DRAFT

Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report

Prepared for:

Pinal County, Arizona

May 20, 2020

TischlerBise

FISCAL | ECONOMIC | PLANNING

4701 Sangamore Road

Suite S240

Bethesda, MD 20816

301.320.6900

www.TischlerBise.com

[PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

[PAGE INTENTIONALLY LEFT BLANK]

EXECUTIVE SUMMARY

Pinal County, Arizona, contracted with TischlerBise to document land use assumptions, prepare the Infrastructure Improvements Plan (hereinafter referred to as the "IIP"), and update development fees within the Pinal County Service Area pursuant to Arizona Revised Statutes (ARS) § 11-1102 (hereafter referred to as the "Enabling Legislation"). Counties in Arizona may assess development fees to offset infrastructure costs to a municipality for necessary public services. The development fees must be based on an Infrastructure Improvements Plan and Land Use Assumptions. The IIP for each type of infrastructure is in the middle section of this document. The proposed development fees are displayed in the Development Fee Report in the next section.

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 costs. Development fees may be used for infrastructure 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. This update of Pinal County's Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

1. Parks and Recreational Facilities
2. Public Safety Facilities
3. Street Facilities

ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development fees are calculated for counties in Arizona.

Necessary Public Services

Under the requirements of the Enabling Legislation, development fees may only be used for construction, acquisition, or expansion of public facilities that are necessary public services. "Necessary public service" means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the county: water facilities, wastewater facilities, street facilities, public safety facilities, and parks and recreational facilities. Additionally, a necessary public service includes any facility that was financed before June 1, 2016 and that meets the following requirements:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
2. After August 1, 2018, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2016 to finance construction of the facility.

Infrastructure Improvements Plan

Development fees must be calculated pursuant to an IIP. For each necessary public service that is the subject of a development fee, by law, the IIP shall include the following eight elements:

1. A description of the existing necessary public services in the service area and the costs to update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable.
2. An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable.
3. A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved Land Use Assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable.
4. A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, and industrial.
5. A description of all the costs necessitated by ongoing maintenance and operations of the necessary public services once construction is completed and a description of the source of revenue to be used to fund the maintenance and operations.
6. The total number of projected service units necessitated by and attributable to new development in the service area based on the approved Land Use Assumptions and calculated pursuant to generally accepted engineering and planning criteria.
7. The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.
8. 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.

Qualified Professionals

The IIP must be developed by qualified professionals 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." TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

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 service area (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 improvement units per service unit, typically called level-of-service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres 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 a cost per acre for land acquisition and/ or park improvements.

Evaluation of Credits/Offsets

Regardless of the methodology, a consideration of credits/offsets is integral to the development of a legally defensible development fee. There are two types of credits/offsets that should be addressed in development fee studies and ordinances. The first is a revenue credit/offset 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/offset 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. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

DEVELOPMENT FEE REPORT

METHODOLOGY

Development fees for the necessary public services made necessary by new development must be based on the same level of service (LOS) provided to existing development in the service area. There are three basic methodologies used to calculate development fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity. Each methodology 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 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 basic methodologies for calculating development fees and how those methodologies 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 methodology documents current LOS standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.

- **Plan-Based** (future improvements) - The plan-based methodology allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), 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).

DEVELOPMENT FEE COMPONENTS

Figure 1 summarizes service areas, methodologies, and infrastructure cost components for each necessary public service. Service areas are shown in Appendix E.

Figure 1: Proposed Development Fee Service Areas, Methodologies, and Cost Components

Necessary Public Service	Service Area	Cost Recovery	Incremental Expansion	Plan-Based	Cost Allocation
Parks and Recreational Facilities	Parks and Recreational Facilities	N/A	N/A	Regional Park Land, Regional Park Improvements, Development Fee Report	Population, Jobs
Public Safety Facilities	Public Safety Facilities	Detention Center, Judicial Court, Radio Equipment	Radio Towers	Sheriff Vehicles, Development Fee Report	Population, Vehicle Trips
	North Central Public Safety Facilities	San Tan Substation	N/A	N/A	Population, Vehicle Trips
Street Facilities	East Street Facilities	Ironwood Road Debt	N/A	Development Fee Report	Vehicle Miles of Travel
	North Central Street Facilities	Hunt Highway Debt, Ironwood Road Debt	N/A	Arterials, Development Fee Report	Vehicle Miles of Travel
	South Central Street Facilities	N/A	N/A	Arterials, Development Fee Report	Vehicle Miles of Travel
	West Street Facilities	N/A	N/A	Arterials, Development Fee Report	Vehicle Miles of Travel

PROPOSED DEVELOPMENT FEES

Arizona counties may no longer assess development fees to residential development based on size of unit or number of bedrooms, therefore, proposed development fees for residential development will be assessed per dwelling unit, based on the type of unit. Nonresidential development fees will be assessed per 1,000 square feet of floor area, based on the type of development. Proposed development fees are shown by Street Facilities Service Area.

Fees shown below represent the maximum allowable fees. Pinal County may adopt fees that are less than the amounts shown; however, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements and/or a decrease in Pinal County's LOS standards. All costs in the Development Fee Report are in current dollars with no assumed inflation rate over time. If cost estimates change significantly over time, development fees should be recalibrated.

Figure 2: Proposed Development Fees – East Street Facilities Service Area

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family	$259	$446	$847	$1,552
Multi-Family	$189	$326	$489	$1,004
Age Restricted / All Other	$164	$282	$448	$894

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	$90	$152	$274
Commercial	$63	$668	$1,155	$1,886
Office & Other Services	$80	$261	$440	$781
Institutional	$25	$346	$580	$951
Hotel (per room)	$16	$224	$378	$618
Assited Living (per bed)	$17	$70	$117	$204

Figure 3: Proposed Development Fees – East Street Facilities Service Area (Street Facilities Exemption)

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family	$259	$446	$0	$705
Multi-Family	$189	$326	$0	$515
Age Restricted / All Other	$164	$282	$0	$445

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	$90	$0	$122
Commercial	$63	$668	$0	$731
Office & Other Services	$80	$261	$0	$341
Institutional	$25	$346	$0	$371
Hotel (per room)	$16	$224	$0	$240
Assited Living (per bed)	$17	$70	$0	$86

Figure 4: Proposed Development Fees – North Central Street Facilities Service Area

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family	$259	$489	$2,621	$3,370
Multi-Family	$189	$357	$1,511	$2,057
Age Restricted / All Other	$164	$309	$1,388	$1,861

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	$110	$471	$612
Commercial	$63	$816	$3,577	$4,456
Office & Other Services	$80	$319	$1,361	$1,760
Institutional	$25	$422	$1,800	$2,247
Hotel (per room)	$16	$274	$1,168	$1,457
Assited Living (per bed)	$17	$85	$363	$465

Figure 5: Proposed Development Fees – South Central Street Facilities Service Area

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family	$259	$446	$1,345	$2,050
Multi-Family	$189	$326	$775	$1,289
Age Restricted / All Other	$164	$282	$712	$1,158

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	$90	$242	$363
Commercial	$63	$668	$1,834	$2,566
Office & Other Services	$80	$261	$698	$1,039
Institutional	$25	$346	$923	$1,294
Hotel (per room)	$16	$224	$599	$839
Assited Living (per bed)	$17	$70	$186	$273

Figure 6: Proposed Development Fees – West Street Facilities Service Area

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family	$259	$446	$1,589	$2,294
Multi-Family	$189	$326	$916	$1,430
Age Restricted / All Other	$164	$282	$842	$1,287

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	$90	$285	$407
Commercial	$63	$668	$2,168	$2,900
Office & Other Services	$80	$261	$825	$1,167
Institutional	$25	$346	$1,091	$1,462
Hotel (per room)	$16	$224	$708	$948
Assited Living (per bed)	$17	$70	$220	$306

CURRENT DEVELOPMENT FEES

Current development fees for residential development are assessed per dwelling unit, based on square feet of finished floor area. Nonresidential development fees are assessed per 1,000 square feet of floor area, based on the type of development. Current development fees are shown by Street Fee Area.

Figure 7: Current Development Fees – East Street Fee Area (with arterials)

Residential Development	Development Fees per Unit			
Square Feet of Finished Floor Area	Parks & Recreational	Public Safety	Street	Total
1,000 or less	$188	$190	$1,065	$1,443
1,001 to 1,500	$354	$359	$1,734	$2,447
1,501 to 2,100	$494	$501	$2,294	$3,289
2,101 or more	$536	$544	$2,431	$3,511

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$0	$158	$561	$719
Commercial	$0	$1,135	$4,022	$5,157
Office & Other Services	$0	$491	$1,741	$2,232
Institutional	$0	$453	$1,607	$2,060

Figure 8: Current Development Fees – East Street Fee Area (without arterials)

Residential Development	Development Fees per Unit			
Square Feet of Finished Floor Area	Parks & Recreational	Public Safety	Street	Total
1,000 or less	$188	$190	$41	$419
1,001 to 1,500	$354	$359	$68	$781
1,501 to 2,100	$494	$501	$89	$1,084
2,101 or more	$536	$544	$95	$1,175

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$0	$158	$22	$180
Commercial	$0	$1,135	$157	$1,292
Office & Other Services	$0	$491	$68	$559
Institutional	$0	$453	$63	$516

Figure 9: Current Development Fees – North Central Street Fee Area

Residential Development	Development Fees per Unit			
Square Feet of Finished Floor Area	Parks & Recreational	Public Safety	Street	Total
1,000 or less	$188	$245	$3,494	$3,927
1,001 to 1,500	$354	$462	$5,692	$6,508
1,501 to 2,100	$494	$645	$7,527	$8,666
2,101 or more	$536	$700	$7,978	$9,214

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$0	$192	$1,844	$2,036
Commercial	$0	$1,379	$13,197	$14,576
Office & Other Services	$0	$596	$5,713	$6,309
Institutional	$0	$550	$5,274	$5,824

Figure 10: Current Development Fees – South Central Street Fee Area

Residential Development	Development Fees per Unit			
Square Feet of Finished Floor Area	Parks & Recreational	Public Safety	Street	Total
1,000 or less	$188	$190	$1,148	$1,526
1,001 to 1,500	$354	$359	$1,871	$2,584
1,501 to 2,100	$494	$501	$2,474	$3,469
2,101 or more	$536	$544	$2,623	$3,703

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$0	$158	$606	$764
Commercial	$0	$1,135	$4,339	$5,474
Office & Other Services	$0	$491	$1,878	$2,369
Institutional	$0	$453	$1,734	$2,187

Figure 11: Current Development Fees – West Street Fee Area

Residential Development	Development Fees per Unit			
Square Feet of Finished Floor Area	Parks & Recreational	Public Safety	Street	Total
1,000 or less	$188	$190	$662	$1,040
1,001 to 1,500	$354	$359	$1,078	$1,791
1,501 to 2,100	$494	$501	$1,426	$2,421
2,101 or more	$536	$544	$1,512	$2,592

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$0	$158	$349	$507
Commercial	$0	$1,135	$2,501	$3,636
Office & Other Services	$0	$491	$1,082	$1,573
Institutional	$0	$453	$999	$1,452

Difference Between Proposed and Current Development Fees

The differences between the proposed and current development fees are displayed below. Arizona counties may no longer assess development fees to residential development based on size of unit or number of bedrooms, therefore, the residential comparison represents a unit with 2,101 or more square feet for single-family units and a unit with 1,001 to 1,500 square feet for multi-family and all other units.

Figure 12: Difference Between Proposed and Current Fees – East SFSA

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family[1]	($277)	($98)	($1,584)	($1,959)
Multi-Family[2]	($165)	($33)	($1,245)	($1,443)
Age Restricted / All Other[2]	($190)	($77)	($1,286)	($1,553)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	($68)	($409)	($445)
Commercial	$63	($467)	($2,867)	($3,271)
Office & Other Services	$80	($230)	($1,301)	($1,451)
Institutional	$25	($107)	($1,027)	($1,109)
Hotel (per room)	N/A	N/A	N/A	N/A
Assited Living (per bed)	N/A	N/A	N/A	N/A

1. Based on current development fees for a residential unit with 2,101 or more square feet
2. Based on current development fees for a residential unit with 1,001 to 1,500 square feet

Figure 13: Difference Between Proposed and Current Fees – East SFSA (Street Facilities Exemption)

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family[1]	($277)	($98)	($95)	($470)
Multi-Family[2]	($165)	($33)	($68)	($266)
Age Restricted / All Other[2]	($190)	($77)	($68)	($336)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	($68)	($22)	($58)
Commercial	$63	($467)	($157)	($561)
Office & Other Services	$80	($230)	($68)	($218)
Institutional	$25	($107)	($63)	($145)
Hotel (per room)	N/A	N/A	N/A	N/A
Assited Living (per bed)	N/A	N/A	N/A	N/A

1. Based on current development fees for a residential unit with 2,101 or more square feet
2. Based on current development fees for a residential unit with 1,001 to 1,500 square feet

Figure 14: Difference Between Proposed and Current Fees – North Central SFSA

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family[1]	($277)	($211)	($5,357)	($5,844)
Multi-Family[2]	($165)	($105)	($4,181)	($4,451)
Age Restricted / All Other[2]	($190)	($153)	($4,304)	($4,647)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	($82)	($1,373)	($1,424)
Commercial	$63	($563)	($9,620)	($10,120)
Office & Other Services	$80	($277)	($4,352)	($4,549)
Institutional	$25	($128)	($3,474)	($3,577)
Hotel (per room)	N/A	N/A	N/A	N/A
Assited Living (per bed)	N/A	N/A	N/A	N/A

1. Based on current development fees for a residential unit with 2,101 or more square feet
2. Based on current development fees for a residential unit with 1,001 to 1,500 square feet

Figure 15: Difference Between Proposed and Current Fees – South Central SFSA

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family[1]	($277)	($98)	($1,278)	($1,653)
Multi-Family[2]	($165)	($33)	($1,096)	($1,295)
Age Restricted / All Other[2]	($190)	($77)	($1,159)	($1,426)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	($68)	($364)	($401)
Commercial	$63	($467)	($2,505)	($2,908)
Office & Other Services	$80	($230)	($1,180)	($1,330)
Institutional	$25	($107)	($811)	($893)
Hotel (per room)	N/A	N/A	N/A	N/A
Assited Living (per bed)	N/A	N/A	N/A	N/A

1. Based on current development fees for a residential unit with 2,101 or more square feet
2. Based on current development fees for a residential unit with 1,001 to 1,500 square feet

Figure 16: Difference Between Proposed and Current Fees – West SFSA

Residential Development	Development Fees per Unit			
Development Type	Parks & Recreational	Public Safety	Street	Total
Single Family[1]	($277)	($98)	$77	($298)
Multi-Family[2]	($165)	($33)	($162)	($361)
Age Restricted / All Other[2]	($190)	($77)	($236)	($504)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Parks & Recreational	Public Safety	Street	Total
Industrial	$31	($68)	($64)	($100)
Commercial	$63	($467)	($333)	($736)
Office & Other Services	$80	($230)	($257)	($406)
Institutional	$25	($107)	$92	$10
Hotel (per room)	N/A	N/A	N/A	N/A
Assited Living (per bed)	N/A	N/A	N/A	N/A

1. Based on current development fees for a residential unit with 2,101 or more square feet
2. Based on current development fees for a residential unit with 1,001 to 1,500 square feet

PARKS AND RECREATIONAL FACILITIES IIP

ARS § 11-1102(V)(7)(e) defines the facilities and assets that can be included in the Parks and Recreational Facilities Infrastructure Improvements Plan:

> *"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. Parks and recreational facilities do not include vehicles, equipment of 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, trails, 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 and equipment or improvements constituting accessory or incidental amenities to a park or recreational facility allowed under this section."*

The Parks and Recreational Facilities IIP includes components for park land, park improvements, and the cost of preparing the Parks and Recreational Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used for park land and park improvements. A plan-based methodology is used for the Development Fee Report.

Proportionate Share

ARS § 11-1102(B)(3) states that development fees may not exceed a proportionate share of the cost of necessary public services, based on service units, needed to provide necessary public services to the development. The Parks and Recreational Facilities IIP and development fees will allocate the cost of necessary public services between residential and nonresidential based on daytime population. Based on 2017 estimates from the U.S. Census Bureau's OnTheMap web application, 27,428 inflow commuters traveled to Pinal County for work in 2017. The proportionate share is based on cumulative impact days per year with residents potentially impacting parks and recreational facilities 365 days per year. Inflow commuters potentially impact parks and recreational facilities 250 days per year, assuming five workdays per week multiplied by 50 weeks per year. For parks and recreational facilities, residential development generates 96 percent of demand and nonresidential development generates the remaining four percent of demand.

Figure PR1: Daytime Population

Development Type	Service Unit	Impact Days per Year	Total Impact Days per Year	Proportionate Share
Residential	427,603 residents	365 days	156,075,095	96%
Nonresidential	27,428 inflow commuters	250 days	6,857,000	4%
Total			162,932,095	100%

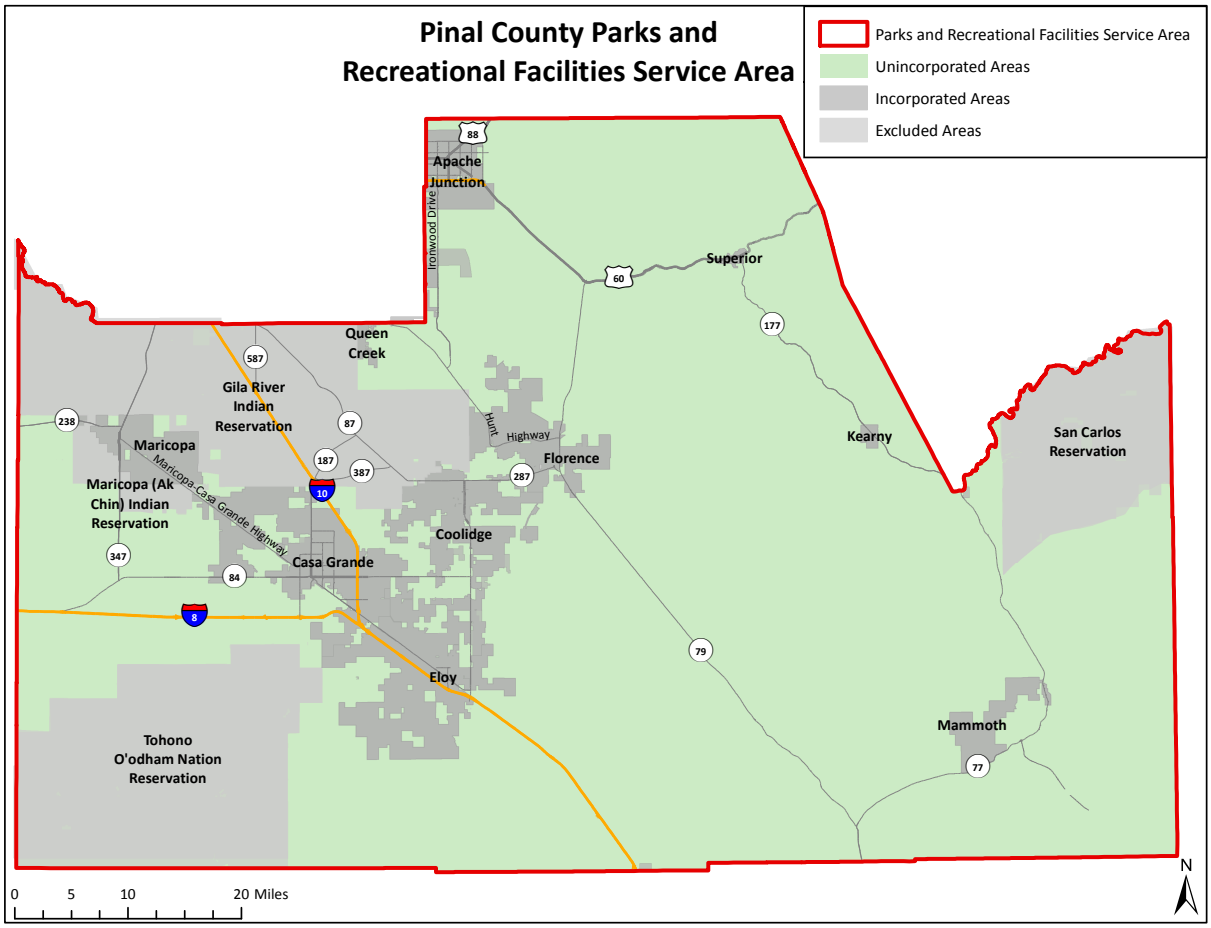
Residential Impact: 365 days per year

Nonresidential Impact: 250 days per year (5 days per week X 50 weeks per year)

Service Area

Pinal County plans to provide a uniform level of service and equal access to parks within the county. The service area for the Parks and Recreational Facilities IIP is shown below in Figure PR2.

Figure PR2: Parks and Recreational Facilities Service Area



Ratio of Service Unit to Development Unit

ARS § 11-1102(F)(4) requires:

> *"A table that establishes the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table that establishes the ratio of a service unit to various types of land uses, including residential, commercial and industrial."*

Figure PR3 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of employees per thousand square feet of floor area.

Figure PR3: Ratio of Service Unit to Development Unit

Residential Development	
Development Type	Persons per Housing Unit[1]
Single Family	2.47
Multi-Family	1.80
Age Restricted / All Other	1.56

Nonresidential Development	
Development Type	Jobs per 1,000 Sq Ft[1]
Industrial	1.16
Commercial	2.34
Office & Other Services	2.97
Institutional	0.93
Hotel (per room)	0.58
Assited Living (per bed)	0.61

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Necessary Public Services

ARS § 11-1102(F)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The description shall be prepared by qualified professionals who are licensed in this state, as applicable."*

ARS § 11-1102(F)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. The analysis shall be prepared by qualified professionals who are licensed in this state, as applicable."*

Regional Park Land – Plan-Based

Pinal County recently acquired 498 acres of regional park land at the site of the future Peralta Regional Park. To allocate the proportionate share of demand for regional park land to residential and nonresidential development, this analysis uses daytime population shown in Figure PR1. Shown below in Figure PR4, Pinal County's existing level of service for residential development is 0.0011 acres per person (498 acres X 96 percent residential share / 440,059 persons). The nonresidential level of service is 0.0003 acres per job (498 acres X four percent nonresidential share / 61,602 jobs).

