City of Glendale
Council Workshop Agenda

November 19, 2013 – 1:30 p.m.

Welcome!
We are glad you have chosen to attend this meeting. We welcome your interest and encourage you to attend again.

Form of Government
The City of Glendale has a Council-Manager form of government. Policy is set by the elected Council and administered by the Council-appointed City Manager. The Council consists of a Mayor and six Councilmembers. The Mayor is elected every four years by voters city-wide. Councilmembers hold four-year terms with three seats decided every two years. Each of the six Councilmembers represent one of six electoral districts and are elected by the voters of their respective districts (see map on back).

Voting Meetings and Workshop Sessions
Voting meetings are held for Council to take official action. These meetings are held on the second and fourth Tuesday of each month at 6:00 p.m. in the Council Chambers of the Glendale Muncipal Office Complex, 5850 West Glendale Avenue. **Workshop sessions** provide Council with an opportunity to hear presentations by staff on topics that may come before Council for official action. These meetings are generally held on the first and third Tuesday of each month at 1:30 p.m. in Room B3 of the Glendale Muncipal Office complex.

Special voting meetings and workshop sessions are called for and held as needed.

Executive Sessions
Council may convene to an executive session to receive legal advice, discuss land acquisitions, personnel issues, and appointments to boards and commissions. Executive sessions will be held in Room B3 of the Council Chambers. As provided by state statute, executive sessions are closed to the public.

Regular City Council meetings are telecast live. Repeat broadcasts are telecast the second and fourth week of the month – Wednesday at 2:30 p.m., Thursday at 8:00 a.m., Friday at 8:00 a.m., Saturday at 2:00 p.m., Sunday at 9:00 a.m. and Monday at 1:30 p.m. on Glendale Channel 11.

Meeting Agendas
Generally, paper copies of Council agendas may be obtained after 4:00 p.m. on the Friday before a Council meeting from the City Clerk Department inside Glendale City Hall. Additionally, the agenda and all supporting documents are posted to the city's website, ***www.glendaleaz.com***

Public Rules of Conduct
The presiding officer shall keep control of the meeting and require the speakers and audience to refrain from abusive or profane remarks, disruptive outbursts, applause, protests, or other conduct which disrupts or interferes with the orderly conduct of the business of the meeting. Personal attacks on Councilmembers, city staff, or members of the public are not allowed. It is inappropriate to utilize the public hearing or other agenda item for purposes of making political speeches, including threats of political action. Engaging in such conduct, and failing to cease such conduct upon request of the presiding officer will be grounds for ending a speaker's time at the podium or for removal of any disruptive person from the meeting room, at the direction of the presiding officer.

How to Participate
Voting Meeting - The Glendale City Council values citizen comments and input. If you wish to speak on a matter concerning Glendale city government that is not on the printed agenda, please fill out a blue Citizen Comments Card. Public hearings are also held on certain agenda items. If you wish to speak on a particular item listed on the agenda, please fill out a gold Public Hearing Speakers Card. Your name will be called when the Public Hearing on the item has been opened or Citizen Comments portion of the agenda is reached. **Workshop Sessions -** There is no Citizen Comments portion on the workshop agenda.

When speaking at the Podium, please state your name and the city in which you reside. If you reside in the City of Glendale, please state the Council District you live in and present your comments in five minutes or less.

Regular Workshop meetings are telecast live. Repeat broadcasts are telecast the first and third week of the month – Wednesday at 3:00 p.m., Thursday at 1:00 p.m., Friday at 8:30 a.m., Saturday at 2:00 p.m., Sunday at 9:00 a.m. and Monday at 2:00 p.m. on Glendale Channel 11.

If you have any questions about the agenda, please call the City Manager's Office at (623)930-2870. If you have a concern you would like to discuss with your District Councilmember, please call the City Council Office at (623)930-2249

For special accommodations or interpreter assistance, please contact the City Manager's Office at (623)930-2870 at least one business day prior to this meeting. TDD (623)930-2197.

Para acomodacion especial o traductor de español, por favor llame a la oficina del adminsitrador del ayuntamiento de Glendale, al (623) 930-2870 un día hábil antes de la fecha de la junta.

Councilmembers

Cactus District – Ian Hugh
Cholla District – Manuel D. Martinez
Ocotillo District – Norma S. Alvarez
Sahuaro District – Gary D. Sherwood
Yucca District – Samuel U. Chavira

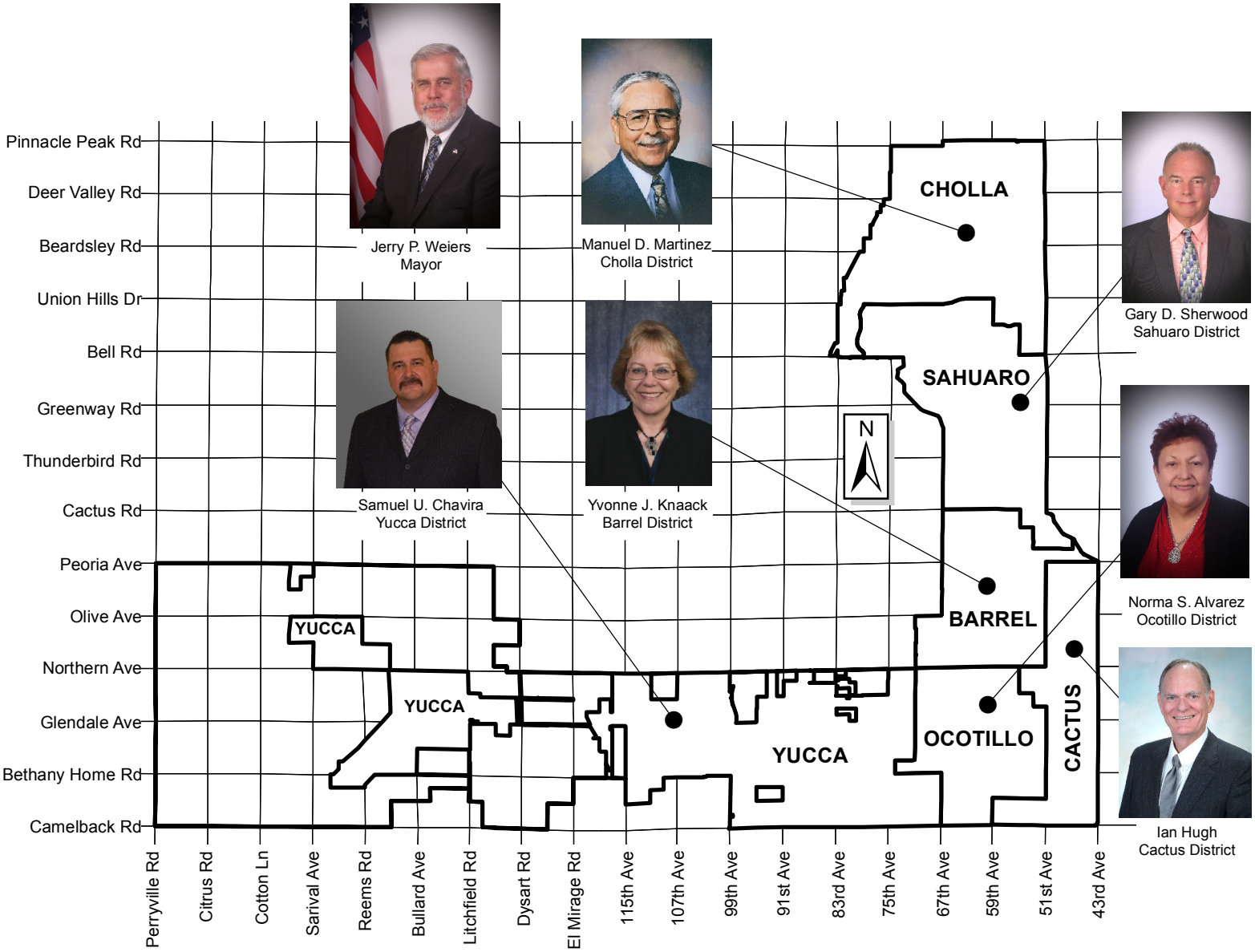
GLENDALE

MAYOR JERRY P. WEIERS
Vice Mayor Yvonne J. Knaack – Barrel District

Appointed City Staff

Brenda S. Fischer – City Manager
Michael D. Bailey – City Attorney
Pamela Hanna – City Clerk
Elizabeth Finn – City Judge

Council District Boundaries



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GLENDALE

GLENDALE CITY COUNCIL WORKSHOP SESSION
Council Chambers – Room B3
5850 West Glendale Avenue
November 19, 2013
1:30 p.m.

One or more members of the City Council may be unable to attend the Workshop or Executive Session Meeting in person and may participate telephonically, pursuant to A.R.S. § 38-431(4).

CALL TO ORDER

WORKSHOP SESSION

1. UPDATE ON DEVELOPMENT IMPACT FEES
   PRESENTED BY: Stuart Kent, Executive Director, Public Works

2. FIRE DEPARTMENT BUDGET DEFICIT
   PRESENTED BY: Mark Burdick, Fire Chief

3. SPECIAL PROJECT RECOMMENDATIONS - IMPLEMENTATION PLAN AND STATUS
   PRESENTED BY: Julie Frisoni, Interim Assistant City Manager
   Jim Brown, Executive Director, Human Resources and Risk Management
   Tom Duensing, Executive Director, Financial Services

4. COUNCIL ITEM OF SPECIAL INTEREST: BALLPARK BOULEVARD EXTENSION THROUGH GLENDALE MUNICIPAL AIRPORT
   PRESENTED BY: Jamsheed Mehta, AICP, Executive Director, Transportation Services
   Stuart Kent, Executive Director, Public Works Director
   Gregory Rodzenko, P.E., City Engineer

CITY MANAGER'S REPORT

This report allows the City Manager to update the City Council. The City Council may only acknowledge the contents to this report and is prohibited by state law from discussing or acting on any of the items presented by the City Manager since they are not itemized on the Council Workshop Agenda.

COUNCIL ITEMS OF SPECIAL INTEREST

Councilmembers may indicate topic(s) they would like to have discussed by the Council at a future Workshop and the reason for their interest. The Council does not discuss the new topics at the Workshop where they are introduced.

EXECUTIVE SESSION

1. LEGAL MATTERS

   A. The City Council will meet with the City Attorney for legal advice, discussion and consultation regarding the city's position in pending or contemplated litigation, including settlement discussions conducted in order to avoid or resolve litigation. (A.R.S. § 38-431.03(A)(3)(4))

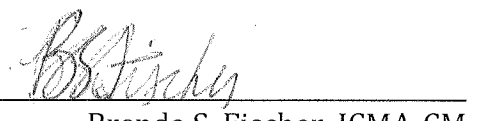
Upon a public majority vote of a quorum of the City Council, the Council may hold an executive session, which will not be open to the public, regarding any item listed on the agenda but only for the following purposes:

(i) discussion or consideration of personnel matters (A.R.S. § 38-431.03(A)(1));
(ii) discussion or consideration of records exempt by law from public inspection (A.R.S. § 38-431.03(A)(2));
(iii) discussion or consultation for legal advice with the city's attorneys (A.R.S. § 38-431.03(A)(3));
(iv) discussion or consultation with the city's attorneys regarding the city's position regarding contracts that are the subject of negotiations, in pending or contemplated litigation, or in settlement discussions conducted in order to avoid or resolve litigation (A.R.S. § 38-431.03(A)(4));
(v) discussion or consultation with designated representatives of the city in order to consider its position and instruct its representatives regarding negotiations with employee organizations (A.R.S. § 38-431.03(A)(5)); or
(vi) discussing or consulting with designated representatives of the city in order to consider its position and instruct its representatives regarding negotiations for the purchase, sale or lease of real property (A.R.S. § 38-431.03(A)(7)).

Confidentiality

Arizona statute precludes any person receiving executive session information from disclosing that information except as allowed by law. A.R.S. § 38-431.03(F). Each violation of this statute is subject to a civil penalty not to exceed $500, plus court costs and attorneys' fees. This penalty is assessed against the person who violates this statute or who knowingly aids, agrees to aid or attempts to aid another person in violating this article. The city is precluded from expending any public monies to employ or retain legal counsel to provide legal services or representation to the public body or any of its officers in any legal action commenced for violation of the statute unless the City Council takes a legal action at a properly noticed open meeting to approve of such expenditure prior to incurring any such obligation or indebtedness. A.R.S. § 38-431.07(A)(B).

Items Respectfully Submitted,



Brenda S. Fischer, ICMA-CM
City Manager

WORKSHOP COUNCIL REPORT

Meeting Date: **11/19/2013**
Meeting Type: **Workshop**
Title: **UPDATE ON DEVELOPMENT IMPACT FEES**
Staff Contact: **Stuart Kent, Executive Director, Public Works**

Purpose and Policy Guidance

City staff, Carson Bise and Dwayne Guthrie with TischlerBise will be present to update City Council on the draft Land Use Assumptions, Infrastructure Improvements Plan (IIP), and preliminary Development Impact Fees (DIF). The approval process as defined in Arizona Revised Statutes (ARS 9-463.05) for development fees is over 250 days and provides ample opportunity for the development community to provide comments and staff is seeking Council concurrence to continue with the process.

Background

Development impact fees are one-time charges to developers that are used to offset capital costs resulting from new development that necessitate the expanding of existing facilities or the development of new facilities to serve growth in a municipality. The collection of these fees allows the municipality to provide the same level of service to the new growth in the community without shifting the cost of growth related projects to the existing residents. Impact fees are charged against the proportional impact of residential, commercial and industrial development and therefore, impact fees typically have not covered more than 30% of any capital project in the last 10 years. It is also important to note that impact fees cannot be used for operating costs, maintenance, paying for compliance requirements to retrofit an existing facility, or to correct deficiencies in existing facilities.

The development of impact fees has historically been completed by developing a cost of service for each service category and then incorporating the costs identified in the city's Capital Improvement Plan (CIP) to develop a cost per unit. Each category's cost per unit was then added up to determine the impact fee for the particular development. These categories included water, sewer, roadways, police, fire, libraries, parks and recreation and open space, general government, sanitation and landfill.

On April 26, 2011, Governor Brewer signed into law Senate Bill 1525 (SB1525) which dramatically changed how impact fees are calculated. Under the new law several categories were eliminated (sanitation, landfill, and general government) and other categories are now restricted on how much DIF can be used to fund capital projects. Overall, the new law establishes a requirement for a "substantial nexus" between the development and the level of necessary public service to be provided. Development impact fees cannot be used to increase the level of service as

compared to the level of service provided to existing residents in the service area. Current impact fee revenue that has already been collected, but not yet spent must be spent by January 2020.

Compliance with the new law required several steps to be taken as full compliance is not required until August 1, 2014. Consistent with the new law, the city took the first step by modifying its impact fee schedule to eliminate categories that are no longer allowed and updated the calculations for all categories based on reductions in the capital plan. As a result, the current development impact fees that were adopted by Council on November 22, 2011 are less than 50% of what the fees were before the law changed. Prior to that action, the city's DIF schedule had not been adjusted since 2006 (adopted by Council on June 13, 2006; effective September 12, 2006).

The changes in state law not only eliminated certain categories from inclusion in DIF, they also modified how impact fees can be collected and used in the future. For example, a recreation facility that exceeds 3,000 square feet cannot have impact fees applied to its construction beyond that size. Furthermore, impact fees cannot include costs related to a number of facilities within a park or recreation facility such as auditoriums, arts and cultural facilities, aquariums, bathhouses, lakes, museums, or other such facilities that are of a regional nature. Regarding library facilities, similar restrictions are in place that only allows for the first 10,000 square feet of a library to be constructed with impact fees. In addition, no books, furniture, fixtures or equipment can be purchased with impact fees.

Other categories such as public safety and water services were only slightly modified. Specifically, the use of impact fees for regional public safety training facilities is disallowed as is the use of impact fees for administrative public safety facilities. Water facilities, like any other impact fee category, cannot use impact fees for regulatory improvements or compliance; however, they can use them to assist with building treatment capacity and delivery systems required to serve an area or facility.

The new legislation also requires the development of a new document called an Infrastructure Improvements Plan that is the basis for the development fees. Historically, the city's CIP was the basis for impact fee calculations. The IIP will only include those capital projects that are related to growth and not include capital projects that either are necessary for regulatory compliance or are for retrofitting existing facilities.

Analysis

Creation of Service Zones

Service zones allow for impact fees that service a specific area to be differentiated from other parts of the community. Using service zones also recognizes that parts of the community may already have nearly all the infrastructure necessary to serve it and other areas of the City may still be early in their development and as a result may need a greater level of infrastructure.

Previously, the only impact fee zones the city had were for parks and recreation. All of the other categories had impact fees calculated for the city as a whole. Based on the anticipated growth areas and Council policy related to development west of 115 Avenue, three different zones are being recommended for certain categories such as Water and Transportation services. Service zones also restrict the usage of fees collected from that zone to be used only in that zone.

While the new law allows for zones, it also requires that all impact fees be spent within 10 years of their collection for the infrastructure outlined in the IIP (15 years is allowed for water infrastructure), otherwise, they must be reimbursed to the developer that paid them. Therefore, collecting impact fees requires that they be collected, spent appropriately and in a timely manner for the infrastructure that they were intended for and not diverted to other projects. If the fees are not spent within the time period they must be returned to the developer.

Method of Review

The new impact fee legislation allows for two different methods for the fees to be reviewed by the community. The first method is a Council appointed Committee tasked with reviewing the IIP and any new or modified impact fees. The second option is an independent, biennial certified audit of land use assumptions, the IIP and the expenditure and collection of impact fees. The audit findings and report must be posted and reviewed at a public hearing within 60 days of their completion.

At the City Council Workshop session of March 5, 2013, Council chose to implement a hybrid method whereby the city will host informal public meetings with the homebuilding, multi-family development, and industrial and commercial development communities, as well as general public, to review the IIP and any new or modified impact fees, as well as contract for the independent, biennial certified audit as specified in the law.

Previous Related Council Action

At the March 5, 2013 Workshop, Council received an update on the DIF and staff received guidance to use a hybrid method for reviewing the IIP and any new or modified impact fees with the community.

On May 22, 2012, Council authorized the City Manager to enter into a professional services contract with TischlerBise Incorporated to update the city's DIF schedule and to develop the IIP.

On November 22, 2011, Council adopted the current version of development impact fees that were modified to be compliant with SB1525 and which took effect on December 31, 2011.

At the September 20, 2011 Workshop, Council was briefed on the potential impacts of SB1525 and directed staff to modify the existing development impact fees to ensure the city can continue to collect development impact fees in accordance with the new law.

Community Benefit/Public Involvement

Prior to the November 22, 2011 Council action adopting the new DIF schedule, city staff met with representatives of the Homebuilders Association of Central Arizona as well as representatives of the Arizona Multi-Housing Association, and both agencies were in agreement with the new fee schedule.

Staff has shared this report with representatives of the Home Builders Association of Central Arizona, representatives of the Multi-family housing Association and representatives of the commercial business associations to solicit their input and comments. As the formal adoption of the land use assumptions and the Infrastructure Improvement Plan will not occur until March, 2014, there is ample time to incorporate any changes to the plan that may be necessary.

Attachments

Draft Land Use Assumptions, Infrastructure Improvements Plan, and Preliminary Development Fees Report

Draft Land Use Assumptions, Infrastructure Improvements Plan, and Development Fees

Prepared for:

City of Glendale, Arizona

November 6, 2013

TischlerBise
Fiscal, Economic & Planning Consultants

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EXECUTIVE SUMMARY

This update of Glendale's Infrastructure Improvements Plan (IIP) and development fees includes the following necessary public services listed below. Glendale currently collects a development fee for library facilities but the recommendation of City staff is to suspend collection when the updated fees become effective (approximately August 2014). Additional background and the reasoning behind this recommendation are discussed in the main body of this report.

- Parks and Recreational Facilities
- Streets
- Police Facilities
- Fire Facilities
- Water Facilities
- Wastewater Facilities

Arizona's enabling legislation for development fees (ARS 9-463.05) calls for three integrated products: 1) Land Use Assumptions for at least 10 years (found in Appendix C), 2) Infrastructure Improvements Plan (contained within each public facility section of this report), and 3) Development Fees (preliminary amounts summarized below and discussed in detail in each public facility section). All three products are contained in this document, but the State now requires a two-phase adoption process. The land use assumptions and IIP will be reviewed, refined, and approved before focusing on the development fees. Because the preliminary fees presented in this draft depend on the land use assumptions and infrastructure plans, the fee amounts will change as the City goes through the adoption process.

In contrast to many General Plans and Master Plans for specific types of infrastructure, the IIP is limited to 10 years. Another important change in the legislation is the requirement that fees be based on the same Level-Of-Service (LOS) provided to existing development. LOS may increase, but not by means of development fees. A final highlight of the enabling legislation is specific limitations on necessary public services. For example, only 10,000 square feet of a new library may be funded with development fees.

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fee represents future development's proportionate share of infrastructure capacity. Development fees may only be used for capital improvements or debt service for growth-related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement or correcting existing deficiencies.

