appraiser to develop land cost estimates for each service area and capital facility category.[12] The land cost estimates are based on data for each growth area, recent real estate trends and site characteristics of each park type. As shown in Table 20, the updated land costs for parks reflect the softening residential real estate

[12] Brekan – Nava Group, *Land Cost Analysis for the Northern Development Impact Area* and *Land Cost Analysis for the Southern Development Impact Area,* December 1, 2007.

market, with land costs falling in all service areas with the exception of neighborhood park sites in North Gateway/Deer Valley 1-4.

Table 20. Park Land Cost Comparison

Service Area	Park Type	2006 Study	Current Value	Change
North Gateway - Deer Valley 1-4	Neighborhood	$53,153	$169,001	218%
	Community	$190,766	$169,001	-11%
	District Park	$190,766	$103,429	-46%
Desert View - Deer Valley 5	Neighborhood	$370,424	$143,863	-61%
	Community	$370,424	$143,863	-61%
	District Park	$370,424	$88,044	-76%
Estrella/Laveen	Neighborhood	$113,874	$102,685	-10%
	Community	$113,874	$102,685	-10%
	District Park	$113,874	$62,843	-45%
Ahwatukee	Neighborhood	$230,979	$149,529	-35%
	Community	$230,979	$149,529	-35%
	District Park	$230,979	$91,512	-60%

Source: Original data source from 2006 land value from City of Phoenix, *Infrastructure Financing Plan Appendices,* Appendix E, November 15, 2006; current value from Brekan – Nava Group, *Land Cost Analysis for the Northern Development Impact Area* and *Land Cost Analysis for the Southern Development Impact Area,* December 1, 2007.

Open Space Methodology

This section analyzes the City's methodology used to calculate the open space cost per EDU. The open space fee is assessed only in the Northern Growth Area. The open space impact fees are based on the cost of acquiring land and constructing access improvements necessary to serve development in 2030 based on the existing city-wide level of service for open space. The current impact fees were adopted in January 2007 and based on costs developed as part of the City's *Infrastructure Financing Plan* in 2006. However, the open space costs per EDU were adopted at 62 percent of the cost calculated in the 2006 *Infrastructure Financing Plan* (see Table 9).

Open Space Methodology Recommendations

- Use build-out as the impact fee planning horizon, rather than 2030.
- Divide attributable costs over the planning horizon by growth in EDUs, rather than total EDUs.
- Analyze the existing city-wide and northern growth area level of service in order to ensure that the fees cover only those costs that can be attributed to new development.
- Update the land cost component based updated land appraisal data.

The total cost per service unit for open space consists of two components: land and access improvements. The land component is based on the share of privately-owned desert preserve land that will be purchased for open space. Of the available land in the Sonoran Preserve planning area, approximately 78 percent is owned by the Arizona State Land Department, with the remaining 22 percent privately held. The City currently levies a 0.10 percent sales tax for parks and preserves, and allocates 60 percent of the revenue for the acquisition of State-owned land for desert preserves. As a result, the costs of acquiring State-owned land are excluded from the impact fee calculations. By the same token, no offsets are calculated for the sales tax funding, because the costs of State land are excluded.

Aside from the land acquisition costs, the only cost component utilized in developing the open space costs is the access improvement cost. In the most recent update, the City utilized an access improvement cost of $3,821 per acre based on recent access improvements in Sonoran Preserve. This is the same cost that was used in the 2003 update. The access costs will be updated to reflect the current costs.

In the 2003 update, the cost of access improvements for all open space land was applied to both State-owned and private land that would be acquired for open space; however, in the 2006 update, access improvement costs were not applied to State-owned land that would be acquired for the Sonoran Preserve (see Table 9). The reason for this change is not clear. If the sales tax money cannot be or is not being spent on access improvements, it would be reasonable to include the cost of access improvements to State land in the impact fee calculations.

The acres included in the *Infrastructure Financing Plan* are based on the city-wide standard provision of one acre of open space for every 15.86 EDUs. The existing city-wide level of service will be updated as part of the upcoming impact fee update. This will ensure that only the share of the cost that is attributable to maintaining the existing city-wide ratio of open space acres to EDUs is used in the impact fee calculations.

ALTERNATIVES TO FULL-COST FEES

At the time of the 2006 development impact fee update, the City Council decided not to change the major streets and bridges impact fees. The reluctance of the City Council to adopt full-cost impact fees suggests that consideration be given to abandoning all or parts of the major streets and bridges impact fee in favor of the traditional approach of using developer exactions.

Significance of Street Impact Fee Funding

If developers are funding all or most of the transportation infrastructure and the major streets and bridges impact fees are only functioning to level the playing field between developers, it might make sense to eliminate the impact fees. However, an analysis of the last four years of revenue and credit data (see Table 5) indicates that about 48 percent of total impact fee payments made and credits utilized are net impact fee receipts that can be programmed by the City for priority road improvements. This percentage would no doubt increase if the fees are increased to more closely represent costs. Consequently, it would appear that the major streets and bridges impact fees are providing a significant source of the funds needed to install the arterial street system, even though developers appear to be constructing the majority of the system in return for impact fee credits. Given that major streets and bridges impact fees are a significant source of funding for the transportation system in the growth areas, it is recommended that they be retained in some form.

Elimination of Street Fee Components

An alternative to eliminating the major streets and bridges impact fee is to reduce it by removing certain cost components from the fee. This would be preferable to the current situation, in which the fees are charging only a small fraction of the full cost, because the City would be relieved of the obligation of providing developers with credits against the fees for providing the components that are no longer included in the fee.

In order to mitigate the "sticker" shock of a full-cost major streets and bridges impact fee, the City could adopt a fee that excludes certain elements, such as right-of-way (ROW), or charge a fee that only funds growth-related bridge, major culvert and regional transportation connection costs. Such a strategy would result in a lower impact fee. Developers would no longer be eligible for credits on components removed from the impact fee calculation. At the same time, however, removing ROW or street construction costs from the impact fee would mean that the City would not be able to use impact fee revenue to purchase ROW or construct roads.

Based on the data used in the 2006 update, taking out ROW costs would reduce the fees by about 12 percent, while retaining only costs related to culverts, bridges and regional transportation connections (i.e., taking out ROW, road construction, traffic signals and drains and tiling costs) would reduce the cost per EDU by about 64 percent (Table 21). Compared to the current fees, however, which are based on the 2003 update, the costs per EDU would still triple on average if only ROW costs are taken out; while they would go up by 25 percent on average if everything but

culverts, bridges and regional transportation connections were taken out (however, the fees would virtually disappear in Estrella, where there are few bridge and regional connections projects).

Table 21. Alternative Street Costs per EDU

	North Gateway	N Black Canyon	Desert View	Estrella North	Estrella South	Laveen	Ahwatu-kee W	Average
Total Cost/EDU, 2003 Update	$1,554	$1,928	$2,735	$697	$1,393	$1,389	$2,616	$1,759
Total Cost/EDU, 2006 Update	$8,029	$4,793	$8,128	$1,509	$4,827	$6,178	$9,560	$6,146
Cost/EDU (no ROW) 2006	$6,972	$4,417	$7,027	$1,364	$4,337	$5,719	$8,233	$5,439
Change from 2003	349%	129%	157%	96%	211%	312%	215%	209%
Change from 2006	-13%	-8%	-14%	-10%	-10%	-7%	-14%	-12%
Cost/EDU (bridges only) 2006	$3,955	$2,998	$3,114	$22	$323	$2,317	$2,663	$2,199
Change from 2003	154%	55%	14%	-97%	-77%	67%	2%	25%
Change from 2006	-51%	-37%	-62%	-99%	-93%	-62%	-72%	-64%

Source: Derived from Table 2.

The City retained a professional appraiser to update the land cost component for the 2008 update. The appraisal used commercial and industrial land values to estimate the cost of street ROW to reflect typical zoning around arterial streets. The following table shows the changes in land value between the studies conducted in 2003 and 2006 along with current ROW estimate for each service area. As previously discussed, the current fee is based on the 2003 study; compared with the values utilized in 2003, the right-of-way land cost component will increase by more than 500 percent for most service areas and as much as 1,000 percent for Estrella North. While less drastic, the ROW value has more than doubled for all service areas since the 2006 study. It is unlikely that the construction cost components will increase as much as the land cost estimate in the update; as a result, the right-of-way costs are likely to become a more significant portion of the overall cost per EDU.