The definition of necessary public services for Parks and Recreational Facilities includes parks and recreational facilities on real property up to 30 acres in area, or parks and recreational facilities larger than 30 acres if the facilities provide a direct benefit to the development. As documented in the 2019 Comprehensive Plan, Pinal County plans to develop a network of regional parks larger than 30 acres that will provide access within a 30-minute drive of any development in Pinal County. Due to their unique, regional attraction, the planned regional parks will provide a direct benefit to all development. Regional park land does not include land defined as open space in the 2019 Comprehensive Plan or the 2007 Open Space and Trails Master Plan.

Figure PR4: Existing Level of Service

Level-of-Service (LOS) Standards	
Existing Acres	498
Residential	
Residential Share	96%
2020 Population	440,059
Acres per Person	0.0011
Nonresidential	
Nonresidential Share	4%
2020 Jobs	61,602
Acres per Job	0.0003

Source: Pinal County, Arizona

Pinal County's 2019 Comprehensive Plan defines a planned regional park level of service of six acres per 1,000 persons, or 0.006 acres per person, but this exceeds the existing residential level of service of 0.0011 acres per person. Based on a projected population of 585,664 persons in 2030, Pinal County needs 3,514 acres of regional park land to achieve the planned level of service within the next 10 years. To allocate the proportionate share of demand for regional park land to residential and nonresidential development, this analysis uses daytime population shown in Figure PR1. To ensure future development does not pay for a higher level of service than provided to existing development, costs for regional park land are allocated to all development in 2030. Pinal County's planned LOS for residential development is approximately 0.0058 acres per person (3,514 acres X 96 percent residential share / 585,664 persons). For nonresidential development, the planned LOS is approximately 0.0015 acres per job (3,514 acres X four percent nonresidential share / 94,350 jobs).

The cost to acquire regional park land is $2,008 per acre, and this cost is based on the recent land acquisition at Peralta Regional Park—acquisition costs may include ROW, BLM reviews, processes, and necessary environmental clearances. For regional park land, the cost is $11.57 per person (0.0058 acres per person X $2,008 per acre) and $2.99 per job (0.0015 acres per job X $2,008 per acre).

Figure PR5: Planned Level of Service

Cost Factors	
Average Cost per Acre	$2,008

Level-of-Service (LOS) Standards	
2030 Planned Acres	3,514
Residential	
Residential Share	96%
2030 Population	585,664
Acres per Person	0.0058
Cost per Person	$11.57
Nonresidential	
Nonresidential Share	4%
2030 Jobs	94,350
Acres per Job	0.0015
Cost per Job	$2.99

Source: Pinal County, Arizona

Description	Total Cost[1]	Acres	Cost per Acre
Peralta Regional Park Land	$1,000,000	498	$2,008

1. Acquisition costs may include ROW, BLM reviews, processes, and necessary environmental clearances.

Regional Park Improvements – Plan-Based

Pinal County currently provides no regional park improvements, but it plans to construct 357 acres of regional park improvements within the next 10 years. To ensure future development does not pay for a higher level of service than provided to existing development, costs for regional park improvements are allocated to all development in 2030. The definition of necessary public services for Parks and Recreational Facilities includes parks and recreational facilities on real property up to 30 acres in area, or parks and recreational facilities larger than 30 acres if the facilities provide a direct benefit to the development. Pinal County plans to develop regional parks larger than 30 acres, and due to their unique, regional attraction, the planned regional parks will provide a direct benefit to development.

To allocate the proportionate share of demand for regional park improvements to residential and nonresidential development, this analysis uses daytime population. Pinal County's planned LOS for residential development is 0.0006 improved acres per person (357 acres X 96 percent residential share / 585,664 persons). For nonresidential development, the planned LOS is 0.0002 improved acres per job (357 acres X four percent nonresidential share / 94,350 jobs).

Based on planned regional park improvements of $56,035,323 for 357 acres, the weighted average is $156,962 per acre. For regional park improvements, the cost is $91.85 per person (0.0006 improved acres per person X $156,962 per acre) and $23.76 per job (0.0002 improved acres per job X $156,962 per acre).

Figure PR6: Planned Level of Service

Cost Factors	
Weighted Average Cost per Acre	$156,962

Level-of-Service (LOS) Standards	
2030 Improved Acres	357
Residential	
Residential Share	96%
2030 Population	585,664
Improved Acres per Person	0.0006
Cost per Person	$91.85
Nonresidential	
Nonresidential Share	4%
2030 Jobs	94,350
Improved Acres per Job	0.0002
Cost per Job	$23.76

Description	Total Cost	Acres	Cost per Acre
Palo Verde Mountain Regional Park	$21,442,000	214	$100,196
San Tan Mountain Regional Park[1]	$24,594,651	97	$253,553
Peralta Regional Park	$9,998,672	46	$217,362
Total	$56,035,323	357	$156,962

Source: Pinal County, Arizona

1. Maricopa County Parks and Recreation

Development Fee Report – Plan-Based

The cost to prepare the Parks and Recreational Facilities IIP and related Development Fee Report equals $30,000. Pinal County plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is $1.45 per person and $0.28 per job.

Figure PR7: IIP and Development Fee Report

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational Facilities	$30,000	Residential	96%	Population	19,923	$1.45
		Nonresidential	4%	Jobs	4,347	$0.28
Public Safety Facilities	$40,000	Residential	82%	Population	19,923	$1.65
		Nonresidential	18%	Vehicle Trips	16,255	$0.44
Street Facilities	$49,700	All Development	100%	VMT	313,255	$0.16
Total	$119,700					

PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 11-1102(F)(6) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

ARS § 11-1102(F)(7) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period of not more than ten years."*

As shown in the *Land Use Assumptions* document, Pinal County's population is expected to increase by an additional 145,605 persons and employment is expected to increase by 32,748 jobs over the next 10 years. In the unincorporated areas, population is expected to increase by 51,935 persons and employment is expected to increase by 12,040 jobs during the same period. In the incorporated areas, population is expected to increase by 93,668 persons and employment is expected to increase by 20,679 jobs during the same period. In the excluded areas, population is expected to increase by two persons and employment is expected to increase by 29 jobs over the next 10 years.

Regional Park Land

Within the next 10 years, Pinal County plans to increase its inventory of regional park land from 498 acres to 3,514 acres. The total cost to acquire an additional 3,016 acres of park land is $6,056,185, and this cost will be allocated to all development in 2030. Since the planned level of service exceeds the existing level of service, Pinal County will need to meet demand from existing development countywide and future development in the incorporated / excluded areas.

Unincorporated Areas

Based on a projected population increase of 51,935 persons, future residential development in unincorporated areas demands 299.1 acres of regional park land (51,935 additional persons X 0.0058 acres per person). With projected employment growth of 12,040 jobs, future nonresidential development in unincorporated areas demands 17.9 acres of regional park land (12,040 additional jobs X 0.0015 acres per job) over the next 10 years. Future development in unincorporated areas demands approximately 317.1 acres of land for planned regional parks at a cost of $636,710 (317.1 acres X $2,008 per acre).

Incorporated / Excluded Areas

Based on a projected population increase of 93,669 persons, future residential development in incorporated / excluded areas demands 539.5 acres of regional park land (93,669 additional persons X 0.0058 acres per person). With projected employment growth of 20,708 jobs, future nonresidential development in incorporated / excluded areas demands 30.9 acres of regional park land (20,708 additional jobs X 0.0015 acres per job) over the next 10 years. Future development in incorporated / excluded areas demands approximately 570.4 acres of land for planned regional parks at a cost of $1,145,354 (570.4 acres X $2,008 per acre).

Existing Development

Existing residential development demands 2,534.7 acres (440,059 persons X 0.0058 acres per person) of regional park land and existing nonresidential development demands 91.8 acres of regional park land (61,602 jobs X 0.0015 acres per job). Since Pinal County currently has 498 acres of regional park land from the recent Peralta Regional Park acquisition, existing development's share of land for planned regional parks is 2,128.5 acres (2,534.7 acres + 91.8 acres – 498 acres), and the cost is $4,274,121 (2,626.5 acres X $2,008 per acre).

Figure PR8: Projected Demand for Regional Park Land

Type of Infrastructure	Level of Service	Service Unit	Cost per Unit
Regional Park Land	0.0058 Acres	per Person	$2,008
	0.0015 Acres	per Job	

Demand for Regional Park Land					
Year	Population	Jobs	Acres		
			Residential	Nonresidential	Total
2020	440,059	61,602	2,534.7	91.8	2,626.5
2021	452,643	64,404	2,607.2	95.9	2,703.2
2022	465,559	67,206	2,681.6	100.1	2,781.7
2023	478,844	70,007	2,758.1	104.3	2,862.4
2024	492,546	72,809	2,837.1	108.5	2,945.5
2025	506,701	75,611	2,918.6	112.6	3,031.2
2026	521,353	79,359	3,003.0	118.2	3,121.2
2027	536,537	83,107	3,090.5	123.8	3,214.3
2028	552,286	86,854	3,181.2	129.4	3,310.6
2029	568,647	90,602	3,275.4	135.0	3,410.4
2030	585,664	94,350	3,373.4	140.6	3,514.0
10-Yr Increase	145,605	32,748	838.7	48.8	887.5
Unincorporated Areas	51,935	12,040	299.1	17.9	317.1
	Growth-Related Expenditures		$600,694	$36,016	$636,710
Incorporated / Excluded Areas	93,669	20,708	539.5	30.9	570.4
	Growth-Related Expenditures		$1,083,406	$61,948	$1,145,354
Existing Development[1]	440,059	61,602	2,056.7	71.9	2,128.5
	Existing Dev. Expenditures		$4,129,839	$144,282	$4,274,121
Total	585,664	94,350	2,895.3	120.6	3,016.0
	Total Expenditures		$5,813,939	$242,246	$6,056,185

1. Does not include recent acquisition of Peralta Regional Park: 498 acres and $1,000,000

Regional Park Improvements

Within the next 10 years, Pinal County plans to construct 357 acres of regional park improvements with a total cost of $56,035,323—this cost will be allocated to all development in 2030. Since the planned level of service exceeds the existing level of service, Pinal County will need to meet demand from existing development countywide and future development in the incorporated / excluded areas.

Unincorporated Areas

Based on a projected population increase of 51,935 persons, future residential development in unincorporated areas demands 30.4 acres of regional park improvements (51,935 additional persons X 0.0006 improved acres per person). With projected employment growth of 12,040 jobs, future nonresidential development in unincorporated areas demands 1.8 acres of regional park improvements (12,040 additional jobs X 0.0002 improved acres per job) over the next 10 years. Future development in unincorporated areas demands approximately 32.2 acres of regional park improvements at a cost of $5,056,308 (32.2 improved acres X $156,962 per acre).

Incorporated / Excluded Areas

Based on a projected population increase of 93,669 persons, future residential development in incorporated / excluded areas demands 54.8 acres of regional park improvements (93,669 additional persons X 0.0006 improved acres per person). With projected employment growth of 20,708 jobs, future nonresidential development in incorporated / excluded areas demands 3.1 acres of regional park improvements (20,708 additional jobs X 0.0002 improved acres per job) over the next 10 years. Future development in incorporated / excluded areas demands approximately 57.9 acres of regional park improvements at a cost of $9,095,617 (57.9 improved acres X $156,962 per acre).

Existing Development

Existing residential development demands 257.5 acres of regional park improvements (440,059 persons X 0.0006 improved acres per person) and existing nonresidential development demands 9.3 acres of regional park improvements (61,602 jobs X 0.0002 improved acres per job). Existing development's share is 266.8 acres of regional park improvements, and the cost is $41,883,398 (266.8 improved acres X $156,962 per acre).

Figure PR9: Projected Demand for Regional Park Improvements

Type of Infrastructure	Level of Service	Service Unit	Cost per Unit
Regional Park Improvements	0.0006 Improved Acres	per Person	$156,962
	0.0002 Improved Acres	per Job	

Demand for Regional Park Improvements					
Year	Population	Jobs	Improved Acres		
			Residential	Nonresidential	Total
2020	440,059	61,602	257.5	9.3	266.8
2021	452,643	64,404	264.9	9.7	274.6
2022	465,559	67,206	272.4	10.2	282.6
2023	478,844	70,007	280.2	10.6	290.8
2024	492,546	72,809	288.2	11.0	299.2
2025	506,701	75,611	296.5	11.4	308.0
2026	521,353	79,359	305.1	12.0	317.1
2027	536,537	83,107	314.0	12.6	326.6
2028	552,286	86,854	323.2	13.1	336.3
2029	568,647	90,602	332.8	13.7	346.5
2030	585,664	94,350	342.7	14.3	357.0
10-Yr Increase	145,605	32,748	85.2	5.0	90.2
Unincorporated Areas	51,935	12,040	30.4	1.8	32.2
	Growth-Related Expenditures		$4,770,293	$286,015	$5,056,308
Incorporated / Excluded Areas	93,669	20,709	54.8	3.1	57.9
	Growth-Related Expenditures		$8,603,658	$491,959	$9,095,617
Existing Development	440,059	61,602	257.5	9.3	266.8
	Existing Dev. Expenditures		$40,419,958	$1,463,440	$41,883,398
Total	585,664	94,350	342.7	14.3	357.0
	Total Expenditures		$53,793,910	$2,241,413	$56,035,323

PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue credit/offset is not necessary for Parks and Recreational Facilities development fees, because costs generated by projected development exceed revenues generated by projected development. Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 11-1102(F)(8)).

Parks and Recreational Facilities Development Fees

Infrastructure components and cost factors for Parks and Recreational Facilities are summarized in the upper portion of Figure PR10. The cost per service unit for Parks and Recreational Facilities is $104.86 per person and $27.02 per job.

Parks and Recreational Facilities development fees for residential development are assessed according to the number of persons per housing unit. For example, the single-family fee of $259 is calculated using a cost per service unit of $104.86 per person multiplied by a demand unit of 2.47 persons per housing unit.

Nonresidential development fees are calculated using jobs as the service unit. The fee of $63 per 1,000 square feet of commercial development is derived from a cost per service unit of $27.02 per job multiplied by a demand unit of 2.34 jobs per 1,000 square feet.

Figure PR10: Schedule of Parks and Recreational Facilities Development Fees

Fee Component	Cost per Person	Cost per Job
Regional Park Land	$11.57	$2.99
Regional Park Improvements	$91.85	$23.76
Development Fee Report	$1.45	$0.28
Total	$104.86	$27.02

Residential Development	Development Fees per Unit			
Development Type	Persons per Housing Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	2.47	$259	$536	($277)
Multi-Family	1.80	$189	$354	($165)
All Other	1.56	$164	$354	($190)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Jobs per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	1.16	$31	$0	$31
Commercial	2.34	$63	$0	$63
Office & Other Services	2.97	$80	$0	$80
Institutional	0.93	$25	$0	$25
Hotel (per room)	0.58	$16	N/A	N/A
Assited Living (per bed)	0.61	$17	N/A	N/A

1. See Land Use Assumptions

Parks and Recreational Facilities Development Fee Revenue

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 11-1102(F)(8)). Projected fee revenue shown in Figure PR11 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Parks and Recreational Facilities shown in Figure PR10. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $5.72 million, and projected expenditures equal $62.12 million. Existing development's share of $46.16 million and the incorporated areas' share of $10.24 million may not be funded with development fees.

Figure PR11: Projected Parks and Recreational Facilities Development Fee Revenue

Fee Component	Growth Share	Incorporated	Existing Share	Total
Regional Park Land	$636,710	$1,145,354	$4,274,121	$6,056,185
Regional Park Improvements	$5,056,308	$9,095,617	$41,883,398	$56,035,323
Development Fee Report	$30,000	$0	$0	$30,000
Total	$5,723,018	$10,240,971	$46,157,519	$62,121,508

		Single Family $259 per unit	Multi-Family $189 per unit	All Other $164 per unit	Industrial $31 per 1,000 sq ft	Commercial $63 per 1,000 sq ft	Office & Other $80 per 1,000 sq ft	Institutional $25 per 1,000 sq ft
Year		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	73,786	5,405	19,536	1,885	1,930	1,352	3,800
Year 1	2021	75,260	5,513	19,926	2,074	2,009	1,434	4,040
Year 2	2022	76,407	5,597	20,230	2,263	2,088	1,515	4,280
Year 3	2023	77,377	5,668	20,487	2,452	2,168	1,597	4,520
Year 4	2024	78,368	5,741	20,749	2,641	2,247	1,678	4,760
Year 5	2025	80,395	5,889	21,286	2,830	2,327	1,759	5,000
Year 6	2026	82,543	6,047	21,855	3,046	2,502	1,901	5,491
Year 7	2027	84,819	6,214	22,457	3,263	2,678	2,043	5,982
Year 8	2028	86,739	6,354	22,966	3,479	2,853	2,185	6,473
Year 9	2029	88,840	6,508	23,522	3,696	3,028	2,327	6,964
Year 10	2030	91,013	6,667	24,097	3,912	3,204	2,469	7,454
10-Year Increase		17,227	1,262	4,561	2,027	1,274	1,116	3,655
Projected Revenue		$4,423,392	$236,485	$739,911	$63,089	$79,996	$88,975	$91,171

Projected Fee Revenue	$5,723,018
Total Expenditures	$62,121,508
Incorporated Share	$10,240,971
Existing Development Share	$46,157,519

OPERATIONS AND MAINTENANCE COSTS

ARS § 11-1102(F)(5) requires:

> *"A description of all the costs necessitated by ongoing maintenance and operations of the necessary public services once construction is completed and a description of the source of revenue to be used to fund the maintenance and operations."*

Pinal County's Open Space and Trails Department provided annual estimates for operations and maintenance costs. For Peralta Regional Park, the operations and maintenance cost is $170,000 per year beginning in Fiscal Year 2022. The operations and maintenance cost for San Tan Regional Park is $360,000 per year beginning in Fiscal Year 2024. For Palo Verde Regional Park, the operations and maintenance cost is $1,120,000 per year beginning in Fiscal Year 2026. Based on these annual costs, the projected 10-year operations and maintenance cost equals $9,650,000, and the projected funding sources include the General Fund and park user fees.

Figure PR12: Projected Parks and Recreational Operations and Maintenance Costs

Project Description	Annual O&M	Initial FY	Source	10-Year Total
Peralta Regional Park	$170,000	FY 21/22	General Fund, Park User Fees	$1,530,000
San Tan Regional Park	$360,000	FY 23/24		$2,520,000
Palo Verde Regional Park	$1,120,000	FY 25/26		$5,600,000
Total				$9,650,000

Source: Pinal County Open Space and Trails Department

PUBLIC SAFETY FACILITIES IIP

ARS § 11-1102(V)(7)(d) defines the facilities and assets that can be included in the Public Safety Facilities Infrastructure Improvements Plan:

> *"Public safety facilities, including all appurtenances, equipment and vehicles. Public safety facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the county, vehicles and equipment used to provide administrative services, helicopters or airplanes, paramilitary vehicles, court and judicial facilities, facilities that are used for training firefighters or officers from more than one station or substation or jail, correctional or detention facilities."*

The Public Safety Facilities IIP includes components for Sherriff vehicles, the Detention Center, the Judicial Court, radio equipment, radio towers, the San Tan substation, and the cost of preparing the Public Safety Facilities IIP and related Development Fee Report. The incremental expansion methodology, based on the current level of service, is used for radio towers. The cost recovery methodology is used for the Detention Center, the Judicial Court, radio equipment, and the San Tan substation. A plan-based methodology is used for Sherriff vehicles and the Development Fee Report.

Proportionate Share

ARS § 11-1102(B)(3) states that development fees may not exceed a proportionate share of the cost of necessary public services, based on service units, needed to provide necessary public services to the development. The Public Safety Facilities IIP and development fees will allocate the cost of necessary public services between residential and nonresidential based on functional population. Based on 2017 estimates from the U.S. Census Bureau's OnTheMap web application, residential development accounts for approximately 82 percent of functional population and nonresidential development is responsible for the remaining 18 percent.

Figure PS1: Functional Population

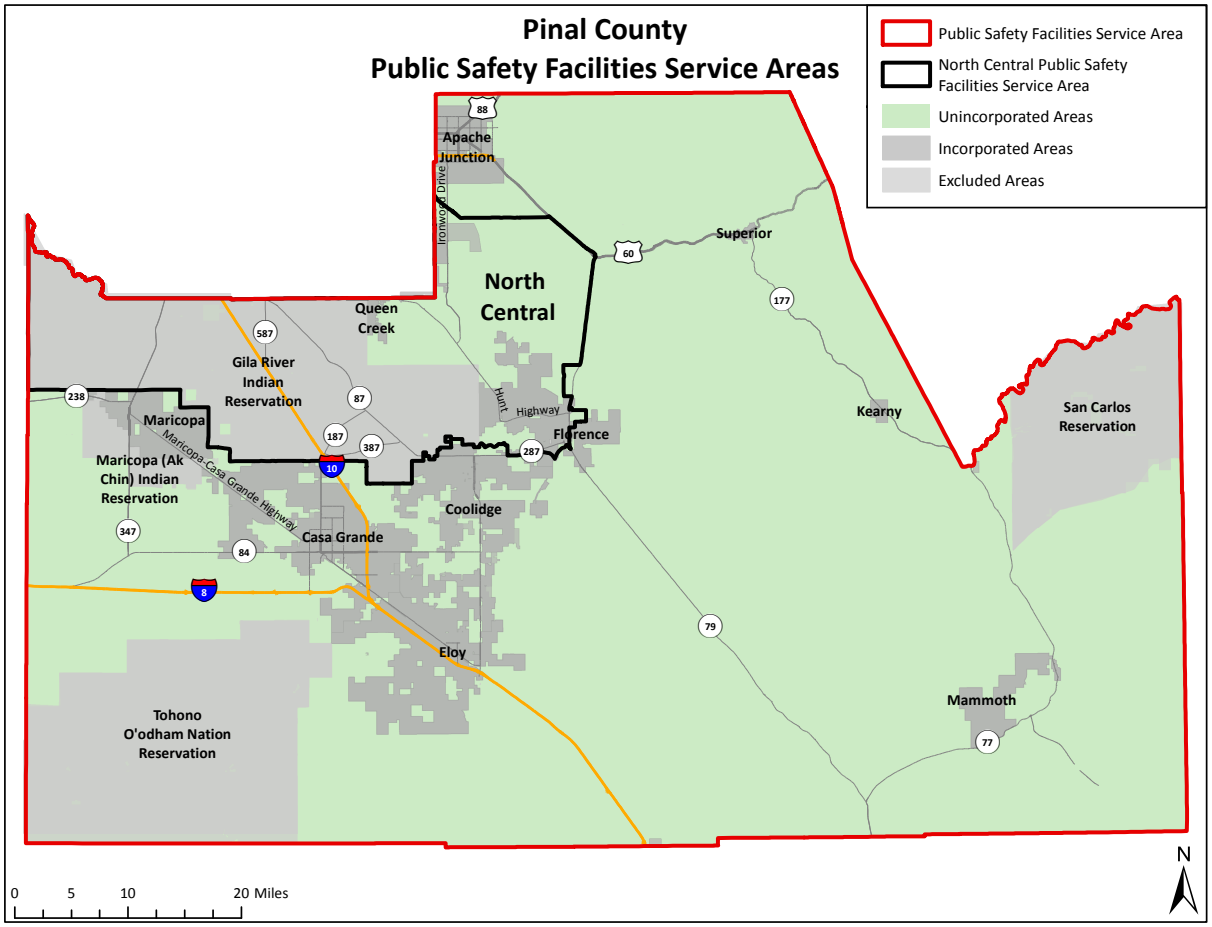
Demand Units in 2017						
Residential					Demand Hours/Day	Person Hours
	Population	427,603				
	Residents Not Working		280,371		20	5,607,420
	Employed Residents		147,232			
	Employed in Pinal County			32,644	14	457,016
	Employed outside Pinal County			114,588	14	1,604,232
					Residential Subtotal	7,668,668
					Residential Share	**82%**
Nonresidential						
	Non-working Residents		280,371		4	1,121,484
	Jobs Located in Pinal County		60,072			
	Residents Employed in Pinal County			32,644	10	326,440
	Non-Resident Workers (inflow commuters)			27,428	10	274,280
					Nonresidential Subtotal	1,722,204
					Nonresidential Share	**18%**
					Total	9,390,872

Source: Arizona Office of Economic Opportunity (population), U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Version 6.6 (employment).