As documented in this report, the City of Glendale has complied with Arizona's development fee enabling legislation and applicable legal precedents. Development fees are proportionate and reasonably related to the capital improvement demands of new development. Specific costs have been identified using local data and current dollars. With input from City staff, TischlerBise determined demand indicators for each type of infrastructure and calculated proportionate share factors to allocate costs by type of development. This report documents the formulas and input variables used to calculate the development fees for each type of public facility. Development fee methodologies also identify the extent to which new development is entitled to various types of credits to avoid potential double payment of growth-related capital costs.

Conceptual Development Fee Calculation

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire jurisdiction (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type

of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure units per demand unit, typically called Level-Of-Service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acreage per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish the cost per acre for land acquisition and/or park improvements.

General Methodologies

There are three general methods for calculating development fees. The choice of a particular method depends primarily on the timing of infrastructure construction (past, concurrent, or future) and service characteristics of the facility type being addressed. Each method has advantages and disadvantages in a particular situation, and can be used simultaneously for different cost components.

Reduced to its simplest terms, the process of calculating development impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss three basic methods for calculating development fees and how those methods can be applied.

Cost Recovery (past improvements)

The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.

Incremental Expansion (concurrent improvements)

The incremental expansion method documents current level-of-service (LOS) standards for each type of public facility, using both quantitative and qualitative measures. By definition there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share to maintain current standards for growth-related infrastructure. Fee revenue will be used to expand or provide additional facilities, as needed to keep pace with new development.

Plan-Based Fee (future improvements)

The plan-based method allocates costs for a specified set of improvements to a specified amount of service units. Improvements are typically identified in a facility master plan and development potential is identified by the land use assumptions. There are two options for determining the cost per service unit: 1) total cost of a public facility can be divided by total demand units (average cost approach), or 2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost approach).

Credits

Regardless of the methodology, a consideration of “credits” is integral to the development of a legally defensible development fee. There are two types of “credits” that should be addressed in development

fee studies and ordinances. The first is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the development fee. This type of credit is integrated into the fee calculation, thus reducing the fee amount. The second is a site-specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program.

Figure 1 summarizes the methods and cost components for each type of infrastructure included in Glendale's IIP and development fee update.

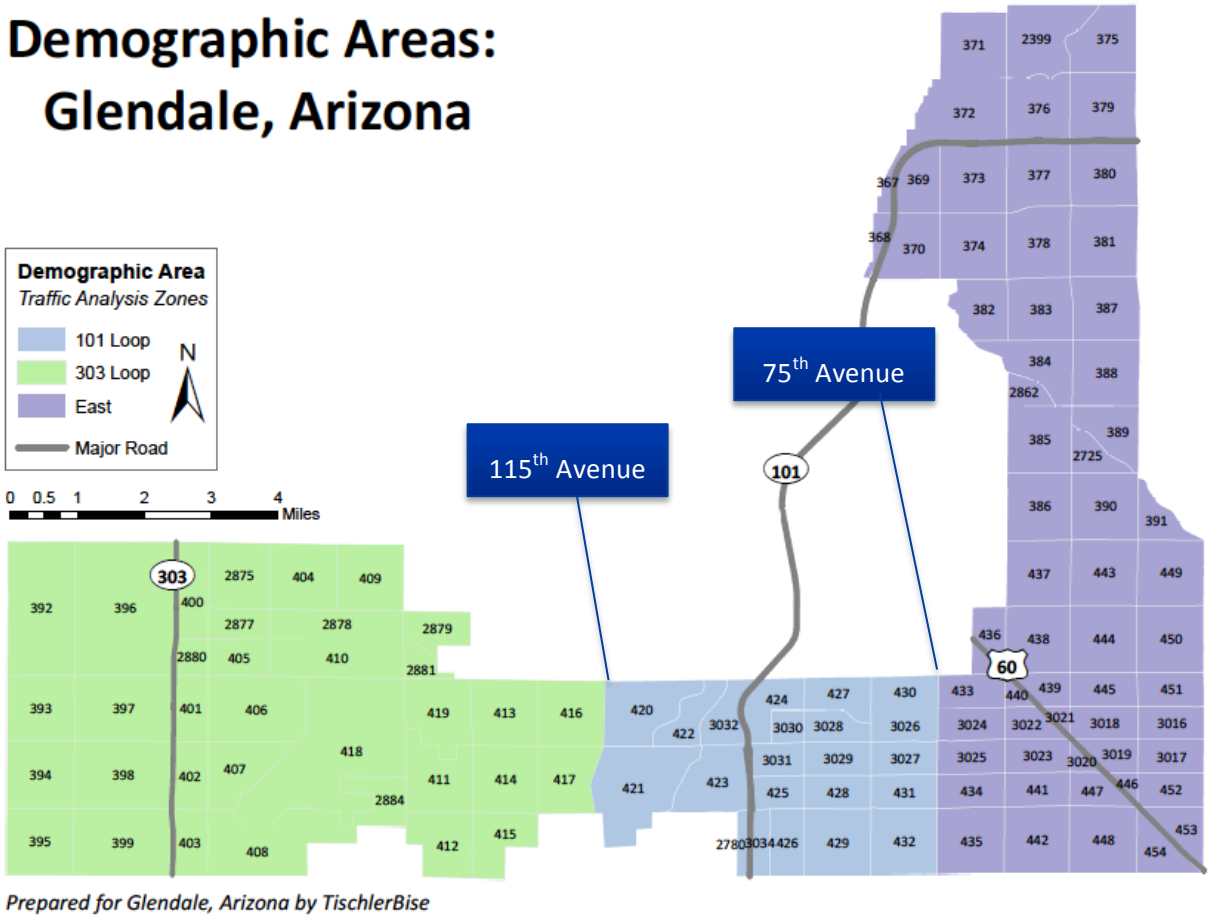
Figure 1 – Development Fee Methods and Cost Components

Type of Fee	***Cost Recovery (past)***	***Incremental Expansion (present)***	***Plan-Based (future)***
1. Parks & Recreation		Mid-size Parks and Trails	
2. Streets			Lane Miles of Arterials & Intersection Improvements
3. Police		Vehicles & Equipment	
4. Fire		Fire Stations & Apparatus	
5. Water	Surface Water Treatment		Surface Water Supply and Major Lines
6. Wastewater	Treatment Plants		Wastewater Collection System

Arizona's enabling legislation requires a determination of service areas, within which a substantial nexus exists between public facilities and the development being served. In Glendale, three demographic areas (shown in Figure 2) provide the basic building blocks used to define the service areas. For example, Glendale does not provide water and wastewater service to the area west of 115th Avenue, so the service area for utilities is East Glendale and the West 101 area. Street facilities are the only type of infrastructure that has three service areas and unique fees for each.

Given the expectation that Glendale will not annex significant residential development west of 115th Avenue within the next five years, residential development in the West 303 area was excluded from the service area and infrastructure improvements plans for all public facilities. Nonresidential development in the West 303 area will be annexed and will pay development fees for streets, police, and fire facilities.

Figure 2 – Demographic Areas for Land Use and Infrastructure Analysis



The preliminary fees shown in this draft study will be revised after public input on the land use assumptions and Infrastructure Improvements Plan (IIP). Also, the preliminary fees do not fully evaluate the need for revenue credits, or the "required offset" (discussed further in Appendix A) that considers available revenues that might be used for growth-related infrastructure.

Non-utility fees for residential development are summarized in Figure 3, including current and proposed fees for each type of infrastructure. Glendale currently collects a library development fee of $398 per single-family dwelling and $314 per multi-family dwelling, but will recommend suspension of this fee when the updated fees become effective in August 2014. The proposed fees vary by three geographic areas. Appendix C provides demographic data and development projections for the three areas.

Figure 3 – Current and Preliminary Non-Utility Fees for Residential Development

Residential	***Per Dwelling Unit in East Glendale***										
Type	*Parks and Recreation*		*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Single Unit	$625	$835	$694	$1,220	$252	$242	$317	$1,133	$1,888	$3,430	$1,542
2+ Units per Structure	$492	$475	$408	$680	$199	$137	$250	$644	$1,349	$1,936	$587
Residential	***Per Dwelling Unit in West 101 Glendale***										
Type	*Parks and Recreation*		*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Single Unit	$625	$835	$694	$3,603	$252	$242	$317	$1,133	$1,888	$5,813	$3,925
2+ Units per Structure	$492	$475	$408	$2,009	$199	$137	$250	$644	$1,349	$3,265	$1,916
Residential	***Per Dwelling Unit in West 303 Glendale****										
Type	*Parks and Recreation*		*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Single Unit	$625	*	$694	*	$252	*	$317	*	$1,888	*	($1,888)
2+ Units per Structure	$492	*	$408	*	$199	*	$250	*	$1,349	*	($1,349)

** Excluded from service area. Glendale anticipates no significant annexation of residential development over the next five years in the West 303 area.*

Fees for nonresidential development, per thousand square feet of floor area, are summarized in Figure 4. There are fee schedules for three geographic areas. For this initial draft of the development fee study, street development fees have been proposed for only four general types of nonresidential development. Additional nonresidential development types can be added, if needed, in the next draft of the fee study. The preliminary fees decrease for all types of nonresidential development in East Glendale. In the West 101 and 303 areas, proposed nonresidential fees increase by 42-155 percent.

Figure 4 – Current and Preliminary Non-Utility Fees for Nonresidential Development

Nonresidential	***Per Thousand Square Feet of Floor Area in East Glendale***								
Type	*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Industrial	$415	$242	$58	$28	$115	$90	$588	$360	($228)
Commercial	$2,156	$1,738	$304	$223	$200	$180	$2,660	$2,141	($519)
Institutional	$1,034	$694	$146	$80	$302	$120	$1,482	$894	($588)
Office & All Other Services	$1,034	$752	$146	$87	$302	$410	$1,482	$1,249	($233)
Nonresidential	***Per Thousand Square Feet of Floor Area in West 101 Glendale***								
Type	*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Industrial	$415	$717	$58	$28	$115	$90	$588	$835	$247
Commercial	$2,156	$5,133	$304	$223	$200	$180	$2,660	$5,536	$2,876
Institutional	$1,034	$2,052	$146	$80	$302	$120	$1,482	$2,252	$770
Office & All Other Services	$1,034	$2,222	$146	$87	$302	$410	$1,482	$2,719	$1,237
Nonresidential	***Per Thousand Square Feet of Floor Area in West 303 Glendale***								
Type	*Streets*		*Police*		*Fire*		*TOTAL*		*Increase/*
	Current	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
Industrial	$415	$892	$58	$28	$115	$90	$588	$1,010	$422
Commercial	$2,156	$6,384	$304	$223	$200	$180	$2,660	$6,787	$4,127
Institutional	$1,034	$2,551	$146	$80	$302	$120	$1,482	$2,751	$1,269
Office & All Other Services	$1,034	$2,763	$146	$87	$302	$410	$1,482	$3,260	$1,778

Current and proposed development fees for water and wastewater facilities are summarized in Figure 5. To be consistent with the current development fee schedule for utilities, TischlerBise can extend the proposed fee tables to indicate fees up to an eight-inch meter in the next draft of this document. In combination, the proposed water and sewer fees for Glendale are 39-43 percent higher, with most of the increase attributable to wastewater facilities.

Figure 5 – Current and Preliminary Fees for Utilities

All Development Types (per meter) in East and West 101 Glendale							
	Water		Wastewater		TOTAL		*Increase/*
Meter Size (inches)	*Current*	*Proposed*	*Current*	*Proposed*	*Current*	*Proposed*	*(Decrease)*
0.75	$3,420	$3,584	$480	$1,950	$3,900	$5,534	$1,634
1.00	$5,820	$5,983	$820	$3,253	$6,640	$9,236	$2,596
1.50	$11,290	$11,925	$1,590	$6,482	$12,880	$18,407	$5,527
2.00	$18,130	$19,085	$2,550	$10,372	$20,680	$29,457	$8,777

To obtain the total development fee for a single residential unit, utility fees (shown in Figure 5) must be added to the non-utility fees (shown in Figure 3). Assuming a 0.75-inch meter for a single residential unit, current and proposed total development fees, by geographic area, are shown in Figure 6. Preliminary fees for residential development are lower in East Glendale due to lower costs of planned improvements for street facilities.

Because Glendale anticipates no significant annexation of residential development over the next five years in the West 303 area, residential development west of 115th Avenue is excluded from the development fee service area. If residential parcels are annexed in the West 303 area, the need for public facilities may be addressed through annexation and development agreements.

Figure 6 – Current and Preliminary Total Fees for a Single Residential Unit by Area

Total Fees for Single Unit Residential (assumes 0.75-inch meter)

Area	*Current*	*Proposed*	*$ Change*	*% Change*
East Glendale	$5,788	$8,964	$3,176	55%
West 101 Glendale	$5,788	$11,347	$5,559	96%
West 303 Glendale*	$1,888	$0	($1,888)	-100%

** Excluded from current utility service area and proposed service area for all fees. Glendale anticipates no significant annexation of residential development over the next five years in the West 303 area.*

PARKS AND RECREATIONAL FACILITIES

ARS 9-463.05 (T)(7)(g) defines the facilities and assets which can be included in the Parks and Recreation Facilities IIP:

> *"Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include vehicles, equipment or that portion of any facility that is used for amusement parks, aquariums, aquatic centers, auditoriums, arenas, arts and cultural facilities, bandstand and orchestra facilities, bathhouses, boathouses, clubhouses, community centers greater than three thousand square feet in floor area, environmental education centers, equestrian facilities, golf course facilities, greenhouses, lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools."*

The infrastructure improvements plan includes components for parks, community centers, and trails. The City has documented existing infrastructure standards and will use an incremental expansion cost method, with development fees maintaining existing standards over time.

Parks and Recreation Service Area

Over the next five years, Glendale will have one service areas for parks and recreation development fees that combines the East and West 101 demographic areas discussed further in the land use assumptions (see Appendix C). Given the expectation that Glendale will not annex significant residential development in the far west portion of the Municipal Planning Area (MPA), the West 303 demographic area is excluded from the parks and recreation service area.

Proportionate Share for Parks and Recreation Facilities

ARS 9-463.05.B.3 states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to serve new development. The City of Glendale has determined the best indicator of the demand for parks and recreation facilities is resident population. Because nonresidential development only creates an indirect and insignificant demand, capital costs are allocated 100% to residential development.

Existing Parks and Standards

As specified in ARS 9-463.05.B.4 development fees in Glendale are based on the same level of service provided to existing development. Figure PR1 inventories existing parks in Glendale that are roughly the same size as future parks that will be funded with development fees. Consistent with Arizona's enabling legislation, large regional parks are excluded from development fees. Also, TischlerBise recommends that Glendale exclude small parks (less than 10 acres) that might not provide a substantial nexus to the entire service area. By eliminating smaller parks, Glendale will no longer have to track collection and expenditure of park fees by sub-areas of the City. Because small parks are project-level improvements (i.e. not a system improvement to be funded by development fees), Glendale may require small parks as a condition of development approval. The average size of the parks listed below is 15.9 acres.

For residential development, Glendale will use resident population to derive current infrastructure standards for parks. Glendale has provided 0.7 acres of mid-size parks for every thousand persons (0.0007 acres per person) in the parks and recreation service area (i.e. East & West 101 demographic areas).

As shown at the bottom of the table, TischlerBise compiled cost factors for parks in Buckeye, Maricopa, Goodyear, and Peoria that average $294,000 per acre for both land and improvements. Based on development fee studies in other jurisdictions, TischlerBise recommends a cost allocation of $100,000 per acre for land and $194,000 per acre for park improvements. To maintain current infrastructure standards for parks, Glendale needs to spend $209.85 for each additional resident.

Figure PR1 – Glendale Parks Inventory

	Park Name	*Acreage*	*Notes*
1	Foothills	43.0	direct benefit
2	Paseo Racquet Center	22.0	
3	Rose Lane	19.0	
4	Chapparal	12.0	
5	Northern Horizon	12.0	only active area
6	O'Neil	11.0	
7	79th & Orangewood Vista	10.0	
8	Bonsall North	10.0	
9	Hidden Meadows	10.0	
10	Sunset Ridge	10.0	
	TOTAL	159.0	
	Average Acres per Park	15.9	

** According to the Arizona enabling legislation, parks up to 30 acres are necessary and Glendale may include larger parks that provide direct benefit to new development.*

Allocation Factors for Park Improvements

Improvements Cost per Acre	$194,000
Improvements Cost per Average Size Park	$3,080,000
Land Cost per Acre	$100,000
Residential Proportionate Share	100%
Nonresidential Proportionate Share	0%
Glendale East & West 101 Residents in 2013	222,749

Infrastructure Standards for Park Improvements

	Improved Acres	*Improvements and Land Cost*
Residential (per person)	0.0007	$209.85

Jurisdiction	*Park*	*Cost per Acre*
Peoria	Pioneer	$358,500
Maricopa	Copper Sky	$345,000
Buckeye (by developer)	Tartesso Sports Park	$266,300
Buckeye (by Town)	Sundance	$253,000
Goodyear (based on fixed assets)	Foothills and Goodyear Com	$248,000
Average for Land plus Improvements =>		$294,200

Infrastructure Improvements Plan for Parks

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure PR2, projected population drives the needs analysis for parks. To maintain current standards in the service area, Glendale will need approximately 12 acres of improved mid-size parks over the next ten years. The ten-year, growth-related capital cost for parks (land plus improvements) is approximately $3.5 million.

Figure PR2 – Parks Needed to Accommodate Growth

Infrastructure Standards and Needs Analysis

Necessary Park Improvements plus Land		0.0007	acres per person
Park Improvements plus Land Cost		$294,000	per acre
		Park Needs	
	Year	*Glendale East & West 101 Residents*	*Park Acres*
Base	2013	222,749	159.0
Year 1	2014	223,971	159.9
Year 2	2015	225,212	160.8
Year 3	2016	226,473	161.7
Year 4	2017	227,753	162.6
Year 5	2018	229,051	163.5
Year 6	2019	230,370	164.4
Year 7	2020	231,711	165.4
Year 8	2021	234,299	167.2
Year 9	2022	236,888	169.1
Year 10	2023	239,476	170.9
	Ten-Yr Increase	16,727	11.9
Growth-Related Need for Park Land plus Improvements =>			$3,499,000

Infrastructure Improvements Plan for Trails

Figure PR3 inventories existing trails in Glendale and documents current infrastructure standards for trails. Existing trails are primarily located in linear parks, along irrigation canals, and in drainage areas that are dry for most of the year. Glendale has provided 0.97 linear feet of trails for every resident in the service area. Staff provided the trail cost factors, with a weighted average of $85 per linear foot for both paved and natural surfaces. To maintain current infrastructure standards for trails, Glendale needs to spend $82.60 for each additional resident.

As shown at the bottom of the table below, projected population drives the needs analysis for trails. To maintain current standards, Glendale will need more than 16,000 linear feet (i.e. three miles) of trails over the next ten years. The ten-year, growth-related capital cost for trails is approximately $1.38 million. Although a specific location has not been identified, the general location would follow the West Valley Rivers Project (Agua Fria Watercourse Master Plan and the New River Multi-Modal Corridor Study), which would place one section of trail near Litchfield Road to the Agua Fria and the other along New River north of Deer Valley Road. The trail elements would include a 10' wide paved surfaces, multi-

use landscape buffer along one side or both, landscape, shade and various amenities (trash cans, benches, signage, water) and lighting.

Figure PR3 – Trail Standards and Needs

Surface Type	*Miles*	$/Linear Foot	
Paved	14	$240	
Natural	27	$5	
TOTAL	41	$85	<= weighted avg
Linear Feet =>	216,480		

Glendale East & West 101 Residents in 2013	222,749
Linear Feet per Person	0.97

Infrastructure Standards and Needs Analysis for Trails

Trials (existing level of service)	0.97	linear feet per person
Trail Cost (weighted average)	$85	per linear foot
Capital Cost	$82.60	per person

		Trail Needs	
	Year	*Glendale East & West 101 Residents*	*Linear Feet of Trails*
Base	2013	222,749	216,480
Year 1	2014	223,971	217,668
Year 2	2015	225,212	218,874
Year 3	2016	226,473	220,099
Year 4	2017	227,753	221,343
Year 5	2018	229,051	222,605
Year 6	2019	230,370	223,887
Year 7	2020	231,711	225,190
Year 8	2021	234,299	227,705
Year 9	2022	236,888	230,221
Year 10	2023	239,476	232,736
Ten-Yr Increase		16,727	16,256
Total Projected Expenditures on Trails =>			$1,382,000

Parks and Recreation Development Fees

Updated development fees for parks and recreation facilities are shown in Figure PR4 (column with light green shading). For a single residential unit, the proposed fee is 34% more than the current fee, while proposed fees for dwellings in a residential structure with two or more units are 3% less than the current fee. Cost factors for parks and recreation facilities are summarized in the upper portion of the table. The conversion of costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons per housing unit is based on 2010 census data for Glendale, as documented in Appendix C.

The cost of professional services related to preparation of the IIP and development fees is specifically authorized in Arizona's enabling legislation. As explained further in Appendix B the cost of professional service is allocated to the projected increase in service units over the next five years, which matches the mandatory update cycle for development fees.