Table 22. Right-of-Way Land Cost

			Current	% Change		
Service Area	2003 Study	2006 Study	Value	2003-2006	2006-2008	2003-2008
North Gateway/Deer Valley 1-3	$76,800	$179,900	$566,280	134%	215%	637%
NBCC/Deer Valley 1-3	$76,800	$179,900	$479,160	134%	166%	524%
Desert View/Deer Valley 5	$76,800	$179,900	$479,160	134%	166%	524%
Estrella North	$42,700	$113,256	$479,160	165%	323%	1022%
Estrella South	$42,700	$113,256	$261,360	165%	131%	512%
Laveen	$72,700	$113,256	$239,580	56%	112%	230%
Ahwatukee West	$83,500	$183,000	$479,160	119%	162%	474%

Source: 2003 land value from City of Phoenix, *Infrastructure Financing Plans (*Southern and Northern Fee Areas), 2003; 2006 land value from City of Phoenix, *Infrastructure Financing Plan Appendices,* Appendix I, November 15, 2006; current value from Brekan – Nava Group, *Land Cost Analysis for the Northern Development Impact Area* and *Land Cost Analysis for the Southern Development Impact Area,* December 1, 2007.

Rather than completely abandoning the current approach for financing the arterial street system, adopting a mix of impact fees and exactions for certain elements of the major streets and bridges impact fee may provide the City more control over impact fee revenue by limiting the amount of future credits that are granted to new development. Further, eliminating certain elements from the impact fee calculation would mitigate the potential increase in the fee.

Transition Issues

Any alternative involving a reduction or elimination of the major streets and bridges impact fee should address issues of equity for those who currently hold credits or reimbursements.

Credits that remain outstanding for a given subdivision and are used to reduce or eliminate impact fees owed would cease to have value. The building permit applicants for lots within the subdivision would not pay any more than they would if the impact fees were retained, but they may be at somewhat of a disadvantage compared to builders who purchased lots in another subdivision where no credits were available. The builder who purchased a lot in the subdivision where credits were available presumably paid more for the lot than the other builder, all else equal, because the lot was subject to lower impact fees. Now that the impact fee is no longer in effect, the builder of the lot in the subdivision with credits may have to absorb the cost of the arterial improvement expressed as a credit in order to compete with the other builder. While this may seem inequitable, it is no more inequitable than the situation that occurs when some developers are required to make arterial improvements in the absence of an impact fee.

Now let's consider the case of excess credits that have been allowed by a developer agreement to be transferred to other developments and have been sold by the original developer to another developer. If the impact fees are eliminated, these credits become worthless. The developer who paid for them is not able to use them to reduce or eliminate his impact fees. On the other hand, he no longer has to pay any impact fees. Like the developer who was holding credits for use in his subdivision, he is at a disadvantage only compared to another developer who made no improvements and was holding no credits. Again, this might be upsetting for the developer who finds his credits no longer of value, but the inequity is no worse than under a system of developer exactions.

Finally, there is the issue of the developer to whom reimbursements are owed. Unlike ordinary credits, which have no intrinsic value other than the ability to reduce impact fees, reimbursement credits represent a promise by the City to make payments to an individual developer. Presumably, the City would need to make the reimbursements even if the impact fees are eliminated. This is unlikely to be a major consideration, as City staff is only aware of one outstanding reimbursement ($650,000 in major streets reimbursements owed to Dynamite Mountain Ranch in the North Gateway service area).

Under the City's current impact fee ordinance, the value of outstanding credits goes up or down at the same rate as changes in the adopted cost per EDU. If the cost per EDU were to change because certain elements of the impact fee were eliminated, the value of the credits would still change according to the same percentage change in the cost per EDU.

OFFSETS FOR ALTERNATIVE REVENUE

The City of Phoenix provides offsets to the impact fees to account for the availability of alternative revenue sources that may be used to pay for capital facilities. Offsets reduce the total facility cost that must be covered through impact fees and ensure that development does not pay twice for the same facilities—once through the impact fee and again through City, State or Federal taxes or fees. The revenue offsets represent future revenues obtained from secondary property taxes and other sources used to pay for facilities included in the *Infrastructure Financing Plan*.

Offset Recommendations

- Adopt a net impact fee that reflects the gross cost per unit less the offset per unit for all facility categories.
- Create a uniform secondary property tax offset based on service units and outstanding debt on existing facilities for all facility categories.
- Base secondary property tax offset on outstanding debt, not future planned expenditures.
- Base the present value factor for all offsets on a 25-year time period.

As discussed in the introduction, most cities combine their cost and offset schedules in their impact fee ordinance and create a unified impact fee schedule. For the updated study, it is recommended that the City Council adopt the impact fees and include the impact fee schedules in the ordinance.

In the Legal Framework section, we described the legal principles that require offsets to be provided for outstanding debt on existing facilities in order to ensure that new development does not pay twice for the same level of service. As discussed in that section, offsets against impact fees are not required for non-impact fee funding that may be used to help fund future growth-related, capacity-expanding improvements. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible.

While we feel that the rationale presented earlier is correct, offsets have often been provided for dedicated funding sources in impact fee studies conducted around the country. A clear example of such a dedicated funding source is the portion of the City's sales tax that is earmarked for park acquisition and development. Even though this funding is earmarked for capacity-expanding park expenditures, it could be argued that the intent of dedicating this funding was to raise the park level of service, rather than to subsidize growth. Another example of dedicated funding is Arizona Highway User Revenue (AHUR). While these funds are dedicated to transportation purposes, they are not dedicated to capacity-expanding improvements, but can be used for maintenance and rehabilitation. Finally, offsets have sometimes been provided for anticipated Federal or State grants. However, offsets are rarely provided for discretionary general revenue sources, such as property taxes or undesignated sales taxes. We recommend following this reasonable, traditional approach to determining how the impact fee offsets should be calculated.

Major Streets and Bridges Offsets

The major funding sources for the City's transportation projects include capital construction funding, AHUR, bond funds, impact fees, capital reserves and Federal and State transit grants. The major streets and bridges impact fee offset is based on the AHUR from taxes on fuel and vehicle sales that are programmed for growth-related major road improvements. An additional offset is provided to account for the secondary property tax used to secure bonds for growth-related major road improvements in the growth areas.

The capital construction funding includes revenue from a 2-percent increase in the sales tax on telecommunications implemented in 1998 that is intended to reimburse Phoenix residents for the use of their public rights of way by the telecommunications industry. An offset for the capital construction funding is not necessary since it is used for maintenance projects. The City's offset schedule was not adjusted in 2006 because the fee is based on the 2003 *Infrastructure Financing Plan*. The Federal and State transit grant funding is utilized for mass transit operating and capital expenses; thus, an offset is not necessary.

Secondary Property Tax

The secondary property tax in Arizona can only be used to repay debt used for capital improvements. The secondary property tax offset recognizes the expenditure of property tax proceeds for bond-funded projects in the Capital Improvements Program (CIP) that will be utilized for growth-related improvements. The secondary property tax offset is based on the estimated road-related secondary property tax rate per $100 of assessed value and a determination of the average assessed value per development unit for specific land uses. The estimated secondary property tax rate per $100 of assessed value for each facility is based on the share of growth-related bond-funded projects for major streets and related storm sewer projects multiplied by the total estimated secondary property tax rate per $100 of assessed value.[13] The current approach yields a total street and sewer offset rate per $100 of assessed value.

Under the City's current approach, the tax rate is multiplied by average city-wide assessed value per unit for more than twenty different land uses. As a result, the offset varies for each land use category. The annual tax revenue per unit is then multiplied by a present value factor that capitalizes the revenue based on the City's bond rate (6.5%) and bond term (25 years) in order to determine the bond proceeds per unit.

The City's current method provides an offset for the portion of future facilities that may be funded with debt. However, the legal principle involved (see Legal Framework section) applies much more clearly to existing debt than to future debt. In other words, new development should not have to pay for the major streets and bridges it will require in the growth areas, while also having to help repay debt on existing major streets and bridges serving existing development. Consequently, the impact fee should be reduced to account for the amount that new development will pay to retire the debt on existing transportation facilities to avoid double payment issues. Since the outstanding debt is retired by all development in the city, the offset should be calculated city-wide.

[13] For example, major streets had $72.2 million of growth-related projects in the 2002-07CIP, or 10.54% of all bond-funded projects in the CIP; this is multiplied by $1.0807 to get a street secondary property tax rate of $0.1139 per $100 of assessed value.

A simple method to calculate the offset is to divide outstanding city-wide debt for existing major streets and bridges by existing city-wide service units. This recommended approach will create a uniform offset per EDU. However, it will require that the City identify the total city-wide amount of bond funding utilized for capacity-expanding major streets and bridges improvements and the outstanding principal balance related to such projects.

State and Federal Funding

The City of Phoenix receives Arizona Highway User Revenues (AHUR) from the State that can be programmed for new major streets and bridges in the CIP. The calculation of the offset utilized in the current impact fee is based on the AHUR funds programmed in the City's 2002-2007 CIP that are used for growth-related major street improvements within the impact fee service areas and per capita AHUR funds.