Service Area

Pinal County strives to provide a uniform level of service and equal response time countywide. The service areas for the Public Safety Facilities IIP are shown below in Figure PS2. Cost recovery of the San Tan substation uses the North Central Public Safety Facilities Service Area, while all other necessary public services use the countywide Public Safety Facilities Service Area.

Figure PS2: Public Safety Facilities Service Areas



RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 11-1102(F)(4) requires:

> *"A table that establishes the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table that establishes the ratio of a service unit to various types of land uses, including residential, commercial and industrial."*

Figure PS3 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the number of persons per housing unit. For nonresidential development, the table displays the number of average weekday vehicle trips generated per thousand square feet of floor area.

Figure PS3: Ratio of Service Unit to Development Unit

Residential Development	
Development Type	Persons per Housing Unit[1]
Single Family	2.47
Multi-Family	1.80
Age Restricted / All Other	1.56

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Rate Adjustment	AWVT per 1,000 Sq Ft[1]
Industrial	3.37	50%	1.69
Commercial	37.75	33%	12.46
Office & Other Services	9.74	50%	4.87
Institutional	19.52	33%	6.44
Hotel (per room)	8.36	50%	4.18
Assited Living (per bed)	2.60	50%	1.30

1. See Land Use Assumptions

ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING NECESSARY PUBLIC SERVICES

ARS § 11-1102(F)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The description shall be prepared by qualified professionals who are licensed in this state, as applicable."*

ARS § 11-1102(F)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. The analysis shall be prepared by qualified professionals who are licensed in this state, as applicable."*

Sheriff Vehicles – Plan-Based

Pinal County will use development fees to expand its current inventory of Sheriff vehicles. Shown below in Figure PS4, Pinal County's existing inventory includes 236 patrol vehicles. Functional population is used to allocate the proportionate share of demand to residential and nonresidential development. Pinal County's existing level of service for residential development is 0.0009 units per person (236 units X 82 percent residential share / 222,443 persons). The nonresidential level of service is 0.0007 units per vehicle trip (236 units X 18 percent nonresidential share / 58,278 vehicle trips).

Figure PS4: Existing Level of Service

Level-of-Service (LOS) Standards	
Existing Patrol Vehicles	236
Residential	
Residential Share	82%
2020 Population - Unincorporated	222,443
Units per Person	0.0009
Nonresidential	
Nonresidential Share	18%
2020 Vehicle Trips - Unincorporated	58,278
Units per Vehicle Trip	0.0007

Pinal County plans to decrease the existing level of service for Sherriff vehicles to limit increased costs associated with operations and maintenance. Shown in Figure PS5, Pinal County plans to acquire 50 additional vehicles over the next 10 years. To allocate the proportionate share of demand to residential and nonresidential development, this analysis uses functional population shown in Figure PS1. The planned level of service for residential development will be 0.0008 units per person (50 units X 82 percent residential share / 51,935 additional persons). The planned nonresidential level of service will be 0.0002 units per vehicle trip (236 units X 18 percent nonresidential share / 48,266 additional trips). Based on the total cost of $3.6 million for 50 units, the cost is $72,000 per unit. This results in a cost of $56.84 per person (0.0008 units per person X $72,000 per unit) and $13.43 per vehicle trip (0.0002 units per trip X $72,000 per unit).

Figure PS5: Planned Level of Service

Cost Factors	
Cost per Unit	$72,000

Level-of-Service (LOS) Standards	
Additional Patrol Vehicles	50
Residential	
Residential Share	82%
2020 Population - Unincorporated	222,443
2030 Population - Unincorporated	274,378
10-Year Increase - Unincorporated	51,935
Units per Person	0.0008
Cost per Person	$56.84
Nonresidential	
Nonresidential Share	18%
2020 Vehicle Trips - Unincorporated	58,278
2030 Vehicle Trips - Unincorporated	106,544
10-Year Increase - Unincorporated	48,266
Units per Vehicle Trip	0.0002
Cost per Vehicle Trip	$13.43

Description	Units	Unit Cost	Total Cost
Patrol Vehicles	50	$72,000	$3,600,000

Source: Pinal County, Arizona

Detention Center – Cost Recovery

In 2004, Pinal County debt-financed[1] expansion of its detention center to 178,800 square feet in order to provide capacity for future development throughout Pinal County. In 2015, Pinal County issued debt obligations[2] to refund and prepay its 2004 debt. The final payment related to the 2015 debt obligations is due in 2029, so the total cost of the detention center is allocated to countywide development in 2029. This portion of the Public Safety Facilities development fee will be used to cover future development's share of detention center debt service payments. The portion of the facility that will be utilized by future development in incorporated / excluded areas will not be recovered through the Public Safety Facilities development fees.

To allocate the proportionate share of demand to residential and nonresidential development, this analysis uses functional population shown in Figure PS1. The planned level of service for residential development will be 0.2578 square feet per person (178,800 square feet X 82 percent residential share / 568,647 persons). The planned nonresidential level of service will be 0.0915 square feet per vehicle trip (178,800 square feet X 18 percent nonresidential share / 351,595 trips). Based on the total cost of $112.29 million for 178,800 square feet, the cost is $628 per square foot. This results in a cost of $161.93 per person (0.2578 square feet per person X $628 per square foot) and $57.49 per vehicle trip (0.0915 square feet per trip X $628 per square foot).

Figure PS6: Planned Level of Service

Description	Square Feet
Detention Center	178,800

Cost Factors	
Total Cost (Principal & Interest)[1]	$112,290,844
Total Square Feet	178,800
Cost per Square Foot	$628

Level-of-Service (LOS) Standards	
Total Square Feet	178,800
Residential	
Residential Share	82%
2029 Population	568,647
Square Feet per Person	0.2578
Cost per Person	$161.93
Nonresidential	
Nonresidential Share	18%
2029 Vehicle Trips	351,595
Square Feet per Vehicle Trip	0.0915
Cost per Vehicle Trip	$57.49

Source: Pinal County, Arizona

1. Arizona Certificates of Participation, Series 2004; Pledged Revenue Refunding Obligations Tax-Exempt, Series 2015A; and Pledged Revenue Obligations Taxable,

[1] Arizona Certificates of Participation, Series 2004
[2] Pledged Revenue Refunding Obligations, Tax-Exempt Series 2015A; Pledged Revenue Obligations, Taxable Series 2015B

Detention Center Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure PS7 includes the remaining debt service related to the detention center expansion totaling $46.27 million.

Figure PS7: Remaining Debt Service

Year	Principal	Interest	Total[1]
2020	$2,925,000	$1,703,250	$4,628,250
2021	$3,070,000	$1,553,375	$4,623,375
2022	$3,230,000	$1,395,875	$4,625,875
2023	$3,400,000	$1,230,125	$4,630,125
2024	$3,575,000	$1,055,750	$4,630,750
2025	$3,750,000	$872,625	$4,622,625
2026	$3,950,000	$680,125	$4,630,125
2027	$4,150,000	$477,625	$4,627,625
2028	$4,360,000	$264,875	$4,624,875
2029	$4,550,000	$77,938	$4,627,938
Total	$36,960,000	$9,311,563	$46,271,563

1. Includes Pledged Revenue Refunding Obligations Tax-Exempt Series 2015A, and Pledged Revenue Obligations Taxable Series 2015B

This analysis uses functional population shown in Figure PS1 to allocate debt service payments to residential and nonresidential development – 82 percent residential and 18 percent nonresidential. As shown below in Figure PS8, this analysis divides annual debt service by population (residential) or vehicle trips (nonresidential) to calculate annual debt service per person (residential) or per trip (nonresidential). A present value adjustment accounts for the time value of annual debt service through 2029. The discount rate of 4.21 percent is the average annual interest rate paid by Pinal County on the 2015 debt obligations.

Figure PS8: Debt Service Credit

Residential	Population	Per Person
$3,795,165	440,059	$8.62
$3,791,168	452,643	$8.38
$3,793,218	465,559	$8.15
$3,796,703	478,844	$7.93
$3,797,215	492,546	$7.71
$3,790,553	506,701	$7.48
$3,796,703	521,353	$7.28
$3,794,653	536,537	$7.07
$3,792,398	552,286	$6.87
$3,794,909	568,647	$6.67
$37,942,681		$76.16

Discount Rate	4.21%
Net Present Value	$61.72

Nonresidential	Vehicle Trips	Per Trip
$833,085	237,994	$3.50
$832,208	248,648	$3.35
$832,658	259,301	$3.21
$833,423	269,955	$3.09
$833,535	280,608	$2.97
$832,073	291,262	$2.86
$833,423	306,345	$2.72
$832,973	321,429	$2.59
$832,478	336,512	$2.47
$833,029	351,595	$2.37
$8,328,881		$29.13

Discount Rate	4.21%
Net Present Value	$23.72

Judicial Court – Cost Recovery

Pinal County currently provides judicial courts facilities necessary to serve countywide residential and nonresidential development. In 2014, Pinal County issued debt obligations to expand these facilities to 47,000 square feet. The final payment related to the 2014 debt obligation is due in 2034, so the total cost of the judicial court expansion is allocated to countywide development in 2034. This portion of the Public Safety Facilities development fee will be used to cover future development's share of judicial court debt service payments. The portion of the facility that will be utilized by future development in incorporated / excluded areas will not be recovered through the Public Safety Facilities development fees.

To allocate the proportionate share of demand for public safety facilities to residential and nonresidential development, this analysis uses functional population shown in Figure PS1. The planned level of service for residential development will be 0.0584 square feet per person (47,000 square feet X 82 percent residential share / 660,180 persons). The planned nonresidential level of service will be 0.0198 square feet per vehicle trip (47,000 square feet X 18 percent nonresidential share / 427,012 trips). Based on the total cost of $23.58 million for 47,000 square feet, the cost is $502 per square foot. This results in a cost of $29.29 per person (0.0584 square feet per person X $502 per square foot) and $9.94 per vehicle trip (0.0198 square feet per trip X $502 per square foot).

Figure PS9: Planned Level of Service

Description	Square Feet
Judicial Court Expansion	47,000

Cost Factors	
Total Cost (Principal & Interest)[1]	$23,582,787
Square Feet	47,000
Cost per Square Foot	$502

Level-of-Service (LOS) Standards	
Existing Square Feet	47,000
Residential	
Residential Share	82%
2034 Population	660,180
Square Feet per Person	0.0584
Cost per Person	$29.29
Nonresidential	
Nonresidential Share	18%
2034 Vehicle Trips	427,012
Square Feet per Vehicle Trip	0.0198
Cost per Vehicle Trip	$9.94

Source: Pinal County, Arizona

1. Pledged Revenue Obligations, Series 2014

Judicial Court Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure PS10 includes the remaining debt service related to the judicial court expansion totaling $19.06 million.

Figure PS10: Remaining Debt Service

Year	Principal	Interest	Total[1]
2020	$0	$610,805	$610,805
2021	$706,780	$610,805	$1,317,585
2022	$742,373	$575,466	$1,317,839
2023	$756,356	$560,619	$1,316,975
2024	$794,492	$522,801	$1,317,292
2025	$835,169	$483,076	$1,318,246
2026	$875,847	$441,318	$1,317,165
2027	$920,339	$397,525	$1,317,864
2028	$966,102	$351,508	$1,317,610
2029	$1,014,407	$303,203	$1,317,610
2030	$1,047,458	$270,235	$1,317,693
2031	$1,099,576	$217,862	$1,317,439
2032	$1,154,237	$162,883	$1,317,121
2033	$1,212,712	$105,172	$1,317,883
2034	$1,272,458	$44,536	$1,316,994
Total	$13,398,305	$5,657,816	$19,056,121

1. Pledged Revenue Obligations, Series 2014

This analysis uses functional population shown in Figure PS1 to allocate debt service payments to residential and nonresidential development – 82 percent residential and 18 percent nonresidential. As shown below in Figure PS11, this analysis divides annual debt service by population (residential) or vehicle trips (nonresidential) to calculate annual debt service per person (residential) or per trip (nonresidential). A present value adjustment accounts for the time value of annual debt service through 2034. The discount rate of 4.55 percent is the average annual interest rate paid by Pinal County on the 2014 debt obligation.

Figure PS11: Debt Service Credit

Residential	Population	Per Person
$500,860	440,059	$1.14
$1,080,419	452,643	$2.39
$1,080,628	465,559	$2.32
$1,079,919	478,844	$2.26
$1,080,180	492,546	$2.19
$1,080,962	506,701	$2.13
$1,080,076	521,353	$2.07
$1,080,649	536,537	$2.01
$1,080,440	552,286	$1.96
$1,080,440	568,647	$1.90
$1,080,508	585,664	$1.84
$1,080,300	603,367	$1.79
$1,080,039	621,711	$1.74
$1,080,664	640,660	$1.69
$1,079,935	660,180	$1.64
$15,626,019		$29.07

Discount Rate	4.55%
Net Present Value	$20.93

Nonresidential	Vehicle Trips	Per Trip
$109,945	237,994	$0.46
$237,165	248,648	$0.95
$237,211	259,301	$0.91
$237,055	269,955	$0.88
$237,113	280,608	$0.84
$237,284	291,262	$0.81
$237,090	306,345	$0.77
$237,216	321,429	$0.74
$237,170	336,512	$0.70
$237,170	351,595	$0.67
$237,185	366,679	$0.65
$237,139	381,762	$0.62
$237,082	396,846	$0.60
$237,219	411,929	$0.58
$237,059	427,012	$0.56
$3,430,102		$10.76

Discount Rate	4.55%
Net Present Value	$7.83

Radio Equipment – Cost Recovery

In 2014, Pinal County replaced its analog public safety radio system with a digital radio system to comply with federal standards and improve coverage. This upgrade was necessary to accommodate countywide demand from both existing and future development. In 2014, Pinal County issued debt obligations to acquire 10,200 units of radio equipment. The final payment related to the 2014 debt obligation is due in 2034, so the total cost of radio equipment is allocated to countywide development in 2034. This portion of the Public Safety Facilities development fee will be used to cover future development's share of radio equipment debt service payments. The portion of the radio equipment that will be utilized by future development in incorporated / excluded areas will not be recovered through the Public Safety Facilities development fees.

To allocate the proportionate share of demand to residential and nonresidential development, this analysis uses functional population shown in Figure PS1. The planned level of service for residential development will be 0.0127 units per person (10,200 units X 82 percent residential share / 660,180 persons). The planned nonresidential level of service will be 0.0043 units per vehicle trip (10,200 units X 18 percent nonresidential share / 427,012 trips). Based on the total cost of $29.87 million for 10,200 units, the cost is $2,929 per unit. This results in a cost of $37.10 per person (0.0127 units per person X $2,929 per unit) and $12.59 per vehicle trip (0.0043 units per trip X $2,929 per unit).

Figure PS12: Planned Level of Service

Description	Units	Unit Cost	Total Cost[1]
Radio Equipment	10,200	$2,929	$29,871,531

Cost Factors	
Weighted Average Cost per Unit	$2,929

Level-of-Service (LOS) Standards	
Existing Radio Equipment	10,200
Residential	
Residential Share	82%
2034 Population	660,180
Units per Person	0.0127
Cost per Person	$37.10
Nonresidential	
Nonresidential Share	18%
2034 Vehicle Trips	427,012
Units per Vehicle Trip	0.0043
Cost per Vehicle Trip	$12.59

Source: Pinal County, Arizona

1. Includes Principal & Interest; Pledged Revenue Obligations, Series 2014

Radio Equipment Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure PS13 includes the remaining debt service related to the radio equipment totaling $24.14 million.

Figure PS13: Remaining Debt Service

Year	Principal	Interest	Total[1]
2020	$0	$773,686	$773,686
2021	$895,254	$773,686	$1,668,941
2022	$940,339	$728,924	$1,669,263
2023	$958,051	$710,117	$1,668,168
2024	$1,006,356	$662,214	$1,668,570
2025	$1,057,881	$611,897	$1,669,778
2026	$1,109,407	$559,003	$1,668,409
2027	$1,165,763	$503,532	$1,669,295
2028	$1,223,729	$445,244	$1,668,973
2029	$1,284,915	$384,058	$1,668,973
2030	$1,326,780	$342,298	$1,669,078
2031	$1,392,797	$275,959	$1,668,756
2032	$1,462,034	$206,319	$1,668,353
2033	$1,536,102	$133,217	$1,669,319
2034	$1,611,780	$56,412	$1,668,192
Total	$16,971,186	$7,166,567	$24,137,753

1. Pledged Revenue Obligations, Series 2014

This analysis uses functional population shown in Figure PS1 to allocate debt service payments to residential and nonresidential development – 82 percent residential and 18 percent nonresidential. As shown below in Figure PS14, this analysis divides annual debt service by population (residential) or vehicle trips (nonresidential) to calculate annual debt service per person (residential) or per trip (nonresidential). A present value adjustment accounts for the time value of annual debt service through 2034. The discount rate of 4.55 percent is the average annual interest rate paid by Pinal County on the 2014 debt obligation.

Figure PS14: Debt Service Credit

Residential	Population	Per Person
$500,860	440,059	$1.14
$1,080,419	452,643	$2.39
$1,080,628	465,559	$2.32
$1,079,919	478,844	$2.26
$1,080,180	492,546	$2.19
$1,080,962	506,701	$2.13
$1,080,076	521,353	$2.07
$1,080,649	536,537	$2.01
$1,080,440	552,286	$1.96
$1,080,440	568,647	$1.90
$1,080,508	585,664	$1.84
$1,080,300	603,367	$1.79
$1,080,039	621,711	$1.74
$1,080,664	640,660	$1.69
$1,079,935	660,180	$1.64
$15,626,019		$29.07

Discount Rate	4.55%
Net Present Value	$20.93

Nonresidential	Vehicle Trips	Per Trip
$109,945	237,994	$0.46
$237,165	248,648	$0.95
$237,211	259,301	$0.91
$237,055	269,955	$0.88
$237,113	280,608	$0.84
$237,284	291,262	$0.81
$237,090	306,345	$0.77
$237,216	321,429	$0.74
$237,170	336,512	$0.70
$237,170	351,595	$0.67
$237,185	366,679	$0.65
$237,139	381,762	$0.62
$237,082	396,846	$0.60
$237,219	411,929	$0.58
$237,059	427,012	$0.56
$3,430,102		$10.76

Discount Rate	4.55%
Net Present Value	$7.83

Radio Towers – Incremental Expansion

Pinal County will use development fees to expand its current inventory of radio towers. Shown below in Figure PS15, Pinal County's existing inventory includes four radio towers with a total cost of $1,600,000. Based on the existing inventory, the weighted average cost is $400,000 per tower—this excludes the cost of land and equipment. Functional population is used to allocate the proportionate share of demand to residential and nonresidential development. Pinal County's existing level of service for residential development is 0.000007 units per person (4.0 units X 82 percent residential share / 440,059 persons). The nonresidential level of service is 0.000003 units per vehicle trip (4.0 units X 18 percent nonresidential share / 237,994 vehicle trips). The cost is $2.98 per person ($400,000 per unit X 0.000007 units per person) and $1.21 per vehicle trip ($400,000 per unit X 0.000003 units per vehicle trip).

Figure PS15: Existing Level of Service

Description	Units
Radio Towers	4

Cost Factors	
Tower Cost[1]	$400,000

Level-of-Service (LOS) Standards	
Existing Towers	4
Residential	
Residential Share	82%
2020 Population	440,059
Units per Person	0.000007
Cost per Person	$2.98
Nonresidential	
Nonresidential Share	18%
2020 Vehicle Trips	237,994
Units per Vehicle Trip	0.000003
Cost per Vehicle Trip	$1.21

Source: Pinal County, Arizona

1. Tower cost excludes land and equipment

San Tan Substation – Cost Recovery

Pinal County plans to construct a new San Tan substation necessary to serve residential and nonresidential development in the North Central Public Safety Facilities Service Area shown in Figure PS2. In 2019, Pinal County issued debt obligations to construct the 15,000-square-foot substation – this is part of a 50,000-square-foot complex. The final payment related to the 2019 debt obligation is due in 2044, however, Pinal County expects the new substation to provide capacity through 2035. The total cost of the San Tan substation is allocated to all development within the North Central Public Safety Facilities Service Area in 2035. This portion of the Public Safety Facilities development fee will be used to cover future development's share of the San Tan substation debt service payments.