As discussed further in Appendix A, Arizona's enabling legislation requires municipalities to forecast the revenue contribution to be made in the future towards capital costs and shall include these contributions in determining the extent of burden imposed by development. The percentage reduction in development fees for the "required offset" will be refined in the next draft of the development fees.

Figure PR4 – Parks and Recreation Service Units and Fees per Development Unit

Fee Component	*Cost per Person*
Necessary Parks	$209.85
Trails	$82.60
Master Plan, IIP, and Fee Study	$2.75
Required Offset	
TOTAL	$295.20

Type	*Persons per Housing Unit*	*Proposed Fee*	*Current Fees*	*$ Change*	*% Change*
Single Unit	2.83	$835	$625	$210	34%
2+ Units per Structure	1.61	$475	$492	($17)	-3%

Projected Revenue from Parks and Recreation Fees

Development fee revenue should match the need for growth-related infrastructure in the service area, which has a ten-year total cost of approximately $4.9 million. The table below indicates Glendale should receive approximately $4.9 million in parks and recreation fee revenue over the next ten years, if actual development in the service area matches the land use assumptions documented in Appendix C and the City adopts the proposed development fees.

Figure PR5 – Parks and Recreation Development Fee Revenue

Ten-Year Growth-Related Costs for Parks and Recreation

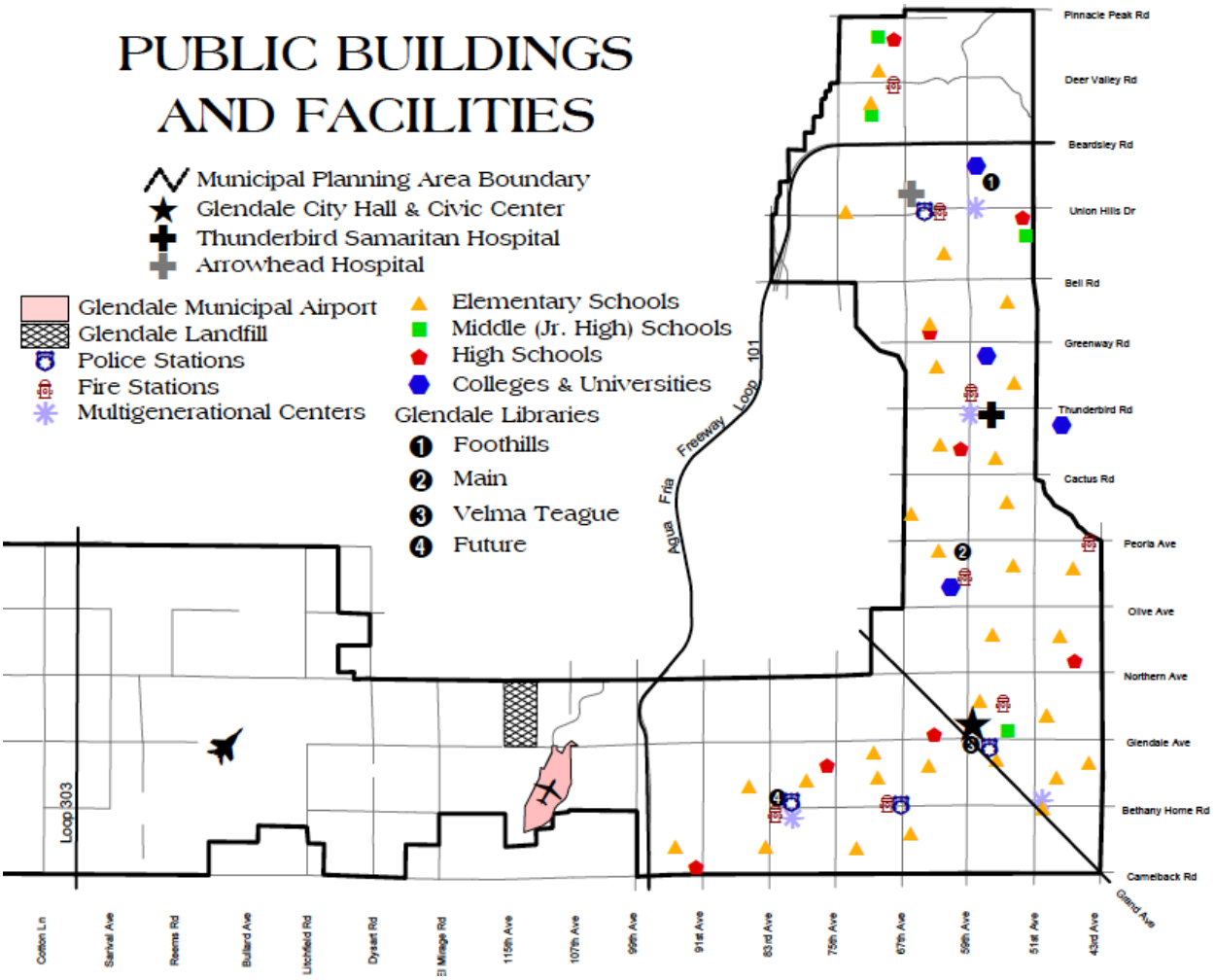
Parks	$3,500,000
Trails	$1,380,000
Total	$4,880,000

		Single Unit	*2+ Units*
		$835	$475
		per housing unit	per housing unit
		71%	29%
	Year	*Hsg Units*	*Hsg Units*
Base	2013	64,029	26,153
Year 1	2014	64,380	26,296
Year 2	2015	64,737	26,442
Year 3	2016	65,099	26,590
Year 4	2017	65,467	26,740
Year 5	2018	65,841	26,893
Year 6	2019	66,220	27,048
Year 7	2020	66,605	27,205
Year 8	2021	67,349	27,509
Year 9	2022	68,093	27,813
Year 10	2023	68,837	28,117
	Ten-Yr Increase	4,808	1,964
	Projected Fees =>	$4,010,000	$930,000
	Total Projected Revenues (rounded) =>		$4,940,000

LIBRARY FACILITIES (NOT RECOMMENDED)

As shown in Figure L1, Glendale has three existing libraries and tentative plans for a fourth library in the West 101 area. The primary reason for the staff recommendation to suspend collect of library development fees is Glendale's limited fiscal resources. Opening a new library in the next ten years would require significant associated operating cost for staffing and operations. Also, development fees accumulate slowly over time, which would likely require additional debt to cover the initial construction of a fourth library.

Figure L1 – Map of Existing and Future Libraries



STREETS

ARS 9-463.05 (T)(7)(f) defines the facilities and assets which can be included in the Street Facilities IIP:

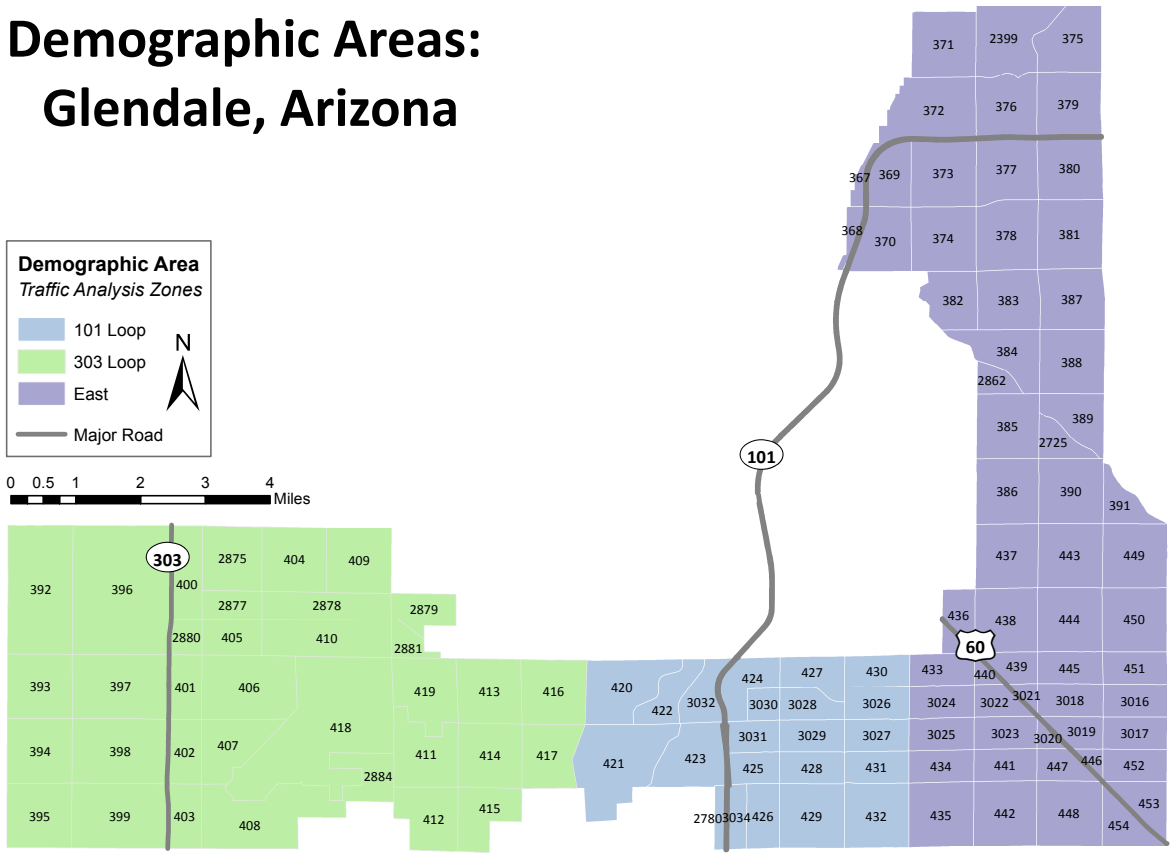
> *"Street facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon."*

Glendale development fees for streets are derived using a plan-based approach for arterial streets and intersection improvements. The streets fee is derived from trip generation rates, trip rate adjustment factors, average trip length weighting factors, and lane capacity. Each component is described below.

Service Areas for Streets

Glendale has identified congestion-related improvements for three demographic areas (i.e. East, West 101, and West 303). The land use assumptions (see Appendix C) describe the boundaries and provide demographic data for the three areas shown below in Figure S1.

Figure S1 – Map of Service Areas for Streets



Prepared for Glendale, Arizona by TischlerBise

Existing Improved Intersections, Lane Miles, and Infrastructure Standards

Lane miles of arterials and improved arterial-arterial or arterial-collector intersections are used to document existing infrastructure standards in Glendale. A lane mile is a rectangular area that is one travel lane wide and one mile long. Glendale will use Vehicle Miles of Travel (VMT) on an average weekday as the service units for documentation of infrastructure standards. One vehicle traveling one mile is a VMT. Documentation of existing and projected VMT by service area is discussed below (see Figure S5, S6, and S7).

Glendale's current policy of is to require half-street improvement of adjacent arterials as a condition of development approval. All local and collector streets are considered project-level improvements not eligible for development fee credits or reimbursements. For the purpose of development fees, intersection improvements include signalization and turn lanes where both streets are classified as arterials, or one street is an arterial and the other street is classified as a collector. Access improvements are considered to be project-level improvements subject to development agreements and are not eligible for development fee credits or reimbursements.

In East Glendale, there are currently 343 lane miles of arterials and 143.5 signalized intersections. The current standard of 1.33 lane miles per 10,000 VMT will decrease to 1.23 by 2023 as the City only anticipates a small addition of 0.7 lane miles over the next ten years in East Glendale. The current standard of 0.56 traffic signals per 10,000 VMT will decrease to 0.54 by 2023, with Glendale planning to improve six intersections in East Glendale over the next ten years. Specific street improvements for East Glendale are listed in Figure S8.

In the West 101 area of Glendale, there are currently 95 lane miles of arterials and 28.5 signalized intersections. The current standard of 1.33 lane miles per 10,000 VMT will decrease to 0.89 by 2023, with the City planning to construct 6.1 lane miles over the next ten years in West 101 Glendale. The current standard of 0.40 traffic signals per 10,000 VMT will decrease to 0.30 by 2023, with Glendale planning to improve five intersections in the West 101 area over the next ten years. Specific street improvements for West 101 Glendale are listed in Figure S9.

In far west Glendale, referred to as the West 303 area, there are currently 172.5 lane miles of arterials and six signalized intersections. The current standard of 1.33 lane miles per 10,000 VMT will decrease to 1.12 by 2023 as the City constructs three lane miles over the next ten years in the West 303 area. The current standard of 0.05 traffic signals per 10,000 VMT will decrease to 0.04 by 2023, with Glendale planning to improve one intersection in West 303 Glendale over the next ten years. Specific street improvements for West 303 Glendale are listed in Figure S10.

Forecast of Service Units

Glendale will use average weekday vehicle miles of travel as the service units for documenting existing infrastructure standards and allocating the cost of future improvements. TischlerBise created an aggregate travel model to convert development units within Glendale's three service areas into vehicle trips and vehicle miles of travel. Figure S2 summarizes the input variables for the travel model. Trip generation rates, expressed as average weekday Vehicle Trip Ends (VTE), are from the Institute of Transportation Engineers (ITE). HU is an abbreviation for housing unit. KSF is an abbreviation for square feet of nonresidential floor area, expressed in thousands. Each input variables is described further below.

Figure S2 – Input Variables for Travel Demand Model

	ITE Code	*Dev Type*	*Weekday VTE*	*Dev Unit*	*Trip Adj*	*Trip Length Wt Factor*
R1	210	Single Units	8.43	HU	64%	1.21
R2	220	2+ Units	4.70	HU	64%	1.21
NR1	150	Industrial	3.56	KSF	50%	0.73
NR2	820	Commercial	42.70	KSF	33%	0.66
NR3	520	Institutional	15.43	KSF	33%	0.73
NR4	710	Office	11.03	KSF	50%	0.73

Trip Generation Rates

Glendale development fees for streets are based on average weekday vehicle trip ends. Trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 2012). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate street fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination point. Therefore, the basic trip adjustment factor is 50%. As discussed further below, the fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip generation rates using local demographic data. Key independent variables needed for the analysis (i.e. vehicles available, housing units, households and persons) are available from American Community Survey (ACS 2011) data for Glendale. Customized average weekday trip generation rates by type of housing, which are lower than the national averages, are shown in Figure S3.

Figure S3 – Customized Residential Trip Rates for Glendale

Glendale, Arizona	Vehicles Available (1)	Households (2) Single Unit per Structure	Households (2) 2+ Units per Structure	Households (2) Total	Vehicles per Household by Tenure
Owner-occupied	93,929	46,200	430	46,630	2.01
Renter-occupied	41,536	12,338	20,231	32,569	1.28
TOTAL	135,465	58,538	20,661	79,199	1.71
Housing Units (6) =>		65,528	27,361	92,889	

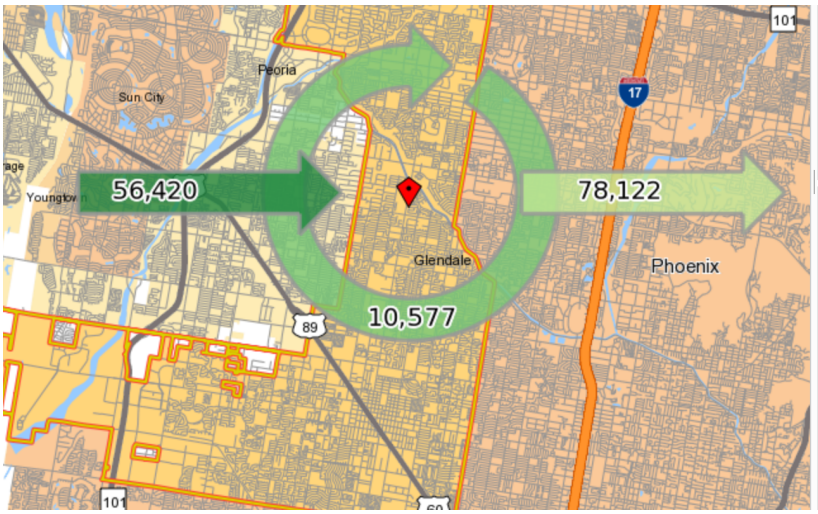
Units per Structure	Persons (3)	Trip Ends (4)	Vehicles by Type of Housing	Trip Ends (5)	Average Trip Ends	Trip Ends per Housing Unit
Single Unit	183,638	475,335	108,798	628,912	552,124	8.43
2+ Units	43,748	151,741	26,667	105,362	128,552	4.70
TOTAL	227,386	627,076	135,465	734,275	680,676	7.33

(1) Vehicles available by tenure from Table B25046, American Community Survey, 2011.
(2) Households by tenure and units in structure from Table C25032, American Community Survey, 2011.
(3) Persons by units in structure from Table C25033, American Community Survey, 2011.
(4) Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is EXP(0.91*LN(persons)+1.52). To approximate the average population of the ITE studies, persons were divided by 330 and the equation result multiplied by 330. For 2+ unit housing (ITE 220), the fitted curve equation is (3.47*persons)-64.48.
(5) Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.81). To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 423 and the equation result multiplied by 423. For 2+ unit housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58.
(6) Housing units from Table B25024, American Community Survey, 2011.

Adjustments for Commuting Patterns and Pass-By Trips

Residential development has a larger trip adjustment factor of 64% to account for commuters leaving Glendale for work. In other words, residential development is assigned all inbound trips plus 14% of outbound trips to account for job locations outside of Glendale. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31% of production trips (i.e., all out-bound trips, which are 50% of all trip ends). As shown in Figure S4, the Census Bureau's web application OnTheMap indicates that approximately 88% of resident workers traveled outside the city for work in 2011. In combination, these factors (0.31 x 0.50 x 0.88 = 0.14) support the additional 14% allocation of trips to residential development.

Figure S4 - Inflow/Outflow Analysis



Inflow/Outflow Job Counts (All Jobs)

	2011 Count	Share
Employed in the Selection Area	66,997	100.0%
Employed in the Selection Area but Living Outside	56,420	84.2%
Employed and Living in the Selection Area	10,577	15.8%
Living in the Selection Area	88,699	100.0%
Living in the Selection Area but Employed Outside	78,122	88.1%
Living and Employed in the Selection Area	10,577	11.9%

For commercial development, the trip adjustment factor is less than 50% because retail development attracts vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, the ITE data indicates that 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66% multiplied by 50%, or approximately 33% of the trip ends.

Many institutional land uses, like schools and day-care, also have significant pass-by and diverted link trips as children are dropped off and picked up by parents on their way to some other primary destination. Given this travel pattern, TischlerBise recommends the pass-by adjustment for all institutional development.

Trip Length Weighting Factor by Type of Land Use

The streets fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6 of the 2009 National Household Travel Survey, vehicle trips from residential development are approximately 121% of the average trip length. The residential trip length adjustment factor includes data on home-based work trips, social, and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 66% of the average trip length while other nonresidential development typically accounts for trips that are 73% of the average for all trips.

Lane Capacity

Street impact fees are based on a lane capacity standard of 7,500 vehicles per lane, obtained from the Florida Department of Transportation, Quality/LOS Handbook (2009). This standard is for a Class II, four-lane divided road, operating at LOS "D", averaging 33,200 average daily trips, with a 10% reduction for major city/county roads. The specific formula is 33200, divided by 4, multiplied by 0.90, with the result rounded to hundreds. City staff and URS, the City's transportation consultant, reviewed the lane capacity standard and confirmed it was appropriate for Glendale.

Projected Travel Demand

The relationship between development in Glendale's three service areas, and the need for system improvements, is shown in Figures S5, S6, and S7. At the top of the tables are both existing and projected development units in Glendale, by service area. The tables include annual calculations, but years 6-9 are hidden from view. Trip generation rates and trip adjustment factors convert projected development into average weekday vehicle trips, as shown in the middle section of the table. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. This progression of travel up and down the functional classification chain limits the average trip length determination, for the purpose of development fees, to the following question, "What is the average vehicle trip length on system improvements (i.e., arterial streets in Glendale)?"

With 343 lane miles of arterials in East Glendale and a lane capacity standard of 7,500 vehicles per lane per day, the existing development fee network has approximately 2.57 million vehicle miles of capacity (i.e., 7,500 vehicles per lane over the entire 343 lane miles). To derive the average utilization (i.e., average trip length expressed in miles) of the system improvements, we divide vehicle miles of capacity by vehicle trips attracted to development in Glendale. As shown below, development in East Glendale currently attracts 674,814 average weekday vehicle trips. Dividing 2,572,500 vehicle miles of capacity by 674,814 average weekday vehicle trips yields an un-weighted average trip length of approximately 3.81 miles. However, the calibration of average trip length includes the same adjustment factors used in the development fee calculations (i.e., journey-to-work commuting, commercial pass-by adjustment, and average trip length adjustment by type of land use). With these refinements, the weighted-average trip length is 3.89 miles.

At the bottom of Figure S5 are Vehicle Miles of Travel (VMT), which is a measurement unit equal to one vehicle traveling one mile. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length. Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire urban area, are derived from traffic counts on particular road segments multiplied by the length of that road segment. For the purpose of development fees, VMT calculations are based on attraction (inbound) trips to development located in the service area, with the trip lengths calibrated to the road network considered to be system improvements. This refinement eliminates pass-through or external- external trips, and travel on roads that are not system improvements (e.g. interstate highways).