The per capita AHUR funding is based on city-wide total budgeted AHUR funding and the population estimate. The per capita funding is then multiplied by the total 2030 population forecast for the impact fee areas to determine the total AHUR funding, which is then divided by the total street EDUs in 2030 for all of the fee areas to determine the AHUR funding per EDU. The AHUR funding per EDU is then multiplied by the proportion of AHUR funding used for major street capital projects and the proportion of AHUR CIP budgeted for growth-related projects in the impact fee areas. Projects that are not in the impact fee areas, as well as replacement/repair projects are excluded from the funding allocated to growth-related items in the impact fee areas.

As with the bond funding, the net AHUR funding per EDU reflects the application of a present value factor. However, the AHUR present value factor is based on the City's bond rate and a 20-year time period, rather than the 25 years used for secondary property taxes. The 20-year period was used to reflect the life span of a street as opposed to the life span of a bond. Either figure is a reasonable approximation of the long term, but the various funding sources should use a common time period. Our suggestion is to use 25 years for all offset calculations. The highway user revenue offset per EDU is consistent among all land uses and service areas. The update of the streets and bridges impact fee will retain the traditional approach used by the City in calculating the AHUR offset.

Parks, Trails and Open Space Offsets

The City Planning Department calculates both a secondary property tax and a sales tax offset for the parks and trails facilities. The open space impact fee is offset for the secondary property tax. This section describes the City's most recent offset calculation based on the 2006 *Offsets Report*.

The City funds recreational facilities such as parks, trails and mountain preserves through bonds, impact fees, parks and preserves initiative sales tax and other restricted funds. In the current 2007-2012 Capital Improvement Program, the City's capital improvements for parks are funded through bond funds, impact fees, sales tax, grants and proceeds from the sale of other park land. Additional offsets may not be necessary for grants, since grant funds are limited to available Federal or State funding, such as Community Development Block Grants, and the grant funding is not dedicated for growth-related improvements.

Sales Tax Offset

The City of Phoenix provides a sales tax offset for the parks and trails impact fees to recognize sales tax revenue that is earmarked for parks. In 1999, City voters approved a 0.10 percent sales tax for parks that will expire in November 2009. Revenues from the sales tax are allocated to park improvements and acquisition of desert preserves. Sixty percent of the revenues is to be used for open space preservation, 30 percent for regional parks and 10 percent for neighborhood and community parks.

The parks sales tax accounts for 7.7 percent of the City's 1.30 cent total sales tax. The offset calculation is based on total city-wide tax revenues and retail square feet, which provides the net sales tax revenue per square foot. The City's current offset calculation attributes the parks 0.10 cent sales tax as 10 percent of total sales tax rather than the actual rate of 7.7 percent of the 1.30 cent sales tax rate of the city-wide base revenue; the update will correct this error in order to correctly attribute the share of the city-wide sales tax earmarked for parks. The park share of the sales tax is multiplied by the increase in retail square feet in the growth areas and then divided by the future park EDUs to determine the annual park sales tax per EDU. The offset allocates 40 percent of the park tax, since that is the proportion of the sales tax earmarked for parks, and assumes that all of the proceeds will be used for growth-related park facilities.

In the current sales tax offset calculation, the gross sales tax offset per EDU is multiplied by a present value factor that is based on a 3-year period and 6.5 percent interest based on the City's bond rate. The current approach assumes that the sales tax will sunset in 2009 and limits the offset to the number of years remaining.

Given the uncertainty of ongoing sales tax funding, the update could continue to assume that the sales tax will sunset in 2009, which would reduce the sales tax offset amount. However, given the level of funding that the sales tax provides for park facilities and the general acceptance of sales tax funding in prior bond approvals, it may be appropriate to assume that sales tax funding will continue beyond the 2009 sunset date. A sales tax offset that utilizes a present value factor based on a typical bond term of 25 years would result in a higher total offset; based on the assumptions used in the 2006 *Infrastructure Financing Plan*, the sales tax offset would increase significantly from $249 to $1,147 per EDU.

The City currently does not apply any sales tax offset to the open space impact fee. As discussed in the previous section of this report, 60 percent of the parks and preserves sales tax is used to acquire desert preserve property owned by the State. Since the costs to purchase State-owned land are not included in the fee, no open space offset for the sales tax is required.

Secondary Property Tax Offset

Both the parks and open space fees are offset to reflect the share of growth-related parks and open space projects that will be funded through bonds that will be repaid through the secondary property tax. The procedure used to develop the bond proceeds offset is the same as used for streets and is based on a single-family secondary property tax rate of $0.9747 per $100 of assessed value and secondary property tax assessed value of $20,276 for units built since 1991. Since the bond proceeds offset is based on the average assessed value, the rate for each land use is not proportional to the EDU factor used to determine the impact fee or the parks sales tax offset for each land use.

As with the major streets and bridges secondary property tax offset, the City bases the offset on future debt rather than existing debt. The recommended approach for determining the secondary property tax for parks and trails is the same as that suggested for major streets and bridges. The offset will be based on the outstanding city-wide debt for parks and trails and the existing city-wide parks and trails service units. This approach avoids double payment issues and creates a uniform offset per EDU. However, it will require that the City identify the total city-wide amount of bond funding utilized for parks and trails and the outstanding principal balance related to such projects.

DEVELOPER CREDITS

As discussed in the Legal Framework section, impact fee case law requires that developers be given credit against impact fees otherwise due for in-kind contributions toward the same types of facilities covered by the fees. The City of Phoenix does provide credits that can be used to reduce the fees that would otherwise be owed within the development for which a dedication or improvement was made. This section describes how developer credits work in Phoenix, surveys how other communities address the issue, and makes recommendations for changes.

Current Credit Procedure

Phoenix provides credit or reimbursement to developers for the dedication or construction of capital facilities that are listed in the *Infrastructure Financing Plan* upon which the impact fee was calculated. A developer may get credit for off-site improvements if he has entered into a formal credit agreement with the City. The credit option reduces the impact fee liability for the new units within a given development. Under a credit agreement, a developer may spread excess credits to a contiguous area if it is served by the developer-provided infrastructure. Reimbursements provide repayment to a developer for the cost of developer improvements from the impact fee funds and require a development agreement.

According to the City's ordinance, in order to be eligible for credit a developer must apply for the credit within one year of securing the first construction permit or within one year of final acceptance of the facility being credited, whichever date is later. However, the City has not strictly enforced this provision, and the ordinance does not place a time limit on spreading excess credits to other developments through a credit or development agreement.

The credit value may be based on the cost of the improvement as identified in the relevant *Infrastructure Financing Plan*; however, the ordinance allows for the calculation of a credit based on other costs in certain instances, such as the dedication of a facility not required for development approval, or the over-sizing of a facility where the specifications do not match those provided in the plan. The City may also provide credits or reimbursements valued at a higher rate than those in the *Infrastructure Financing Plan* when a development agreement is negotiated and approved by Council. If a reimbursement is not based on the plan value or if the City contributes non-impact fee funds for a portion of the project cost through a cost-sharing agreement, the City must follow mandated procurement options such as public bidding, design/build or construction manager at risk processes. For credit agreements the City may use either plan cost or the lowest of three sealed bids from a public bid process to determine the credit value. The value of outstanding credits increases or decreases in proportion to the change in the cost per Equivalent Dwelling Unit (EDU) associated with the approved *Infrastructure Financing Plan*.

Under the City's original impact fee system, developers would lose any remaining outstanding credit value once the development was completed as part of the "extraordinary" cost of building in undeveloped areas of the city. However, the City's policy gradually evolved and developers may now utilize excess credits under certain circumstances. If the credit value for an improvement exceeds the total impact fees for the same type of improvement due from the development, a

developer may apply for a credit agreement to spread the excess credits to a contiguous parcel. Such a credit agreement can be approved by City staff. A Council-approved development agreement is required for reimbursement of excess credits or the application of excess credits to noncontiguous development. Such development agreements typically occur during the development approval process.

The City's credit policy has also evolved to permit developers to apply for credits after permits have been issued and impact fees have already been paid, because the City charges the full impact fee until the infrastructure is completed and accepted by the City. As shown in Table 23, the City has issued refunds of more than $4.0 million in each of the past five years, with more than $11.6 million in FY 2004/2005. The refunds are highest for major streets and bridges, and as shown earlier amount to 48 percent of all impact fees collected (see Table 5). A City audit in 2004 found that the potential for developers to obtain credits against impact fee funds already collected leads to uncertainty regarding what funds are actually available to the City for expenditure on capital facilities.[14]

Table 23. Developer Refunds, FY 2003-2007

Facility	2002/03	2003/04	2004/05	2005/06	2006/07
Major Streets and Bridges	$2,510,964	$3,297,002	$6,825,919	$4,451,893	$3,359,950
Wastewater	$677,576	$368,928	$1,159,525	$1,235,694	$317,740
Water	$1,307,589	$940,109	$1,912,821	$1,827,645	$0
Storm Drainage	$11,361	$0	$24,873	$0	$114,762
Parks and Trails	$8,970	$776,452	$1,641,285	$848,040	$909,722
Total Refunds*	$4,516,460	$5,382,491	$11,566,425	$8,363,272	$4,638,474

*Columns do not exactly sum to totals in all cases because some totals include administrative adjustments.
Source: City of Phoenix Development Services Department refund log, provided November 8, 2007.