To allocate the proportionate share of demand for public safety facilities to residential and nonresidential development, this analysis uses functional population shown in Figure PS1. The planned level of service for residential development will be 0.0726 square feet per person (15,000 square feet X 82 percent residential share / 169,449 persons). The planned nonresidential level of service will be 0.0573 square feet per vehicle trip (15,000 square feet X 18 percent nonresidential share / 47,106 trips). The San Tan substation's share of the total cost is $7.83 million for 15,000 square feet, so the cost is $522 per square foot. This results in a cost of $37.87 per person (0.0726 square feet per person X $522 per square foot) and $29.90 per vehicle trip (0.0573 square feet per trip X $522 per square foot).

Figure PS16: Planned Level of Service

Cost Factors	
Total Cost (Principal & Interest)[1]	$7,825,408
Planned Station Square Feet	15,000
Cost per Square Foot	$522

Level-of-Service (LOS) Standards	
Planned Station Square Feet	15,000
Residential	
Residential Share	82%
2035 Population - North Central	169,449
Square Feet per Person	0.0726
Cost per Person	$37.87
Nonresidential	
Nonresidential Share	18%
2035 Vehicle Trips - North Central	47,106
Square Feet per Vehicle Trip	0.0573
Cost per Vehicle Trip	$29.90

Source: Pinal County, Arizona

1. Pledged Revenue Obligations, Series 2019

San Tan Substation Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure PS17 includes debt service related to the San Tan substation totaling $4.64 million.

Figure PS17: Remaining Debt Service

Year	Principal	Interest	Total[1]
2020	$0	$159,613	$159,613
2021	$0	$188,396	$188,396
2022	$0	$188,396	$188,396
2023	$0	$188,396	$188,396
2024	$0	$188,396	$188,396
2025	$0	$188,396	$188,396
2026	$163,607	$188,396	$352,003
2027	$174,685	$180,215	$354,900
2028	$183,206	$171,481	$354,687
2029	$191,727	$162,321	$354,048
2030	$200,249	$152,734	$352,983
2031	$210,900	$142,722	$353,622
2032	$222,404	$132,177	$354,581
2033	$232,203	$121,917	$354,120
2034	$240,724	$112,629	$353,353
2035	$251,376	$103,000	$354,376
Total	$2,071,081	$2,569,182	$4,640,263

1. Pledged Revenue Obligations, Series 2019

This analysis uses functional population shown in Figure PS1 to allocate debt service payments to residential and nonresidential development – 82 percent residential and 18 percent nonresidential. As shown below in Figure PS18, this analysis divides annual debt service by population (residential) or vehicle trips (nonresidential) to calculate annual debt service per person (residential) or per trip (nonresidential). A present value adjustment accounts for the time value of annual debt service through 2035. The discount rate of 4.11 percent is the average annual interest rate paid by Pinal County on the 2019 debt obligation.

Figure PS18: Debt Service Credit

Residential	Population	Per Person
$130,883	116,610	$1.12
$154,484	119,546	$1.29
$154,484	122,482	$1.26
$154,484	125,418	$1.23
$154,484	128,354	$1.20
$154,484	131,290	$1.18
$288,642	134,818	$2.14
$291,018	138,345	$2.10
$290,843	141,873	$2.05
$290,319	145,401	$2.00
$289,446	148,928	$1.94
$289,970	153,032	$1.89
$290,756	157,137	$1.85
$290,379	161,241	$1.80
$289,750	165,345	$1.75
$290,588	169,449	$1.71
$3,805,016		$26.54

Discount Rate	4.11%
Net Present Value	$18.65

Nonresidential	Vehicle Trips	Per Trip
$28,730	22,578	$1.27
$33,911	23,787	$1.43
$33,911	24,995	$1.36
$33,911	26,203	$1.29
$33,911	27,411	$1.24
$33,911	28,620	$1.18
$63,361	30,468	$2.08
$63,882	32,317	$1.98
$63,844	34,165	$1.87
$63,729	36,014	$1.77
$63,537	37,863	$1.68
$63,652	39,711	$1.60
$63,824	41,560	$1.54
$63,742	43,408	$1.47
$63,604	45,257	$1.41
$63,788	47,106	$1.35
$835,247		$24.51

Discount Rate	4.11%
Net Present Value	$17.56

Development Fee Report – Plan-Based

The cost to prepare the Public Safety Facilities IIP and related Development Fee Report equals $40,000. Pinal County plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is $1.65 per person and $0.44 per vehicle trip.

Figure PS19: IIP and Development Fee Report

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational Facilities	$30,000	Residential	96%	Population	19,923	$1.45
		Nonresidential	4%	Jobs	4,347	$0.28
Public Safety Facilities	$40,000	Residential	82%	Population	19,923	$1.65
		Nonresidential	18%	Vehicle Trips	16,255	$0.44
Street Facilities	$49,700	All Development	100%	VMT	313,255	$0.16
Total	$119,700					

PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 11-1102(F)(6) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

ARS § 11-1102(F)(7) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period of not more than ten years."*

As shown in the *Land Use Assumptions* document, Pinal County's population is expected to increase by an additional 145,605 persons and nonresidential vehicle trips are expected to increase by 128,685 trips over the next 10 years. In the unincorporated areas, population is expected to increase by 51,935 persons and nonresidential vehicle trips are expected to increase by 48,266 trips during the same period. In the incorporated / excluded areas, population is expected to increase by 93,670 persons and nonresidential vehicle trips are expected to increase by 80,419 trips during the same period.

Sheriff Vehicles

Pinal County plans to lower its existing level of service for Sheriff vehicles over the next 10 years by acquiring 50 additional vehicles. Based on a projected population increase of 51,935 persons, future residential development in unincorporated areas demands 41.0 vehicles (51,935 additional persons X 0.0008 units per person). With projected vehicle trip growth of 48,266 trips, future nonresidential development in unincorporated areas demands 9.0 vehicles (48,266 additional vehicle trips X 0.0002 units per vehicle trip). Future development in unincorporated areas demands 50.0 additional Sheriff vehicles at a cost of $3,600,000 (50.0 units X $72,000 per unit).

Figure PS20: Projected Demand for Sheriff Vehicles

Type of Infrastructure	Level of Service	Service Unit	Cost per Unit
Sheriff Vehicles	0.0008 Units	per Person	$72,000
	0.0002 Units	per Vehicle Trip	

Demand for Sheriff Vehicles					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2020	222,443	58,278	193.5	42.5	236.0
2021	226,887	61,529	197.0	43.1	240.1
2022	230,345	64,780	199.8	43.7	243.5
2023	233,269	68,030	202.1	44.3	246.4
2024	236,257	71,281	204.4	44.9	249.3
2025	242,366	74,532	209.2	45.5	254.8
2026	248,844	80,935	214.4	46.7	261.1
2027	255,704	87,337	219.8	47.9	267.7
2028	261,494	93,739	224.3	49.1	273.4
2029	267,825	100,141	229.3	50.3	279.6
2030	274,378	106,544	234.5	51.5	286.0
10-Yr Increase	51,935	48,266	41.0	9.0	50.0
Growth-Related Expenditures			$2,952,000	$648,000	$3,600,000

Detention Center

Over the next nine years, Pinal County plans to retire outstanding debt obligations related to the Detention Center. The remaining principal and interest, as shown in Figure PS7, is $46,271,563.

Unincorporated Areas

Based on a projected population increase of 45,382 persons over the next nine years, future residential development in unincorporated areas demands 11,701.0 square feet (45,382 additional persons X 0.2578 square feet per person) of the existing Detention Center. With projected vehicle trip growth of 41,864 trips, future nonresidential development in unincorporated areas demands 3,832.1 square feet (41,864 additional trips X 0.0915 square feet per vehicle trip) over the next nine years. Future development in unincorporated areas demands approximately 15,533.1 square feet of the existing Detention Center at a cost of $9,755,146 (15,533.1 square feet X $628 per square foot).

Incorporated / Excluded Areas

Based on a projected population increase of 83,206 persons over the next nine years, future residential development in incorporated / excluded areas demands 21,453.3 square feet (83,203 additional persons X 0.2578 square feet per person) of the existing Detention Center. With projected vehicle trip growth of 71,738 trips, future nonresidential development in incorporated / excluded areas demands 6,566.6 square feet (71,738 additional trips X 0.0915 square feet per vehicle trip) over the next nine years. Future development in incorporated / excluded areas demands approximately 28,019.9 square feet of the existing Detention Center at a cost of $17,597,224 (28,019.9 square feet X $628 per square foot).

Existing Development

Existing residential development demands 113,461.7 square feet (440,059 persons X 0.2578 square feet per person) of the Detention Center and existing nonresidential development demands 21,785.3 square feet (237,994 vehicle trips X 0.0915 square feet per vehicle trip). Existing development's share of the Detention Center is 135,247.0 square feet, and the cost is $84,938,473 (135,247.0 square feet X $628 per square foot). When adjusted for future development's share of the remaining principal and interest, existing development's share is $18,919,192 ($46,271,563 remaining balance - $9,755,146 unincorporated areas share - $17,597,224 incorporated / excluded areas share).

Figure PS21: Projected Demand for Detention Center

Type of Infrastructure	Level of Service	Service Unit	Cost per Sq Ft
Detention Center	0.2578 Square Feet	per Person	$628
	0.0915 Square Feet	per Vehicle Trip	

Demand for Detention Center					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2020	440,059	237,994	113,461.7	21,785.3	135,247.0
2021	452,643	248,648	116,706.2	22,760.5	139,466.7
2022	465,559	259,301	120,036.5	23,735.7	143,772.2
2023	478,844	269,955	123,461.7	24,710.9	148,172.6
2024	492,546	280,608	126,994.7	25,686.1	152,680.8
2025	506,701	291,262	130,644.2	26,661.3	157,305.5
2026	521,353	306,345	134,422.1	28,041.9	162,464.0
2027	536,537	321,429	138,336.8	29,422.6	167,759.5
2028	552,286	336,512	142,397.5	30,803.3	173,200.8
2029	568,647	351,595	146,616.0	32,184.0	178,800.0
9-Yr Increase	128,588	113,601	33,154.3	10,398.7	43,553.0
Unincorporated Areas	45,382	41,864	11,701.0	3,832.1	15,533.1
	Growth-Related Expenditures		$7,348,504	$2,406,642	$9,755,146
Incorporated / Excluded Areas	83,206	71,738	21,453.3	6,566.6	28,019.9
	Growth-Related Expenditures		$13,473,207	$4,124,017	$17,597,224
Existing Development	440,059	237,994	113,461.7	21,785.3	135,247.0
	Existing Dev. Expenditures		$71,256,781	$13,681,692	$84,938,473
Total	568,647	351,595	146,616.0	32,184.0	178,800.0
	Total Expenditures		$92,078,492	$20,212,352	$112,290,844

Judicial Court

Over the next 14 years, Pinal County plans to retire outstanding debt obligations related to the Judicial Court expansion. The remaining principal and interest, as shown in Figure PS10, is $19,056,121.

Unincorporated Areas

Based on a projected population increase of 81,066 persons over the next 14 years, future residential development in unincorporated areas demands 4,732.5 square feet (81,066 additional persons X 0.0584 square feet per person) of the Judicial Court expansion. With projected vehicle trip growth of 73,875 trips, future nonresidential development in unincorporated areas demands 1,463.6 square feet (73,875 additional trips X 0.0198 square feet per vehicle trip) over the next 14 years. Future development in unincorporated areas demands approximately 6,196.1 square feet of the Judicial Court expansion at a cost of $3,108,961 (6,196.1 square feet X $502 per square foot).

Incorporated / Excluded Areas

Based on a projected population increase of 139,055 persons over the next 14 years, future residential development in incorporated / excluded areas demands 8,117.7 square feet (139,055 additional persons X 0.0584 square feet per person) of the Judicial Court expansion. With projected vehicle trip growth of 115,143 trips, future nonresidential development in incorporated / excluded areas demands 2,281.2 square feet (115,143 additional trips X 0.0198 square feet per vehicle trip) over the next 14 years. Future development in incorporated / excluded areas demands approximately 10,399.0 square feet of the Judicial Court expansion at a cost of $5,217,800 (10,399.0 square feet X $502 per square foot).

Existing Development

Existing residential development demands 25,689.8 square feet (440,059 persons X 0.0584 square feet per person) of the Judicial Court expansion and existing nonresidential development demands 4,715.2 square feet (237,994 vehicle trips X 0.0198 square feet per vehicle trip). Existing development's share of the Judicial Court expansion is 30,404.9 square feet, and the cost is $15,256,027 (30,404.9 square feet X $502 per square foot). When adjusted for future development's share of the remaining principal and interest, existing development's share is $10,729,360 ($19,056,121 remaining balance - $3,108,961 unincorporated areas share - $5,217,800 incorporated / excluded areas share).

Figure PS22: Projected Demand for Judicial Court

Type of Infrastructure	Level of Service	Service Unit	Cost per Sq Ft
Judicial Court Expansion	0.0584 Square Feet	per Person	$502
	0.0198 Square Feet	per Vehicle Trip	

Demand for Judicial Court Expansion					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2020	440,059	237,994	25,689.8	4,715.2	30,404.9
2021	452,643	248,648	26,424.4	4,926.2	31,350.6
2022	465,559	259,301	27,178.4	5,137.3	32,315.7
2023	478,844	269,955	27,954.0	5,348.4	33,302.3
2024	492,546	280,608	28,753.9	5,559.4	34,313.3
2025	506,701	291,262	29,580.2	5,770.5	35,350.7
2026	521,353	306,345	30,435.6	6,069.3	36,504.9
2027	536,537	321,429	31,322.0	6,368.2	37,690.1
2028	552,286	336,512	32,241.4	6,667.0	38,908.4
2029	568,647	351,595	33,196.5	6,965.8	40,162.3
2030	585,664	366,679	34,189.9	7,264.7	41,454.6
2031	603,367	381,762	35,223.4	7,563.5	42,786.9
2032	621,711	396,846	36,294.3	7,862.3	44,156.6
2033	640,660	411,929	37,400.5	8,161.2	45,561.7
2034	660,180	427,012	38,540.0	8,460.0	47,000.0
14-Yr Increase	220,121	189,018	12,850.2	3,744.8	16,595.1

Unincorporated Areas	81,066	73,875	4,732.5	1,463.6	6,196.1
	Growth-Related Expenditures		$2,374,573	$734,387	$3,108,961
Incorporated / Excluded Areas	139,055	115,143	8,117.7	2,281.2	10,399.0
	Growth-Related Expenditures		$4,073,170	$1,144,630	$5,217,800
Existing Development	440,059	237,994	25,689.8	4,715.2	30,404.9
	Existing Dev. Expenditures		$12,890,143	$2,365,884	$15,256,027
Total	660,180	427,012	38,540.0	8,460.0	47,000.0
	Total Expenditures		$19,337,886	$4,244,902	$23,582,787

Radio Equipment

Over the next 14 years, Pinal County plans to retire outstanding debt obligations related to radio equipment. The remaining principal and interest, as shown in Figure PS13, is $24,137,753.

Unincorporated Areas

Based on a projected population increase of 81,066 persons over the next 14 years, future residential development in unincorporated areas demands 1,027.0 units (81,066 additional persons X 0.0127 units per person) of radio equipment. With projected vehicle trip growth of 73,875 trips, future nonresidential development in unincorporated areas demands 317.6 units (73,875 additional trips X 0.0043 units per vehicle trip) over the next 14 years. Future development in unincorporated areas demands approximately 1,344.7 units of radio equipment at a cost of $3,938,017 (1,344.7 units X $2,929 per unit).

Incorporated / Excluded Areas

Based on a projected population increase of 139,055 persons over the next 14 years, future residential development in incorporated / excluded areas demands 1,761.7 units (139,055 additional persons X 0.0127 units per person) of radio equipment. With projected vehicle trip growth of 115,143 trips, future nonresidential development in incorporated / excluded areas demands 495.1 units (115,143 additional trips X 0.0043 units per vehicle trip) over the next 14 years. Future development in incorporated / excluded areas demands approximately 2,256.8 units of radio equipment at a cost of $6,609,213 (2,256.8 units X $2,929 per unit).

Existing Development

Existing residential development demands 5,575.2 units (440,059 persons X 0.0127 units per person) of radio equipment and existing nonresidential development demands 1,023.3 units (237,994 vehicle trips X 0.0043 units per vehicle trip). Existing development's share of radio equipment is 6,598.5 units, and the cost is $19,324,301 (6,598.5 units X $2,929 per unit). When adjusted for future development's share of the remaining principal and interest, existing development's share is $13,590,523 ($24,137,753 remaining balance - $3,938,017 unincorporated areas share - $6,609,213 incorporated / excluded areas share).

Figure PS23: Projected Demand for Radio Equipment

Type of Infrastructure	Level of Service	Service Unit	Cost per Unit
Radio Equipment	0.0127 Units	per Person	$2,929
	0.0043 Units	per Vehicle Trip	

Demand for Radio Equipment					
Year	Population	Vehicle Trips	Units		
			Residential	Nonresidential	Total
2020	440,059	237,994	5,575.2	1,023.3	6,598.5
2021	452,643	248,648	5,734.7	1,069.1	6,803.8
2022	465,559	259,301	5,898.3	1,114.9	7,013.2
2023	478,844	269,955	6,066.6	1,160.7	7,227.3
2024	492,546	280,608	6,240.2	1,206.5	7,446.7
2025	506,701	291,262	6,419.5	1,252.3	7,671.9
2026	521,353	306,345	6,605.2	1,317.2	7,922.3
2027	536,537	321,429	6,797.5	1,382.0	8,179.6
2028	552,286	336,512	6,997.1	1,446.9	8,443.9
2029	568,647	351,595	7,204.3	1,511.7	8,716.1
2030	585,664	366,679	7,419.9	1,576.6	8,996.5
2031	603,367	381,762	7,644.2	1,641.4	9,285.7
2032	621,711	396,846	7,876.6	1,706.3	9,582.9
2033	640,660	411,929	8,116.7	1,771.1	9,887.9
2034	660,180	427,012	8,364.0	1,836.0	10,200.0
14-Yr Increase	220,121	189,018	2,788.8	812.7	3,601.5
Unincorporated Areas	81,066	73,875	1,027.0	317.6	1,344.7
	Growth-Related Expenditures		$3,007,793	$930,224	$3,938,017
Incorporated / Excluded Areas	139,055	115,143	1,761.7	495.1	2,256.8
	Growth-Related Expenditures		$5,159,348	$1,449,865	$6,609,213
Existing Development	440,059	237,994	5,575.2	1,023.3	6,598.5
	Existing Dev. Expenditures		$16,327,514	$2,996,787	$19,324,301
Total	660,180	427,012	8,364.0	1,836.0	10,200.0
	Total Expenditures		$24,494,655	$5,376,876	$29,871,531

Radio Towers

Pinal County plans to maintain its existing level of service for radio towers over the next 10 years.

Unincorporated Areas

Based on a projected population increase of 51,935 persons, future residential development in unincorporated areas demands 0.4 units (51,935 additional persons X 0.000007 units per person). With projected vehicle trip growth of 48,266 trips, future nonresidential development in unincorporated areas demands 0.1 units (48,266 additional vehicle trips X 0.000003 units per vehicle trip). Future development in unincorporated areas demands approximately 0.5 additional radio towers at a cost of $213,247 (0.5 units X $400,000 per unit).

Incorporated / Excluded Areas

Based on a projected population increase of 93,670 persons, future residential development in incorporated / excluded areas demands 0.7 units (93,670 additional persons X 0.000007 units per person). With projected vehicle trip growth of 80,419 trips, future nonresidential development in incorporated / excluded areas demands 0.2 units (80,419 additional vehicle trips X 0.000003 units per vehicle trip). Future development in incorporated / excluded areas demands approximately 0.9 additional radio towers at a cost of $376,584 (0.9 units X $400,000 per unit).

Figure PS24: Projected Demand for Radio Towers

Type of Infrastructure	Level of Service	Service Unit	Cost per Unit
Radio Towers	0.000007 Units	per Person	$400,000
	0.000003 Units	per Vehicle Trip	

Demand for Radio Towers					
Year	Population	Vehicle Trips	Cost		
			Residential	Nonresidential	Total
2020	440,059	237,994	3.3	0.7	4.0
2021	452,643	248,648	3.4	0.8	4.1
2022	465,559	259,301	3.5	0.8	4.3
2023	478,844	269,955	3.6	0.8	4.4
2024	492,546	280,608	3.7	0.8	4.5
2025	506,701	291,262	3.8	0.9	4.7
2026	521,353	306,345	3.9	0.9	4.8
2027	536,537	321,429	4.0	1.0	5.0
2028	552,286	336,512	4.1	1.0	5.1
2029	568,647	351,595	4.2	1.1	5.3
2030	585,664	366,679	4.4	1.1	5.5
10-Yr Increase	145,605	128,685	1.1	0.4	1.5

Unincorporated Areas	51,935	48,266	0.4	0.1	0.5
	Growth-Related Expenditures		$154,840	$58,407	$213,247

Incorporated / Excluded Areas	93,670	80,419	0.7	0.2	0.9
	Growth-Related Expenditures		$279,268	$97,316	$376,584

San Tan Substation

Over the next 15 years, Pinal County plans to retire outstanding debt obligations related to the San Tan substation. Total principal and interest equals $7,825,408.

Unincorporated Areas

Based on a projected population increase of 52,839 persons over the next 15 years, future residential development in the North Central Public Safety Facilities Service Area demands 3,835.5 square feet (52,839 additional persons X 0.0726 square feet per person). With projected vehicle trip growth of 24,527 trips, future nonresidential development in the North Central Public Safety Facilities Service Area demands 1,405.8 square feet (24,527 additional trips X 0.0573 square feet per vehicle trip) over the next 15 years. Future development in the North Central Public Safety Facilities Service Area demands approximately 5,241.4 square feet of the San Tan substation at a cost of $2,734,384 (5,241.4 square feet X $522 per square foot).

Existing Development

Existing residential development demands 8,464.5 square feet (116,610 persons X 0.0726 square feet per person) and existing nonresidential development demands 1,294.2 square feet (22,578 vehicle trips X 0.0573 square feet per vehicle trip). Existing development's share of the San Tan substation is 9,758.6 square feet, and the cost is $5,091,024 (9,758.6 square feet X $522 per square foot).