Figure S5 – Ten-Year Travel Demand in East Glendale

Year->	*Base*	*1*	*2*	*3*	*4*	*5*	*10*	*10-Year*
East Glendale	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*	*Increase*
Single Units (71%)	57,571	57,747	57,925	58,102	58,281	58,460	59,871	2,300
2+ Units (29%)	23,515	23,587	23,659	23,732	23,805	23,878	24,455	940
Industrial KSF	10,230	10,360	10,490	10,610	10,740	10,860	11,440	1,210
Commercial KSF	14,610	14,750	14,900	15,040	15,190	15,330	16,090	1,480
Institutional KSF	7,130	7,250	7,370	7,500	7,620	7,750	8,420	1,290
Office KSF	6,000	6,370	6,750	7,140	7,540	7,950	10,130	4,130
Single Unit Res Trips	310,607	311,557	312,517	313,472	314,438	315,403	323,016	
2+ Units ResTrips	70,733	70,950	71,166	71,386	71,605	71,825	73,561	
Industrial Trips	18,209	18,441	18,672	18,886	19,117	19,331	20,363	
Commercial Trips	205,870	207,842	209,956	211,929	214,042	216,015	226,724	
Institutional Trips	36,305	36,916	37,527	38,189	38,800	39,462	42,874	
Office Trips	33,090	35,131	37,226	39,377	41,583	43,844	55,867	
Total Vehicle Trips	674,814	680,836	687,065	693,239	699,586	705,881	742,405	
Vehicle Miles of Travel (VMT)	2,572,250	2,590,991	2,610,300	2,629,488	2,649,150	2,668,701	2,786,958	214,707
LANE MILES	343.0	345.5	348.0	350.6	353.2	355.8	371.6	28.6
Improved Intersections	143.5	144.5	145.6	146.7	147.8	148.9	155.5	12.0

The analysis discussed above for East Glendale was replicated for the West 101 area, as shown in Figure S6. Average trip length in West 101 Glendale is 9.76 miles.

Figure S6 – Travel Demand in West 101 Area

Year->	*Base*	*1*	*2*	*3*	*4*	*5*	*10*	*10-Year*
West 101 Loop	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*	*Increase*
Single Units (71%)	6,458	6,633	6,813	6,997	7,186	7,381	8,966	2,508
2+ Units (29%)	2,638	2,709	2,783	2,858	2,935	3,015	3,662	1,024
Industrial KSF	1,760	1,870	1,990	2,120	2,260	2,410	3,280	1,520
Commercial KSF	1,300	1,380	1,470	1,570	1,670	1,780	2,450	1,150
Institutional KSF	1,070	1,100	1,120	1,140	1,170	1,190	1,320	250
Office KSF	710	820	960	1,110	1,290	1,490	3,020	2,310
Single Unit Res Trips	34,842	35,786	36,757	37,750	38,770	39,822	48,373	
2+ Units ResTrips	7,935	8,149	8,371	8,597	8,828	9,069	11,015	
Industrial Trips	3,133	3,329	3,542	3,774	4,023	4,290	5,838	
Commercial Trips	18,318	19,446	20,714	22,123	23,532	25,082	34,523	
Institutional Trips	5,448	5,601	5,703	5,805	5,958	6,059	6,721	
Office Trips	3,916	4,522	5,294	6,122	7,114	8,217	16,655	
Total Vehicle Trips	73,592	76,833	80,382	84,170	88,225	92,540	123,127	
Vehicle Miles of Travel (VMT)	712,219	739,959	769,974	801,707	835,498	871,235	1,131,890	419,671
LANE MILES	95.0	98.7	102.7	106.9	111.4	116.2	150.9	56.0
Improved Intersections	28.5	29.6	30.8	32.1	33.4	34.9	45.3	16.8

The travel demand analysis of the West 303 area is shown in Figure S7. Average trip length in West 303 Glendale is 16.76 miles. A unique feature of the West 303 needs analysis is the expectation that Glendale will not annex any significant amount of residential development over the next five years. Even though the table below covers ten years, the City must update the land use assumptions and IIP every five years and will reevaluate this assumption during the update process.

Figure S7 – Travel Demand in West 303 Area

Year->	*Base*	*1*	*2*	*3*	*4*	*5*	*10-Year*
West 303 Loop	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*Increase*
Single Units (71%)	7,534	7,534	7,534	7,534	7,534	7,534	0
2+ Units (29%)	3,077	3,077	3,077	3,077	3,077	3,077	0
Industrial KSF	770	880	1,000	1,150	1,310	1,500	2,150
Commercial KSF	690	740	780	830	880	940	580
Institutional KSF	490	510	530	550	570	580	200
Office KSF	1,850	2,000	2,150	2,310	2,470	2,650	1,790
Single Unit Res Trips	40,647	40,647	40,647	40,647	40,647	40,647	
2+ Units ResTrips	9,256	9,256	9,256	9,256	9,256	9,256	
Industrial Trips	1,371	1,566	1,780	2,047	2,332	2,670	
Commercial Trips	9,723	10,427	10,991	11,696	12,400	13,246	
Institutional Trips	2,495	2,597	2,699	2,801	2,902	2,953	
Office Trips	10,203	11,030	11,857	12,740	13,622	14,615	
Total Vehicle Trips	73,694	75,524	77,230	79,186	81,159	83,387	
Vehicle Miles of Travel (VMT)	1,293,999	1,315,594	1,335,846	1,358,989	1,382,351	1,408,656	270,951
LANE MILES	172.5	175.4	178.1	181.2	184.3	187.8	36.1
Improved Intersections	6.0	6.1	6.2	6.3	6.4	6.5	1.3

Infrastructure Improvements Plan for Streets

URS worked with Glendale engineering staff to create ten-year infrastructure improvements plans for each service area. The engineering team evaluated projects identified by the region's computerized transportation model and local traffic studies. The "need" for improvements due to traffic "congestion" is more difficult to determine for an open system, like streets, than for closed systems, like water and sewer systems. Also, the demand for street capacity can be influenced by development units outside the service area and by what is know as "triple convergence." In essence, this concept acknowledges that transportation capacity is consumed by drivers changing their time, route, and mode of travel, with the latter being more significant in urban areas. Because "congestion" is a relative and more subjective term that is closely connected with a person's willingness to pay, TischlerBise recommends that development fees for street improvements embrace the willingness-to-pay concept. The prioritized lists of street improvements shown in Figures S8-10 can be expanded or contracted until the perceived need for improvements balances the willingness to pay for the improvements through development fees. The prioritized improvements are in areas expected to experience congestion problems due to traffic flowing from a larger travel shed (conceptually like a funnel that tapers to fit into a bottleneck). Therefore, the location of improvements is not based on accurately forecasting the exact location of future development. If a developer is asked to construct a system improvement (i.e. a project on the list) as a condition of development approval, it will be necessary for Glendale to provide a site-specific credit or reimburse the developer from future fee collections. The City will continue to require project level improvements, such as turn lanes and signals for ingress/egress, and half-street construction of adjacent arterials.

Figure S8 summarizes the streets IIP for East Glendale, including improvements to six intersections and widening one arterial (0.7 lane miles of capacity). The projected cost of improvements to streets in the east service area is $10.3 million.

Figure S8 – East IIP for Streets

2014-2018					
Priority	**Project Name**	**Type**	**Added Capacity**	**Description**	**Est. Cost (millions)**
1	59th Ave. & Olive Ave.	Intersection Capacity Improvements	1 intersection	Including Olive WB & EB Rt Turn lanes, SB Bus Bay (S of Olive), and NB Bus bay (N of Olive)	1.473
2	59th Ave. & Glendale Ave. DMS (Sports Facilities Fiber)	DMS		Install 2 DMS along 59th Ave. and 1 on Glendale Ave. NB and SB 59th Ave. approaching L 101. WB Glendale Ave. west of 67th Ave. on the same structure as the EB sign (no com needed)	0.626
3	51st Ave. & Olive Ave. ITS (Last Mile ITS)	ITS		Construct last mile ITS connections to intersections along 51st Ave. and Olive Ave. (5.7% local match and 100% design)	0.247
Subtotal					**2.346**
2019-2023					
Priority	**Project Name**	**Type**	**Added Capacity**	**Description**	**Est. Cost (millions)**
4	59th Ave. & Thunderbird Rd.	Intersection Capacity Improvements	1 intersection	Improvements could include new right-turn lanes, dual left-turn lanes, additional through lanes, and new bus bays	1.750
5	67th Ave DMS: Camelback to Pinnacle Peak	DMS		Install 4 DMS along 67th Avenue. NB and SB 67th Ave. approaching Glendale Ave. and Loop 101.	0.976
6	59th Ave. & Northern	Intersection Capacity Improvements	1 intersection	Improvements could include new right-turn lanes, dual left-turn lanes, additional through lanes, and new bus bays	0.900
7	51st Ave. & Peoria	Intersection Capacity Improvements	1 intersection	Improvements could include new right-turn lanes, dual left-turn lanes, additional through lanes, and new bus bays	0.800
8	75th : Loop 101 to Rose Garden Lane	Segment	0.7 lane-miles	Add 1 NB lane and 1 SB lane	2.617
9	63rd & Northern Ave.	Minor Intersection	1 minor intersection	Add Traffic Signal, Conduit, Fiber, Cable, Camera	0.514
10	Ocotillo & 67th Avenue	Minor Intersection	1 minor intersection	Add Traffic Signal, Conduit, Fiber, Cable	0.415
Subtotal					**7.972**
			6	**Intersections**	
East Service Area Total			**0.7**	**Lane-Miles**	**10.318**

Proposed improvements in the West 101 service area include five intersections, plus 6.1 lane miles of arterials. As shown in Figure S9, with total street improvements in West 101 Glendale are estimated to cost $23.7 million over ten years.

Figure S9 – West 101 IIP for Streets

2014-2018					
Priority	**Project Name**	**Type**	**Added Capacity**	**Description**	**Est. Cost (millions)**
1A	Incremental Outside Lane Widening	Segment	1 lane-mile	Includes pavement, curb & Gutter, sidewalk, landscaping, street lights, ITS, and ROW	4.100
1B	Incremental Inside Lane	Segment	1 lane-mile	Includes pavement	0.900
2	99th Ave. ITS/DMS: Camelback - Northern	ITS/Signals		Install conduit, fiber, CCTV and DMS on 99th Ave. between Camelback and Northern	1.942
3	Camelback Road DMS	DMS		Install 1 DMS along Camelback Road. WB Camelback east of 91st Ave.	0.371
Subtotal					**7.313**
2019-2023					
Priority	**Project Name**	**Type**	**Added Capacity**	**Description**	**Est. Cost (millions)**
4	Glendale Ave. ITS: 99th Ave. to 115th Ave.	ITS/DMS		Install conduit, fiber, CCTV and 2 DMS.	1.077
5	Bethany Home Road: 83rd Ave. to 91st Ave.	Segment	.1 lane-mile	Widen to 4 lanes (north 1/2) including ROW	7.605
6	Incremental Minor Intersection Improvements	Minor Intersection Improvements	5 minor intersectio ns	Add Traffic signal, conduit, fiber, cable, camera and widen collector street as necessary. ($500,000 each)	2.500
7	Glendale Ave. DMS: 75th to 115th	DMS		Install 1 DMS along Glendale Ave. WB Glendale east of 91st Ave.	0.242
8A	Incremental Outside Lane Widening	Segment	1 lane-mile	Includes pavement, curb & gutter, sidewalk, landscaping, street lights, ITS and ROW	4.100
8B	Incremental Inside Lane Installation	Segment	1 lane-mile	Includes pavement	0.900
Subtotal					**16.424**
			5	**Intersections**	
West Loop 101 Service Area Total			**6.1**	**Lane-miles**	**23.737**

West 303 Glendale's IIP for streets includes one intersection and three lane miles of additional capacity over the next ten years. The projected cost of improvements is $11.08 million.

Figure S10 – West 303 IIP for Streets

West Loop 303 Service Area - Prioritized Projects - 2014-2023					
2014-2018					
Priority	**Project Name**	**Type**	**Added Capacity**	**Description**	**Est. Cost (millions)**
1	Glendale Ave ITS: Litchfield -115th	DMS		DMS between Dysart and Litchfield, count stations west of Dysart and on Litchfield north and south of Glendale Ave. and fiber	1.634
2	Incremental Outside Lane Widening	Segment	0.5 lane-mile	Includes pavement, curb & gutter, sidewalk, landscaping, street lights, ITS and ROW	2.000
3	Incremental Inside Lane Installation	Segment	1 lane-mile	Includes pavement	0.900
4	Incremental Intersection Improvement	Intersection Capacity	1 intersection	Includes pavement widening, traffic signal, curb & gutter, sidewalk, sidewalk ramps, ITS and ROW	2.300
Subtotal					**6.834**
2019-2023					
5	Northern Parkway ITS: Sarival to 115th	DMS		Install conduit, fiber, CCTV and DMS along Northern Parkway and connect it to the system at Glendale Ave. and Litchfield	1.345
6	Incremental Outside Lane Widening	Segment	0.5 lane-mile	Includes pavement, curb & gutter, sidewalk, landscaping, street lights, ITS and	2.000
7	Incremental Inside Lane Installation	Segment	1 lane-mile	Includes pavement	0.900
Subtotal					**4.245**
			1	**Intersection**	
Total			**3**	**Lane Miles**	**11.079**

Development Fees for Streets

Figure S11 indicates 2013 and 2023 development units (at the top) and the increase in average weekday vehicle miles of travel in the middle of the table. The service unit index compares VMT by type of land use to the travel demand for a single residential unit. Current and proposed fees are shown at the bottom of Figure S11. Proposed street development fees in East Glendale are 67-76 percent higher for residential development, but lower for nonresidential development. To derive the streets fee by type of development, multiply its proportionate share factor (based on the ten-year increase in VMT as shown in the right column in the middle section) by the total cost of improvements and divide by the increase in development units. For example, the fee for a single residential unit is 0.2721*$10,318,00/2,301, or $1,220 per unit (truncated).

Figure S11 – Streets Development Fee Schedule East

Development Type (1)	*2013 Development Units (2)*	*2023 Development Units (2)*	*Additional Units 2013-2023*
Single Housing Units (71%)	57,570	59,871	2,301
2+ Housing Units (29%)	23,515	24,455	940
Industrial KSF	10,230	11,440	1,210
Commercial KSF	14,610	16,090	1,480
Institutional KSF	7,130	8,420	1,290
Office & All Other Services KSF	6,000	10,130	4,130
Housing Unit Total	81,085	84,326	3,241
Nonres KSF Total	37,970	46,080	8,110

(1) Single Housing Units = SFD, SFA, and MH; KSF = square feet of floor area in thousands.
(2) Land Use Assumptions, TischlerBise August 12, 2013.
(3) Trip Generation, Institute of Transportation Engineers, 2012.
Retail and institutional include 34% pass-by adjustment.

Streets Cost Allocation - East Glendale

Development Type	*Avg Wkdy Veh Trip Ends per Development Unit (3)*	*Trip Adjustment Factors*	*Trip Length Weighting Factor*	*Vehicle Miles of Capacity per Development Unit*	*Service Unit Index*	*Ten-Year VMT Increase*	*Proportionate Share by Development Type*
Single Housing Units	8.43	64%	121%	25.39	1.00	58,433	27.21%
2+ Housing Units	4.70	64%	121%	14.16	0.56	13,309	6.20%
Industrial	3.56	50%	73%	5.05	0.20	6,116	2.85%
Commercial	42.70	33%	66%	36.18	1.42	53,542	24.93%
Institutional	15.43	33%	73%	14.46	0.57	18,653	8.69%
Office & Other Services	11.03	50%	73%	15.66	0.62	64,680	30.12%
					TOTAL	214,733	100.00%

3.89 <= average utilization (trip miles)
343 <= existing arterial lane miles

Street Fees - East Glendale

Development Type	*Current Fees*	*Proposed Fee in East Glendale*	*$ Change*	*% Change*
Single Housing Units	$694	$1,220	$526	76%
2+ Housing Units	$408	$680	$272	67%
Industrial	$415	$242	($173)	-42%
Commercial	$2,156	$1,738	($418)	-19%
Institutional	$1,034	$694	($340)	-33%
Office & Other Services	$1,034	$752	($282)	-27%

Ten-Year Improvements Plan => $10,318,000

Figure S12 indicates 2013 and 2023 development units in the West 101 service area and the increase in average weekday vehicle miles of travel (see middle of table). The service unit index compares VMT by type of land use to the travel demand for a single residential unit. Current and proposed fees are shown at the bottom of the table below. Proposed fees are significantly higher than current fees for all types of development. To derive the streets fee per thousand square feet of industrial floor area multiply the proportionate share factor (0.0459) by the IIP cost ($23,737,000) and divide by the ten-year increase in industrial space (1,520 square feet expressed in thousands), which yields $717. The fee per KSF is multiplied by the size of a specific building (expressed in thousands) to yield the total development fee. For example, a 101,000 square feet warehouse would pay a street development fee of $72,417.

Figure S12 – Streets Development Fee Schedule West 101

Development Type (1)	*2013 Development Units (2)*	*2023 Development Units (2)*	*Additional Units 2013-2023*
Single Housing Units (71%)	6,458	8,966	2,508
2+ Housing Units (29%)	2,638	3,662	1,024
Industrial KSF	1,760	3,280	1,520
Commercial KSF	1,300	2,450	1,150
Institutional KSF	1,070	1,320	250
Office & All Other Services KSF	710	3,020	2,310
Housing Unit Total	9,096	12,628	3,532
Nonres KSF Total	4,840	10,070	5,230

(1) Single Housing Units = SFD, SFA, and MH; KSF = square feet of floor area in thousands.
(2) Land Use Assumptions, TischlerBise August 12, 2013.
(3) Trip Generation, Institute of Transportation Engineers, 2012.
Retail and institutional include 34% pass-by adjustment.

Streets Cost Allocation - West 101 Glendale

Development Type	*Avg Wkdy Veh Trip Ends per Development Unit (3)*	*Trip Adjustment Factors*	*Trip Length Weighting Factor*	*Vehicle Miles of Capacity per Development Unit*	*Service Unit Index*	*Ten-Year VMT Increase*	*Proportionate Share by Development TYPE*
Single Housing Units	8.43	64%	121%	63.72	1.00	159,798	38.08%
2+ Housing Units	4.70	64%	121%	35.52	0.56	36,376	8.67%
Industrial	3.56	50%	73%	12.68	0.20	19,277	4.59%
Commercial	42.70	33%	66%	90.77	1.42	104,384	24.87%
Institutional	15.43	33%	73%	36.28	0.57	9,070	2.16%
Office & Other Services	11.03	50%	73%	39.29	0.62	90,767	21.63%
					TOTAL	419,672	100.00%

9.76 <= average utilization (trip miles)
95.0 <= existing arterial lane miles

Street Fees - West 101 Glendale

Development Type	*Current Fees*	*Proposed Fee in West 101*	*$ Change*	*% Change*
Single Housing Units	$694	$3,603	$2,909	419%
2+ Housing Units	$408	$2,009	$1,601	392%
Industrial	$415	$717	$302	73%
Commercial	$2,156	$5,133	$2,977	138%
Institutional	$1,034	$2,052	$1,018	98%
Office & Other Services	$1,034	$2,222	$1,188	115%

Ten-Year Improvements Plan => $23,737,000

Figure S13 indicates 2013 and 2023 development units in the West 303 service area and the increase in average weekday vehicle miles of travel in the middle of the table. The service unit index compares VMT by type of land use to the travel demand for a single residential unit. Current and proposed fees are shown at the bottom of the table below. To derive the streets fee by type of development, multiply its proportionate share factor (based on the ten-year increase in VMT, as shown in the right column in the middle section) by the total cost of improvements and divide by the increase in development units.