The City's complex system of excess credits is further compounded by a lack of a centralized database that tracks the value of existing credits by facility fee type and impact fee service area. The City does not track the value of credit claims and the total outstanding value of existing credit claims. Instead, the value of each credit agreement is tracked separately for each development. As a result, operating departments and impact fee administrators do not have readily available data on total outstanding developer credits, which, again, leads to uncertainty in programming impact fee funding for capital facilities.

Regional Developer Credit Practices

In order to identify local practices, impact fee ordinances in Phoenix-area communities with transportation impact fees were reviewed, and local administrators were interviewed to determine how their ordinances worked in practice. The credit procedures from the ten municipalities are summarized in Table 24.

Aside from Phoenix, we could not find any other municipality that refunds impact fees previously paid to a developer who gets credit approval after the development is partially completed. As noted earlier, this practice creates much uncertainty about the City's ability to program impact fees already collected, particularly major streets and bridges impact fees. We recommend that the City discontinue this practice, and in the future require that credits be approved before the first building

[14] City of Phoenix Auditor Department, "Impact Fee Program Review," March 15, 2004.

permit for a development has been issued. As a transition, the City could give developers six months to apply for credits for any projects that have already been initiated.

Table 24. Developer Credit Procedures, Phoenix Area Municipalities

Municipality	Refunds Possible?	Value Adjusted?	Excess Credits?
Apache Junction	-	No	Developer Agreement
Avondale	-	No	May be Transferred
Chandler	No	No	None
Fountain Hills	No	No	Reimbursement Only
Glendale	-	No	None
Goodyear	-	No	Reimbursement Only
Peoria	No	No	Reimbursement Only
Phoenix	Yes	Yes	Reimbursement/Transfer
Queen Creek	No	No	Reimbursement Only
Surprise	No	No	Developer Agreement
Town of Gilbert	No	No	None

Source: Respective municipal impact fee ordinances and interviews with municipal staff conducted October 16 to October 31, 2007.

None of the other communities surveyed have provisions in their ordinances allowing the value of credits to be adjusted when the fees are updated. However, the City's provision is not unreasonable, in that it allows the value of the developer's contribution to be adjusted for inflation when the cost per EDU is adjusted. However, the change in the cost per EDU can be affected by a number of things that have nothing to do with cost inflation. An alternative would be to allow the value of credits to be adjusted by an inflation index whenever the fees are adjusted. In addition, the value of credits should be based solely on the value of improvements and should not be affected when fees are adopted at less than full cost.

The term "excess credits" refers to the value of a developer's contribution in excess of the amount of impact fees that would otherwise be due from the development. Excess credits become more common when the impact fees do not reflect the actual current cost of building infrastructure. Most communities provide for excess credits because of the incentive they provide to developers, who can often make improvements more cheaply and in a more timely fashion than the City.

Three of the ten surveyed communities do not provide the developer with any credits for excess contributions, which was Phoenix's original approach. Four allow the developer to be reimbursed for the excess credit, but do not allow the credit to be transferred to another developer or development. Three others allow the credits to be transferred outside the original development, pursuant to a development agreement.

Credit Policy Recommendations

Credit Policy Recommendations

- Require application and approval of credit claims prior to the application for the initial building permit.
- Charge full-cost impact fees, as this will reduce the incidence of excess credits.
- Prohibit the transfer of excess credits to other developments for all new development, except through a Council-approved or staff-administered agreement.
- Grandfather the transferability of existing excess credits.
- Limit outstanding credits to initially-approved value of the improvement or dedication.
- De-link value of outstanding credits from changes in impact fees and base credit value on the value of improvements.
- Create a centralized database to track the value of outstanding credits for all developments.

In our view, the highest-priority change should be to require application and approval of credit claims prior to the application for the initial building permit for the development. (At the very least, payment of any impact fee should constitute a waiver of any claim to an offset for that particular building permit.) As a transition, the City could give developers six months to apply for credits for any projects that have already been initiated. Ceasing the practice of refunding impact fees when credits are approved after the development project has begun would allow the City to program the expenditure of fees collected without worrying about whether the fees will need to be refunded.

One of the most important elements of a successful credit approach is an impact fee schedule that reflects current facility costs. Road impact fees, in particular, should not be adopted at a very low percentage of the maximum calculated amount. This is because developers often make in-kind contributions in the form of right-of-way dedication or actual roadway construction, and under an impact fee system receive a reimbursement or credit for the equivalent value of such contributions against the fee. In particular, full-cost fees will limit the number of developers with excess credits, and will provide sufficient funding to reimburse or otherwise compensate developers who make major, costly improvements that would otherwise be the City's responsibility.

Phoenix's current system allows excess credits to be transferred to contiguous developments with staff approval. In addition, developers may transfer excess credits to noncontiguous developments or receive reimbursement pursuant to a development agreement approved by the City Council. Allowing the transfer of excess credits makes it more difficult for City staff to track credit obligations, creates additional uncertainty about future impact fee revenues, and often prevents the developer from being fully compensated for the value of his contribution (he may not have nearby developments needing the credits, and other developers are unlikely to pay him face value for them). The preferable alternative would be to prohibit transfer of excess credits, and to allow excess credits only with a Council-approved developer agreement that establishes an agreed-upon schedule of reimbursements. An alternative to a Council-approved developer agreement would be a staff-administered agreement. Such an approach would be much simpler, more equitable and more predictable than the current system, in which reimbursements are rare and developers try to transfer their excess credits. It would also ensure that any approved excess credit reimbursements reflect the City Council's priorities for the location and timing of infrastructure extensions. This recommendation would not affect existing excess credits, which should be grandfathered so that developers or subsequent interests in a development with outstanding excess credits would remain eligible to redeem those credits under the excess credit policy that was in place at the time the credited infrastructure was accepted by the City.

An even more ambitious reform would be to provide all future credits, not just excess credits, in the form of reimbursements. Under this approach, the full fee would be paid for every building permit, and the City would deal only with a limited number of developers who have made improvements. There are a number of ways this could be structured. For example, the City could set aside a certain percentage of impact fees collected to be used for reimbursements each year. If the set-aside funds are sufficient to reimburse all developers with credits, each developer would be fully reimbursed and any excess funding could be used for City-initiated projects. If the set-aside funds are not sufficient, all developers would be reimbursed a percentage of their outstanding credits, and the unreimbursed credits would be carried over to the next year. Based on the current fee schedule and the last four years of experience, the City would need to set-aside about 58 percent of major streets and bridges impact fees collected for reimbursements (see Table 5). The percentage could be adjusted periodically as needed to ensure that developers are reimbursed within a reasonable period of time. This approach would be much simpler to track and would be much more predictable than the current system. Unfortunately, it could not be implemented all at once, since existing credits could not readily be converted to reimbursements (original developers and current lot owners are not necessarily the same, and presumably the developer passed on the cost of the improvement to the extent possible in the cost of the lots, so that current lot owners can reasonably claim to "own" the credits). Nevertheless, this approach could be implemented for future developments.

Currently, the values of outstanding credits that were based on cost estimates in the *Infrastructure Financing Plan* fluctuate based on the percentage change in the approved cost per EDU. This is a laudable attempt to ensure that the value of a developer's contribution is adjusted for inflation whenever the appropriate cost per EDU is updated to account for inflation as well as other factors. However, changes to the cost per EDU reflect much more than simply construction cost inflation. For example, suppose the cost per EDU is cut in half by the City Council as a matter of policy in order to stimulate the building industry—should the value of outstanding credits also be cut in half? Or suppose that the cost per EDU is doubled in order to include components, such as storm drainage costs, not included in the previous update—should the value of outstanding credits be doubled? Neither adjustment is reasonable, for they are unrelated to the actual current value of the developer's improvement.

The current ordinance contains another provision that seems to imply that if the cost per EDU is adopted at less than 100 percent of the amount calculated in the *Infrastructure Financing Plan*, the credits that are based on plan costs should be valued at the same percentage. This is an understandable attempt to ensure that there is some balance between the fees being charged and the credits being provided, but it sacrifices the equity of the impact fee system. A guiding principle of an impact fee system is that all developers are treated equally, and all pay the same in proportion to their impact, regardless of whether their payment is made through impact fees or in-kind contributions. If credits are only valued at the percentage of the full cost being charged through impact fees, equity would be retained only if all developers are required to make similar in-kind contributions. However, this is rarely the case, and developers who pay in-kind would be making much bigger contributions than developers who simply pay the reduced fee.