Figure PS25: Projected Demand for San Tan Substation

Type of Infrastructure	Level of Service	Service Unit	Cost per Sq Ft
San Tan Substation	0.0726 Square Feet	per Person	$522
	0.0573 Square Feet	per Vehicle Trip	

Demand for San Tan Substation					
Year	Population	Vehicle Trips	Square Feet		
			Residential	Nonresidential	Total
2020	116,610	22,578	8,464.5	1,294.2	9,758.6
2021	119,546	23,787	8,677.6	1,363.4	10,041.0
2022	122,482	24,995	8,890.7	1,432.7	10,323.4
2023	125,418	26,203	9,103.9	1,501.9	10,605.8
2024	128,354	27,411	9,317.0	1,571.2	10,888.1
2025	131,290	28,620	9,530.1	1,640.4	11,170.5
2026	134,818	30,468	9,786.2	1,746.4	11,532.5
2027	138,345	32,317	10,042.2	1,852.3	11,894.6
2028	141,873	34,165	10,298.3	1,958.3	12,256.6
2029	145,401	36,014	10,554.4	2,064.2	12,618.6
2030	148,928	37,863	10,810.4	2,170.2	12,980.6
2031	153,032	39,711	11,108.3	2,276.2	13,384.5
2032	157,137	41,560	11,406.3	2,382.1	13,788.4
2033	161,241	43,408	11,704.2	2,488.1	14,192.3
2034	165,345	45,257	12,002.1	2,594.0	14,596.1
2035	169,449	47,106	12,300.0	2,700.0	15,000.0
15-Yr Increase	52,839	24,527	3,835.5	1,405.8	5,241.4

Unincorporated Areas	52,839	24,527	3,835.5	1,405.8	5,241.4
	Growth-Related Expenditures		$2,000,961	$733,423	$2,734,384

Existing Development	116,610	22,578	8,464.5	1,294.2	9,758.6
	Existing Dev. Expenditures		$4,415,873	$675,151	$5,091,024

Total	169,449	47,106	12,300.0	2,700.0	15,000.0
	Total Expenditures		$6,416,835	$1,408,573	$7,825,408

PUBLIC SAFETY FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

Revenue credits/offsets are necessary for Public Safety Facilities development fees related to the Detention Center, the Judicial Court, radio equipment, and the San Tan substation.

Public Safety Facilities Development Fees

Infrastructure components and cost factors for Public Safety Facilities are summarized in the upper portion of Figure PS26. The cost per service unit for Public Safety Facilities is $180.63 per person and $53.64 per vehicle trip. Public Safety Facilities development fees for residential development are assessed according to the number of persons per housing unit. The single-family fee of $446 is calculated using a cost per service unit of $180.63 per person multiplied by a demand unit of 2.47 persons per housing unit. Nonresidential development fees are calculated using vehicle trips as the service unit. The fee of $668 per 1,000 square feet of commercial development is derived from a cost per service unit of $53.64 per vehicle trip multiplied by a demand unit of 12.46 vehicle trips per 1,000 square feet.

Figure PS26: Schedule of Public Safety Facilities Development Fees

Fee Component	Cost per Person	Cost per Trip
Sheriff Vehicles	$56.84	$13.43
Detention Center	$161.93	$57.49
Detention Center Credit	($61.72)	($23.72)
Judicial Court	$29.29	$9.94
Judicial Court Credit	($20.93)	($7.83)
Radio Equipment	$37.10	$12.59
Radio Equipment Credit	($26.51)	($9.91)
Radio Towers	$2.98	$1.21
Development Fee Report	$1.65	$0.44
Total	$180.63	$53.64

Residential Development	Development Fees per Unit			
Development Type	Persons per Housing Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	2.47	$446	$544	($98)
Multi-Family	1.80	$326	$359	($33)
Age Restricted / All Other	1.56	$282	$359	($77)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Weekday Vehicle Trips[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	1.69	$90	$158	($68)
Commercial	12.46	$668	$1,135	($467)
Office & Other Services	4.87	$261	$491	($230)
Institutional	6.44	$346	$453	($107)
Hotel (per room)	4.18	$224	N/A	N/A
Assited Living (per bed)	1.30	$70	N/A	N/A

1. See Land Use Assumptions

San Tan Substation Public Safety Facilities Development Fees

Infrastructure components and cost factors for the San Tan substation in the North Central Public Safety Facilities Service Area are summarized in the upper portion of Figure PS27. In addition to the Public Safety Facilities development fees assessed on all development in the unincorporated areas shown in Figure PS26, the San Tan Substation Public Safety Facilities development fees will be assessed on future development in the North Central Public Safety Facilities Service Area – future development outside of the North Central Public Safety Facilities Service Area will not pay development fees related to the San Tan substation. The cost per service unit for the San Tan substation is $19.22 per person and $12.34 per vehicle trip.

San Tan Substation Public Safety Facilities development fees for residential development are assessed according to the number of persons per housing unit. For example, the single-family fee of $47 is calculated using a cost per service unit of $19.22 per person multiplied by a demand unit of 2.47 persons per housing unit.

Nonresidential development fees are calculated using vehicle trips as the service unit. The San Tan Substation Public Safety Facilities development fee of $154 per 1,000 square feet of commercial development is derived from a cost per service unit of $12.34 per vehicle trip multiplied by a demand unit of 12.46 vehicle trips per 1,000 square feet.

Figure PS27: Schedule of San Tan Substation Public Safety Facilities Development Fees

Fee Component	Cost per Person	Cost per Trip
San Tan Substation	$37.87	$29.90
San Tan Substation Credit	($18.65)	($17.56)
Total	$19.22	$12.34

Residential Development	Development Fees per Unit			
Development Type	Persons per Housing Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	2.47	$47	$156	($109)
Multi-Family	1.80	$35	$103	($68)
Age Restricted / All Other	1.56	$30	$103	($73)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Weekday Vehicle Trips[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	1.69	$21	$34	($13)
Commercial	12.46	$154	$244	($90)
Office & Other Services	4.87	$60	$105	($45)
Institutional	6.44	$79	$97	($18)
Hotel (per room)	4.18	$52	N/A	N/A
Assited Living (per bed)	1.30	$16	N/A	N/A

1. See Land Use Assumptions

Public Safety Facilities Development Fee Revenue

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 11-1102(F)(8)). Projected fee revenue shown in Figure PS28 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Public Safety Facilities shown in Figure PS26. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $13.76 million, and projected expenditures equal $86.80 million. Existing development's share of $43.24 million and the incorporated areas' share of $29.80 million may not be funded with development fees.

Figure PS28: Projected Public Safety Facilities Development Fee Revenue

Fee Component	Growth Share		Incorporated	Existing Share	Total
	10 Years	10+ Years			
Sheriff Vehicles	$3,600,000	$0	$0	$0	$3,600,000
Detention Center	$9,755,146	$0	$17,597,224	$18,919,192	$46,271,563
Detention Center Credit	($3,793,874)	$0	$0	$0	($3,793,874)
Judicial Court	$2,001,082	$1,107,879	$5,217,800	$10,729,360	$19,056,121
Judicial Court Credit	($1,464,746)	($810,138)	$0	$0	($2,274,884)
Radio Equipment	$2,534,703	$1,403,313	$6,609,213	$13,590,523	$24,137,753
Radio Equipment Credit	($1,855,345)	$1,026,175	$0	$0	($829,171)
Radio Tower	$213,247	$0	$376,584	$0	$589,831
Development Fee Report	$40,000	$0	$0	$0	$40,000
Total	$11,030,213	$2,727,229	$29,800,821	$43,239,076	$86,797,338

Year		Single Family $446 per unit Housing Unit	Multi-Family $326 per unit Housing Unit	All Other $282 per unit Housing Unit	Industrial $90 per 1,000 sq ft KSF	Commercial $668 per 1,000 sq ft KSF	Office & Other $261 per 1,000 sq ft KSF	Institutional $346 per 1,000 sq ft KSF
Base	2020	73,786	5,405	19,536	1,885	1,930	1,352	3,800
Year 1	2021	75,260	5,513	19,926	2,074	2,009	1,434	4,040
Year 2	2022	76,407	5,597	20,230	2,263	2,088	1,515	4,280
Year 3	2023	77,377	5,668	20,487	2,452	2,168	1,597	4,520
Year 4	2024	78,368	5,741	20,749	2,641	2,247	1,678	4,760
Year 5	2025	80,395	5,889	21,286	2,830	2,327	1,759	5,000
Year 6	2026	82,543	6,047	21,855	3,046	2,502	1,901	5,491
Year 7	2027	84,819	6,214	22,457	3,263	2,678	2,043	5,982
Year 8	2028	86,739	6,354	22,966	3,479	2,853	2,185	6,473
Year 9	2029	88,840	6,508	23,522	3,696	3,028	2,327	6,964
Year 10	2030	91,013	6,667	24,097	3,912	3,204	2,469	7,454
10-Year Increase		17,227	1,262	4,561	2,027	1,274	1,116	3,655
Projected Revenue		$7,103,561	$379,773	$1,188,229	$170,077	$772,807	$266,758	$1,149,008

Projected Fee Revenue	$11,030,213
Growth Share 10+ Years	$2,727,229
Total Expenditures	$86,797,338
Incorporated Share	$29,800,821
Existing Development Share	$43,239,076

Projected San Tan Substation Public Safety Facilities Development Fee Revenue

Projected fee revenue shown in Figure PS29 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Public Safety Facilities related to the San Tan substation shown in Figure PS27. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue generated in the North Central Public Safety Facilities Service Area related to the San Tan substation equals $1.32 million, and projected expenditures equal $6.41 million. Existing development's share of $5.09 million may not be funded with development fees.

Figure PS29: Projected San Tan Substation Public Safety Facilities Development Fee Revenue

Fee Component	Growth Share		Incorporated	Existing Share	Total
	10 Years	10+ Years			
San Tan Substation	$1,680,891	$1,053,493	$0	$5,091,024	$7,825,408
San Tan Substation Credit	($871,107)	($545,009)	$0	$0	($1,416,116)
Total	$809,783	$508,484	$0	$5,091,024	$6,409,292

Year		Single Family $47 per unit	Multi-Family $35 per unit	All Other $30 per unit	Industrial $21 per 1,000 sq ft	Commercial $154 per 1,000 sq ft	Office & Other $60 per 1,000 sq ft	Institutional $79 per 1,000 sq ft
		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	38,680	2,834	10,241	392	806	422	1,526
Year 1	2021	39,654	2,905	10,499	466	840	462	1,597
Year 2	2022	40,628	2,976	10,757	539	874	502	1,669
Year 3	2023	41,602	3,048	11,015	613	909	542	1,740
Year 4	2024	42,576	3,119	11,273	687	943	582	1,812
Year 5	2025	43,550	3,190	11,530	760	977	622	1,884
Year 6	2026	44,720	3,276	11,840	848	1,034	665	2,005
Year 7	2027	45,890	3,362	12,150	935	1,091	708	2,126
Year 8	2028	47,060	3,447	12,460	1,022	1,149	751	2,247
Year 9	2029	48,230	3,533	12,770	1,110	1,206	794	2,369
Year 10	2030	49,401	3,619	13,080	1,197	1,263	837	2,490
10-Year Increase		10,720	785	2,838	805	457	416	964
Projected Revenue		$508,876	$27,206	$85,121	$16,732	$70,226	$24,968	$76,655

Projected Fee Revenue	$809,783
Growth Share 10+ Years	$508,484
Total Expenditures	$6,409,292
Incorporated Share	$0
Existing Development Share	$5,091,024

OPERATIONS AND MAINTENANCE COSTS

ARS § 11-1102(F)(5) requires:

> *"A description of all the costs necessitated by ongoing maintenance and operations of the necessary public services once construction is completed and a description of the source of revenue to be used to fund the maintenance and operations."*

STREET FACILITIES IIP

ARS § 11-1102(V)(7)(e) defines the facilities and assets that can be included in the Street Facilities Infrastructure Improvements Plan:

> *"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."*

The Street Facilities IIP includes components for arterials, Ironwood Road debt, Hunt Highway debt, and the cost of preparing the Street Facilities IIP and related Development Fee Report. The cost recovery methodology is used for Ironwood Road debt and Hunt Highway debt. A plan-based methodology is used for arterials and the Development Fee Report.

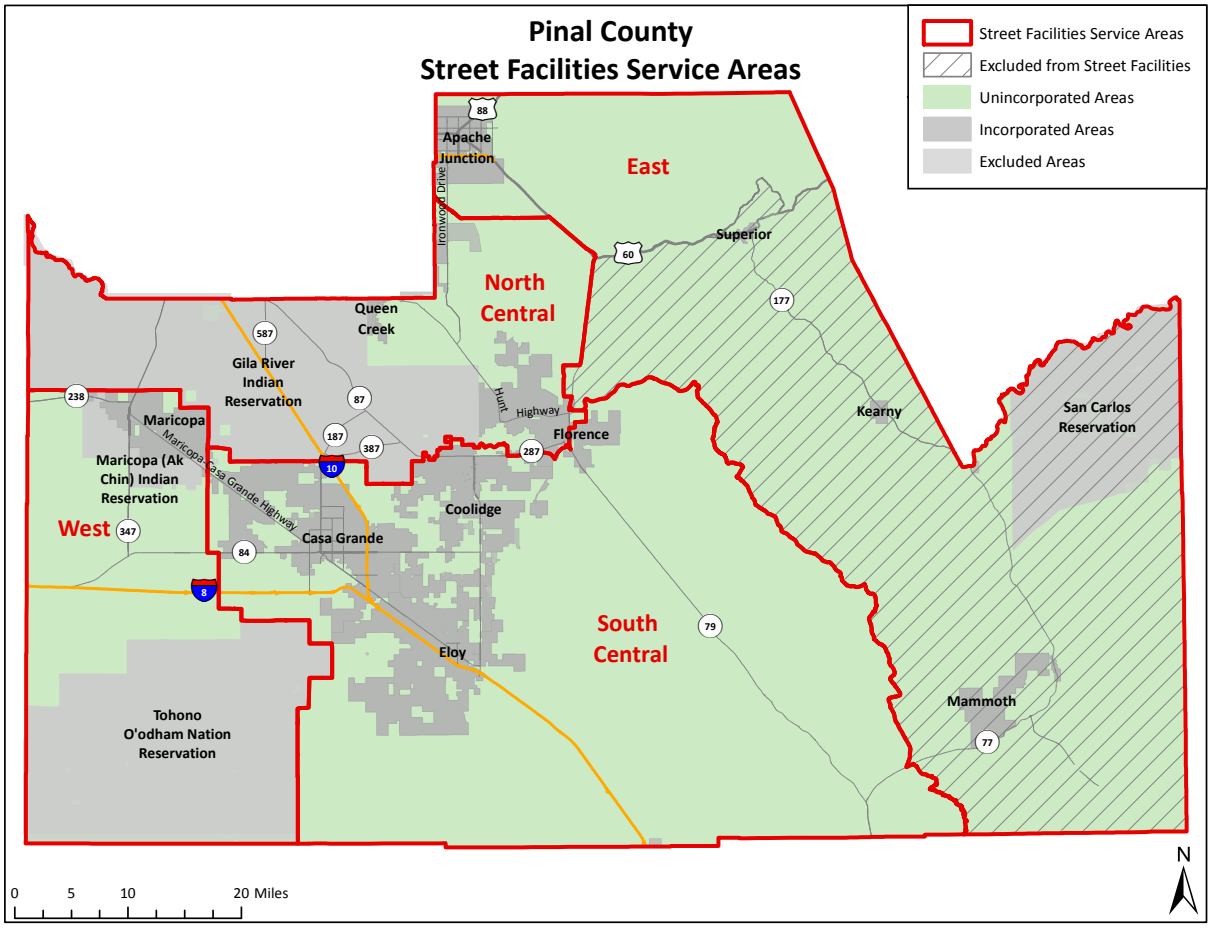
Proportionate Share

ARS § 11-1102(B)(3) states that development fees may not exceed a proportionate share of the cost of necessary public services, based on service units, needed to provide necessary public services to the development. The Street Facilities IIP and development fees will allocate the cost of necessary public services between residential and nonresidential based on trip generation rates, trip adjustment factors, and trip lengths for each Street Facilities service area.

Service Area

The service areas for the Street Facilities IIP are shown below in Figure S1. The Street Facilities Service Areas (SFSA) include the following service areas: East , North Central, South Central, and West. As shown below, a portion of the East SFSA is excluded from the Street Facilities development fees. The North Central, South Central, and West Street Facilities Service Areas include arterials. The East SFSA includes cost recovery of Ironwood Road debt, and the North Central SFSA includes cost recovery of Ironwood Road debt and Hunt Highway debt.

Figure S1: Street Facilities Service Areas



RATIO OF SERVICE UNIT TO DEVELOPMENT UNIT

ARS § 11-1102(F)(4) requires:

> *"A table that establishes the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table that establishes the ratio of a service unit to various types of land uses, including residential, commercial and industrial."*

Pinal County will use vehicle miles of travel (VMT) as the demand units for Street Facilities development fees. Components used to determine VMT include average weekday vehicle trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

Residential Trip Generation Rates

ITE publishes vehicle trip generation rates for residential development. Based on the 10th Edition of Trip Generation (2017) the national average for single-family units is 9.44 (ITE 210) average weekday vehicle trip ends per dwelling. Multi-family residential development generates 5.44 (ITE 221) average weekday vehicle trip ends per dwelling. All other development generates 5.00 average weekday vehicle trip ends.

Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 10th Edition (2017). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. Assisted living development uses Assisted Living (ITE 254) as a proxy and generates 2.60 average weekday vehicle trip ends per bed. For hotel development, the proxy is Hotel (ITE 310), and this type of development generates 8.36 average weekday vehicle trip ends per room. Institutional development uses Elementary School (ITE 520) and generates 19.52 average weekday vehicle trip ends per 1,000 square feet of floor area. For office & other services development, the proxy is General Office (ITE 710), and it generates 9.74 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.75 average weekday vehicle trips per 1,000 square feet of floor area.

Figure S2: Average Weekday Vehicle Trip Ends by Land Use

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Sq Ft Per Emp
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
254	Assisted Living	bed	2.60	4.24	0.61	na
310	Hotel	room	8.36	14.34	0.58	na
520	Elementary School	1,000 Sq Ft	19.52	21.00	0.93	1,076
820	Shopping Center (average size)	1,000 Sq Ft	37.75	16.11	2.34	427

1. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Trip Rate Adjustments

Average Weekday Vehicle Trips are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends from the reference book, *Trip Generation, 10th Edition*, published by the Institute of Transportation Engineers (ITE) in 2017. A vehicle trip end represents a vehicle entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate the development fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. The basic trip adjustment factor is 50 percent. As discussed further below, the development fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Commuter Trip Adjustment

Residential development has a larger trip adjustment factor of 62 percent to account for commuters leaving Pinal County for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure S3, the U.S. Census Bureau's OnTheMap web application indicates that 78 percent of resident workers traveled outside of Pinal County for work in 2017. In combination, these factors (31 percent X 50 percent X 78 percent = 12 percent) support the additional 12 percent allocation of trips to residential development.

Figure S3: Commuter Trip Adjustment

Trip Adjustment Factor for Commuters[1]	
Employed Residents	147,232
Residents Living and Working in Pinal County	32,644
Residents Commuting Outside Pinal County for Work	114,588
Percent Commuting out of Pinal County	78%
Additional Production Trips[2]	12%
Residential Trip Adjustment Factor	62%

1. U.S. Census Bureau, OnTheMap Application (version 6.6) and LEHD Origin-Destination Employment Statistics, 2017.

2. According to the National Household Travel Survey (2009)*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of "production" trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2017 indicate that 78 percent of Pinal County's workers travel outside the county for work. In combination, these factors (0.3099 x 0.50 x 78 = 0.12) account for 12 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (12 percent of production trips) for a total of 62 percent.
*http://nhts.ornl.gov/publications.shtml ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

Adjustment for Pass-By Trips

For commercial and institutional development, the trip adjustment factor is less than 50 percent because these types of development attract 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, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent 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 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

Demand Indicators – Average Weekday Vehicle Trips

Shown in Figure S4 are the demand indicators for residential and nonresidential land uses related to average weekday vehicle trips (AWVT). For residential development, the table displays AWVT per housing unit. For nonresidential development, the table displays AWVT generated per 1,000 square feet of floor area (per room for Hotel, and per bed for Assisted Living).

Figure S4: Demand Indicators by Development Type, Average Weekday Vehicle Trips (AWVT)

Residential Development			
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	AWVT per Housing Unit
Single Family	9.44	62%	5.85
Multi-Family	5.44	62%	3.37
All Other	5.00	62%	3.10

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	AWVT per 1,000 Sq Ft[1]
Industrial	3.37	50%	1.69
Commercial	37.75	33%	12.46
Office & Other Services	9.74	50%	4.87
Institutional	19.52	33%	6.44
Hotel (per room)	8.36	50%	4.18
Assited Living (per bed)	2.60	50%	1.30

1. See Land Use Assumptions

Trip Length Weighting Factor

The Street Facilities development fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6a, Table 6b, and Table 6c of the 2017 National Household Travel Survey, vehicle trips from residential development are approximately 117 percent 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 75 percent of the average trip length while other nonresidential development typically accounts for trips that are 73 percent of the average for all trips.

Demand Indicators – Vehicle Miles of Travel

Shown below are the demand indicators for residential and nonresidential land uses related to vehicle miles of travel (VMT). For residential development, the table displays VMT per housing unit. For nonresidential development, the table displays VMT generated per 1,000 square feet of floor area (per room for Hotel, and per bed for Assisted Living).