Figure S13 – Streets Development Fee Schedule West 303

Development Type (1)	*2013 Development Units (2)*	*2023 Development Units (2)*	*Additional Units 2013-2023*
Single Housing Units (71%)*	7,534	7,534	0
2+ Housing Units (29%)*	3,077	3,077	0
Industrial KSF	770	2,920	2,150
Commercial KSF	690	1,270	580
Institutional KSF	490	690	200
Office & All Other Services KSF	1,850	3,640	1,790
Housing Unit Total	10,611	14,031	3,420
Nonres KSF Total	3,800	8,520	4,720

(1) Single Housing Units = SFD, SFA, and MH; KSF = square feet of floor area in thousands.
(2) Land Use Assumptions, TischlerBise August 12, 2013.
(3) Trip Generation, Institute of Transportation Engineers, 2012.
Retail and institutional include 34% pass-by adjustment.
** Excluded from service area. Glendale anticipates no significant annexation of residential development over the next five years in the West 303 area.*

Streets Cost Allocation - West 303 Glendale

Development Type	*Avg Wkdy Veh Trip Ends per Development Unit (3)*	*Trip Adjustment Factors*	*Trip Length Weighting Factor*	*Vehicle Miles of Capacity per Development Unit*	*Service Unit Index*	*Ten-Year VMT Increase*	*Proportionate Share by Development TYPE*
Single Housing Units*	8.43	64%	121%	109.61	1.00	0	0.00%
2+ Housing Units*	4.70	64%	121%	61.11	0.56	0	0.00%
Industrial	3.56	50%	73%	21.82	0.20	46,906	17.31%
Commercial	42.70	33%	66%	156.15	1.42	90,566	33.43%
Institutional	15.43	33%	73%	62.41	0.57	12,482	4.61%
Office & Other Services	11.03	50%	73%	67.60	0.62	120,996	44.66%
					TOTAL	270,950	100.00%

16.79 <= average utilization (trip miles)
172.5 <= existing arterial lane miles

Street Fees - West 303 Glendale

Development Type	*Current Fees*	*Proposed Fee in West 303*	*$ Change*	*% Change*
Single Housing Units*	$694	$0	($694)	-100%
2+ Housing Units*	$408	$0	($408)	-100%
Industrial	$415	$892	$477	115%
Commercial	$2,156	$6,384	$4,228	196%
Institutional	$1,034	$2,551	$1,517	147%
Office & Other Services	$1,034	$2,763	$1,729	167%

Ten-Year Improvements Plan => $11,079,000

Projected Revenue from Street Fees

Revenue projections shown below assume implementation of the proposed street fees and that development over the next ten years is consistent with the land use assumptions described in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue. The street fee revenue projections in Figure S14 match the cost of planned system improvements for each service area.

Figure S14 – Projected Street Fee Revenue

East Glendale Street Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$1,220 per housing unit	$680 per housing unit	$242 per 1000 Sq Ft	$1,738 per 1000 Sq Ft	$694 per 1000 Sq Ft	$752 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	57,571	23,515	10,230	14,610	7,130	6,000
Year 1	2014	57,747	23,587	10,360	14,750	7,250	6,370
Year 2	2015	57,925	23,659	10,490	14,900	7,370	6,750
Year 3	2016	58,102	23,732	10,610	15,040	7,500	7,140
Year 4	2017	58,281	23,805	10,740	15,190	7,620	7,540
Year 5	2018	58,460	23,878	10,860	15,330	7,750	7,950
Year 10	2023	59,871	24,455	11,440	16,090	8,420	10,130
Ten-Yr Increase		2,300	940	1,210	1,480	1,290	4,130
Fee Revenue =>		$2,806,000	$639,000	$293,000	$2,572,000	$895,000	$3,106,000
						Total North =>	$10,311,000

West 101 Glendale Street Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$3,603 per housing unit	$2,009 per housing unit	$717 per 1000 Sq Ft	$5,133 per 1000 Sq Ft	$2,052 per 1000 Sq Ft	$2,222 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	6,458	2,638	1,760	1,300	1,070	710
Year 1	2014	6,633	2,709	1,870	1,380	1,100	820
Year 2	2015	6,813	2,783	1,990	1,470	1,120	960
Year 3	2016	6,997	2,858	2,120	1,570	1,140	1,110
Year 4	2017	7,186	2,935	2,260	1,670	1,170	1,290
Year 5	2018	7,381	3,015	2,410	1,780	1,190	1,490
Year 10	2023	8,966	3,662	3,280	2,450	1,320	3,020
Ten-Yr Increase		2,508	1,024	1,520	1,150	250	2,310
Fee Revenue =>		$9,036,000	$2,057,000	$1,090,000	$5,903,000	$513,000	$5,133,000
						Total Central =>	$23,732,000

West 303 Glendale Street Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$0 per housing unit	$0 per housing unit	$892 per 1000 Sq Ft	$6,384 per 1000 Sq Ft	$2,551 per 1000 Sq Ft	$2,763 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*	*Sq Ft x 1000*
Base	2013	7,534	3,077	770	690	490	1,850
Year 1	2014	7,686	3,139	880	740	510	2,000
Year 2	2015	7,841	3,203	1,000	780	530	2,150
Year 3	2016	7,999	3,267	1,150	830	550	2,310
Year 4	2017	8,161	3,333	1,310	880	570	2,470
Year 5	2018	8,325	3,401	1,500	940	580	2,650
Year 10	2023	9,962	4,069	2,920	1,270	690	3,640
Ten-Yr Increase		2,428	992	2,150	580	200	1,790
Fee Revenue =>		$0	$0	$1,918,000	$3,703,000	$510,000	$4,946,000
						Total South=>	$11,077,000

POLICE FACILITIES

ARS 9-463.05.T.7(f) defines the police facilities eligible for development fee funding.

> *"Police facilities, including all appurtenances, equipment and vehicles. Police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training officers from more than one station or substation."*

The City of Glendale will use an incremental expansion cost methodology to maintain the current infrastructure standards for police vehicles and equipment.

Police Service Area

To hasten response times, police officers are dispersed throughout Glendale and routinely patrol all developed areas. The Police Department has one, citywide service area.

Proportionate Share

ARS 9-463.05.B.3 states the development fee shall not exceed a proportionate share of the cost of necessary public services needed to serve new development. In Glendale, police infrastructure standards, projected needs, and development fees are based on both residential and nonresidential development. As shown in Figure P1, functional population was used to allocate police infrastructure and costs to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. Residents that don't work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents that work in Glendale are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Glendale are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2011 functional population data for Glendale, the cost allocation for residential development is 77% while nonresidential development accounts for 23% of the demand for public safety infrastructure.

Figure P1 – Functional Population

		Demand Units in 2011		*Demand Hours/Day*	*Person Hours*
Residential					
	Total Population*	230,482			
62%	Residents Not Working	141,783		20	2,835,660
38%	Resident Workers**	88,699			
12%	Worked in City**		10,577	14	148,078
88%	Worked Outside City**		78,122	14	1,093,708
				Residential Subtotal	4,077,446
				Residential Share =>	**77%**
Nonresidential					
	Non-working Residents	141,783		4	567,132
	Jobs Located in City**	66,997			
	Residents Working in City**		10,577	10	105,770
	Non-Resident Workers (inflow commuters)**		56,420	10	564,200
				Nonresidential Subtotal	1,237,102
				Nonresidential Share =>	**23%**
				TOTAL	5,314,548

** Annual Estimates of the Resident Population for Incorporated Places in Arizona: April 1, 2010 to July 1, 2011, U.S. Census Bureau.*
*** Inflow/Outflow Analysis, OnTheMap web application, U.S. Census Bureau data for all jobs.*

Police Service Units and Infrastructure Standards

As specified in ARS 9-463.05.B.4 police development fees in Glendale are based on the same level of service provided to existing development. Development fees will be used to expand the fleet of police vehicles and purchase additional equipment that has a useful life of at least three years. Figure P2 lists police vehicles and equipment used by Glendale's Police Department during FY13-14. Items are ranked ordered by total cost (from most to least). Equipment provided to sworn officers, such as radios, weapons, cells phones, computers and safety gear, account for approximately one-third of the infrastructure cost. Patrol vehicles account for another third of the cost, with all other types of vehicles accounting for the remaining third. In FY13-14, Glendale has 805 vehicles and equipment items, with a capital cost of approximately $24.85 million, which is a weighted average cost of approximately $30,900 per item. The inventory below excludes vehicles used for administrative services.

For residential development, Glendale will use resident population in the East and West 101 areas to derive current police infrastructure standards. For nonresidential development in the entire MPA, Glendale will use inbound, average-weekday, vehicle trips as the service unit. Trip generation rates per thousand square feet of floor area are highest for commercial development (retail and eating/drinking places), mid-range for office/institutional development, and lowest for industrial development. This ranking matches the relative demand for police services by type of nonresidential development.

As shown at the bottom of Figure P2, every 1,000 persons will require Glendale to purchase 2.8 additional police vehicles or equipment items. To maintain the current infrastructure standard for police vehicles and equipment, each additional person requires a capital expenditure of $85, with each additional vehicle trip to nonresidential development representing a capital cost of $16.

Figure P2 – Glendale Police Vehicles and Equipment

Police Vehicle and Equipment Inventory

Description	*Items*	*Unit Cost*	*Total Cost*
EQUIPMENT PER SWORN OFFICER	409	$18,313	$7,489,925
SEDAN FULL SIZE PD PATROL	144	$50,274	$7,239,456
SEDAN INTERMEDIATE PUBLIC SAFETY	88	$28,788	$2,533,366
SEDAN FULL SIZE	50	$31,767	$1,588,339
PICKUP POLICE	28	$41,600	$1,164,800
MOTORCYCLES POLICE	25	$34,125	$853,120
ARMORED VEHICLE	2	$323,447	$646,893
SUV EMERGENCY SERVICES	14	$45,495	$636,923
TRAILER SEMI-TRAILER VAN BODY	1	$608,838	$608,838
TRUCK VAN BODY	2	$239,088	$478,175
BUS COMMAND CENTER	1	$350,188	$350,188
SUV 5-6 PASSENGER	6	$51,432	$308,591
CART ALL TERRAIN VEHICLE	10	$16,732	$167,323
VAN PD PRISONER TRANSPORT	3	$54,420	$163,260
TRAILER MOUNTED TACTICAL PLAT	1	$114,967	$114,967
TRUCK TRACTOR CONVENTIONAL	1	$108,086	$108,086
VAN HANDICAPPED ACCESS	1	$91,124	$91,124
HEAVY PICKUP	2	$43,781	$87,561
SEDAN INTERMEDIATE	3	$21,556	$64,667
LARGE TRAILER VAN BODY	2	$26,988	$53,975
VAN HIGH CUBE CARGO	1	$46,365	$46,365
TRAILER RADAR PUBLIC SAFETY	6	$5,398	$32,385
TRAILER VAN BODY	4	$3,994	$15,977
CART UTILITY MULTI WHEELED	1	$10,660	$10,660
Total	805		$24,854,962
Weighted Average Unit Cost =>		$30,900	

Allocation Factors for Police Vehicles and Equipment

Average Cost per Item	$30,900
Residential Proportionate Share	77%
Nonresidential Proportionate Share	23%
East and West 101 Resident Population in 2013	222,749
Average Weekday Vehicle Trips to Nonresidential Development in 2013	348,080

Infrastructure Standards for Police Vehicles and Equipment

	Vehicles and Equipment	*Capital Cost per Service Unit*
Residential (per person)	0.0028	$85
Nonresidential (per vehicle trip)	0.0005	$16

Police Needs Analysis and Infrastructure Improvements Plan

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure P3, projected population and vehicle trips to nonresidential development drive the need for police buildings and vehicles. To maintain current standards, Glendale will need approximately 104 police vehicles or equipment items over the next ten years. The projected capital expenditure on additional police vehicles or equipment items is $3.2 million over the next ten years.

Figure P3 – Police Facilities Needed to Accommodate Growth

Infrastructure Standards and Capital Costs

Police Vehicles and Equipment - Residential	0.0028	Sq Ft per person
Police Vehicles and Equipment - Nonresidential	0.0005	Sq Ft per vehicle trip
Police Vehicles and Equipment Cost	$30,900	per item

				Police Infrastructure Needs	
	Year	*East & West 101 Population*	*Glendale MPA Nonres Veh Trips*	*Public Safety Debt Service*	*Vehicles and Equipment*
Base	2013	222,749	348,080		805
Year 1	2014	223,971	356,848		813
Year 2	2015	225,212	365,962		821
Year 3	2016	226,473	375,486		830
Year 4	2017	227,753	385,426		839
Year 5	2018	229,051	395,784		848
Year 6	2019	230,370	406,801		857
Year 7	2020	231,711	418,040		867
Year 8	2021	234,299	430,015		881
Year 9	2022	236,888	442,852		895
Year 10	2023	239,476	456,247		909
Ten-Yr Increase		16,727	108,167		104
			Total Projected Expenditures (rounded) =>		$3,214,000

Police Development Fees

Infrastructure standards and cost factors for police are summarized in the upper portion of Figure P4. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons per dwelling unit provides the necessary conversion. Persons per dwelling unit, by type of residential structure, are documented in Appendix C. For nonresidential development, trip generation rates by type of development are from the Institute of Transportation Engineers (ITE 2012) and discussed further in the street fee section of this report. Updated development fees for police facilities are shown in the column with blue shading. The proposed fees are slightly less than current fees for all types of development.

The cost of professional services related to preparation of the IIP and development fees is specifically authorized in Arizona's enabling legislation. As explained further in Appendix B the cost of professional service is allocated to the projected increase in service units over the next five years, which matches the mandatory update cycle for development fees.

As discussed further in Appendix A, Arizona's enabling legislation requires municipalities to forecast the revenue contribution to be made in the future towards capital costs and shall include these contributions in determining the extent of burden imposed by development. The percentage reduction in development fees for the "required offset" will be refined in the next draft of the development fees.

Figure P4 – Police Service Units and Fees per Development Unit

Infrastructure Standards for Police	*Vehicle and Equipment Cost*	*Professional Services*	*Required Offset*	*Net Cost*
Residential (per person)	$85	$1.77	1%	$85.90
Nonresidential (per vehicle trip)	$16	$0.02	1%	$15.85

Residential (per housing unit)	*Unit Type*	*Persons per Housing Unit*	*Police Fee*	*Current Fee*	*Increase / (Decrease)*
	Single Unit	2.83	$243	$252	($9)
	2+ Units per Structure	1.61	$138	$199	($61)

Nonresidential *ITE Code*	*Type*	*Demand Unit*	Weekday Vehicle Trip Ends	Trip Rate Adjustment Factors	Police Fee	*Current Fee*	*Increase / (Decrease)*
820	Commercial	1000 SF	42.70	33%	$223	$304	($81)
710	Office	1000 SF	11.03	50%	$87	$146	($59)
620	Nursing Home	1,000 Sq Ft	7.60	50%	$60		
610	Hospital	1,000 Sq Ft	13.22	50%	$104		
565	Day Care	student	4.38	24%	$16		
520	School	1000 SF	15.43	33%	$80	$146	($66)
320	Lodging	room	5.63	50%	$44		
254	Assisted Living	bed	2.66	50%	$21		
150	Warehousing	1000 SF	3.56	50%	$28	$58	($30)
110	Light Industrial	1000 SF	6.97	50%	$55	$104	($49)

Projected Revenue from Police Fees

Development fee revenue should match the need for growth-related infrastructure, which has a ten-year total cost of approximately $3.2 million. Figure P5 indicates Glendale should receive approximately $3.15 million in police development fee revenue over the next ten years, if actual development matches the land use assumptions documented in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue.

Figure P5 – Projected Police Development Fee Revenue

Police Impact Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$243 per housing unit	$138 per housing unit	$28 per 1000 Sq Ft	$223 per 1000 Sq Ft	$80 per 1000 Sq Ft	$87 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*KSF*	*KSF*	*KSF*	*KSF*
Base	2013	64,029	26,153	12,760	16,600	8,690	8,560
Year 1	2014	64,380	26,296	13,110	16,870	8,860	9,190
Year 2	2015	64,737	26,442	13,480	17,150	9,020	9,860
Year 3	2016	65,099	26,590	13,880	17,440	9,190	10,560
Year 4	2017	65,467	26,740	14,310	17,740	9,360	11,300
Year 5	2018	65,841	26,893	14,770	18,050	9,520	12,090
Year 6	2019	66,220	27,048	15,260	18,380	9,700	12,920
Year 7	2020	66,605	27,205	15,780	18,710	9,870	13,790
Year 8	2021	67,349	27,509	16,360	19,050	10,060	14,730
Year 9	2022	68,093	27,813	16,970	19,420	10,250	15,740
Year 10	2023	68,837	28,117	17,640	19,810	10,430	16,790
Ten-Yr Increase		4,808	1,964	4,880	3,210	1,740	8,230
Projected Revenue =>		$1,168,000	$271,000	$137,000	$716,000	$139,000	$716,000
						Total Projected Revenues (rounded) =>	$3,147,000

FIRE FACILITIES

ARS 9-463.05.T.7(f) defines the fire facilities eligible for development fee funding.

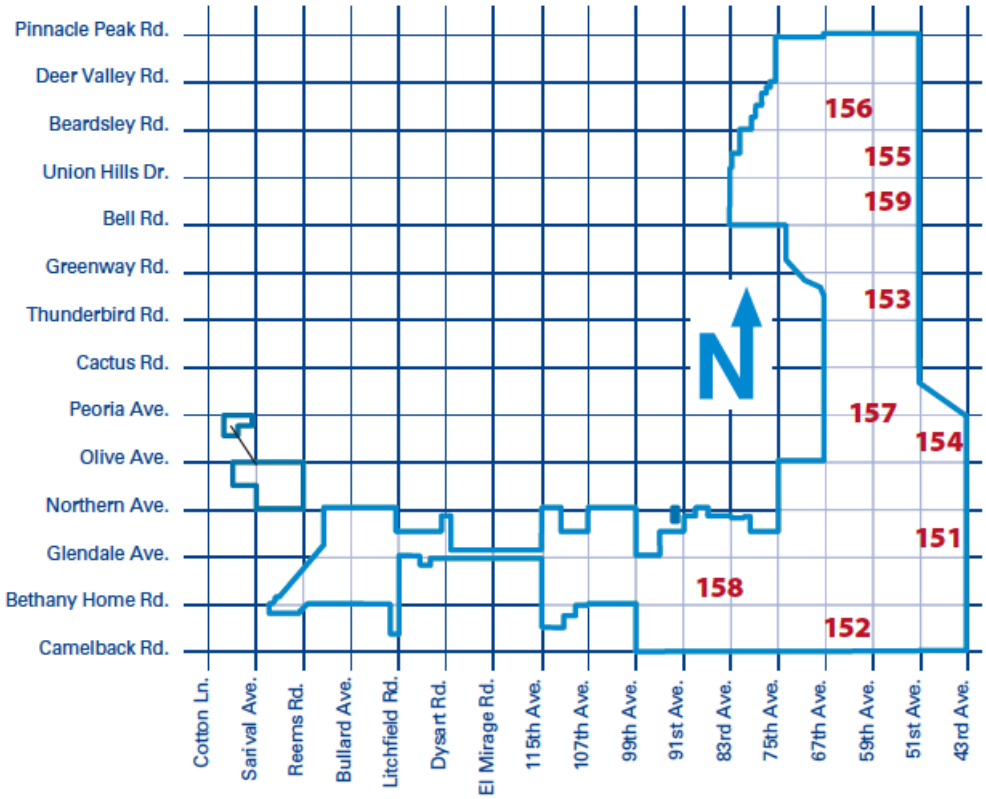
> *"Fire facilities, including all appurtenances, equipment and vehicles. Fire facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training officers from more than one station or substation."*

The City of Glendale will use the incremental expansion method to derive development fees for fire stations, vehicles and equipment. The infrastructure improvements plan for fire stations and apparatus maintains current standards.

Fire Service Area

As shown in Figure F1, Glendale has nine existing fire stations, generally located in the East demographic area, with one station in the West 101 area. To hasten response times, fire and emergency medical response teams are dispatched from nearby stations, with multiple stations responding if warranted. Thus all developed areas within the City of Glendale are served by an integrated public safety system. The City of Glendale has one citywide service area for fire facilities.

Figure F1 – General Location of Existing Fire Station Locations



Proportionate Share

ARS 9-463.05.B.3 states that development fee shall not exceed a proportionate share of the cost of necessary public services needed to serve new development. In Glendale, fire infrastructure was allocated to 60% to residential and 40% nonresidential development based on 2012 calls for service, as provided by Glendale staff.

Existing Fire Infrastructure Standards

Figure F2 inventories existing fire stations in Glendale. The nine stations have an average floor area of approximately 11,600 square feet per station. For residential development, year-round persons are the service units. For nonresidential development, jobs are the service units in Glendale. Given the prevalence of emergency medical calls, the average number of residents and jobs per development unit provides a reasonable indicator of the relative demand for fire services.

For residential development, the City has provided 0.28 square feet of fire buildings for each person in East and West 101 Glendale. For nonresidential development, Glendale has provided 0.50 square feet of fire station for each job.

Figure F2 – Glendale Fire Stations

Fire Stations

#	*Square Feet*
151	13,261
152	13,789
153	8,281
154	9,470
155	8,278
156	6,738
157	16,000
158	14,768
159	13,712
TOTAL	104,297
Avg per Station =>	11,600

Allocation Factors

Cost per Square Foot	$400
Residential Proportionate Share	60%
Nonresidential Proportionate Share	40%
East and West 101 Residents in 2013	222,749
MPA Jobs in 2013	84,176

Infrastructure Standards for Fire Stations

	Square Feet
Residential (per person)	0.28
Nonresidential (per job)	0.50

Development fees will be used to expand the fleet of fire vehicles and purchase additional equipment that has a useful life of at least three years. Figure F3 lists fire vehicles and equipment currently used by the Glendale Fire Department. Items are ranked ordered by total cost (from most to least). Expensive fire apparatus accounts for most of the total cost, but the cumulative cost of portable radios is also significant at approximately $3.6 million. In FY13-14, the Fire Department has 472 vehicles and equipment items, with a capital cost of approximately $18.79 million. Glendale currently provides 1.3 fire vehicles/equipment items for every thousand residents and 2.2 fire vehicles/equipment items for every thousand jobs. The inventory below excludes vehicles used for administrative services.