Let's take an example using parkland dedication. The park cost per EDU in the Desert View service area was adopted at 72 percent of the calculated cost in the 2006 update. Suppose there are two developers in the North Gateway area who are both building 1,000-home subdivisions, but only one of them is required as a condition of zoning to dedicate parkland. Let's assume he is required to dedicate 10 acres (slightly less than the 12.71 acres per 1,000 EDUs standard on which the

Infrastructure Financing Plan is based). Let's also assume that his property is appraised at $370,424 per acre, which is the value on which the 2006 fee calculations for the Desert View service area are based. His land is objectively worth $3,704,240, but he only gets credit for 72 percent of the value, which works out to $2,667,053. At the current parks and trails impact fee in the Desert View area of $2,910 per unit, both developers should pay $2,910,000, so the developer that dedicated the land owes the difference between the fee and the credit, which is $242,947. In the end, the developer who is required to dedicate land pays a total in fees and land value of $3,947,187 ($3,704,240 in actual land value and $242,947 in fees), which is $1,037,187 or 36 percent more than was paid by the other developer who only had to pay the fee.

Our recommendation is that credits should be based solely on the value of the improvements (whether based on values in the infrastructure plan or bid values), without regard for whether the current fees are based on less than 100 percent of full costs. Whether or not the value of the credit should be adjusted for inflation when the impact fees are updated is a policy issue, but if they are adjusted, the adjustment should be based on an index of construction costs, rather than on the change in the adopted cost per EDU. In addition, credits based on infrastructure financing plan values should not be affected when those plans are updated.

The internal process for granting credits requires the interaction of staff within the Planning Department, Development Services and operating departments. The complexity of the City's credit process requires considerable staff time in Planning and Development Services, with a full-time staff member devoted almost exclusively to credit issues in each department. Impact fee revenues are posted and tracked net of any offsets or known credits, and there is no centralized database that tracks the outstanding credits for all developments. Instead, the credit balances are tracked for individual developments. Thus, it is not possible for the City to track the volume of credits claimed by developers or readily identify the value of outstanding credit claims. The City should develop a database that makes it easy for operating departments and impact fee administrators to identify and value the outstanding credit values by impact fee area. Such a database would provide a more accurate accounting of the funding available for new projects, pending refunds and the current net credit liabilities.

INFLATION INDEXING

The Arizona State Legislature amended the statute relating to municipal impact fees during the 2007 legislative session. As a result of that amendment, municipalities are now permitted to automatically adjust an impact fee on an annual basis based on a nationally recognized cost index without a public hearing or update to the infrastructure improvement plan. The amendment requires public notice of any adjustment at least thirty days prior to their effective date. Communities in other states have utilized indexing in order to minimize the "jump" in an impact fee each time the municipality updates their fees and the corresponding shock to the cost of development. Depending on the type of index, fee indexing helps maintain the relationship between the actual impact fee and changes in the costs to provide facilities.

The State statute does not suggest a mechanism for indexing the impact fee. Most municipal impact fees in other states are based on nationally recognized cost indexes and are updated once a year. There are several national annual and monthly indexes that track changes in consumer and construction costs; typical indexes include a consumer price index such as the U.S. Bureau of Labor Statistics Consumer Price Index (CPI), or a construction-specific index such as the Construction Cost Index (CCI) or Building Cost Index (BCI) published by the *Engineering News Record* (ENR). The CPI measures the increase in the cost of a common basket of consumer goods and reflects the increase in the cost of living over time. The CCI and BCI measure changes in costs related to construction cost components, such as cement, steel, wood and labor costs; however, the CCI is more heavily weighted toward labor costs than the BCI.

In order to be an effective measure of change, an index should reflect the types of expenditures associated with the major component costs of a facility impact fee and, when possible, reflect the geographic variations in cost that may be specific to an area. There is no nationally recognized index of changes in land values. The construction cost components of both the parks and trails and major streets and bridges impact fees would best be captured through the BCI. The BCI index has been recommended for Phoenix in prior studies because it provides a representative mix of component and labor costs in Phoenix.[15]

The most straight-forward and simplest approach to annual impact fee updates would be to adjust the fees at the end of each year that the fees were not comprehensively updated based on the percent change in the BCI during the preceding 12-month period. The City will need to use the national ENR BCI since ENR has not yet developed a Phoenix-specific index as they have with numerous other major cities. The national index is an appropriate measure for overall construction cost trends in Phoenix since local construction cost trends generally mirror national trends. The City of Phoenix and other Phoenix-area municipalities should continue to work with ENR staff to create a Phoenix-specific index; if such an index were created, the City could utilize the local index for annual impact fee updates.

Automatic annual indexing for inflation should not be confused with phasing. If the City Council does not adopt the fees at full cost, there is little reason to index them for inflation. Instead, the City may desire to phase the fees in to the full cost or at least to something closer to the full cost over a period of time. For example, suppose that the calculated major streets and bridges fee in the

[15] 3 D/I, *City of Phoenix Construction Cost Analysis*, April 20, 2006.

Desert View service area is $5,000 per typical single-family unit. The Council could increase the fee from its current level of $2,176 in two steps, adopting it initially at half of the increase, or $3,588, which is 72 percent of the full amount; after one year, the fee could be automatically increased to the 100 percent level. The fees for all other land uses in the service area would also be charged at the same percentages of the calculated amounts.

APPENDIX A: CURRENT FEE SCHEDULES

Table 25. Current Major Streets and Bridges Impact Fee Schedule

Land Use	Unit	N Gate-way W/ DV 1-3	NBCC/ DV 4	Desert View/ DV 5	Ahwa-tukee West	Estrella North	Estrella South	Laveen
Single-Family, Low Density	Dwelling	$1,223	$1,683	$2,676	$2,530	$71	$927	$922
Single-Family, Detached	Dwelling	$995	$1,369	$2,176	$2,057	$58	$754	$750
Single-Family, Attached	Dwelling	$607	$835	$1,327	$1,255	$35	$460	$457
Multi-Family, 2-4 Units	Dwelling	$928	$1,243	$1,920	$1,820	$184	$769	$766
Multi-Family, Standard Density	Dwelling	$762	$1,020	$1,577	$1,495	$152	$632	$629
Mobile Home/RV Park	Space	$475	$636	$983	$932	$95	$394	$392
Timeshare	Dwelling	$762	$1,020	$1,577	$1,495	$152	$632	$629
Bank w/ Drive-in	1000 sq. ft.	$7,942	$10,650	$16,492	$15,631	$1,506	$6,545	$6,516
Building Mat., Lumber, Hardware	1000 sq. ft.	$2,060	$2,778	$4,327	$4,099	$332	$1,669	$1,661
Convenience Market w/Gas	Fuel Pos.	$7,276	$9,632	$14,717	$13,967	$1,846	$6,231	$6,206
Convenience Market	1000 sq. ft.	$9,667	$12,872	$19,788	$18,768	$2,168	$8,133	$8,099
Home Furnishings Store	1000 sq. ft.	$225	$304	$473	$448	$36	$183	$182
Lodging, Hotel/Motel, Resort	Room	$705	$967	$1,532	$1,448	$53	$540	$537
New and Used Car Sales	1000 sq. ft.	$7,951	$10,722	$16,702	$15,821	$1,282	$6,439	$6,409
Nursery/Garden Center	Acres	$1,631	$2,200	$3,426	$3,245	$263	$1,321	$1,315
Restaurant w/Drive Through	1000 sq. ft.	$26,095	$34,618	$53,010	$50,298	$6,336	$22,197	$22,106
Restaurant, General	1000 sq. ft.	$5,525	$7,418	$11,501	$10,899	$1,012	$4,534	$4,513
Retail								
Less than 12,500 sq. ft.	1000 sq. ft.	$3,037	$4,095	$6,379	$6,042	$490	$2,459	$2,448
12,500 to 19,999 sq. ft.	1000 sq. ft.	$3,026	$4,081	$6,357	$6,021	$488	$2,450	$2,439
20,000 to 29,999 sq. ft.	1000 sq. ft.	$2,779	$3,748	$5,838	$5,529	$448	$2,251	$2,241
30,000 to 42,499 sq. ft.	1000 sq. ft.	$2,650	$3,574	$5,567	$5,274	$428	$2,147	$2,137
42,500 to 74,499 sq. ft.	1000 sq. ft.	$2,468	$3,328	$5,185	$4,911	$398	$1,999	$1,990
75,000 to 149,999 sq. ft.	1000 sq. ft.	$2,146	$2,894	$4,508	$4,270	$346	$1,738	$1,730
150,000 to 249,999 sq. ft.	1000 sq. ft.	$1,856	$2,503	$3,900	$3,694	$299	$1,503	$1,496
250,000 to 349,999 sq. ft.	1000 sq. ft.	$1,716	$2,315	$3,606	$3,416	$277	$1,391	$1,384
350,000 to 449,999 sq. ft.	1000 sq. ft.	$1,846	$2,489	$3,877	$3,673	$298	$1,495	$1,488
450,000 to 549,999 sq. ft.	1000 sq. ft.	$2,028	$2,735	$4,260	$4,035	$327	$1,643	$1,635
550,000 to 699,999 sq. ft.	1000 sq. ft.	$2,135	$2,880	$4,486	$4,249	$344	$1,729	$1,721
700,000 to 899,999 sq. ft.	1000 sq. ft.	$2,200	$2,966	$4,621	$4,377	$355	$1,782	$1,773
More than 900,000 sq. ft.	1000 sq. ft.	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Retail, General	1000 sq. ft.	$2,189	$2,952	$4,598	$4,356	$353	$1,773	$1,765
Service Station	Fuel Pos.	$3,483	$4,608	$7,037	$6,679	$891	$2,986	$2,974
Service Station w/Conv. Market	Fuel Pos.	$3,350	$4,434	$6,775	$6,429	$849	$2,868	$2,856
Movie Theater	1000 sq. ft.	$7,384	$9,815	$15,061	$14,287	$1,723	$6,247	$6,221