Figure S5: Ratio of Service Unit to Development Unit – East SFSA

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	0.422	2.89
Multi-Family	5.44	62%	117%	0.422	1.67
Age Restricted / All Other	5.00	62%	117%	0.422	1.53

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	0.422	0.52
Commercial	37.75	33%	75%	0.422	3.94
Office & Other Services	9.74	50%	73%	0.422	1.50
Institutional	19.52	33%	73%	0.422	1.98
Hotel (per room)	8.36	50%	73%	0.422	1.29
Assited Living (per bed)	2.60	50%	73%	0.422	0.40

1. See Land Use Assumptions

Figure S6: Ratio of Service Unit to Development Unit – North Central SFSA

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	4.619	31.63
Multi-Family	5.44	62%	117%	4.619	18.23
Age Restricted / All Other	5.00	62%	117%	4.619	16.75

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	4.619	5.68
Commercial	37.75	33%	75%	4.619	43.16
Office & Other Services	9.74	50%	73%	4.619	16.42
Institutional	19.52	33%	73%	4.619	21.72
Hotel (per room)	8.36	50%	73%	4.619	14.09
Assited Living (per bed)	2.60	50%	73%	4.619	4.38

1. See Land Use Assumptions

Figure S7: Ratio of Service Unit to Development Unit – South Central SFSA

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	8.900	60.95
Multi-Family	5.44	62%	117%	8.900	35.12
Age Restricted / All Other	5.00	62%	117%	8.900	32.28

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	8.900	10.95
Commercial	37.75	33%	75%	8.900	83.15
Office & Other Services	9.74	50%	73%	8.900	31.64
Institutional	19.52	33%	73%	8.900	41.85
Hotel (per room)	8.36	50%	73%	8.900	27.16
Assited Living (per bed)	2.60	50%	73%	8.900	8.45

1. See Land Use Assumptions

Figure S8: Ratio of Service Unit to Development Unit – West SFSA

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	10.519	72.03
Multi-Family	5.44	62%	117%	10.519	41.51
Age Restricted / All Other	5.00	62%	117%	10.519	38.15

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	10.519	12.94
Commercial	37.75	33%	75%	10.519	98.28
Office & Other Services	9.74	50%	73%	10.519	37.40
Institutional	19.52	33%	73%	10.519	49.46
Hotel (per room)	8.36	50%	73%	10.519	32.10
Assited Living (per bed)	2.60	50%	73%	10.519	9.98

1. See Land Use Assumptions

Analysis of Capacity, Usage, and Costs of Existing Necessary Public Services

ARS § 11-1102(F)(1) requires:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The description shall be prepared by qualified professionals who are licensed in this state, as applicable."*

ARS § 11-1102(F)(2) requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. The analysis shall be prepared by qualified professionals who are licensed in this state, as applicable."*

East Street Facilities Service Area

The East Street Facilities Service Area IIP includes Ironwood Road debt. The cost recovery methodology is used for Ironwood Road debt.

Ironwood Road Debt – Cost Recovery

In 2006, Pinal County debt-financed[3] an expansion of Ironwood Road that benefits development in the East SFSA and the North Central SFSA. In 2014, Pinal County issued a debt obligation[4] to refund its 2006 debt. The final payment related to the 2014 debt obligation is due in 2025, so the total cost of Ironwood Road debt is allocated to unincorporated development in 2025 – the East SFSA share is $15,087,416 (15 percent) and the North Central SFSA share is $85,495,357 (85 percent). This portion of the Street Facilities development fee will be used to cover future development's share of Ironwood Road debt service payments. To allocate the proportionate share to residential and nonresidential development, this analysis uses trip generation rates, trip adjustment factors, trip length weighting factors, and average trip lengths shown in Figure S5. Allocating the East SFSA share of $15,087,416 to projected East SFSA VMT in the final year of debt service results in a cost of $402.21 per VMT ($15,087,416 total cost / 37,511 VMT).

Figure S9: Cost Allocation

Cost Factors	
Total Cost (Principal & Interest)	$15,087,416

Level-of-Service (LOS) Standards	
2025 VMT	37,511
Cost per VMT	$402.21

Source: Pinal County, Arizona

[3] Greater Arizona Development Authority, Series 2006
[4] Pledged Revenue Refunding Obligations, Series 2014

Ironwood Road Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure S10 includes debt service related to Ironwood Road in the East SFSA totaling $4,633,613. This analysis divides annual debt service by VMT in the East SFSA to calculate annual debt service per VMT. A present value adjustment accounts for the time value of annual debt service through 2025. The discount rate of 4.45 percent is the average annual interest rate paid by Pinal County on the 2014 debt obligation.

Figure S10: Debt Service Credit

Year	Principal	Interest	Total	VMT	Per VMT
2020	$575,250	$195,975	$771,225	35,602	$21.66
2021	$604,500	$167,213	$771,713	35,984	$21.45
2022	$635,250	$136,988	$772,238	36,366	$21.24
2023	$666,750	$105,225	$771,975	36,747	$21.01
2024	$701,250	$71,888	$773,138	37,129	$20.82
2025	$736,500	$36,825	$773,325	37,511	$20.62
Total	$3,919,500	$714,113	$4,633,613		$126.79

Discount Rate	4.45%
Net Present Value	$109.29

North Central Street Facilities Service Area

The North Central Street Facilities Service Area IIP includes arterials, Ironwood Road debt, and Hunt Highway debt. A plan-based methodology is used for arterials, and the cost recovery methodology is used for Ironwood Road debt and Hunt Highway debt.

Arterials – Plan-Based

Pinal County plans to construct 60.4 lane miles of arterials during the next 10 years. Based on discussions with staff, and existing transportation plans, future development's share of the planned arterials is 48.7 percent. Based on a total cost of $49,966,344 for the planned arterials, future development's share is $24,326,107 ($49,966,344 total cost X 48.7 percent growth share). Existing development's share of $25,640,237 may not be funded with development fees.

Figure S11: Planned Arterials – North Central SFSA

Improvement	Start	End	Additional Lane Miles	Total Cost	Growth Share	Growth Cost
Arizona Farms	Hunt Highway	Quail Run	4.0	$2,628,260	25.0%	$657,065
Bella Vista	Gantzel	Quail Run	6.0	$3,942,390	50.0%	$1,971,195
Combs	Kenworthy	Sierra Vista	4.0	$2,628,260	50.0%	$1,314,130
Hunt Highway[1]	Gary	Arizona Farms	15.0	$20,135,593	50.0%	$10,067,797
Hunt Highway	Magma	Hiller	15.2	$9,987,388	50.0%	$4,993,694
Ironwood	Combs	Hunt Highway	11.2	$7,359,128	50.0%	$3,679,564
Skyline	Terminus	Schnepf	4.0	$2,628,260	50.0%	$1,314,130
Thompson	Hunt Highway	Empire	1.0	$657,065	50.0%	$328,533
Total			60.4	$49,966,344	48.7%	$24,326,107

Source: Pinal County, Arizona

1. Constructed with Series 2014 Plegdged Revenue Obligations. Pinal County will continue collecting development fees to fund future development's share of the total cost.

To allocate the proportionate share of demand for arterials to residential and nonresidential development, this analysis uses trip generation rates, trip adjustment factors, trip length weighting factors, and average trip lengths shown in Figure S6. Pinal County's existing LOS is 1.333 lane miles per 10,000 VMT (203.16 lane miles / (1,523,735 VMT / 10,000 VMT)), and the planned LOS for arterials is 1.333 lane miles per 10,000 VMT (263.57 lane miles / (1,976,743 VMT / 10,000 VMT)). Based on a growth-related cost of $24,326,107 to construct 60.4 lane miles of arterials, the weighted average is $402,750 per lane mile. For arterials, the cost is $53.70 per VMT (263.57 lane miles / 1,976,743 VMT X $402,750 per lane mile).

Figure S12: Planned Level of Service

Cost Factors	
Growth Cost of Planned Arterials	$24,326,107
Planned Arterial Lane Miles	60.40
Growth Cost per Lane Mile	$402,750

Planned Level-of-Service (LOS) Standards	
2030 Arterial Lane Miles	263.57
2030 VMT	1,976,743
Lane Miles per 10,000 VMT	1.333
Cost per VMT	$53.70

Source: Pinal County, Arizona

Hunt Highway Debt Credit

In 2014, Pinal County debt-financed[5] an expansion of Hunt Highway that benefits development in the North Central SFSA. The expansion of Hunt Highway includes multiple phases, and the total cost of $20,135,593 is included in the list of planned arterials shown in Figure S11.

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure S13 includes the remaining debt service related to Hunt Highway in the North Central SFSA totaling $17,864,407. The final payment related to the 2014 debt obligation is due in 2034, so annual debt service payments for Hunt Highway are allocated to VMT generated by development in unincorporated areas of the North Central SFSA to calculate annual debt service per VMT. A present value adjustment accounts for the time value of annual debt service through 2034. The discount rate of 4.55 percent is the average annual interest rate paid by Pinal County on the 2014 debt obligation.

Figure S13: Debt Service Credit

Year	Principal	VMT	Per VMT
2020	$0	1,523,735	$0.00
2021	$942,373	1,564,274	$0.60
2022	$989,831	1,604,812	$0.62
2023	$1,008,475	1,645,351	$0.61
2024	$1,059,322	1,685,890	$0.63
2025	$1,113,559	1,726,428	$0.65
2026	$1,167,797	1,776,491	$0.66
2027	$1,227,119	1,826,554	$0.67
2028	$1,288,136	1,876,617	$0.69
2029	$1,352,542	1,926,680	$0.70
2030	$1,396,610	1,976,743	$0.71
2031	$1,466,102	2,033,959	$0.72
2032	$1,538,983	2,091,175	$0.74
2033	$1,616,949	2,148,391	$0.75
2034	$1,696,610	2,205,607	$0.77
Total	$17,864,407		$9.51

Discount Rate	4.55%
Net Present Value	$6.53

[5] Pledged Revenue Obligations, Series 2014

Ironwood Road Debt – Cost Recovery

In 2006, Pinal County debt-financed[6] an expansion of Ironwood Road that benefits development in the East SFSA and the North Central SFSA. In 2014, Pinal County issued a debt obligation[7] to refund its 2006 debt. The final payment related to the 2014 debt obligation is due in 2025, so the total cost of Ironwood Road debt is allocated to unincorporated development in 2025 – the East SFSA share is $15,087,416 (15 percent) and the North Central SFSA share is $85,495,357 (85 percent). This portion of the Street Facilities development fee will be used to cover future development's share of Ironwood Road debt service payments. Allocating the North Central SFSA share of $85,495,357 to projected North Central SFSA VMT in the final year of debt service results in a cost of $49.52 per VMT ($85,495,357 total cost / 1,726,428 VMT).

Figure S14: Cost Allocation

Cost Factors	
Total Cost (Principal & Interest)	$85,495,357

Level-of-Service (LOS) Standards	
2025 VMT	1,726,428
Cost per VMT	$49.52

Source: Pinal County, Arizona

Ironwood Road Debt Credit

To avoid a potential double payment for annual debt service, TischlerBise includes a revenue credit in the development fee calculations. Shown below, Figure S15 includes debt service related to Ironwood Road in the North Central SFSA totaling $26,257,138. This analysis divides annual debt service by VMT in the North Central SFSA to calculate annual debt service per VMT. A present value adjustment accounts for the time value of annual debt service through 2025. The discount rate of 4.45 percent is the average annual interest rate paid by Pinal County on the 2014 debt obligation.

Figure S15: Debt Service Credit

Year	Principal	Interest	Total	VMT	Per VMT
2020	$3,259,750	$1,110,525	$4,370,275	1,523,735	$2.87
2021	$3,425,500	$947,538	$4,373,038	1,564,274	$2.80
2022	$3,599,750	$776,263	$4,376,013	1,604,812	$2.73
2023	$3,778,250	$596,275	$4,374,525	1,645,351	$2.66
2024	$3,973,750	$407,363	$4,381,113	1,685,890	$2.60
2025	$4,173,500	$208,675	$4,382,175	1,726,428	$2.54
Total	$22,210,500	$4,046,638	$26,257,138		$16.19

Discount Rate	4.45%
Net Present Value	$13.98

[6] Greater Arizona Development Authority, Series 2006
[7] Pledged Revenue Refunding Obligations, Series 2014

South Central Street Facilities Service Area

The South Central Street Facilities Service Area IIP uses a plan-based methodology arterials.

Arterials – Plan-Based

Pinal County plans to construct 46.6 lane miles of arterials during the next 10 years. Based on discussions with staff, and existing transportation plans, future development's share of the planned arterials is 25 percent. Based on a total cost of $30,619,229 for the planned arterials, future development's share is $7,654,807 ($30,619,229 total cost X 25 percent growth share). Existing development's share of $22,964,422 may not be funded with development fees.

Figure S16: Planned Arterials – South Central SFSA

Improvement	Start	End	Additional Lane Miles	Total Cost	Growth Share	Growth Cost
Battaglia	Henness	City Limit	8.0	$5,256,520	25.0%	$1,314,130
McCartney	I-10	Overfield	5.0	$3,285,325	25.0%	$821,331
Selma Highway	Tweedy	SR 87	8.0	$5,256,520	25.0%	$1,314,130
Selma Highway[1]	Thornton	Jimmie Kerr	7.0	$4,599,455	25.0%	$1,149,864
Sunland Gin	Milligan	Houser	6.0	$3,942,390	25.0%	$985,598
Val Vista	I-10	Cox	4.2	$2,759,673	25.0%	$689,918
Maricopa-CG Hwy	SFSA Boundary	Casa Grande	8.4	$5,519,346	25.0%	$1,379,837
Total			46.6	$30,619,229	25.0%	$7,654,807

Source: Pinal County, Arizona

1. Adds 2 additional lanes to the 4 lanes planned by Pinal RTA. This project is not funded by the transportation excise tax.

To allocate the proportionate share of demand for arterials to residential and nonresidential development, this analysis uses trip generation rates, trip adjustment factors, trip length weighting factors, and average trip lengths shown in Figure S7. Pinal County's existing LOS is 1.333 lane miles per 10,000 VMT (180.79 lane miles / (1,355,900 VMT / 10,000 VMT)), and the planned LOS for arterials is 1.333 lane miles per 10,000 VMT (227.39 lane miles / (1,705,425 VMT / 10,000 VMT)). Based on a growth-related cost of $7,654,807 to construct 46.6 lane miles of arterials, the weighted average is $164,266 per lane mile. For arterials, the cost is $21.90 per VMT (227.39 lane miles / 1,705,425 VMT X $164,266 per lane mile).

Figure S17: Planned Level of Service

Cost Factors	
Growth Cost of Planned Arterials	$7,654,807
Planned Arterial Lane Miles	46.60
Growth Cost per Lane Mile	$164,266

Planned Level-of-Service (LOS) Standards	
2030 Arterial Lane Miles	227.39
2030 VMT	1,705,425
Lane Miles per 10,000 VMT	1.333
Cost per VMT	$21.90

Source: Pinal County, Arizona

West Street Facilities Service Area

The West Street Facilities Service Area IIP includes arterials. A plan-based methodology is used for arterials.

Arterials – Plan-Based

Pinal County plans to construct 17.2 lane miles of arterials during the next 10 years. Based on discussions with staff, and existing transportation plans, future development's share of the planned arterials is 25 percent. Based on a total cost of $11,301,518 for the planned arterials, future development's share is $2,825,380 ($11,301,518 total cost X 25 percent growth share). Existing development's share of $8,476,139 may not be funded with development fees.

Figure S18: Planned Arterials – West SFSA

Improvement	Start	End	Additional Lane Miles	Total Cost	Growth Share	Growth Cost
Barnes	Amarillo Valley	SR 347	4.0	$2,628,260	25.0%	$657,065
Amarillo Valley	Barnes	Century	4.0	$2,628,260	25.0%	$657,065
Louis Johnson	Amarillo Valley	SR 347	4.0	$2,628,260	25.0%	$657,065
Maricopa-CG Hwy	Maricopa City	SFSA Boundary	5.2	$3,416,738	25.0%	$854,185
Total			17.2	$11,301,518	25.0%	$2,825,380

Source: Pinal County, Arizona

To allocate the proportionate share of demand for arterials to residential and nonresidential development, this analysis uses trip generation rates, trip adjustment factors, trip length weighting factors, and average trip lengths shown in Figure S8. Pinal County's existing LOS is 1.333 lane miles per 10,000 VMT (44.77 lane miles / (335,744 VMT / 10,000 VMT)), and the planned LOS for arterials is 1.333 lane miles per 10,000 VMT (61.97 lane miles / (464,749 VMT / 10,000 VMT)). Based on a growth-related cost of $2,825,380 to construct 17.2 lane miles of arterials, the weighted average is $164,266 per lane mile. For arterials, the cost is $21.90 per VMT (61.97 lane miles / 464,749 VMT X $164,266 per lane mile).

Figure S19: Planned Level of Service

Cost Factors	
Growth Cost of Planned Arterials	$2,825,380
Planned Arterial Lane Miles	17.20
Growth Cost per Lane Mile	$164,266

Planned Level-of-Service (LOS) Standards	
2030 Arterial Lane Miles	61.97
2030 VMT	464,749
Lane Miles per 10,000 VMT	1.333
Cost per VMT	$21.90

Source: Pinal County, Arizona

All Street Facilities Service Areas

The Street Facilities IIP for all service areas includes the cost of preparing the Street Facilities IIP and related Development Fee Report. A plan-based methodology is used for the Development Fee Report.

Development Fee Report – Plan-Based

The cost to prepare the Street Facilities IIP and related Development Fee Report equals $49,700. Pinal County plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the *Land Use Assumptions* document, the cost is $0.16 per VMT.

Figure S20: IIP and Development Fee Report

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational Facilities	$30,000	Residential	96%	Population	19,923	$1.45
		Nonresidential	4%	Jobs	4,347	$0.28
Public Safety Facilities	$40,000	Residential	82%	Population	19,923	$1.65
		Nonresidential	18%	Vehicle Trips	16,255	$0.44
Street Facilities	$49,700	All Development	100%	VMT	313,255	$0.16
Total	$119,700					

PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 11-1102(F)(6) requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

ARS § 11-1102(F)(7) requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period of not more than ten years."*

As shown in the *Land Use Assumptions* document, VMT generated in unincorporated areas is expected to increase by an additional 939,378 VMT over the next 10 years. In the East SFSA, VMT is expected to increase by 7,841 VMT while the North Central SFSA is expected to see an increase of 453,008 VMT. In the South Central SFSA, the 10-year increase is projected to include an additional 349,525 VMT, and future development in the West SFSA is projected to generate an additional 129,004 VMT. See Appendix D for detailed VMT projections for each service area.

East Street Facilities Service Area

As shown on the lower right side of Figure S21, future development in the East SFSA generates an additional 7,841 VMT over the next 10 years. To proportionately allocate the cost of Ironwood Road debt to all development in the final year of the debt payment, the travel demand model is sized to match the five lane miles constructed in the East SFSA using Ironwood Road debt.

Figure S21: Travel Demand Model – East SFSA

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	2.89
Multi-Family	HU	221	5.44	62%	117%	1.67
All Other	HU	240	5.00	62%	117%	1.53
Industrial	KSF	130	3.37	50%	73%	0.52
Commercial	KSF	820	37.75	33%	75%	3.94
Office & Other Services	KSF	710	9.74	50%	73%	1.50
Institutional	KSF	520	19.52	33%	73%	1.98

Avg Trip Length (miles)	0.422
Vehicle Capacity Per Lane	7,500

	East Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	10 2030	10-Year Increase
Development	Single Family Units	9,807	9,900	9,993	10,086	10,178	10,271	11,670	**1,862**
	Multi-Family Units	718	725	732	739	746	752	855	**136**
	All Other Units	2,597	2,621	2,646	2,670	2,695	2,719	3,090	**493**
	Industrial KSF	229	246	263	280	297	314	348	**119**
	Commercial KSF	345	350	355	360	365	370	408	**64**
	Office & Other Services KSF	101	107	113	119	125	131	227	**126**
	Institutional KSF	232	246	259	273	287	300	724	**492**
Avg Weekday Vehicle Trips	Single-Family Trips	57,401	57,944	58,486	59,029	59,572	60,115	68,301	**10,900**
	Multi-Family Trips	2,423	2,446	2,469	2,492	2,515	2,538	2,883	**460**
	All Other Trips	8,050	8,126	8,202	8,278	8,354	8,430	9,578	**1,529**
	Residential Trips	67,873	68,515	69,157	69,799	70,441	71,083	80,763	**12,889**
	Industrial Trips	386	414	443	471	500	528	587	**201**
	Commercial Trips	4,293	4,357	4,420	4,484	4,548	4,612	5,085	**793**
	Office & Other Services Trips	492	521	550	579	608	637	1,105	**613**
	Institutional Trips	1,497	1,584	1,672	1,759	1,846	1,933	4,664	**3,167**
	Nonresidential Trips	6,668	6,876	7,085	7,293	7,502	7,711	11,441	**4,773**
	Total Vehicle Trips	74,541	75,392	76,242	77,093	77,943	78,794	92,204	**17,663**
VMT	**Vehicle Miles of Travel (VMT)**	**35,602**	**35,984**	**36,366**	**36,747**	**37,129**	**37,511**	**43,443**	**7,841**
	Annual Increase		382	382	382	382	382	1,186	
Demand	Arterial Lane Miles	4.75	4.80	4.85	4.90	4.95	5.00	5.79	**1.05**
	Annual Increase		0.05	0.05	0.05	0.05	0.05	0.16	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

North Central Street Facilities Service Area

As shown on the lower right side of Figure S22, future development in the North Central SFSA generates an additional 453,008 VMT over the next 10 years. To maintain the existing infrastructure standards, Pinal County plans to construct 60.4 additional lane miles of arterials to accommodate projected development over the next 10 years. As shown in Figure S11, future development's share of planned arterials is $24,326,107, and existing development's share is $25,640,237.

Figure S22: Travel Demand Model – North Central SFSA

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	31.63
Multi-Family	HU	221	5.44	62%	117%	18.23
All Other	HU	240	5.00	62%	117%	16.75
Industrial	KSF	130	3.37	50%	73%	5.68
Commercial	KSF	820	37.75	33%	75%	43.16
Office & Other Services	KSF	710	9.74	50%	73%	16.42
Institutional	KSF	520	19.52	33%	73%	21.72

Avg Trip Length (miles)	4.619
Vehicle Capacity Per Lane	7,500

	North Central Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	10 2030	10-Year Increase
Development	Single Family Units	38,680	39,654	40,628	41,602	42,576	43,550	49,401	**10,720**
	Multi-Family Units	2,834	2,905	2,976	3,048	3,119	3,190	3,619	**785**
	All Other Units	10,241	10,499	10,757	11,015	11,273	11,530	13,080	**2,838**
	Industrial KSF	392	466	539	613	687	760	1,197	**805**
	Commercial KSF	806	840	874	909	943	977	1,263	**457**
	Office & Other Services KSF	422	462	502	542	582	622	837	**416**
	Institutional KSF	1,526	1,597	1,669	1,740	1,812	1,884	2,490	**964**
Avg Weekday Vehicle Trips	Single-Family Trips	226,388	232,089	237,789	243,489	249,189	254,889	289,132	**62,743**
	Multi-Family Trips	9,557	9,798	10,038	10,279	10,520	10,760	12,206	**2,649**
	All Other Trips	31,748	32,547	33,346	34,146	34,945	35,745	40,547	**8,799**
	Residential Trips	267,693	274,433	281,174	287,914	294,654	301,394	341,884	**74,191**
	Industrial Trips	661	785	909	1,033	1,157	1,281	2,017	**1,356**
	Commercial Trips	10,038	10,465	10,893	11,321	11,748	12,176	15,729	**5,692**
	Office & Other Services Trips	2,053	2,248	2,443	2,638	2,833	3,028	4,077	**2,024**
	Institutional Trips	9,827	10,288	10,750	11,211	11,673	12,134	16,039	**6,213**
	Nonresidential Trips	22,578	23,787	24,995	26,203	27,411	28,620	37,863	**15,284**
	Total Vehicle Trips	290,272	298,220	306,168	314,117	322,065	330,013	379,747	**89,475**
VMT	**Vehicle Miles of Travel (VMT)**	**1,523,735**	**1,564,274**	**1,604,812**	**1,645,351**	**1,685,890**	**1,726,428**	**1,976,743**	**453,008**
	Annual Increase		40,539	40,539	40,539	40,539	40,539	50,063	
Demand	Arterial Lane Miles	203.16	208.57	213.97	219.38	224.79	230.19	263.57	**60.40**
	Annual Increase		5.41	5.41	5.41	5.41	5.41	6.68	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

South Central Street Facilities Service Area

As shown on the lower right side of Figure S23, future development in the South Central SFSA generates an additional 349,525 VMT over the next 10 years. To maintain the existing infrastructure standards, Pinal County plans to construct 46.6 additional lane miles of arterials to accommodate projected development over the next 10 years. As shown in Figure S16, future development's share of planned arterials is $7,654,807, and existing development's share is $22,964,422.