Figure F3 – Glendale Fire Vehicles and Equipment

Fire Vehicles and Equipent Inventory

Type	*Count*	*Unit Cost*	*Total Cost*
Pumpers	10	$540,000	$5,400,000
Ladder Trucks	4	$1,200,000	$4,800,000
Portable Radios	428	$8,500	$3,638,000
Ladder Tenders	4	$450,000	$1,800,000
Hazmat Truck	1	$650,000	$650,000
Heavy Rescue Truck	1	$650,000	$650,000
Air and Light Truck	1	$540,000	$540,000
Water Tanker	1	$340,000	$340,000
Heavy Trucks	5	$59,000	$295,000
Heavy Utility Truck	1	$215,000	$215,000
Small Trucks	7	$26,200	$183,400
Brush Truck	1	$120,000	$120,000
Cars	6	$17,200	$103,200
Vans	2	$28,800	$57,600
TOTAL	472		$18,792,200

Allocation Factors for Fire Vehicles and Equipment

Average Cost per Vehicle	$39,800
Residential Proportionate Share	60%
Nonresidential Proportionate Share	40%
East and West 101 Residents in 2013	222,749
MPA Jobs in 2013	84,176

Infrastructure Standards for Fire Vehicles and Equipment

Residential (per person)	0.0013
Nonresidential (per job)	0.0022

Fire Infrastructure Needs and Improvements Plan

Arizona's development fee enabling legislation requires jurisdictions to convert land use assumptions into service units and the corresponding need for additional infrastructure over the next ten years. As shown in Figure F4, projected population and jobs drive the needs analysis for fire stations and vehicles/equipment. Glendale's ten-year IIP for fire facilities is to provide approximately 17,872 additional square feet of fire stations. One additional station will be constructed in the West 101 area within the next five years and a land cost of $435,600 is included in the IIP. The projected capital expenditure on additional fire vehicles or equipment items is $3.2 million over the next ten years. In combination, Glendale anticipates capital costs of approximately $11.24 million for growth-related fire infrastructure over the next ten years.

At the bottom of the table below is the cost allocation for fire facilities to projected service units over the next ten years. The cost of growth-related fire facilities was allocated 60% to residential development and 40% to nonresidential development. For residential development, the growth cost per additional housing unit over the next ten years, divided by average persons per housing unit, yields the capital cost per person. The capital cost per job is equal to the growth cost per thousand square feet of floor area, divided by the average number of jobs per thousand square feet. Glendale's ratios of service units per development unit (i.e. persons per housing unit and jobs per thousand square feet) are documented in Appendix C.

Figure F4 – Fire Facilities IIP and Cost Allocation

Fire Infrastructure Standards and Capital Costs

Fire Stations - Residential	0.28	Sq Ft per person
Fire Stations - Nonresidential	0.50	Sq Ft per job
Fire Stations Cost	$400	per square foot
Fire Vehicles and Equipment - Residential	0.0013	per person
Fire Vehicles and Equipment - Nonresidential	0.0022	per job
Fire Vehicles and Equipment Cost	$39,800	average per item

				Fire Infrastructure Needs	
	Year	*East & West 101 Residents*	*Glendale MPA Jobs*	*Sq Ft of Fire Stations*	*Fire Vehicles and Equipment*
Base	2013	222,749	84,176	104,297	472
Year 1	2014	223,971	86,220	105,653	478
Year 2	2015	225,212	88,369	107,067	485
Year 3	2016	226,473	90,633	108,544	491
Year 4	2017	227,753	93,022	110,087	498
Year 5	2018	229,051	95,549	111,704	506
Year 6	2019	230,370	98,225	113,401	513
Year 7	2020	231,711	101,067	115,186	521
Year 8	2021	234,299	104,089	117,411	531
Year 9	2022	236,888	107,312	119,736	542
Year 10	2023	239,476	110,756	122,169	553
Ten-Yr Increase		16,727	26,580	17,872	81
			Cost of Fire Stations =>	$7,149,000	
			Land Cost (two acres @$435,600 per acre) =>	$871,200	
				Cost of Fire Apparatus =>	$3,224,000
				Total Projected Expenditures (rounded) =>	$11,244,200

Cost Allocation for Fire Facilities

	Residential	*Nonresidential*
Proportionate Share	60%	40%
Service Area and Development Units	East & West 101 Housing Units	MPA KSF
Ten-Year Increase	6,773	18,060
Average Service Units per	2.47 Persons per HU	1.81 Jobs per KSF
Cost per Service Unit	$403	$137

Fire Development Fees

Infrastructure standards and cost factors for fire facilities are summarized in the upper portion of Figure F5. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in the table below. For residential development, average number of persons in a dwelling unit provides the necessary conversion. Persons per unit, by type of residential structure, are derived from 2010 census data (see the land use assumptions in Appendix C). For nonresidential development, average jobs per thousand square feet of floor area, or unique development units like rooms in a hotel, are derived from trip generation rates by type of development, published by the Institute of Transportation Engineers (ITE 2012).

Updated development fees for fire facilities are shown in the column with light orange shading. Proposed fire development fees increase for residential development and decrease for all nonresidential development types except offices.

Figure F5 – Fire Fees per Development Unit

Infrastructure Standards for Fire

	Fire Stations and Apparatus	*Professional Services*	*Required Offset*	*Net Cost*
Residential (per person)	$403	$1.41	1%	$400.36
Nonresidential (per job)	$137	$0.52	9%	$125.14

Residential (per Housing Unit)

Unit Type	*Persons per HU*	*Proposed Fire Fee*	*Current Fee*	*Increase / (Decrease)*
Single Unit	2.83	$1,133	$317	$816
2+ Units per Structure	1.61	$644	$250	$394

Nonresidential

ITE Code	*Type*	*Development Unit*	*Jobs per Dev Unit*	*Proposed Fire Fee*	*Current Fee*	*Increase / (Decrease)*
820	Commercial*	1000 SF	1.44	$180	$200	($20)
710	Office**	1000 SF	3.32	$410	$302	$108
620	Nursing Home**	1000 SF	2.33	$290		
610	Hospital**	1000 SF	2.94	$360		
565	Day Care**	student	0.16	$20		
520	School**	1000 SF	0.98	$120	$302	($182)
320	Lodging**	room	0.44	$50		
254	Assisted Living**	bed	0.68	$80		
150	Warehousing*	1000 SF	0.79	$90	$115	($25)
110	Light Industrial*	1000 SF	0.79	$90	$208	($118)

** Jobs per development unit from Figure A10, Glendale Land Use Assumptions, TischlerBise, August 12, 2013.*
*** Jobs per development unit from Trip Generation, Institute of Transportation Engineers, 2012.*

Projected Revenue from Fire Fees

Development fee revenue should match the need for growth-related infrastructure, which has a ten-year total cost of approximately $11.24 million (see Figure F4 above). Figure F6 indicates Glendale should receive approximately $11.3 million in fire development fee revenue over the next ten years, if actual development matches the land use assumptions documented in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the need for infrastructure and development fee revenue.

Figure F6 – Projected Fire Development Fee Revenue

Fire Development Fee Revenue

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$1,133 per housing unit	$644 per housing unit	$90 per 1000 Sq Ft	$180 per 1000 Sq Ft	$120 per 1000 Sq Ft	$410 per 1000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*KSF*	*KSF*	*KSF*	*KSF*
Base	2013	64,029	26,153	12,760	16,600	8,690	8,560
Year 1	2014	64,380	26,296	13,110	16,870	8,860	9,190
Year 2	2015	64,737	26,442	13,480	17,150	9,020	9,860
Year 3	2016	65,099	26,590	13,880	17,440	9,190	10,560
Year 4	2017	65,467	26,740	14,310	17,740	9,360	11,300
Year 5	2018	65,841	26,893	14,770	18,050	9,520	12,090
Year 6	2019	66,220	27,048	15,260	18,380	9,700	12,920
Year 7	2020	66,605	27,205	15,780	18,710	9,870	13,790
Year 8	2021	67,349	27,509	16,360	19,050	10,060	14,730
Year 9	2022	68,093	27,813	16,970	19,420	10,250	15,740
Year 10	2023	68,837	28,117	17,640	19,810	10,430	16,790
Ten-Yr Increase		4,808	1,964	4,880	3,210	1,740	8,230
Projected Fees =>		$5,447,000	$1,265,000	$439,000	$578,000	$209,000	$3,374,000
						Total =>	$11,312,000

WATER FACILITIES

ARS 9-463.05 (T)(7)(f) defines the facilities and assets which can be included in the Water Facilities IIP:

> "Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities."

The Water Facilities IIP includes cost recovery for available surface water treatment capacity, plus planned improvements to major water lines and additional surface water supply.

Water Service Area and Service Units

Potable water is supplied via an interconnected grid to all areas of Glendale. New development in all areas of Glendale will benefit from the planned improvements. Glendale has one service area for water that covers the incorporated area east of 115th Avenue. Average day gallons of potable water are the service units for water development fees.

Water Connections and Demand

Based on the projected increase in population and jobs in East and West 101 areas of Glendale, average daily water demand is expected to increase from 44.14 Million Gallons per Day (MGD) in 2013 to 50.62 MGD in 2023. Water system connections are expected to increase from 63,186 in 2013 to 72,461 in 2023. Annual increase and cumulative water demand data are shown in Figure W1.

Figure W1– Projected Water Demand

Year		Water Connections	Million Gallons Per Avg Day	Annual Increase Connections	Annual Increase MGD	Cumulative Increase Connections	Cumulative Increase MGD
Past3	FY10-11	61,256	37.92				
Past2	FY11-12	61,478	42.95				
Past1	FY12-13	62,326	43.54				
Base	FY13-14	63,186	44.14				
Future1	FY14-15	64,057	44.75	871	0.61	871	0.61
Future2	FY15-16	64,940	45.37	883	0.62	1,755	1.23
Future3	FY16-17	65,836	45.99	896	0.63	2,651	1.85
Future4	FY17-18	66,744	46.63	908	0.63	3,559	2.49
Future5	FY18-19	67,665	47.27	921	0.64	4,479	3.13
Future6	FY19-20	68,598	47.92	933	0.13	5,412	3.78
Future7	FY20-21	69,544	48.59	946	0.13	6,359	4.44
Future8	FY21-22	70,503	49.26	959	0.13	7,318	5.11
Future9	FY22-23	71,476	49.93	972	0.14	8,290	5.79
Future10	FY23-24	72,461	50.62	986	0.14	9,276	6.48
Future11	FY24-25	73,461	51.32	999	0.14	10,275	7.18
Future12	FY25-26	74,474	52.03	1,013	0.14	11,289	7.89
Future13	FY26-27	75,501	52.75	1,027	0.14	12,316	8.60
Future14	FY27-28	76,543	53.47	1,041	0.15	13,357	9.33
Future15	F289-29	77,598	54.21	1,056	0.15	14,413	10.07
Future16	FY29-30	78,668	54.96	1,070	0.15	15,483	10.82
Future17	FY30-31	79,753	55.72	1,085	0.15	16,568	11.57

Glendale has adequate surface water treatment capacity to accommodate additional customers over the next five years. As shown in Figure W2, the cost recovery is based on the cost per gallon of capacity, ensuring additional customers only pay for their proportionate share of available capacity. The net book value is from the FY2012 Comprehensive Annual Financial Report (see Section J in Notes to Financial Statements).

Figure W2 – Cost Recovery for Surface Water Treatment Capacity

Asset	*Value*
Oasis Surface Water Treatment Plant	$71,800,000
Total	$71,800,000
Average Day Gallons of Capacity	12,500,000
Cost Recovery per Gallon of Capacity	$5.74

Water Plan-Based Projects

Figure W3 organizes infrastructure improvements into two general categories, with major water lines shown at the top and additional surface water supply shown at the bottom. The cost of water line extensions and oversizing was allocated to the projected increase in water demand over the next ten years (see Figure W1 above), yielding a cost of $0.23 per gallon of capacity. Surface water supply is for a 100-year lease of 2,363 acre-feet per year, which is approximately 2.11 MGD, or $3.07 per gallon of average day capacity.

Figure W3 – Water IIP

Major Water Lines

#	Description	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY20-24	Total Project
61027	Water Line Extension/Oversizing	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000	$1,500,000
								$0
	Total	$150,000	$150,000	$150,000	$150,000	$150,000	$750,000	$1,500,000
							Ten-Year Increase in Gallons of Capacity per Day =>	6,480,000
							Cost per Gallon of Capacity =>	$0.23

Surface Water Supply

#	Description	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY20-24	Total Project
	White Mountain Apache Tribe 100-Year Lease (2,363 Ac-Ft/Yr)	$6,490,580						$6,490,580
	Total	$6,490,580	$0	$0	$0	$0	$0	$6,490,580
							Increase in Average Day Gallons of Capacity =>	2,110,000
							Cost per Gallon of Capacity =>	$3.07

Proposed Water Development Fee

Figure W4 summarizes capital cost factors for the water system development fee. The first three line items are cost recovery and IIP costs discussed above. According to city staff, the current standard in Glendale is 140 gallons per person on an average day. With an average of 2.83 persons in a single unit dwelling, the Equivalent Dwelling Unit (EDU) demand is 396 gallons of water per day. The additional fee amounts for larger meters are derived using capacity ratios from the American Water Works Association. Preliminary water development fees are 2-12 percent higher than current fees. The next draft will further evaluate the need for possible revenue credits, referred to as the "required offset" in Arizona's development fee enabling legislation (see Appendix A for details).

Figure W4 – Water Development Fees

Input Variables	*Cost per Gallon of Average Day Capacity*
Cost Recovery for Surface Water Treatment	$5.74
Major Water Lines IIP	$0.23
Surface Water Supply IIP	$3.07
Net Capital Cost per Gallon of Capacity	$9.04
IIP and Development Fee Preparation Cost per Meter =>	$4.98
Required Offset Credit per Meter =>	
Net Revenue Credit per Meter =>	
Average Day Gallons of Capacity per EDU =>	396

All Development Types (per meter)

Meter Size (inches)	*Capacity Ratio**	*Proposed Fee*	*Current Fee*	*$ Change*	*Percent Change*
0.75	1.00	$3,584	$3,420	$164	5%
1.00	1.67	$5,983	$5,820	$163	3%
1.50	3.33	$11,925	$11,290	$635	6%
2.00	5.33	$19,085	$18,130	$955	5%
3.00	10.67	$38,201	$37,630	$571	2%
4.00	16.67	$59,680	$58,160	$1,520	3%
6.00	33.33	$119,321	$113,930	$5,391	5%
8.00	53.33	$190,917	$171,070	$19,847	12%

* *Source American Water Works Association, M6.*

WASTEWATER FACILITIES

RS 9-463.05 (T)(7)(f) defines the facilities and assets which can be included in the Wastewater Facilities IIP:

> *"Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities."*

The Wastewater Facilities development fee includes the growth-related cost of planned improvements, such as major sewer lines and a cost recovery component for available capacity in wastewater treatment plants.

Wastewater Service Area and Service Units

Glendale currently imposes a citywide sewer fee for all development east of 115th Avenue. TischlerBise recommends continuation of this approach. As documented in the sewer master plan (CDM 2008), Glendale has constructed interconnections that allow wastewater flow to be adjusted between the three major water reclamation facilities. The collection system in the lower (southern) portion of Glendale has an east-west interconnection in Camelback Road and there is another interconnection via the 99th Avenue Interceptor.

Projected Connections and Wastewater Flow

Past data on sewer connections and annual wastewater flow, from Glendale's Comprehensive Annual Financial Report, are shown at the top of Figure WW1. Using the compound annual growth rate for projected residents and jobs in the utility service area (i.e. the East and West 101 areas of Glendale), TischlerBise extended sewer connections and wastewater flow to 2030. Sewer connections and wastewater generation are projected to increase by 1.38% per year (compound growth rate). Additional documentation on land use assumptions may be found in Appendix C.

Figure WW1 – Sewer Connections and Average Day Gallons

Year		Sewer Connections	Million Gallons Per Avg Day	Annual Increase Connections	Annual Increase MGD	Cumulative Increase Connections	Cumulative Increase MGD
Past3	FY10-11	57,087	14.60				
Past2	FY11-12	57,179	18.90				
Past1	FY12-13	57,968	19.16				
Base	FY13-14	58,767	19.42				
Future1	FY14-15	59,578	19.69	811	0.27	811	0.27
Future2	FY15-16	60,399	19.96	822	0.27	1,632	0.54
Future3	FY16-17	61,232	20.24	833	0.28	2,465	0.81
Future4	FY17-18	62,077	20.52	845	0.28	3,310	1.09
Future5	FY18-19	62,933	20.80	856	0.28	4,166	1.38
Future6	FY19-20	63,801	21.09	868	0.06	5,034	1.66
Future7	FY20-21	64,681	21.38	880	0.06	5,914	1.95
Future8	FY21-22	65,573	21.67	892	0.06	6,806	2.25
Future9	FY22-23	66,478	21.97	904	0.06	7,710	2.55
Future10	FY23-24	67,394	22.28	917	0.06	8,627	2.85
Future11	FY24-25	68,324	22.58	930	0.06	9,557	3.16
Future12	FY25-26	69,266	22.90	942	0.06	10,499	3.47
Future13	FY26-27	70,222	23.21	955	0.06	11,454	3.79
Future14	FY27-28	71,190	23.53	969	0.06	12,423	4.11
Future15	F289-29	72,172	23.86	982	0.06	13,405	4.43
Future16	FY29-30	73,167	24.18	995	0.07	14,400	4.76
Future17	FY30-31	74,177	24.52	1,009	0.07	15,409	5.09

Existing Wastewater Facilities

Glendale currently has three major treatment plants, each with adequate capacity to accommodate development for the next five years. Because the City has oversized these facilities in anticipation of growth, new customers will pay their proportionate share per gallon of capacity consumed. The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is commonly used for utility systems that must provide adequate capacity before new development can take place. As shown at the bottom of Figure WW2, the cost of $5.80 per average day gallon of capacity is based on Glendale's most recent expansion of the West Area Water Reclamation Facility (WRF).

Figure WW2 – Cost Recovery for Water Reclamation Facilities

Glendale Wastewater Treatment Plants

Facility	*Average Day Flow (gallons in millions)*	*Capacity (gallons in millions)*
Arrowhead Water Reclamation Facility	2.6	4.5
West Area Water Reclamation Facility	5.5	11.5
91st Avenue WWTP (Glendale share of SROG)	8.0	13.2

Cost Recovery per Gallon of Capacity

	2005 Expansion
West Area WRF Cost	$40,600,000
Additional Capacity (avg day gallons)	7,000,000
Cost per Gallon of Capacity	$5.80

Wastewater IIP

As shown in Figure WW3, Glendale anticipates relatively minor expenditures on the sewer collection system over the next ten years. Expenditures include a major sewer line along Glendale Avenue, from 93rd to 99th, and minor extensions of sewer lines, or developer reimbursements for sewer line oversizing.

Figure WW3 – Wastewater IIP

Wastewater Collection System

#	*Description*	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*	*FY20-24*	*Total Project*
63017	Sewer Line Extension/Oversizing	$160,000	$160,000	$160,000	$160,000	$160,000	$800,000	$1,600,000
T3611	Glendale Ave, 93rd-99th Ave						$1,118,591	$1,118,591
	Total	$160,000	$160,000	$160,000	$160,000	$160,000	$1,918,591	$2,718,591
							Ten-Year Increase in Gallons of Capacity per Day =>	2,850,000
							Cost per Gallon of Capacity =>	$0.95

Wastewater Development Fees

Proposed development fees for wastewater facilities are shown in Figure WW4. The proposed fee is equal to the net capital cost per gallon of capacity multiplied by the EDU demand factor of 288 gallons of wastewater flow on an average day. For meters larger than 0.75 inches, a capacity ratio converts the fee per EDU to a proportionate fee based on hydraulic capacity. Proposed fees are three times higher than current fees, but still lower than the wastewater development fees in most Phoenix-area jurisdictions. For example, the 2012 sewer fee for the smallest meter size is $5,493 in Avondale, $4,193 in Goodyear, and $1,923 in Peoria.

Figure WW4 – Wastewater Development Fee Schedule

Input Variables	*Cost per Gallon of Average Day Capacity*
Wastewater Treatment Capacity Cost Recovery	$5.80
Wastewater Collection System IIP	$0.95
Net Capital Cost per Gallon of Capacity	$6.75
IIP and Development Fee Preparation Cost per Meter =>	$5.35
Required Offset Credit per Meter =>	
Net Revenue Credit per Meter =>	
Average Day Gallons of Capacity per EDU =>	288

All Development Types (per meter)

Meter Size (inches)	*Capacity Ratio**	*Proposed Fee*	*Current Fee*	*$ Change*
0.75	1.00	$1,950	$480	$1,470
1.00	1.67	$3,253	$820	$2,433
1.50	3.33	$6,482	$1,590	$4,892
2.00	5.33	$10,372	$2,550	$7,822
3.00	10.67	$20,759	$5,290	$15,469
4.00	16.67	$32,430	$8,170	$24,260
6.00	33.33	$64,836	$16,000	$48,836
8.00	53.33	$103,738	$24,030	$79,708

** Source American Water Works Association, M6.*

APPENDIX A – REVENUE STRATEGY AND REQUIRED OFFSET ANALYSIS

The "Required Offset" percentage reduction is a placeholder that will be discussed in more detail at a later date. Arizona's enabling legislation requires municipalities to forecast the revenue contribution to be made in the future towards capital costs and shall include these contributions in determining the extent of burden imposed by development. TischlerBise will likely recommend a small percentage reduction in development fees to satisfy the "required offset," which is a phrase taken directly from the enabling legislation (quoted below).