Current Major Streets and Bridges Impact Fee Schedule (continued)

Land Use	Unit	N Gate-way W/ DV 1-3	NBCC/ DV 4	Desert View/ DV 5	Ahwa-tukee West	Estrella North	Estrella South	Laveen
General Office								
Less than 12,500 sq. ft.	1000 sq. ft.	$2,878	$3,888	$6,067	$5,745	$437	$2,316	$2,305
12,500 to 19,999 sq. ft.	1000 sq. ft.	$2,623	$3,543	$5,528	$5,235	$399	$2,111	$2,101
20,000 to 29,999 sq. ft.	1000 sq. ft.	$2,324	$3,139	$4,898	$4,639	$353	$1,871	$1,862
30,000 to 42,499 sq. ft.	1000 sq. ft.	$2,153	$2,909	$4,539	$4,298	$327	$1,733	$1,725
42,500 to 74,499 sq. ft.	1000 sq. ft.	$1,982	$2,678	$4,179	$3,958	$301	$1,596	$1,589
75,000 to 149,999 sq. ft.	1000 sq. ft.	$1,684	$2,275	$3,550	$3,362	$256	$1,356	$1,350
150,000 to 249,999 sq. ft.	1000 sq. ft.	$1,535	$2,073	$3,235	$3,064	$234	$1,236	$1,230
250,000 to 349,999 sq. ft.	1000 sq. ft.	$1,397	$1,887	$2,944	$2,788	$212	$1,124	$1,119
350,000 to 449,999 sq. ft.	1000 sq. ft.	$1,301	$1,757	$2,742	$2,597	$197	$1,046	$1,042
450,000 to 549,999 sq. ft.	1000 sq. ft.	$1,172	$1,584	$2,472	$2,341	$178	$943	$939
550,000 to 649,999 sq. ft.	1000 sq. ft.	$1,183	$1,598	$2,494	$2,362	$180	$952	$948
650,000 to 899,999 sq. ft.	1000 sq. ft.	$1,108	$1,497	$2,336	$2,213	$169	$893	$889
900,000 to 1,099,999 sq. ft.	1000 sq. ft.	$1,055	$1,426	$2,225	$2,107	$160	$849	$845
1,100,000 to 1,299,999 sq. ft.	1000 sq. ft.	$1,012	$1,368	$2,134	$2,021	$154	$815	$812
1,300,000 to 1,499,999 sq. ft.	1000 sq. ft.	$970	$1,310	$2,045	$1,937	$147	$781	$777
More than 1,500,000 sq. ft.	1000 sq. ft.	$949	$1,282	$2,000	$1,894	$144	$764	$760
Office, Medical/Dental	1000 sq. ft.	$3,020	$4,045	$6,256	$5,930	$589	$2,496	$2,485
Industrial and Manufacturing**	1000 sq. ft.	$860	$1,167	$1,829	$1,731	$113	$683	$680
Warehouse**	1000 sq. ft.	$861	$1,168	$1,830	$1,732	$114	$684	$681
Mini Warehouse	1000 sq. ft.	$28	$66	$147	$135	$0	$0	$0
Nursery, Landscape Contractor	Acre	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Church/Synagogue	1000 sq. ft.	$629	$831	$1,267	$1,203	$166	$542	$540
Day Care Center	1000 sq. ft.	$2,604	$3,483	$5,379	$5,100	$526	$2,162	$2,152
Elementary School, Private	1000 sq. ft.	$365	$537	$908	$853	$0	$211	$209
High School, Private	1000 sq. ft.	$925	$1,276	$2,035	$1,923	$39	$693	$690
Post-Secondary School	1000 sq. ft.	$2,952	$4,074	$6,495	$6,138	$126	$2,214	$2,202
University	Student	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Hospital	1000 sq. ft.	$2,230	$2,981	$4,603	$4,364	$452	$1,851	$1,843
Nursing Home	Beds	$337	$453	$703	$666	$60	$276	$275
U.S. Post Office, Privately Owned	1000 sq. ft.	$6,878	$9,275	$14,448	$13,686	$1,109	$5,570	$5,544
Agriculture	Acre	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Bus Depot	1000 sq. ft.	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Golf Course	Acre	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Indoor Arena	Acre	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Outdoor Arena	Acre	NA*	NA*	NA*	NA*	NA*	NA*	NA*
Core Land Use	1000 sq. ft.	NA*	NA*	NA*	NA*	NA*	NA*	NA*

* requires an independent impact analysis

** fees may be reduced for these and other uses that are freeway-oriented depending on distance from the freeway

Source: Fees may not exactly match official fees due to rounding differences; based on EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost/EDU from City of Phoenix, *Infrastructure Financing Plan,* 2003; AHUR and secondary property tax offsets per EDU from City of Phoenix, *Offsets Report,* Table 2, 2003.

Table 26. Current Parks and Trails Impact Fee Schedule

Land Use	Unit	N Gateway/ NBCC/ Deer Valley 1-4	Desert View/ Deer Valley 5	Estrella/ Laveen	Ahwa-tukee
Single-Family, Detached	Dwelling	$4,072	$2,910	$2,035	$2,510
Single-Family, Attached	Dwelling	$1,670	$1,194	$835	$1,030
Multi-Family, 2-4 Units	Dwelling	$1,894	$1,359	$957	$1,175
Multi-Family, more than 4 units	Dwelling	$1,482	$1,064	$749	$920
Mobile Home/RV Park	Space	$1,606	$1,153	$812	$997
Timeshare	1000 sq. ft.	$576	$414	$291	$358

Source: Fees may not exactly match official fees due to rounding differences; based on EDUs per unit from City Code, Sec. 29-5E; cost per EDU from *Infrastructure Financing Plan*, 2006; and offsets per EDU from *Offsets Report*, 2006.

Table 27. Current Open Space Impact Fee Schedule

Land Use	Unit	Northern Growth Area*
Single-Family, Low Density	Dwelling	$1,108
Single-Family, Standard Density	Dwelling	$1,108
Single-Family, Attached	Dwelling	$875
Multi-Family, 2-4 Units	Dwelling	$1,026
Multi-Family, more than 4 units	Dwelling	$812
Mobile Home/RV Park	Space	$957
Timeshare	1000 sq. ft.	$552

* No open space fees in Southern Growth Area

Source: Fees may not exactly match official fees due to rounding differences; based on EDUs per unit from City Code, Sec. 29-5E; cost per EDU from *Infrastructure Financing Plan*, 2006; and offsets per EDU from *Offsets Report*, 2006.