Figure S23: Travel Demand Model – South Central SFSA

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	60.95
Multi-Family	HU	221	5.44	62%	117%	35.12
All Other	HU	240	5.00	62%	117%	32.28
Industrial	KSF	130	3.37	50%	73%	10.95
Commercial	KSF	820	37.75	33%	75%	83.15
Office & Other Services	KSF	710	9.74	50%	73%	31.64
Institutional	KSF	520	19.52	33%	73%	41.85

Avg Trip Length (miles)	8.900
Vehicle Capacity Per Lane	7,500

	South Central Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	10 2030	10-Year Increase
Development	Single Family Units	17,188	17,316	17,444	17,572	17,700	17,828	20,366	**3,178**
	Multi-Family Units	1,259	1,268	1,278	1,287	1,297	1,306	1,492	**233**
	All Other Units	4,551	4,585	4,619	4,652	4,686	4,720	5,392	**841**
	Industrial KSF	955	1,020	1,084	1,149	1,214	1,279	1,729	**775**
	Commercial KSF	456	474	491	509	527	545	852	**396**
	Office & Other Services KSF	381	401	420	439	459	478	765	**384**
	Institutional KSF	1,359	1,473	1,586	1,700	1,814	1,928	2,959	**1,600**
Avg Weekday Vehicle Trips	Single-Family Trips	100,597	101,346	102,095	102,845	103,594	104,343	119,197	**18,600**
	Multi-Family Trips	4,247	4,278	4,310	4,342	4,373	4,405	5,032	**785**
	All Other Trips	14,107	14,212	14,317	14,422	14,528	14,633	16,716	**2,608**
	Residential Trips	118,951	119,837	120,723	121,609	122,495	123,381	140,944	**21,993**
	Industrial Trips	1,609	1,718	1,827	1,936	2,045	2,155	2,914	**1,305**
	Commercial Trips	5,676	5,899	6,123	6,346	6,569	6,793	10,609	**4,934**
	Office & Other Services Trips	1,856	1,951	2,045	2,140	2,234	2,329	3,726	**1,869**
	Institutional Trips	8,753	9,486	10,219	10,952	11,685	12,419	19,058	**10,305**
	Nonresidential Trips	17,893	19,054	20,214	21,374	22,535	23,695	36,306	**18,413**
	Total Vehicle Trips	136,844	138,891	140,937	142,983	145,029	147,076	177,251	**40,406**
VMT	**Vehicle Miles of Travel (VMT)**	**1,355,900**	**1,372,704**	**1,389,507**	**1,406,311**	**1,423,114**	**1,439,918**	**1,705,425**	**349,525**
	Annual Increase		16,804	16,804	16,804	16,804	16,804	53,102	
Demand	Arterial Lane Miles	180.79	183.03	185.27	187.51	189.75	191.99	227.39	**46.60**
	Annual Increase		2.24	2.24	2.24	2.24	2.24	7.08	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

West Street Facilities Service Area

As shown on the lower right side of Figure S24, future development in the South Central SFSA generates an additional 129,004 VMT over the next 10 years. To maintain the existing infrastructure standards, Pinal County plans to construct 17.2 additional lane miles of arterials to accommodate projected development over the next 10 years. As shown in Figure S18, future development's share of planned arterials is $2,825,380, and existing development's share is $8,476,139.

Figure S24: Travel Demand Model – West SFSA

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	72.03
Multi-Family	HU	221	5.44	62%	117%	41.51
All Other	HU	240	5.00	62%	117%	38.15
Industrial	KSF	130	3.37	50%	73%	12.94
Commercial	KSF	820	37.75	33%	75%	98.28
Office & Other Services	KSF	710	9.74	50%	73%	37.40
Institutional	KSF	520	19.52	33%	73%	49.46

Avg Trip Length (miles)	10.519
Vehicle Capacity Per Lane	7,500

	West Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	10 2030	10-Year Increase
Development	Single Family Units	3,442	3,483	3,524	3,565	3,605	3,646	4,536	**1,094**
	Multi-Family Units	252	255	258	261	264	267	332	**80**
	All Other Units	911	922	933	944	955	965	1,201	**290**
	Industrial KSF	206	231	255	280	304	328	454	**247**
	Commercial KSF	119	126	133	140	147	154	282	**163**
	Office & Other Services KSF	368	375	381	387	393	399	458	**89**
	Institutional KSF	292	296	300	304	309	313	561	**269**
Avg Weekday Vehicle Trips	Single-Family Trips	20,145	20,384	20,623	20,862	21,101	21,341	26,547	**6,402**
	Multi-Family Trips	850	861	871	881	891	901	1,121	**270**
	All Other Trips	2,825	2,859	2,892	2,926	2,959	2,993	3,723	**898**
	Residential Trips	23,821	24,103	24,386	24,669	24,951	25,234	31,391	**7,570**
	Industrial Trips	348	389	430	471	512	553	764	**416**
	Commercial Trips	1,484	1,571	1,659	1,746	1,833	1,920	3,511	**2,027**
	Office & Other Services Trips	1,794	1,824	1,854	1,884	1,915	1,945	2,230	**436**
	Institutional Trips	1,878	1,906	1,933	1,961	1,989	2,017	3,611	**1,733**
	Nonresidential Trips	5,504	5,690	5,876	6,063	6,249	6,435	10,115	**4,611**
	Total Vehicle Trips	29,325	29,794	30,262	30,731	31,200	31,669	41,506	**12,181**
VMT	**Vehicle Miles of Travel (VMT)**	**335,744**	**340,671**	**345,598**	**350,525**	**355,452**	**360,379**	**464,749**	**129,004**
	Annual Increase		4,927	4,927	4,927	4,927	4,927	20,874	
Demand	Arterial Lane Miles	44.77	45.42	46.08	46.74	47.39	48.05	61.97	**17.20**
	Annual Increase		0.66	0.66	0.66	0.66	0.66	2.78	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

STREET FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

Revenue credits/offsets are necessary for Street Facilities development fees related to Ironwood Road debt and Hunt Highway debt.

Street Facilities Development Fees – East SFSA

Infrastructure components and cost factors for the East Street Facilities Service Area are summarized in the upper portion of Figure S25. The cost per service unit for Street Facilities is $293.08 per VMT.

Street Facilities development fees for residential development are assessed according to VMT generated per housing unit. The single-family fee of $847 is calculated using a cost per service unit of $293.08 per VMT multiplied by 2.89 VMT per housing unit.

Nonresidential development fees are calculated using VMT as the service unit. The fee of $1,155 per 1,000 square feet of commercial development is derived from a cost per service unit of $293.08 per VMT multiplied by 3.94 VMT per 1,000 square feet.

Figure S25: Schedule of Street Facilities Development Fees – East SFSA

Fee Component	Cost per VMT
Ironwood Debt	$402.21
Ironwood Debt Credit	($109.29)
Development Fee Report	$0.16
Total	$293.08

Residential Development	Development Fees per Unit			
Development Type	Avg Wkdy VMT per Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	2.89	$847	$2,431	($1,584)
Multi-Family	1.67	$489	$1,734	($1,245)
Age Restricted / All Other	1.53	$448	$1,734	($1,286)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Wkdy VMT per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	0.52	$152	$561	($409)
Commercial	3.94	$1,155	$4,022	($2,867)
Office & Other Services	1.50	$440	$1,741	($1,301)
Institutional	1.98	$580	$1,607	($1,027)
Hotel (per room)	1.29	$378	N/A	N/A
Assited Living (per bed)	0.40	$117	N/A	N/A

1. See Land Use Assumptions

Street Facilities Development Fees – North Central SFSA

Infrastructure components and cost factors for the North Central Street Facilities Service Area are summarized in the upper portion of Figure S26. The cost per service unit for Street Facilities is $82.87 per VMT.

Street Facilities development fees for residential development are assessed according to VMT generated per housing unit. The single-family fee of $2,621 is calculated using a cost per service unit of $82.87 per VMT multiplied by 31.63 VMT per housing unit.

Nonresidential development fees are calculated using VMT as the service unit. The fee of $3,577 per 1,000 square feet of commercial development is derived from a cost per service unit of $82.87 per VMT multiplied by 43.16 VMT per 1,000 square feet.

Figure S26: Schedule of Street Facilities Development Fees – North Central SFSA

Fee Component	Cost per VMT
Arterials	$53.70
Hunt Highway Debt Credit	($6.53)
Ironwood Debt	$49.52
Ironwood Debt Credit	($13.98)
Development Fee Report	$0.16
Total	$82.87

Residential Development	Development Fees per Unit			
Development Type	Avg Wkdy VMT per Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	31.63	$2,621	$7,978	($5,357)
Multi-Family	18.23	$1,511	$5,692	($4,181)
Age Restricted / All Other	16.75	$1,388	$5,692	($4,304)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Wkdy VMT per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	5.68	$471	$1,844	($1,373)
Commercial	43.16	$3,577	$13,197	($9,620)
Office & Other Services	16.42	$1,361	$5,713	($4,352)
Institutional	21.72	$1,800	$5,274	($3,474)
Hotel (per room)	14.09	$1,168	N/A	N/A
Assited Living (per bed)	4.38	$363	N/A	N/A

1. See Land Use Assumptions

Street Facilities Development Fees – South Central SFSA

Infrastructure components and cost factors for the South Central Street Facilities Service Area are summarized in the upper portion of Figure S27. The cost per service unit for Street Facilities is $22.06 per VMT.

Street Facilities development fees for residential development are assessed according to VMT generated per housing unit. The single-family fee of $1,345 is calculated using a cost per service unit of $22.06 per VMT multiplied by 60.95 VMT per housing unit.

Nonresidential development fees are calculated using VMT as the service unit. The fee of $1,834 per 1,000 square feet of commercial development is derived from a cost per service unit of $22.06 per VMT multiplied by 83.15 VMT per 1,000 square feet.

Figure S27: Schedule of Street Facilities Development Fees – South Central SFSA

Fee Component	Cost per VMT
Arterials	$21.90
Development Fee Report	$0.16
Total	$22.06

Residential Development	Development Fees per Unit			
Development Type	Avg Wkdy VMT per Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	60.95	$1,345	$2,623	($1,278)
Multi-Family	35.12	$775	$1,871	($1,096)
Age Restricted / All Other	32.28	$712	$1,871	($1,159)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Wkdy VMT per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	10.95	$242	$606	($364)
Commercial	83.15	$1,834	$4,339	($2,505)
Office & Other Services	31.64	$698	$1,878	($1,180)
Institutional	41.85	$923	$1,734	($811)
Hotel (per room)	27.16	$599	N/A	N/A
Assited Living (per bed)	8.45	$186	N/A	N/A

1. See Land Use Assumptions

Street Facilities Development Fees – West SFSA

Infrastructure components and cost factors for the West Street Facilities Service Area are summarized in the upper portion of Figure S28. The cost per service unit for Street Facilities is $22.06 per VMT.

Street Facilities development fees for residential development are assessed according to VMT generated per housing unit. The single-family fee of $1,589 is calculated using a cost per service unit of $22.06 per VMT multiplied by 72.03 VMT per housing unit.

Nonresidential development fees are calculated using VMT as the service unit. The fee of $2,168 per 1,000 square feet of commercial development is derived from a cost per service unit of $22.06 per VMT multiplied by 98.28 VMT per 1,000 square feet.

Figure S28: Schedule of Street Facilities Development Fees – West SFSA

Fee Component	Cost per VMT
Arterials	$21.90
Development Fee Report	$0.16
Total	$22.06

Residential Development	Development Fees per Unit			
Development Type	Avg Wkdy VMT per Unit[1]	Proposed Fees	Current Fees	Increase / Decrease
Single Family	72.03	$1,589	$1,512	$77
Multi-Family	41.51	$916	$1,078	($162)
Age Restricted / All Other	38.15	$842	$1,078	($236)

Nonresidential Development	Development Fees per 1,000 Square Feet			
Development Type	Avg Wkdy VMT per 1,000 Sq Ft[1]	Proposed Fees	Current Fees	Increase / Decrease
Industrial	12.94	$285	$349	($64)
Commercial	98.28	$2,168	$2,501	($333)
Office & Other Services	37.40	$825	$1,082	($257)
Institutional	49.46	$1,091	$999	$92
Hotel (per room)	32.10	$708	N/A	N/A
Assited Living (per bed)	9.98	$220	N/A	N/A

1. See Land Use Assumptions

Street Facilities Development Fee Revenue

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation (ARS § 11-1102(F)(8)).

Street Facilities Development Fee Revenue – East SFSA

Projected fee revenue shown in Figure S29 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Street Facilities in the East SFSA shown in Figure S25. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $0.56 million, and projected expenditures equal $4.33 million. Existing development's share of $3.77 million may not be funded with development fees.

Figure S29: Projected Street Facilities Development Fee Revenue – East SFSA

Fee Component	Growth Share	Existing Share	Total
Ironwood Debt	$767,709	$3,767,916	$4,535,625
Ironwood Debt Credit	($208,607)	$0	($208,607)
Development Fee Report	$303	$0	$303
Total	$559,406	$3,767,916	$4,327,321

Year		Single Family $847 per unit	Multi-Family $489 per unit	All Other $448 per unit	Industrial $152 per 1,000 sq ft	Commercial $1,155 per 1,000 sq ft	Office & Other $440 per 1,000 sq ft	Institutional $580 per 1,000 sq ft
		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	9,807	718	2,597	229	345	101	232
Year 1	2021	9,900	725	2,621	246	350	107	246
Year 2	2022	9,993	732	2,646	263	355	113	259
Year 3	2023	10,086	739	2,670	280	360	119	273
Year 4	2024	10,178	746	2,695	297	365	125	287
Year 5	2025	10,271	752	2,719	314	370	131	300
10-Year Increase		464	34	122	85	25	30	68
Projected Revenue		$393,009	$16,641	$54,706	$12,954	$28,868	$13,189	$39,460

Projected Fee Revenue	$558,827
Total Expenditures	$4,327,321
Existing Development Share	$3,768,494

Street Facilities Development Fee Revenue – North Central SFSA

Projected fee revenue shown in Figure S30 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Street Facilities in the North Central SFSA shown in Figure S26. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $28.61 million, and projected expenditures equal $69.91 million. Existing development's share of $41.30 million may not be funded with development fees.

Figure S30: Projected Street Facilities Development Fee Revenue – North Central SFSA

Fee Component	Growth Share	Existing Share	Total
Arterials	$24,326,107	$25,640,237	$49,966,344
Hunt Highway Debt Credit	($2,956,990)	$0	($2,956,990)
Ironwood Debt	$10,037,685	$15,664,190	$25,701,875
Ironwood Debt Credit	($2,833,275)	$0	($2,833,275)
Development Fee Report	$32,159	$0	$32,159
Total	$28,605,685	$41,304,427	$69,910,112

		Single Family $2,621 per unit	Multi-Family $1,511 per unit	All Other $1,388 per unit	Industrial $471 per 1,000 sq ft	Commercial $3,577 per 1,000 sq ft	Office & Other $1,361 per 1,000 sq ft	Institutional $1,800 per 1,000 sq ft
Year		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	38,680	2,834	10,241	392	806	422	1,526
Year 1	2021	39,654	2,905	10,499	466	840	462	1,597
Year 2	2022	40,628	2,976	10,757	539	874	502	1,669
Year 3	2023	41,602	3,048	11,015	613	909	542	1,740
Year 4	2024	42,576	3,119	11,273	687	943	582	1,812
Year 5	2025	43,550	3,190	11,530	760	977	622	1,884
Year 6	2026	44,720	3,276	11,840	848	1,034	665	2,005
Year 7	2027	45,890	3,362	12,150	935	1,091	708	2,126
Year 8	2028	47,060	3,447	12,460	1,022	1,149	751	2,247
Year 9	2029	48,230	3,533	12,770	1,110	1,206	794	2,369
Year 10	2030	49,401	3,619	13,080	1,197	1,263	837	2,490
10-Year Increase		10,721	785	2,839	805	457	415	964
Projected Revenue		$21,494,515	$907,201	$3,014,085	$290,318	$1,194,885	$438,779	$1,265,448

Projected Fee Revenue	$28,605,230
Total Expenditures	$69,910,112
Existing Development Share	$41,304,882

Street Facilities Development Fee Revenue – South Central SFSA

Projected fee revenue shown in Figure S31 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Street Facilities in the South Central SFSA shown in Figure S27. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $7.67 million, and projected expenditures equal $30.63 million. Existing development's share of $22.96 million may not be funded with development fees.

Figure S31: Projected Street Facilities Development Fee Revenue – South Central SFSA

Fee Component	Growth Share	Existing Share	Total
Arterials	$7,654,807	$22,964,422	$30,619,229
Development Fee Report	$13,330	$0	$13,330
Total	$7,668,137	$22,964,422	$30,632,559

		Single Family $1,345 per unit	Multi-Family $775 per unit	All Other $712 per unit	Industrial $242 per 1,000 sq ft	Commercial $1,834 per 1,000 sq ft	Office & Other $698 per 1,000 sq ft	Institutional $923 per 1,000 sq ft
Year		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	17,188	1,259	4,551	955	456	381	1,359
Year 1	2021	17,316	1,268	4,585	1,020	474	401	1,473
Year 2	2022	17,444	1,278	4,619	1,084	491	420	1,586
Year 3	2023	17,572	1,287	4,652	1,149	509	439	1,700
Year 4	2024	17,700	1,297	4,686	1,214	527	459	1,814
Year 5	2025	17,828	1,306	4,720	1,279	545	478	1,928
Year 6	2026	18,335	1,343	4,855	1,369	607	536	2,134
Year 7	2027	18,843	1,380	4,989	1,459	668	593	2,340
Year 8	2028	19,351	1,418	5,123	1,549	729	650	2,546
Year 9	2029	19,858	1,455	5,258	1,639	790	708	2,752
Year 10	2030	20,366	1,492	5,392	1,729	852	765	2,959
10-Year Increase		3,178	233	841	774	396	384	1,600
Projected Revenue		$4,248,252	$179,470	$595,405	$186,177	$722,303	$266,462	$1,470,000

Projected Fee Revenue	$7,668,070
Total Expenditures	$30,632,559
Existing Development Share	$22,964,489

Street Facilities Development Fee Revenue – West SFSA

Projected fee revenue shown in Figure S32 is based on the development projections in the *Land Use Assumptions* document and the updated development fees for Street Facilities in the West SFSA shown in Figure S28. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase and development fee revenue will increase at a corresponding rate. If development occurs at a slower rate than projected, the demand for infrastructure will also decrease, along with development fee revenue. Projected development fee revenue equals $2.83 million, and projected expenditures equal $11.31 million. Existing development's share of $8.48 million may not be funded with development fees.

Figure S32: Projected Street Facilities Development Fee Revenue – West SFSA

Fee Component	Growth Share	Existing Share	Total
Arterials	$2,825,380	$8,476,139	$11,301,518
Development Fee Report	$3,909	$0	$3,909
Total	$2,829,288	$8,476,139	$11,305,427

Year		Single Family $1,589 per unit	Multi-Family $916 per unit	All Other $842 per unit	Industrial $285 per 1,000 sq ft	Commercial $2,168 per 1,000 sq ft	Office & Other $825 per 1,000 sq ft	Institutional $1,091 per 1,000 sq ft
		Housing Unit	Housing Unit	Housing Unit	KSF	KSF	KSF	KSF
Base	2020	3,442	252	911	206	119	368	292
Year 1	2021	3,483	255	922	231	126	375	296
Year 2	2022	3,524	258	933	255	133	381	300
Year 3	2023	3,565	261	944	280	140	387	304
Year 4	2024	3,605	264	955	304	147	393	309
Year 5	2025	3,646	267	965	328	154	399	313
Year 6	2026	3,824	280	1,012	353	180	411	363
Year 7	2027	4,002	293	1,060	378	205	423	412
Year 8	2028	4,180	306	1,107	403	231	434	462
Year 9	2029	4,358	319	1,154	429	256	446	511
Year 10	2030	4,536	332	1,201	454	282	458	561
10-Year Increase		1,094	80	290	247	163	89	269
Projected Revenue		$1,728,040	$72,832	$242,323	$70,255	$350,742	$73,477	$291,524

Projected Fee Revenue	$2,829,194
Total Expenditures	$11,305,427
Existing Development Share	$8,476,233

STREET FACILITIES MAINTENANCE AND OPERATIONS COSTS

ARS § 11-1102(F)(5) requires:

> *"A description of all the costs necessitated by ongoing maintenance and operations of the necessary public services once construction is completed and a description of the source of revenue to be used to fund the maintenance and operations."*

Pinal County's Public Works Department provided annual estimates for operations and maintenance costs equal to $3,527 per lane mile of arterials. To project operations and maintenance costs, the analysis assumes Pinal County will construct 10 percent of the planned arterials in each Street Facilities Service Area each year. After constructing an arterial, there are no operations and maintenance costs in the first two years. Based on these annual costs, the projected 10-year operations and maintenance costs equal $1,971,240, and the projected funding sources include the General Fund and Highway User Revenue Fund (HURF) revenues.