> *9-463.05.E.7. "A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."*

> *9-463.05.B.12. "The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection."*

Figure A1 – Revenue Projections

TO BE PROVIDED IN NEXT DRAFT

APPENDIX B – COST OF PROFESSIONAL SERVICES

As stated in Arizona's development fee enabling legislation, "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 and professional services required for the preparation or revision of a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan" (see 9-463.05.A). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in units over five years. Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience".

Figure B1 – Cost of Professional Services

Necessary Public Service	*Cost*	*Demand Indicator*	*Proportionate Share*	*Cost Allocation*				Cost per Demand Unit
				Units	*2013*	*2018*	*Increase*	
Water	$22,318	All Development	100%	Connections	63,186	67,665	4,479	$4.98
Wastewater	$22,318	All Development	100%	Connections	58,767	62,933	4,166	$5.35
Parks and Recreation	$17,359	Residential	100%	East & West 101 Residents	222,749	229,051	6,302	$2.75
Police	$12,399	Residential	77%	East & West 101 Residents	222,749	229,051	6,302	$1.51
		Nonresidential	23%	Avg Wkdy Veh Trips to MPA Nonres	348,080	395,784	47,704	$0.05
Fire	$14,879	Residential	60%	East & West 101 Residents	222,749	229,051	6,302	$1.41
		Nonresidential	40%	MPA Jobs	84,176	95,549	11,373	$0.52
Libraries	$13,639	Residential	100%	East & West 101 Residents	222,749	229,051	6,302	$2.16
Streets	$21,078	All Development	100%	Avg Wkdy VMT	4,578,469	4,948,593	370,124	$0.05
TOTAL	***$123,990***							

APPENDIX C – LAND USE ASSUMPTIONS

For municipalities in Arizona, the state enabling legislation now requires supporting documentation on land use assumptions, a plan for infrastructure improvements, and development fee calculations. This document contains the land use assumptions for the City of Glendale 2013 development fee update. Development fees must be updated every five years, making short-range projections the critical time frame. The Infrastructure Improvements Plan (IIP) is limited to ten years, thus a very long-range "build-out" analysis may not be used to derive development fees.

Arizona Revised Statutes (ARS) 9-463.05 (T)(6) requires the preparation of a *Land Use Assumptions* document which shows:

> *"Projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the General Plan of the municipality."*

TischlerBise prepared current demographic ***estimates*** and future development ***projections*** for both residential and nonresidential development that will be used in the Infrastructure Improvement Plan (IIP) and calculation of the development fees. Demographic data for FY13-14 (beginning July 1, 2013) are used in calculating levels-of-service (LOS) provided to existing development in the City of Glendale. Although long-range projections are necessary for planning infrastructure systems, a shorter time frame of five to ten years is critical for the impact fees analysis. Due to the slow recovery from the Great Recession, TischlerBise used compound growth rates to produce conservative initial projections that increase over time.

Arizona's Development Fee Act requires fees to be updated at least every five years and limits the IIP to a maximum of ten years. Therefore, the use of a very long-range "build-out" analysis is no longer acceptable for deriving development fees in Arizona municipalities.

Summary of Growth Indicators

Development projections and growth rates are summarized in Figure C1. These projections will be used to estimate development fee revenue and to indicate the anticipated need for growth-related infrastructure. However, impact fees methodologies are designed to reduce sensitivity to accurate development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, impact fees revenues will also decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in impact fee revenue, but will also need to accelerate capital improvements to keep pace with development.

Development projections are based on Maricopa Association of Governments socioeconomic data by traffic analysis zone (MAG, June 2013). TischlerBise used MAG's housing unit and employment data for 2010, 2020, and 2030 for the Municipal Planning Area (MPA). Housing data were converted to resident population and job data were converted to nonresidential floor area.

Land use assumptions assume the City of Glendale will continue to annex land as development occurs, with the incorporated area expanding over time to eventually approximate the municipal planning area. TischlerBise derived interim year data between 2010 and 2020 using compound growth rates, thus yielding annual increments that increase over time. During the next five years, the development fee study assumes an average increase of 733 housing units per year (compound annual growth rate of 0.7%). In comparison, over the past five years Glendale issued building permits for an average of 252 housing units per year.

Because MAG assumed a higher rate of job growth during the first decade (2010-2020) than in the second decade (2020-2030), TischlerBise used 2010 and 2030 employment data, with interim years derived from compound growth rates. Over the next five years, the development fee study expects Glendale to add nonresidential floor area averaging 1.56 million square feet per year (compound annual increase of 3.2%). Over the past five years, Glendale issued building permits averaging 870,000 square feet of nonresidential construction per year. (Note: MPA = Municipal Planning Area and KSF = Square Feet of nonresidential floor area in thousands.)

Figure C1 – Municipal Planning Area Projections and Growth Rates

Based on socioeconomic data by traffic analysis zone, Maricopa Association of Governments (June 2013).

Glendale, AZ	Annual Increase	
Timeframe	*Dwelling Units*	*Nonres Sq Ft x 1000*
2008 CY permits	318	1,787
2009 CY permits	465	579
2010 CY permits	82	559
2011 CY permits	115	357
2012 CY permits	282	1,066
7/13-7/14	709	1,420
7/14-7/15	721	1,480
7/15-7/16	733	1,560
7/16-7/17	745	1,640
7/17-7/18	758	1,720

	MPA Total as of July 1st	
Year	*Dwelling Units*	*Nonres Sq Ft in thousands*
2013	100,793	46,610
2014	101,502	48,030
2015	102,223	49,510
2016	102,956	51,070
2017	103,701	52,710
2018	104,459	54,430
2023	110,985	64,670

	2013 to 2018 Avg Annual	
	Increase	*Compound Growth Rate*
Residential Units	733	0.7%
Nonresidential Sq Ft x 1000	1,564	3.2%

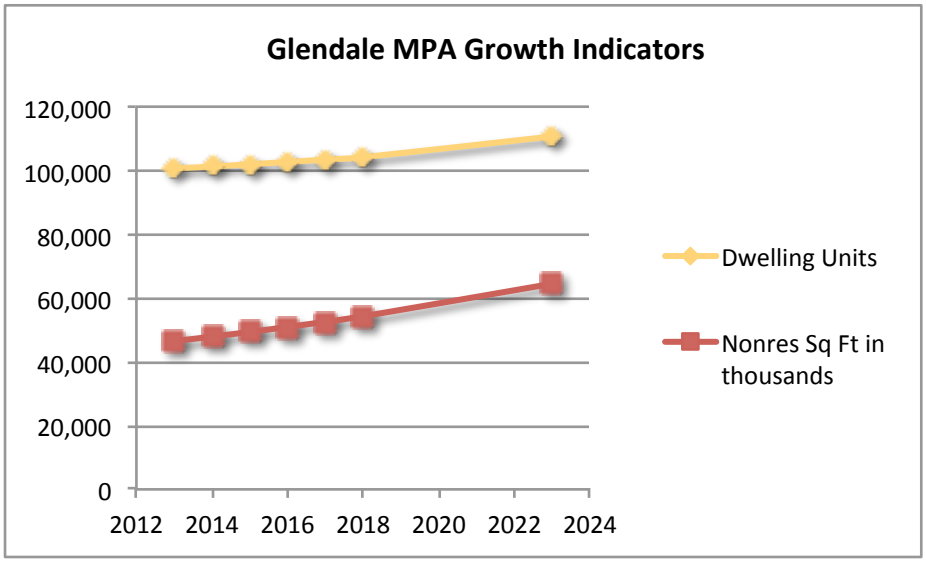


Figure C2 provides additional detail on the annual increases in demand indicators (change from July 1st to July 1st of the next year). Single-unit housing tends to be the most consistent type of development from year to year. In contrast, apartments and all nonresidential development vary significantly over time. The City of Glendale will closely monitor actual development each year. If needed, development fees can be updated prior to the required five-year cycle.

Note: Please see Figure C10 and related text for additional information on types of nonresidential development. Resident population excludes group quarters, such as prisons and dormitories.

Figure C2 – Projected Annual Increases for the Glendale MPA

Annual Increase	7/13-7/14	7/14-7/15	7/15-7/16	7/16-7/17	7/17-7/18	7/18-7/19	7/19-7/20	7/20-7/21	7/21-7/22	7/22-7/23	***2013-2023 Avg Anl***
Resident Population	1,751	1,780	1,812	1,841	1,871	1,904	1,937	4,092	4,093	4,093	2,517
Housing Units	709	721	733	745	758	771	784	1,657	1,657	1,657	1,019
Jobs	2,044	2,149	2,264	2,389	2,526	2,676	2,841	3,023	3,223	3,443	2,658
Industrial KSF	350	370	400	430	460	490	520	580	610	670	488
Commercial KSF	270	280	290	300	310	330	330	340	370	390	321
Institutional KSF	170	160	170	170	160	180	170	190	190	180	174
Office & Other KSF	630	670	700	740	790	830	870	940	1,010	1,050	823
Total Nonres KSF/Yr =>	1,420	1,480	1,560	1,640	1,720	1,830	1,890	2,050	2,180	2,290	1,806

Service Areas

ARS 9-463.05(T)(9) defines "service area" as follows:

> *"Any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan. "*

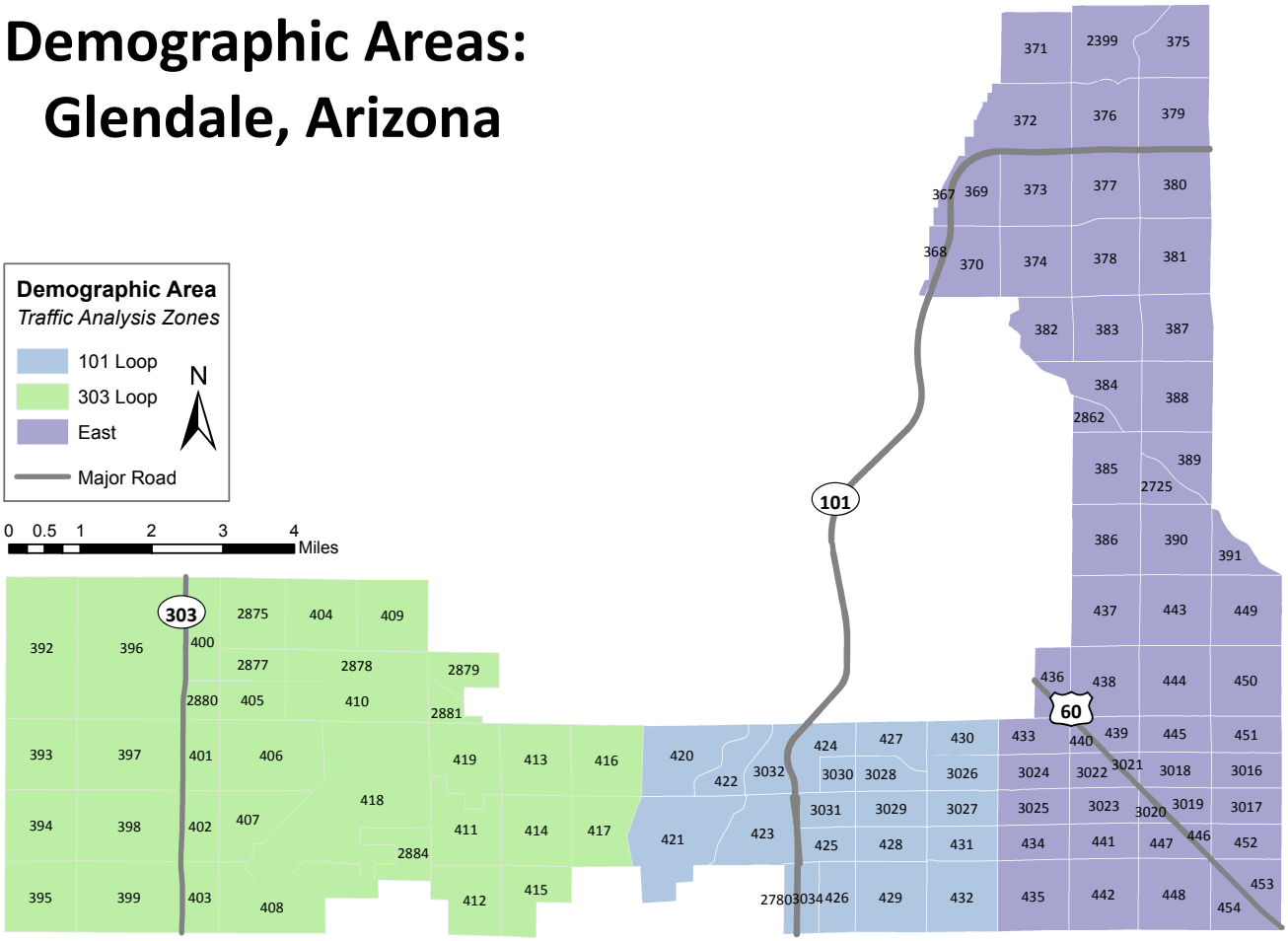
Arizona's development fee legislation includes detailed definitions of the types of infrastructure that are considered to be "necessary public services." In the City of Glendale, all development fees are currently imposed citywide. TischlerBise recommends continuation of citywide fees for police and fire infrastructure. Development fees by sub-areas might be required for all other types of infrastructure (i.e. parks and recreation, library, streets, water and sewer). For water and sewer fees, the service area will be limited by the geographic extent of utility lines, with no service expected west of 115th Avenue.

To provide demographic data for the demand analysis required for development fees, TischlerBise tabulated population, housing units, jobs, and nonresidential floor area by three demographic areas, as described in the table below.

Demographic Area	Description
East	North and Central area east of 75th Ave
101 Loop	East of 115th Ave and west of 75th Ave
303 Loop	West of 115th Ave

The rationale for these sub-areas and their applicability to each type of infrastructure will be further discussed in the Infrastructure Improvements Plan (IIP). The boundaries of the demographic areas are shown in Figure C3.

Figure C3: Map of Glendale Demographic Areas



Prepared for Glendale, Arizona by TischlerBise

According to the latest socioeconomic data by traffic analysis zone (MAG, June 2013), all three areas are expected to experience similar housing unit increases over the next five years. In the east, residential development will be a combination of infill and redevelopment. The 101 Loop has vacant and agricultural land that can accommodate new housing that will be served by City water and sewer utilities. The far west, 303 Loop will not be served by Glendale water and sewer utilities. As shown in Figure C4, the large existing base of housing units in the East yields a much lower percentage growth rate, even though the absolute increase is similar to the areas in west Glendale.

Figure C4: Dwelling Units by Demographic Area

Dwelling Units	*2013*	*2018*	*Increase*	*Annual Growth (compound)*
East	81,085	82,338	1,252	0.3%
101 Loop	9,096	10,396	1,299	2.7%
303 Loop	10,611	11,726	1,115	2.0%
		Total	3,666	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

As shown in Figure C5, almost all of the current industrial floor area in Glendale is located in the east demographic area. Similar increases in industrial jobs and floor area are expected in all three demographic areas over the next five years.

Figure C5: Industrial Floor Space by Demographic Area

Industrial	*Square Feet of Floor Area (in thousands)*			*Annual Growth (compound)*
	2013	*2018*	*Increase*	
East	10,230	10,860	630	1.2%
101 Loop	1,760	2,410	650	6.5%
303 Loop	770	1,500	730	14.3%
		Total	2,010	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

All other types of nonresidential floor space (i.e. commercial, institutional, and office/other) by demographic area are shown in Figure C6. Although these types of nonresidential buildings tend to follow residential development, nonresidential development in the East demographic area is expected to remain strong for the next five years. The 101 Loop has the second largest increase in all other types of nonresidential development. Even in the 303 Loop, all other types of nonresidential development is expected to increase by more than one million square feet over the next five years.

Figure C6: All Other Nonresidential by Demographic Area

All Other Nonresidential	*Square Feet of Floor Area (in thousands)*			*Annual Growth (compound)*
	2013	*2018*	*Increase*	
East	27,740	31,030	3,290	2.3%
101 Loop	3,080	4,460	1,380	7.7%
303 Loop	3,030	4,170	1,140	6.6%
		Total	5,810	

Source: Based on MAG socioeconomic data by traffic analysis zone (June 2013).

Residential Development

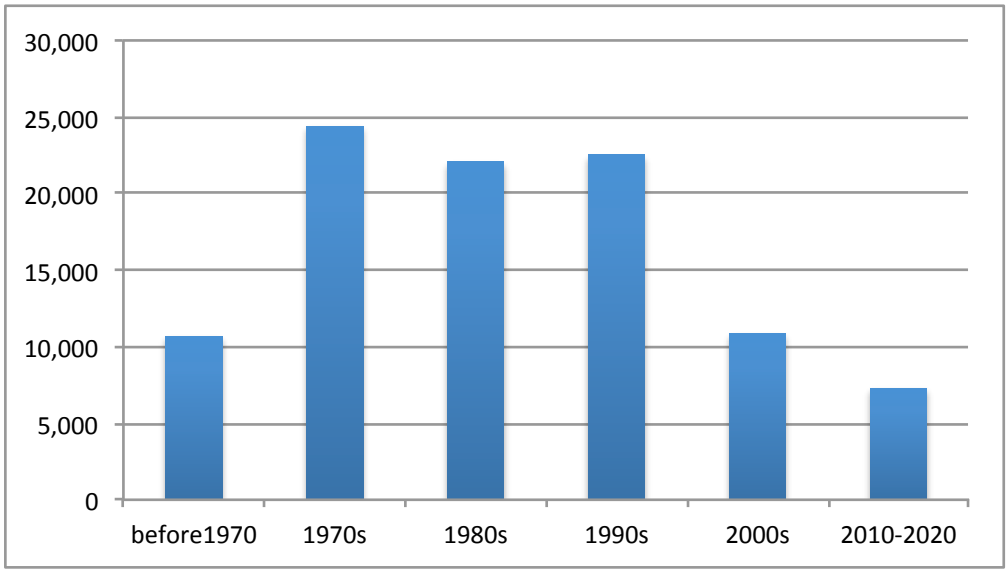
Current estimates and future projections of residential development are detailed in this section, including population and housing units by type. From 2000 to 2010, Glendale increased by an average of 1,084 housing units per year. Figure C7 indicates the estimated number of housing units added by decade in Glendale. Consistent with the nationwide decline in development activity, residential construction in the City slowed significantly since 2008. For comparison, the projected increase in dwelling units over the next decade is also shown on the graph.

Figure C7 – Housing Units by Decade

Census 2010 Population*	226,721
Census 2010 Housing Units*	90,505
Total Housing Units in 2000	79,667
New Housing Units	10,838

From 2000 to 2010, Glendale added an average of 1,084 housing units per year.

* *U.S. Census Bureau, Summary File 1.*



Source for 1990s and earlier is Table B25034, American Community Survey, 2011. scaled to equal total housing units in 2000. Projected housing unit increase from 2010 to 2020 is based on MAG Draft 3 socioeconomic data (May 2013).

Persons per Housing Unit

The 2010 census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS), which has limitations due to sample-size constraints. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For development fees in Glendale, "single-unit" residential includes detached units (both site-built and manufactured) and townhouses that share a common sidewall, but are constructed on an individual parcel of land. The second residential category includes all structures with two of more units on an individual parcel of land.

According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Development fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. When persons per housing unit are used in the fee calculations, infrastructure standards are derived using year-round population. When persons per household are used in the fee calculations, the impact fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards.

TischlerBise recommends that impact fees for residential development in the City of Glendale be imposed according to the number of year-round residents per housing unit. For the development fee calculations, TischlerBise used the ACS results shown at the top of Figure C8 to indicate the relative number of persons per housing unit, by units in a residential structure, and the housing mix in Glendale. Over the next five years, the housing stock in Glendale should remain approximately 71% single units and 29% two or more units per structure. The ACS sample results by residential category were adjusted to yield the 2010 census counts for resident population, households, and housing units. In 2010, dwellings with a single unit per structure (detached, attached, and mobile homes) averaged 2.83 persons per housing unit. Dwellings in structures with multiple units averaged 1.61 year-round residents per housing unit in 2010.

Figure C8 – Year-Round Persons per Unit by Type of Housing

2011 Summary by Type of Housing from American Community Survey

Units in Structure	*Renter & Owner*				
	Persons	*House-holds*	*Persons per Household*	*Housing Units*	***Persons per Housing Unit***
Single Unit*	183,638	58,538	3.14	65,528	2.80
2+ Units	43,748	20,661	2.12	27,361	1.60
Subtotal	227,386	79,199	2.87	92,889	2.45
Group Quarters	3,080				
TOTAL	230,466			92,889	2.48

Source: Tables B25024, C25032, C25033, and B26001.