Table 28. Current Library Impact Fee Schedule

Land Use	Unit	North Gateway/ Deer Valley 1-4	Desert View/ Deer Valley 5	Ahwa-tukee	Estrella/ Laveen
Single-Family Detached	Dwelling	$425	$370	$52	$196
Single-Family Attached	Dwelling	$209	$182	$26	$97
Multi-Family, 2-4 Units/Structure	Dwelling	$246	$216	$41	$121
Multi-Family, >4 Units/Structure	Dwelling	$193	$169	$33	$95
Mobile Home/RV Park	Space	$206	$181	$35	$101
Timeshare	1,000 sq. ft.	$80	$70	$13	$39
Retail Center	1,000 sq. ft.	$10	$0	$0	$0
Bank, S&L w/Drive Thru	1,000 sq. ft.	$0	$0	$0	$0
Convenience Market	1,000 sq. ft.	$11	$1	$0	$0
Conv. Market w/Gas Pumps	1,000 sq. ft.	$0	$0	$0	$0
Gas Stations	1,000 sq. ft.	$0	$0	$0	$0
Lodging, Hotel or Motel	1,000 sq. ft.	$30	$20	$0	$0
Restaurant w/Drive-Thru	1,000 sq. ft.	$0	$0	$0	$0
Restaurant, General	1,000 sq. ft.	$0	$0	$0	$0
Theater, Motion Picture	1,000 sq. ft.	$10	$0	$0	$0
Office, General	1,000 sq. ft.	$55	$41	$0	$0
Office, Medical	1,000 sq. ft.	$40	$26	$0	$0
Manufacturing	1,000 sq. ft.	$23	$15	$0	$0
Warehouse	1,000 sq. ft.	$0	$0	$0	$0
Mini-Warehouse	1,000 sq. ft.	$40	$32	$0	$8
Church	1,000 sq. ft.	$53	$47	$12	$28
Day Care Center	1,000 sq. ft.	$12	$6	$0	$0
Elementary School	1,000 sq. ft.	$0	$0	$0	$0
High School	1,000 sq. ft.	$0	$0	$0	$0
Hospital	1,000 sq. ft.	$0	$0	$0	$0
Nursing Home	1,000 sq. ft.	$27	$21	$0	$2

Note: Fees may not exactly match official fees due to rounding differences; independent impact analysis required for retail centers of 900,000 sq. ft. or more, wholesale nursery, landscape contractor, golf course, university, agriculture, bus depot, indoor or outdoor arena or core land use.

Source: Derived from EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost per EDU from City of Phoenix, *Infrastructure Financing Plan,* November 15, 2006; secondary property tax offset per EDU from City of Phoenix, *Offsets Report*, 2006 (revised August 27, 2007).

Table 29. Current Fire Impact Fee Schedule

Land Use	Unit	Northern Growth Area	Ahwa-tukee	Estrella/ Laveen
Single-Family Detached	Dwelling	$322	$60	$162
Single-Family Attached	Dwelling	$322	$60	$162
Multi-Family	Dwelling	$270	$91	$161
Mobile Home/RV Park	Space	$270	$91	$161
Retail Center	1,000 sq. ft.	$96	$0	$2
Bank, S&L w/Drive Thru	1,000 sq. ft.	$0	$0	$0
Convenience Market	1,000 sq. ft.	$98	$0	$4
Conv. Market w/Gas Pumps	1,000 sq. ft.	$0	$0	$0
Gas Stations	1,000 sq. ft.	$0	$0	$0
Lodging, Hotel or Motel	1,000 sq. ft.	$138	$0	$44
Restaurant w/Drive-Thru	1,000 sq. ft.	$0	$0	$0
Restaurant, General	1,000 sq. ft.	$0	$0	$0
Theater, Motion Picture	1,000 sq. ft.	$96	$0	$2
Office, General	1,000 sq. ft.	$119	$0	$25
Office, Medical	1,000 sq. ft.	$87	$0	$0
Manufacturing	1,000 sq. ft.	$165	$10	$71
Warehouse	1,000 sq. ft.	$148	$0	$54
Mini-Warehouse	1,000 sq. ft.	$202	$47	$108
Church	1,000 sq. ft.	$259	$104	$165
Day Care Center	1,000 sq. ft.	$172	$17	$78
Elementary School	1,000 sq. ft.	$124	$0	$30
High School	1,000 sq. ft.	$124	$0	$30
Hospital	1,000 sq. ft.	$48	$0	$0
Nursing Home	1,000 sq. ft.	$203	$48	$109

Note: Fees may not exactly match official fees due to rounding differences; independent impact analysis required for retail centers of 900,000 sq. ft. or more, wholesale nursery, landscape contractor, golf course, university, agriculture, bus depot, indoor or outdoor arena or core land use.

Source: Derived from EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost/EDU from City of Phoenix, *Infrastructure Financing Plan,* November 15, 2006*;* secondary property tax offset per EDU from City of Phoenix, *Offsets Report*, 2006 (revised August 27, 2007).

Table 30. Current Police Impact Fee Schedule

Land Use	Unit	Northern Growth Area	Ahwa-tukee	Estrella/ Laveen
Single-Family Detached	Dwelling	$344	$0	$90
Single-Family Attached	Dwelling	$344	$0	$90
Multi-Family	Dwelling	$153	$0	$47
Mobile Home/RV Park	Space	$153	$0	$47
Retail Center	1,000 sq. ft.	$189	$0	$24
Bank, S&L w/Drive Thru	1,000 sq. ft.	$106	$0	$0
Convenience Market	1,000 sq. ft.	$190	$0	$25
Conv. Market w/Gas Pumps	1,000 sq. ft.	$114	$0	$0
Gas Stations	1,000 sq. ft.	$0	$0	$0
Lodging, Hotel or Motel	1,000 sq. ft.	$206	$0	$41
Restaurant w/Drive-Thru	1,000 sq. ft.	$112	$0	$0
Restaurant, General	1,000 sq. ft.	$142	$0	$0
Theater, Motion Picture	1,000 sq. ft.	$189	$0	$24
Office, General	1,000 sq. ft.	$198	$0	$33
Office, Medical	1,000 sq. ft.	$185	$0	$20
Manufacturing	1,000 sq. ft.	$216	$0	$51
Warehouse	1,000 sq. ft.	$210	$0	$45
Mini-Warehouse	1,000 sq. ft.	$231	$0	$66
Church	1,000 sq. ft.	$254	$16	$89
Day Care Center	1,000 sq. ft.	$219	$0	$54
Elementary School	1,000 sq. ft.	$201	$0	$36
High School	1,000 sq. ft.	$201	$0	$36
Hospital	1,000 sq. ft.	$170	$0	$5
Nursing Home	1,000 sq. ft.	$231	$0	$66

Note: Fees may not exactly match official fees due to rounding differences; independent impact analysis required for retail centers of 900,000 sq. ft. or more, wholesale nursery, landscape contractor, golf course, university, agriculture, bus depot, indoor or outdoor arena or core land use.

Source: Derived from EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost/EDU from City of Phoenix, *Infrastructure Financing Plan,* November 15, 2006; secondary property tax offset per EDU from City of Phoenix, *Offsets Report*, 2006 (revised August 27, 2007).

Table 31. Current Equipment Repair Impact Fee Schedule

Land Use	Unit	Northern Growth Area	Southern Growth Area
Single-Family Detached	Dwelling	$74	$61
Single-Family Attached	Dwelling	$74	$61
Multi-Family	Dwelling	$34	$28
Mobile Home/RV Park	Space	$34	$28
Retail Center	1,000 sq. ft.	$71	$58
Bank, S&L w/Drive Thru	1,000 sq. ft.	$49	$36
Convenience Market	1,000 sq. ft.	$71	$58
Conv. Market w/Gas Pumps	1,000 sq. ft.	$51	$38
Gas Stations	1,000 sq. ft.	$0	$0
Lodging, Hotel or Motel	1,000 sq. ft.	$75	$62
Restaurant w/Drive-Thru	1,000 sq. ft.	$50	$37
Restaurant, General	1,000 sq. ft.	$58	$45
Theater, Motion Picture	1,000 sq. ft.	$71	$58
Office, General	1,000 sq. ft.	$62	$50
Office, Medical	1,000 sq. ft.	$58	$47
Manufacturing	1,000 sq. ft.	$25	$20
Warehouse	1,000 sq. ft.	$23	$18
Mini-Warehouse	1,000 sq. ft.	$29	$24
Church	1,000 sq. ft.	$26	$22
Day Care Center	1,000 sq. ft.	$17	$13
Elementary School	1,000 sq. ft.	$12	$8
High School	1,000 sq. ft.	$12	$8
Hospital	1,000 sq. ft.	$3	$0
Nursing Home	1,000 sq. ft.	$20	$16

Note: Fees may not exactly match official fees due to rounding differences; independent impact analysis required for retail centers of 900,000 sq. ft. or more, wholesale nursery, landscape contractor, golf course, university, agriculture, bus depot, indoor or outdoor arena or core land use.

Source: Derived from EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost/EDU from City of Phoenix, *Infrastructure Financing Plan,* November 15, 2006; secondary property tax offset per EDU from City of Phoenix, *Offsets Report*, 2006 (revised August 27, 2007).