** Single unit includes detached, attached, and mobile homes.*

One-Year Estimates, 2011 American Community Survey, U.S. Census Bureau.

2010 Census Counts

Units in Structure	*Renter & Owner*				
	Persons	*House-holds*	*Persons per Household*	*Housing Units*	***Persons per Housing Unit***
Single Unit	180,471	58,475	3.09	63,846	2.83
2+ Units	42,993	20,639	2.08	26,659	1.61
Subtotal	223,464	79,114	2.82	90,505	2.47
Group Quarters	3,257				
TOTAL	226,721			90,505	

Demographic data shown in Figure C9 provide key inputs for updating development fees in the City of Glendale. The municipal planning area is larger than the city limits, but the difference will decrease over time as the City continues to annex additional land area. Starting with 2010 and 2020 socioeconomic data by traffic analysis zone (MAG, June 2013), TischlerBise derived the interim year data using exponential growth formulas. This approach provides more conservative short-range projections, with annual increases growing larger over time. From 2020 to 2030, TischlerBise derived the interim year housing unit increase from the average annual change over the decade. In 2010, approximately 13% of the housing stock in Glendale was vacant or used by seasonal residents, with an average of 2.47 persons per housing unit. In contrast to the MAG socioeconomic data that assumes a significant increase to 2.75 persons per housing unit by 2020, the land use assumptions derive resident population from projected dwelling units assuming a constant 2.47 persons per housing unit.

Figure C9 – Glendale MPA Residential Development

Glendale Municipal Planning Area	*FY13-14*	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*	*FY23-24*
	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*
	Base Yr	*1*	*2*	*3*	*4*	*5*	*10*
Resident Population by Area							
East	200,281	200,895	201,512	202,131	202,752	203,374	208,285
303 Loop	26,210	26,739	27,278	27,829	28,390	28,963	34,657
101 Loop	22,468	23,076	23,700	24,342	25,001	25,677	31,191
Total MPA Pop (Yr-Rd)	248,959	250,710	252,490	254,302	256,143	258,014	274,133
Dwelling Units by Area							
East	81,085	81,334	81,584	81,834	82,086	82,338	84,326
303 Loop	10,611	10,825	11,044	11,267	11,494	11,726	14,031
101 Loop	9,096	9,342	9,595	9,855	10,122	10,396	12,628
Total MPA Dwelling Units	100,793	101,502	102,223	102,956	103,701	104,459	110,985
Persons per Housing Unit	2.47	2.47	2.47	2.47	2.47	2.47	2.47

Nonresidential Development

In addition to data on residential development, the infrastructure improvements plan and development fees require data on nonresidential development in Glendale. Current estimates and future projections of nonresidential development are detailed in this section, including jobs and floor area by type. TischlerBise uses the term "jobs" to refer to employment by place of work.

Jobs by Type of Nonresidential Development

Figure C10 indicates 2012 job and floor area estimates for the City of Glendale, according to four general types of nonresidential development. For industrial, commercial, and office/other development, floor area estimates were obtained from Costar. For institutional development, TischlerBise estimated floor area using the average square feet per job for an elementary school, derived from trip generation data published by the Institute of Transportation Engineers (see Trip Generation, 2012). For future industrial development, warehousing (ITE 150) is a reasonable proxy, averaging approximately 1,100 square feet per job. The prototype for future commercial development is an average size shopping center (ITE 820), assuming the current average of approximately 700 square feet per job will hold constant over time. For office and other services, a general office (ITE 710) is the prototype for future development, assuming Glendale's current average of 189 square feet per job will increase to the national average of approximately 300 square feet per job by 2023.

For the purpose of development fee calculations, TischlerBise excluded construction, non-site based employment, and work-at-home employment from the job data provided by MAG. These types of jobs do not result in any substantial increase in nonresidential floor area.

Figure C10 – 2012 Jobs and Floor Area Estimates

	2012 Jobs (1)		*Sq Ft per Job (2)*	*Floor Area*	*Jobs per 1000 Sq Ft*
Industrial	9,821	12%	1,265	12,420,000	0.79
Commercial (3)	23,453	28%	697	16,342,000	1.44
Institutional (4)	8,574	10%	1,018	8,728,000	0.98
Office & Other (5)	42,065	50%	189	7,952,000	5.29
TOTAL	83,914	100%	542	45,442,000	1.85

(1) Jobs in 2012 based on MAG socioeconomic projections (May 2013) for 2010 and 2020.
(2) Costar data (2012) except Institutional that was estimated from the number of jobs.
(3) Retail, Food and Accommodation Services.
(4) Education and Public Administration.
(5) Major sectors are Health Care, Administration & Support (office jobs), and Professional/Scientific/Technical Services.

Figure C11 provides base year data and a ten-year forecast of both jobs and nonresidential floor in the entire planning area. Based on the MAG employment forecast from 2010 to 2030 (June 2013), Glendale expects to become more of an employment center with jobs increasing faster than housing units. In 2013, there were 0.84 jobs for every housing unit in the Glendale MPA. By 2023, the ratio increases to 1.00 jobs per housing unit in the Glendale MPA. Construction, non-site based employment, and work-at-home jobs were excluded to more accurately indicate the increase in nonresidential floor area.

Figure C11 – Glendale MPA Nonresidential Development

Glendale Municipal Planning Area	*FY13-14*	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*	*FY23-24*
	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2023*
	Base Yr	*1*	*2*	*3*	*4*	*5*	*10*
Jobs by Type of Nonresidential Development							
Total MPA Jobs - Industrial	9,784	10,215	10,677	11,174	11,710	12,288	16,036
Total MPA Jobs - Commercia	23,496	23,900	24,319	24,752	25,202	25,668	28,291
Total MPA Jobs - Institution	8,559	8,730	8,904	9,081	9,263	9,448	10,434
Total MPA Jobs - Office/Oth	42,336	43,375	44,470	45,625	46,848	48,144	55,995
Total MPA Jobs	84,176	86,220	88,369	90,633	93,022	95,549	110,756
Jobs to Housing Ratio	0.84	0.85	0.86	0.88	0.90	0.91	1.00
MPA Total Nonresidential Floor Area (square feet in thousands)							
Industrial KSF	12,760	13,110	13,480	13,880	14,310	14,770	17,640
Commercial KSF	16,600	16,870	17,150	17,440	17,740	18,050	19,810
Institutional KSF	8,690	8,860	9,020	9,190	9,360	9,520	10,430
Office & Other KSF	8,560	9,190	9,860	10,560	11,300	12,090	16,790
Total MPA KSF	46,610	48,030	49,510	51,070	52,710	54,430	64,670
Avg Sq Ft Per Job	554	557	560	563	567	570	584
Avg Jobs per KSF	1.81	1.80	1.78	1.77	1.76	1.76	1.71

WORKSHOP COUNCIL REPORT

Meeting Date: **11/19/2013**
Meeting Type: **Workshop**
Title: **FIRE DEPARTMENT BUDGET DEFICIT**
Staff Contact: **Mark Burdick, Fire Chief**

Purpose and Policy Guidance

This is a presentation to City Council for direction regarding the Fire Department budget deficit that is projected to be $1,328,070 by June 30, 2014.

Background

The Fire Department constant staffing and shop budgets have been reduced, as mandated by previous budget reductions. Public Safety Sales Tax contingency funding was available to cover reductions to the general fund; however, the reserves were depleted in FY 2011-12. The Fire Chief presented the Fire Department deficit to City Council on April 26, 2013, and was provided direction that the budget could be addressed at a later time.

Analysis

The Fire Department has mandated costs that incur an increase every fiscal year, such as our Computer Aided Dispatch (CAD) contract and the Regional Wireless Cooperative (RWC). In the last fiscal year the budget shortfall was covered at the end of the year by a Council action. The current budget deficit has been partially offset through: vacated position salary savings from FY 2012-13 that have been previously applied and salary savings from additionally vacated positions of $250,147 in FY 2013-14, one-time reimbursement from the City of Goodyear for a deputy chief assignment in the amount of $66,640, and one-time reimbursement from the City of Phoenix in the amount of $30,030 for a billing error. Budget expenses that will cause the department to be overspent at the end of this fiscal year include:

Constant Staffing – (average overtime per month is approximately $54,144 per pay period). We were budged $846,636 for FY 2013-14 and require $1,407,751, as expended in FY 2012-13, for a gap of $561,115. We expect to deplete our overtime funding by the 13th pay period in FY 2013-14 (pay period ending 12/14/13).

Shop and Fuel Chargeback – In FY 2012-13 the department used $809,901 in shop and fuel; Funding for FY 2013-14 is $547,048 for Shop and Fuel, creating a deficit of $262,853 in this area and fuel costs are continuing to increase.

CAD – With the increase for CAD, the Fire Department will be short by $23,372.

RWC funding gap of $94,923 in FY 2013-14.

Personal Protective Gear – An $80,000 supplemental for personal protective gear was submitted last budget process. This supplemental was an estimate to replace gear due to an NFPA standard change in 2013. After initiating the new standards, the program was stopped at 25% replacement due to a lack of funding. The current requirement to make the department NFPA compliant is one-time funding of $496,324 and on-going funding of $111,300.

Self-contained breathing apparatus (SCBA) updates – A $125,000 one-time supplemental for SCBA updates is required to keep the current equipment in service. Replacement parts are not available from the manufacturer, so units are being disassembled to utilize serviceable parts.

Previous Related Council Action

City Council approved additional funding of over $1,041,545 on April 23, 2013, to address general fund cost overruns from FY 2012-13.

Budget and Financial Impacts

The Fire Department will be overspent by $1,674,887 minus the on-going salary savings of $250,147, one-time reimbursement of $66,640 from the City of Goodyear, and one-time reimbursement from the City of Phoenix for $30,030, for a net deficit of $1,328,070. This deficit is comprised of $524,654 in one-time expenses, bringing the on-going deficit to $803,416.

WORKSHOP COUNCIL REPORT

Meeting Date:	**11/19/2013**
Meeting Type:	**Workshop**
Title:	**SPECIAL PROJECT RECOMMENDATIONS - IMPLEMENTATION PLAN AND STATUS**
Staff Contact:	**Julie Frisoni, Interim Assistant City Manager** **Jim Brown, Executive Director, Human Resources and Risk Management** **Tom Duensing, Executive Director, Financial Services**

Purpose and Policy Guidance

The purpose of this presentation is to provide the Council with the current status of recommendations as outlined in the final report performed by the law firm of Haralson, Miller, Pitt, Feldman & McAnally, P.L.C. (HMPFM).

Background

The special project was commissioned by the City Council in February 2013 to research certain city matters including:

- Early retirement program expenditures
- Transfers to/from trust funds
- Management's disclosure to Council
- Potential civil or criminal liability based on findings

Staff was directed to immediately implement the recommendations identified in the final report that was distributed to the public on August 20, 2013 and to the Attorney General's Office on August 23, 2013.

This presentation is the first of quarterly updates on the status of the recommendations. Updates will be provided until all recommendations are implemented, and will include additional actions staff is taking, beyond their recommendations, based on the outcome of this report.

Analysis

External recommendations to be reviewed and discussed during this presentation include:

- Code of Conduct
- Ethics hotline
- Email retention period

- Significant program decisions supported by sound financial analysis and supporting documentation
- Risk Management and Workers' Compensation trust fund boards
- Current and proposed transfer of funds' policies
- Evaluation of all trust fund expenditures, administrative costs and salaries
- Department and trust fund premiums
- City Auditor reporting structure
- City's external auditor
- City Charter involvement of City Attorney
- Anti-fraud program

Previous Related Council Action

On September 24, 2013, an expenditure authorization was approved by Council with the law firm of HMPFM in the amount of $75,884.89 for services rendered on the Council's special project. The total cost of the special project was $513,406.87.

In August 2013, Council accepted the final report and HMPFM's recommendations, released the report to the public and provided a copy to the State Attorney General's Office.

On June 11, 2013, Council approved a FY 2012-13 budget amendment of $500,000 for the special project.

On March 26, 2013, a request to enter into a retention agreement with the law firm of HMPFM to conduct the Council's special project was approved by Council.

At the February 5, 2013 workshop, the newly elected Council heard a presentation on the draft scope of work.

The previous Council provided direction in December 2012 to begin the process to start an audit of identified funds.

Community Benefit/Public Involvement

This special project provided an opportunity for the Council, city employees and the public to learn from an independent firm what had occurred with the management of certain funds within the city and to make recommendations so that appropriate processes and controls can be implemented.

WORKSHOP COUNCIL REPORT

Meeting Date:	**11/19/2013**
Meeting Type:	**Workshop**
Title:	**COUNCIL ITEM OF SPECIAL INTEREST: BALL PARK BOULEVARD EXTENSION THROUGH GLENDALE MUNICIPAL AIRPORT**
Staff Contact:	**Jamsheed Mehta, AICP, Executive Director, Transportation Services** **Stuart Kent, Executive Director, Public Works** **Gregory Rodzenko, P.E., City Engineer**

Purpose and Policy Guidance

Staff is seeking direction from Council regarding alternatives to extend Ball Park Boulevard.

Background

Six years ago, the city entered into an agreement with the Los Angeles Dodgers, LLC, and Chicago White Sox, Ltd., stating that the city would construct Ball Park Boulevard exiting to the north of Camelback Ranch. The road, per the traffic study, was to carry 40 percent of the baseball traffic, allowing the parking lots to empty within the stipulated 25 minutes. Currently, access to and from the baseball facility generally operates within the stipulated time frame.

Originally, the road was to be constructed in concert with the Main Street Development at the southwest corner of Glendale and 99th avenues. The Main Street Development has not moved forward due to the economic downturn. However, agreements with both the City of Phoenix and then developer, Rightpath Inc., stipulate that the road extension north of its current terminus will be constructed to connect with 99th and Maryland avenues. Although not a requirement at this time, if the roadway had to be extended, it would be built jointly and in conjunction with private development that will benefit from the extension of Ball Park Boulevard. According to those agreements, revenues derived from those future developments in the form of sales tax and a portion of gross profits will go toward debt repayment. The right-of-way acquisition is significant for this route and without developer contribution, it is estimated to cost $18 million to acquire the land and construct the road under this alignment.

This Council Item of Special Interest was initiated by Mayor Weiers as he asked staff to evaluate an alternative alignment for the road. This alignment is an extension of Glen Harbor Boulevard, at Glendale Municipal Airport, that would connect to Ball Park Boulevard within Camelback Ranch. The intent of such an alignment would be to enhance economic development adjacent to the Glendale Municipal Airport.

Another possible alignment that staff considered could run along the east side of the airport and also connect to the existing Ball Park Boulevard at Camelback Ranch. Such an alignment would open up aviation-related development opportunities on the east side of the airport. Both

alternatives include dip crossings of the New River, similar to the McKellips Road crossing of the Salt River in the East Valley. Planning for such river crossings will include a lengthy federal environmental permitting process, which could take several years.

Analysis

The first alternative pathway on the west side of the airport utilizes the existing Glen Harbor Boulevard. The existing road would need some improvements to expand and to meet current safety requirements. Glen Harbor Boulevard would be extended from the current southern cul-de-sac, across the New River in a dip section, and meet with the existing Ball Park Boulevard as shown on the attached aerial photo. The road is very close to the end of the runway and would require review by the Federal Aviation Administration. It is estimated that the total cost to construct a fully improved road would be $6 million.

The second alternative pathway would be on the east side of the runway. This would be a completely new road, extending south from Glendale Avenue and then across the New River in a dip crossing. This alternative would then meet up with the existing Ball Park Boulevard as shown on the attached aerial photo. It is estimated that the total cost to construct this road would be $8 million.

These alternatives do not require the purchase of dozens of acres of right-of-way, as will the original concept pathway. These are also shorter roadway sections, so physically there will be less construction involved as compared to the original Ball Park Boulevard concept.

If Council directs staff to explore these two alternate alignments through the airport, it is recommended that these be considered in the next update to Glendale's *Transportation Master Plan,* scheduled for Fiscal Year 2014-15. All three alignments stemming from the existing Ball Park Boulevard would then be evaluated as part of the overall transportation system, considering anticipated traffic demand, economic benefits and priority relative to other roadway improvements in the city.

It is important to note that neither of the two alternative alignments will replace the original concept of extending Ball Park Boulevard through the Main Street Development and connecting to 99th and Maryland avenues. This original concept is referenced in the agreements with Phoenix, the teams and the developer.

Previous Related Council Action

On November 2, 2007, the city entered into a facility development agreement with the Los Angeles Dodgers, LLC, and Chicago White Sox, Ltd., to provide an alternate exit road (Camelback Road is the primary exit).

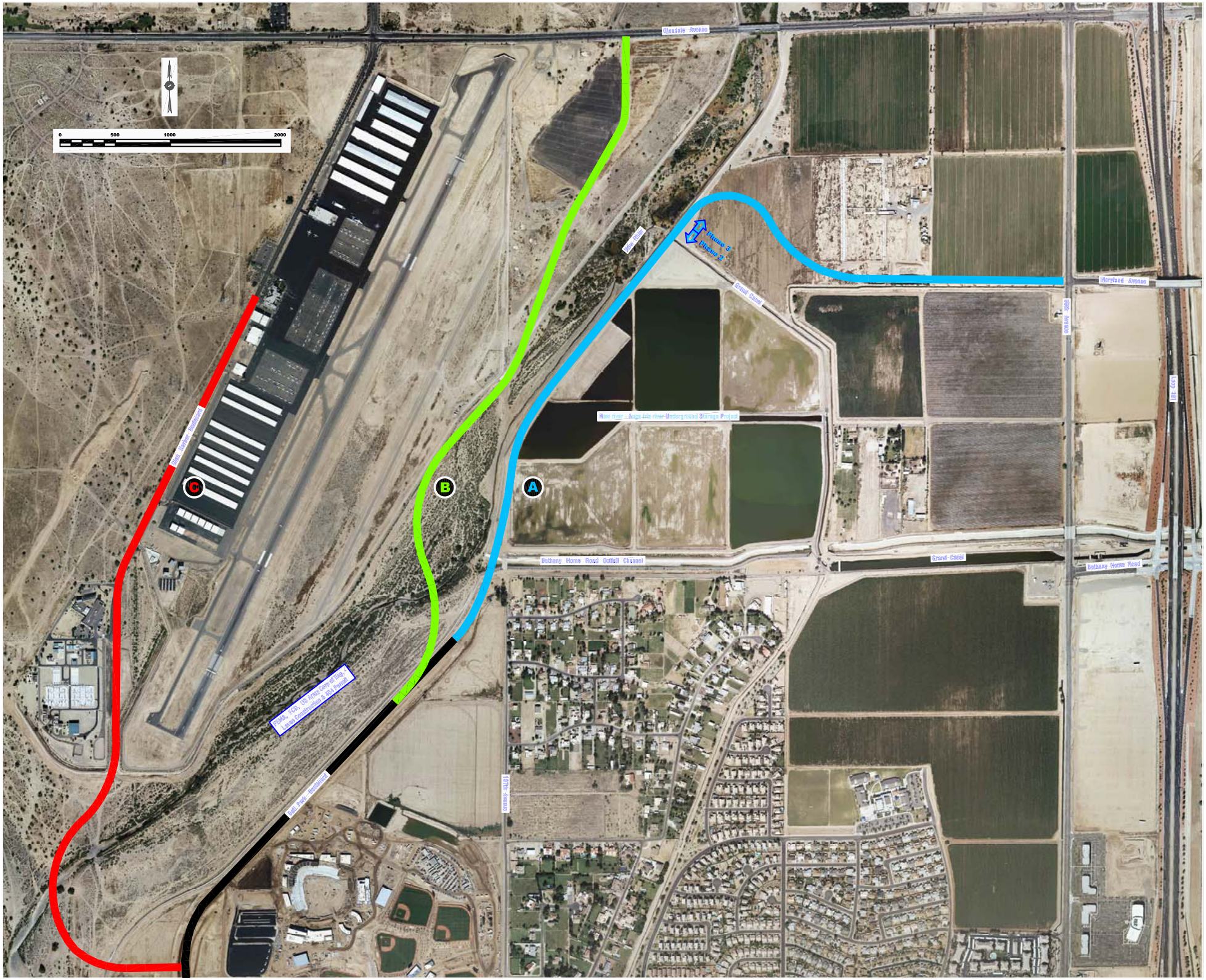
On October 9, 2009, the city entered into an intergovernmental agreement with Phoenix that identified sources of revenue to repay the bonds, and the required infrastructure improvements, including the extension of Ball Park Boulevard.

Budget and Financial Impacts

There is no funding source identified for the construction of this roadway at this time.

Attachments

Aerial Photo



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Glendale Avenue
Phase 3
Phase 2
Grand Canal
Maryland Avenue
99th Avenue
New River - Auga Fria River Underground Storage Project
Bethany Horns Road Outfall Channel
Grand Canal
Bethany Horns Road
Loop 101
A
B
C
D