Table 32. Current Water Impact Fee Schedule

		Northern Growth Area		Southern Growth Area	
Land Use/Meter Size	Unit	Inside City	Outside City	Inside City	Outside City
Single-Family (< 1" Meter)	Dwelling	$5,110	$4,810	$2,726	$2,426
Mobile Home/RV Park	Space	$5,290	$5,080	$2,906	$2,696
Multi-Family (Individual Meter)	Dwelling	$5,458	$5,278	$3,074	$2,894
Multi-Family (Shared Meter)	Dwelling	$2,438	$2,258	$1,270	$1,090
Nonresid., 5/8" x 3/4" Meter	Meter	$5,110	$4,810	$2,726	$2,426
Nonresid., 3/4" Meter	Meter	$7,965	$7,665	$4,389	$4,089
Nonresid., 1" Meter	Meter	$12,775	$12,025	$6,815	$6,065
Nonresid., 1-1/2" Meter	Meter	$25,790	$24,410	$13,870	$12,490
Nonresid., 2" Disk Meter	Meter	$41,180	$38,930	$22,108	$19,858
Nonresid., 2" Turbine Meter	Meter	$38,480	$34,880	$19,408	$15,808
Nonresid., 3" Displacement Meter	Meter	$76,650	$72,150	$40,890	$36,390
Nonresid., 3" Compound Meter	Meter	$82,120	$77,500	$43,976	$39,356
Nonresid., 3" Turbine Meter	Meter	$83,725	$75,625	$42,005	$33,905
Nonresid., 4" Displ./Comp. Meter	Meter	$127,750	$120,250	$68,150	$60,650
Nonresid., 4" Turbine Meter	Meter	$153,300	$144,300	$81,780	$72,780
Nonresid., 6" Displ./Comp. Meter	Meter	$257,900	$244,100	$138,700	$124,900
Nonresid., 6" Turbine Meter	Meter	$319,375	$301,375	$170,375	$152,375
Nonresid., 8" Displ./Comp. Meter	Meter	$408,800	$384,800	$218,080	$194,080
Nonresid., 8" Turbine Meter	Meter	$459,900	$432,900	$245,340	$218,340

Note: Fees may not exactly match official fees due to rounding differences.
Source: Derived from EDUs/unit from City of Phoenix Code, Chapter 29: Development Impact Fee Ordinance; cost/EDU from City of Phoenix, *Infrastructure Financing Plan,* November 15, 2006; development occupational fee offset and water rate offset per unit from City of Phoenix, *Offsets Report*, 2006 (revised August 27, 2007).

Table 33. Current Wastewater Impact Fees, Single-Family Unit

Service Area/Location	Cost/ EDU	Occup. Fee Offset/Unit	Sewer Rate Offset/Unit	Net Cost/ Unit
Desert View				
Inside City	$4,376	$600	$598	$3,178
Outside City	$4,376	$900	$598	$2,878
North Gateway				
Inside City	$6,637	$600	$598	$5,439
Outside City	$6,637	$900	$598	$5,139
Deer Valley 1				
Inside City	$2,880	$600	$598	$1,682
Outside City	$2,880	$900	$598	$1,382
Deer Valley 2				
Inside City	$2,265	$600	$598	$1,067
Outside City	$2,265	$900	$598	$767
Deer Valley 3				
Inside City	$2,265	$600	$598	$1,067
Outside City	$2,265	$900	$598	$767
Deer Valley 4				
Inside City	$2,620	$600	$598	$1,422
Outside City	$2,620	$900	$598	$1,122
Deer Valley 5				
Inside City	$7,310	$600	$598	$6,112
Outside City	$7,310	$900	$598	$5,812
Estrella North				
Inside City	$2,265	$600	$598	$1,067
Outside City	$2,265	$900	$598	$767
Estrella South				
Inside City	$4,555	$600	$598	$3,357
Outside City	$4,555	$900	$598	$3,057
Laveen West				
Inside City	$3,555	$600	$598	$2,357
Outside City	$3,555	$900	$598	$2,057
Laveen East				
Inside City	$2,265	$600	$598	$1,067
Outside City	$2,265	$900	$598	$767
Ahwatukee				
Inside City	$2,927	$600	$598	$1,729
Outside City	$2,927	$900	$598	$1,429

Note: Fees for other land uses can be derived by determining cost based on fixture units and net cost per fixture unit from Table 34 and deducting offsets determined based on land use or meter size from Table 35.

Source: EDUs/unit from City Code (Sec. 29-8.D.10); cost/EDU from City of Phoenix, *Infrastructure Financing Plan*, November 15, 2006; offsets per fixture unit and per single-family unit from *Offsets Report Appendices*, Appendix D, 2006 (revised August 22, 2007).

Table 34. Current Wastewater Net Cost per Fixture Unit

Service Area	Cost/EDU	Cost/ Fixture Unit	Rate Offset/ Fixture Unit	Net Cost/ Fixture Unit
Desert View	$4,376	$190	$26	$164
North Gateway	$6,637	$289	$26	$263
Deer Valley 1	$2,880	$125	$26	$99
Deer Valley 2	$2,265	$98	$26	$72
Deer Valley 3	$2,265	$98	$26	$72
Deer Valley 4	$2,620	$114	$26	$88
Deer Valley 5	$7,310	$318	$26	$292
Estrella North	$2,265	$98	$26	$72
Estrella South	$4,555	$198	$26	$172
Laveen West	$3,555	$155	$26	$129
Laveen East	$2,265	$98	$26	$72
Ahwatukee	$2,927	$127	$26	$101

Source: Cost/EDU from City of Phoenix, *Infrastructure Financing Plan*, November 15, 2006; cost/fixture unit is cost/EDU divided by 23, based on 23 fixture units per EDU from *Offsets Report Appendices*, Appendix D, 2006 (revised August 22, 2007); rate offset per fixture unit from *Offsets Report Appendices*, Appendix D, 2006 (revised August 22, 2007).

Table 35. Current Wastewater Development Occupational Fee Offset

Land Use/Meter Size	Unit	Inside City	Outside City
Single-Family	Dwelling	$600	$900
Multi-Family	Dwelling	$360	$540
Mobile Home/RV Park	Space	$420	$630
Nonresid., 5/8" x 3/4" Meter	Meter	$600	$900
Nonresid., 3/4" Meter	Meter	$600	$900
Nonresid., 1" Meter	Meter	$1,500	$2,250
Nonresid., 1-1/2" Meter	Meter	$2,760	$4,140
Nonresid., 2" Disk Meter	Meter	$4,500	$6,750
Nonresid., 2" Turbine Meter	Meter	$7,200	$10,800
Nonresid., 3" Displacement Meter	Meter	$9,000	$13,500
Nonresid., 3" Compound Meter	Meter	$9,240	$13,860
Nonresid., 3" Turbine Meter	Meter	$16,200	$24,300
Nonresid., 4" Displ./Comp. Meter	Meter	$15,000	$22,500
Nonresid., 4" Turbine Meter	Meter	$18,000	$27,000
Nonresid., 6" Displ./Comp. Meter	Meter	$27,600	$41,400
Nonresid., 6" Turbine Meter	Meter	$37,500	$55,500
Nonresid., 8" Displ./Comp. Meter	Meter	$48,000	$72,000
Nonresid., 8" Turbine Meter	Meter	$54,000	$81,000

Source: City of Phoenix, *Offsets Report*, Table 3, 2006 (revised August 22, 2007).

Table 36. Current Drainage Impact Fees per Unit

Land Use	Unit	Estrella	Laveen
Single-Family Detached	Dwelling	$1,154	$919
Single-Family Attached	1/4 Acre	$1,154	$919
Multi-Family	1/4 Acre	$1,188	$953
Mobile Home/RV Park	1/4 Acre	$1,188	$953
Retail Center	1/4 Acre	$967	$732
Bank, S&L w/Drive Thru	1/4 Acre	$646	$411
Convenience Market	1/4 Acre	$970	$735
Conv. Market w/Gas Pumps	1/4 Acre	$677	$442
Gas Stations	1/4 Acre	$0	$0
Lodging, Hotel or Motel	1/4 Acre	$1,033	$798
Restaurant w/Drive-Thru	1/4 Acre	$666	$431
Restaurant, General	1/4 Acre	$783	$548
Theater, Motion Picture	1/4 Acre	$967	$732
Office, General	1/4 Acre	$1,003	$768
Office, Medical	1/4 Acre	$953	$718
Manufacturing	1/4 Acre	$1,075	$840
Warehouse	1/4 Acre	$1,048	$813
Mini-Warehouse	1/4 Acre	$1,132	$897
Church	1/4 Acre	$1,221	$986
Day Care Center	1/4 Acre	$1,085	$850
Elementary School	1/4 Acre	$1,012	$777
High School	1/4 Acre	$1,012	$777
Hospital	1/4 Acre	$894	$659
Nursing Home	1/4 Acre	$1,134	$899

Source: Cost per acre, EDUs per acre and cost per EDU from City of Phoenix, *Infrastructure Financing Plan*, November 15, 2006; secondary property tax offset per EDU from City of Phoenix, *Offsets Report*, Table 2, 2006 (revised August 22, 2007).