Figure S33: Projected Street Facilities Maintenance and Operations Costs

Project Description	Annual O&M per Lane Mile	Annual Lane Miles	Source	10-Year Total
East Arterials	$3,527	0.0	General Fund, Highway User Revenue Fund	$0
North Central Arterials	$3,527	6.0		$958,639
South Central Arterials	$3,527	4.7		$739,612
West Arterials	$3,527	1.7		$272,990
Total				$1,971,240

Source: Pinal County Public Works Department

APPENDIX A: PROFESSIONAL SERVICES

ARS § 11-1102(A) states:

> *"A county may assess development fees to offset costs to the county 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."*

ARS § 11-1102(V)(8) states:

> *"Qualified professional means a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience."*

Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units over the next five years. Qualified professionals must develop the IIP using generally accepted engineering and planning practices.

Figure A1: Cost of Professional Services

Necessary Public Service	Cost	Proportionate Share		Service Unit	5-Year Change	Cost per Service Unit
Parks and Recreational Facilities	$30,000	Residential	96%	Population	19,923	$1.45
		Nonresidential	4%	Jobs	4,347	$0.28
Public Safety Facilities	$40,000	Residential	82%	Population	19,923	$1.65
		Nonresidential	18%	Vehicle Trips	16,255	$0.44
Street Facilities	$49,700	All Development	100%	VMT	313,255	$0.16
Total	$119,700					

APPENDIX B: FORECAST OF REVENUES OTHER THAN FEES

ARS § 11-1102(F)(8) requires:

> *"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."*

ARS § 11-1102(B)(12) states,

> *"The county shall forecast the contribution to be made in the future in cash, taxes, fees, assessments and all other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fees."*

REVENUE PROJECTIONS

The required forecast of non-development fee revenue from identified sources that can be attributed to future development over the next 10 years is summarized below. These funds are available for capital investments; however, Pinal County directs these revenues to non-development fee eligible capital needs including maintenance, repair, and replacement.

Only revenue generated by future development that is dedicated to growth-related capital improvements needs to be considered in determining the extent of the burden imposed by future development. Offsets against development fees are warranted in the following cases: (1) future development will be paying taxes or fees used to retire debt on existing facilities serving existing development; (2) future development will be paying taxes or fees used to fund an existing deficiency, or (3) future development will be paying taxes or fees that are dedicated to be used for growth-related improvements. The analysis provided in this report identified the need for offsets against the fees, and these offsets are included in the development fee calculations. Projected revenues generated by future development are shown below.

APPENDIX C: LAND USE DEFINITIONS

RESIDENTIAL DEVELOPMENT

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Pinal County will collect development fees from all new residential units. One-time development fees are determined by site capacity (i.e. number of residential units).

Single-Family Units:

1. **Single-family detached** is a one-unit structure detached from any other house, that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has open space on all four sides.
2. **Single-family attached (townhouse)** is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

Multi-Family Units:

1. **2+ units (duplexes and apartments)** are units in structures containing two or more housing units, further categorized as units in structures with "2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more apartments."

All Other Units:

1. **Mobile home** includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.
2. **Boat, RV, Van, Etc.** includes any living quarters occupied as a housing unit that does not fit the other categories (e.g., houseboats, railroad cars, campers, and vans). Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

NONRESIDENTIAL DEVELOPMENT

The proposed general nonresidential development categories (defined below) can be used for all new construction within Pinal County. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

Assisted Living: Establishments primarily providing either routine general protective oversight, assistance with activities necessary for independent living to mentally or physically limited persons, or establishments providing care for persons who are unable to care for themselves. By way of example, *Assisted Living* includes assisted living facilities, nursing homes, rest homes, chronic care homes, and convalescent homes.

Commercial: Establishments primarily selling merchandise, eating/drinking places, and entertainment uses. By way of example, *Commercial* includes shopping centers, supermarkets, pharmacies, restaurants, bars, nightclubs, automobile dealerships, and movie theaters.

Hotel: A hotel is a place of lodging that provides sleeping accommodations and may include supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops.

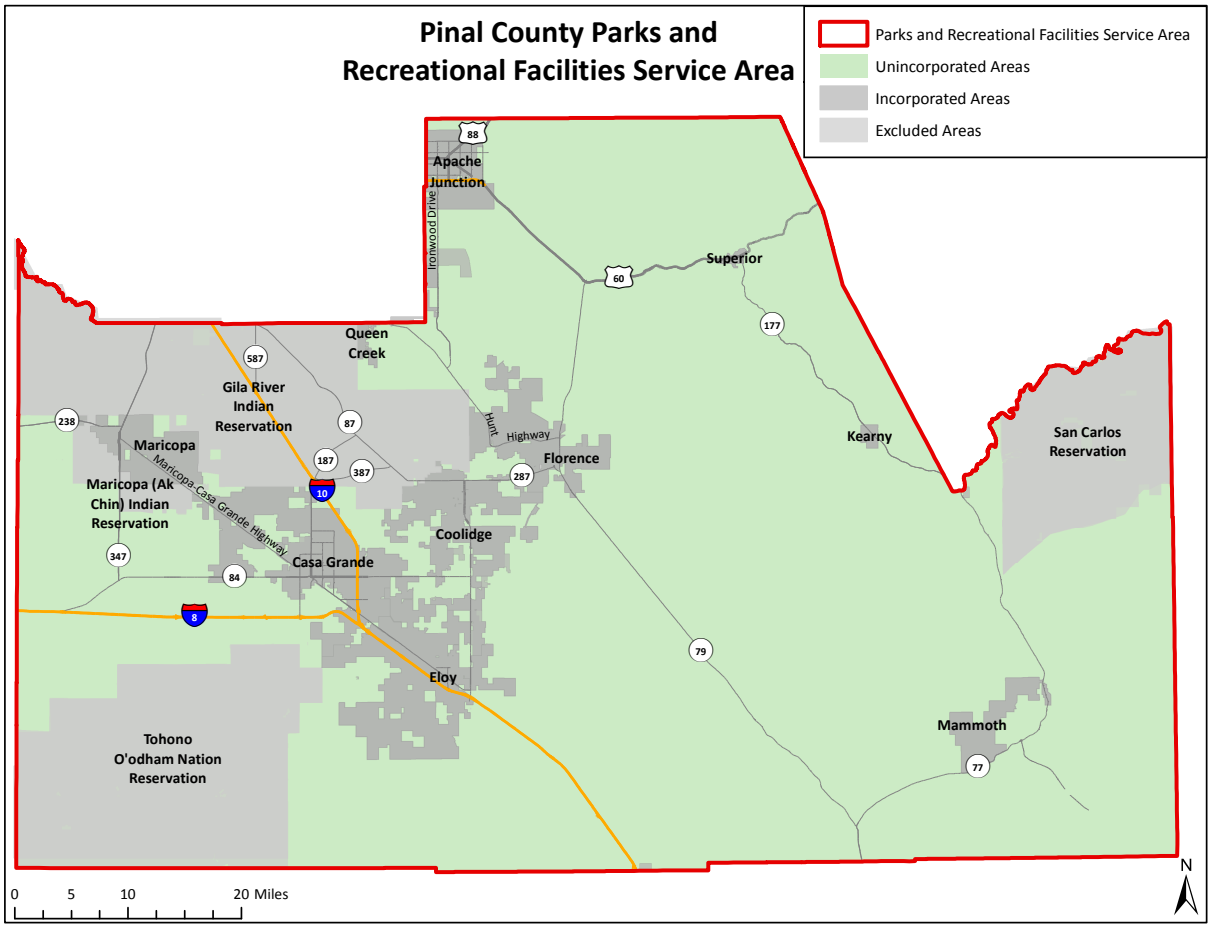
Industrial: Establishments primarily engaged in the production, transportation, or storage of goods. By way of example, *Industrial* includes manufacturing plants, distribution warehouses, trucking companies, utility substations, power generation facilities, and telecommunications buildings.

Institutional: Public and quasi-public buildings providing educational, social assistance, or religious services. By way of example, *Institutional* includes schools, universities, churches, daycare facilities, hospitals, and government buildings.

Office & Other Services: Establishments providing management, administrative, professional, or business services. By way of example, *Office & Other Services* includes banks, business offices, medical offices, and veterinarian clinics.

APPENDIX D: LAND USE ASSUMPTIONS

The estimates and projections of residential and nonresidential development in this *Land Use Assumptions* document are for areas within the boundaries of Pinal County, Arizona. The map below illustrates the areas within the Pinal County Parks and Recreational Facilities Service Area. Appendix E includes maps of the Public Safety Facilities Service Areas and the Street Facilities Service Areas.



Arizona's Development Fee Act requires the preparation of Land Use Assumptions, which are defined in Arizona Revised Statutes § 11-1102(V)(6) as:

> *"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 county."*

Pinal County, Arizona, retained TischlerBise to analyze the impacts of development on its capital facilities and to calculate development fees based on that analysis. TischlerBise prepared current demographic estimates and future development projections for both residential and nonresidential development that will be used in the Infrastructure Improvements Plan (IIP) and calculation of the development fees. Current demographic data estimates for 2020 are used in calculating levels of service (LOS) provided to existing development in Pinal County. Arizona's Enabling Legislation requires fees to be updated at least every five years and limits the IIP to a maximum of 10 years.

SUMMARY OF GROWTH INDICATORS

Key land use assumptions for the Pinal County Development Fee Report are population, housing units, and employment projections. Based on discussions with staff, TischlerBise estimates population using data published by Maricopa Association of Governments (MAG) in its Socioeconomic Projections Report (June 2019). For housing units, TischlerBise applies person per housing unit factors derived from 2013-2017 American Community Survey 5-Year Estimates to population estimates and projections. For nonresidential development, the base year employment estimate is calculated based on MAG 2020 estimates. To project future employment by industry sector, the analysis uses MAG employment projections. The employment estimate is converted into floor area based on average square feet per job multipliers. Six nonresidential development prototypes are discussed further (see Figure D5 and related text). The projections contained in this document provide the foundation for the Development Fee Report. These metrics are the service units and demand indicators used in the Development Fee Report.

Development projections are summarized in Figure D16 through Figure D23. These projections will be used to estimate development fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development fee methodologies are designed to reduce sensitivity to development projections in the determination of the proportionate share fee amounts. If actual development is slower than projected, fee revenue will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, Pinal County will receive an increase in fee revenue, but will also need to accelerate infrastructure improvements to keep pace with the actual rate of development.

During the next 10 years, countywide development projections indicate an average increase of approximately 6,500 housing units per year and approximately 2.15 million square feet of nonresidential floor area per year. Over the same period, development in unincorporated areas will average approximately 2,300 housing units per year and approximately 807,000 square feet of nonresidential floor area per year.

RESIDENTIAL DEVELOPMENT

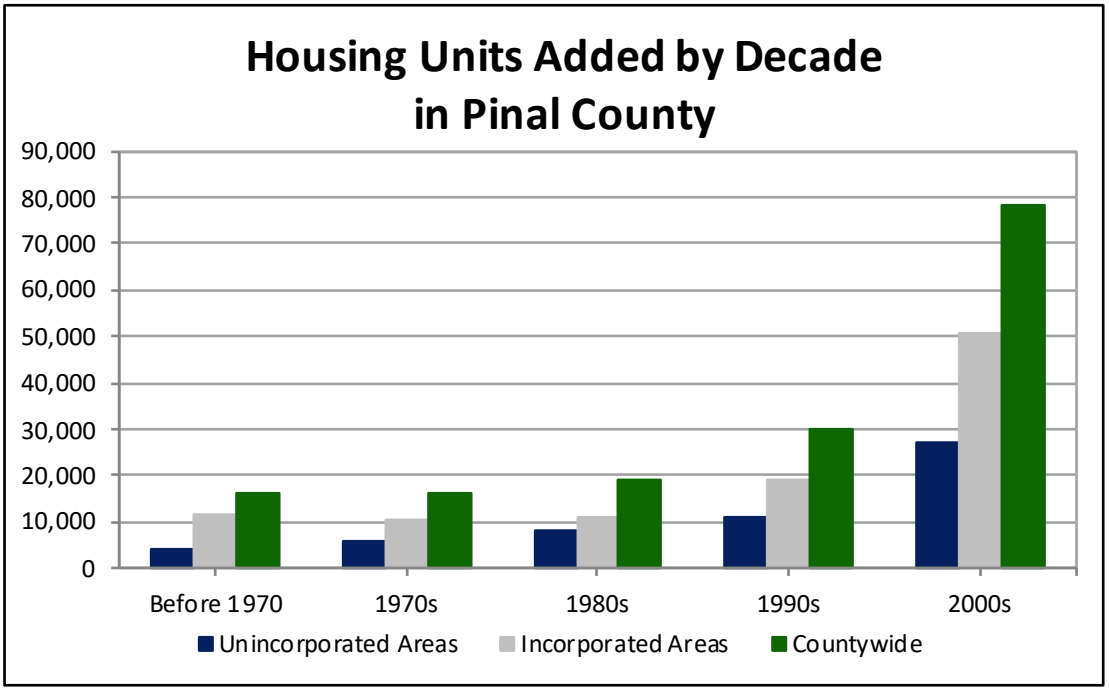
Current estimates and future projections of residential development are detailed in this section including population and housing units by type.

Recent Residential Construction

Development fees require an analysis of current levels of service. For residential development, current levels of service are determined using estimates of population and housing units. Shown below, Figure D1 indicates the estimated number of housing units added by decade according to data obtained from the U.S. Census Bureau. Pinal County experienced strong growth from 2000 to 2010, when housing inventory increased by an average of 7,800 units per year – 2,700 in unincorporated areas and 5,100 in incorporated areas.

Figure D1: Housing Units by Decade

Census 2010 Housing Units	159,222	Pinal County's housing stock grew by an average of 7,800 housing units per year from 2000 to 2010.
Census 2000 Housing Units	81,154	
New Housing Units 2000 to 2010	78,068	



Source: U.S. Census Bureau, Census 2010 Summary File 1, Census 2000 Summary File 1, 2013-2017 5-Year American Community Survey (for 1990s and earlier, adjusted to yield total units in 2000).

Housing Unit Size

According to the U.S. Census Bureau, a household is a housing unit occupied by year-round residents. Development fees often use per capita standards and persons per housing unit (PPHU) or persons per household (PPH) to derive proportionate share fee amounts. When PPHU is used in the fee calculations, infrastructure standards are derived using year-round population. When PPH is used in the fee calculations, the development fee methodology assumes a higher percentage of housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that Pinal County impose development fees for residential development according to the number of persons per housing unit.

Occupancy calculations require data on population and the types of units by structure. 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, which share a common sidewall, but are constructed on an individual parcel of land). For development fees in Pinal County, detached stick-built units and attached are included in the "Single-Family" category. The second residential category includes duplexes and all other structures with two or more units on an individual parcel of land. This is referred to as the "Multi-Family" category. The final residential category, which includes mobile homes, boats, RV, vans, and all other units, is referred to as the "All Other" category.

Figure D2 below shows the occupancy estimates for Pinal County. Single-family units average 2.47 persons per housing unit, multi-family units average 1.80 persons per housing unit, and all other units average 1.56 persons per housing unit.

Figure D2: Persons per Housing Unit

Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single-Family[1]	311,528	104,064	2.99	126,146	**2.47**	74.7%	17.51%
Multi-Family[2]	16,655	7,325	2.27	9,241	**1.80**	5.5%	20.73%
All Other[3]	52,110	22,124	2.36	33,399	**1.56**	19.8%	33.76%
Total	380,293	133,513	2.85	168,786	**2.25**	100.0%	20.90%

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates, Tables B25024, B25032, B25033.

1. Includes detached and attached (i.e. townhouses) units.
2. Includes dwellings in structures with two or more units.
3. Includes Mobile Home, Boat, RV, van, etc.

Residential Estimates

TischlerBise uses MAG's 2019 Socioeconomic Projections to derive 2020 base year population estimates for the following four areas: Countywide, Unincorporated Areas, Incorporated Areas, and Excluded Areas. To determine the resident population, the analysis excludes population in group quarters (prison population and institutional population). This results in a base year resident population estimate of 440,059 persons countywide.

To estimate total housing units, TischlerBise applies the countywide persons per housing unit factor derived from 2013-2017 American Community Survey 5-Year Estimates to resident population estimates. For example, countywide resident population of 440,059 divided by countywide persons per housing unit of 2.25 equals 195,312 housing units countywide. To estimate housing units by type, the analysis maintains the existing housing mix shown in Figure D2. This results in 145,971 single-family units (74.7 percent X 195,312 countywide housing units), 10,693 multi-family units (5.5 percent X 195,312 countywide housing units), and 38,648 all other units (19.8 percent X 195,312 countywide housing units).

To estimate resident population by housing unit type, TischlerBise applies the occupancy factors shown in Figure D2 to the estimates of housing units by type. The countywide resident population estimate includes 360,487 persons in single-family units (2.47 PPHU X 145,971 single-family units), 19,272 persons in multi-family units (1.80 PPHU X 10,693 multi-family units), and 60,299 persons in all other units (1.56 PPHU X 38,648 all other units). This process is repeated for unincorporated areas, incorporated areas, and excluded areas.

Figure D3: Residential Estimates, 2020

2020 Estimates	Countywide	Unincorporated Areas	Incorporated Areas	Excluded Areas
Population				
Group Quarters	26,116	261	25,669	186
Resident	440,059	222,443	208,791	8,825
Total	**466,175**	**222,704**	**234,460**	**9,011**
Resident Population				
Single Family	360,487	182,221	171,037	7,229
Multi-Family	19,272	9,742	9,144	386
All Other	60,299	30,480	28,610	1,209
Total	**440,059**	**222,443**	**208,791**	**8,825**
Housing Units				
Single Family	145,971	73,786	69,258	2,927
Multi-Family	10,693	5,405	5,074	214
All Other	38,648	19,536	18,337	775
Total	**195,312**	**98,727**	**92,668**	**3,917**

Source: Cells shaded yellow from Maricopa Association of Governments 2019 Socioeconomic Projections. Cells without shading calculated by TischlerBise.

Residential Projections

Based on MAG projections, Pinal County's total population will increase to 616,160 over the next 10 years, and the resident population will increase to 585,664 during the same period. TischlerBise converts projected population to projected housing units using the same steps outlined in the previous section. This results in a total housing unit projection of 259,936 units in 2030.

Population and housing unit projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than is projected, the demand for infrastructure will also decrease.

Figure D4: Residential Projections

2030 Projections	Countywide	Unincorporated Areas	Incorporated Areas	Excluded Areas
Population				
Group Quarters	30,497	298	29,986	213
Resident	585,664	274,378	302,459	8,827
Total	**616,160**	**274,676**	**332,444**	**9,040**
Resident Population				
Single Family	479,763	224,765	247,768	7,231
Multi-Family	25,649	12,016	13,246	387
All Other	80,251	37,597	41,445	1,210
Total	**585,664**	**274,378**	**302,459**	**8,827**
Housing Units				
Single Family	194,269	91,013	100,328	2,928
Multi-Family	14,231	6,667	7,350	214
All Other	51,436	24,097	26,563	775
Total	**259,936**	**121,778**	**134,241**	**3,918**

Source: Cells shaded yellow from Maricopa Association of Governments 2019 Socioeconomic Projections. Cells without shading calculated by TischlerBise.

NONRESIDENTIAL DEVELOPMENT

Current estimates and future projections of nonresidential development are detailed in this section including jobs and nonresidential floor area. TischlerBise uses the term jobs to refer to employment by place of work. In Figure D5, gray shading indicates the nonresidential development prototypes used by TischlerBise to derive employment densities and average weekday vehicle trip ends. For nonresidential development, TischlerBise uses data published in Trip Generation, Institute of Transportation Engineers, 10th Edition (2017). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area and has 864 square feet of floor area per employee. Assisted living development uses Assisted Living (ITE 254) as a proxy and generates 2.60 average weekday vehicle trip ends per bed. For hotel development, the proxy is Hotel (ITE 310), and this type of development generates 8.36 average weekday vehicle trip ends per room. Institutional development uses Elementary School (ITE 520) and generates 19.52 average weekday vehicle trip ends per 1,000 square feet of floor area and has 1,076 square feet of floor area per employee. For office & other services development, the proxy is General Office (ITE 710); it generates 9.74 average weekday vehicle trip ends per 1,000 square feet of floor area and has 337 square feet of floor area per employee. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.75 average weekday vehicle trips per 1,000 square feet of floor area and has 427 square feet of floor area per employee.

Figure D5: Nonresidential Demand Units

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	4.96	3.05	1.63	615
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq Ft	1.74	5.05	0.34	2,902
254	Assisted Living	bed	2.60	4.24	0.61	na
310	Hotel	room	8.36	14.34	0.58	na
520	Elementary School	1,000 Sq Ft	19.52	21.00	0.93	1,076
530	High School	1,000 Sq Ft	14.07	22.25	0.63	1,581
540	Community College	student	1.15	14.61	0.08	na
610	Hospital	1,000 Sq Ft	10.72	3.79	2.83	354
710	General Office (average size)	1,000 Sq Ft	9.74	3.28	2.97	337
715	Single Tenant Office	1,000 Sq Ft	11.25	3.77	2.98	335
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
820	Shopping Center (average size)	1,000 Sq Ft	37.75	16.11	2.34	427

1. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Employment Estimates

TischlerBise uses MAG's 2019 Socioeconomic Projections to derive 2020 base year employment estimates for the following four areas: Countywide, Unincorporated Areas, Incorporated Areas, and Excluded Areas. MAG estimates countywide employment of 61,602 jobs in 2020.

To estimate nonresidential floor area, TischlerBise applies the employment density factors shown in Figure D5 to employment estimates shaded yellow in Figure D6. For example, countywide industrial employment of 8,449 jobs multiplied by an employment density factor of 864 square feet per employee equals 7,299,936 square feet of industrial floor area. The analysis shows nonresidential floor area estimates and projections in thousands (x1,000), so the final step divides total industrial floor area by 1,000 to get 7,300 square feet of industrial floor area (7,299,936 industrial floor area / 1,000). TischlerBise repeats this process for commercial, office & other services, and institutional development. The 2020 base estimate includes approximately 36.2 million square feet of nonresidential floor area.

Figure D6: Nonresidential Estimates, 2020

2020 Estimates	Countywide	Unincorporated Areas	Incorporated Areas	Excluded Areas
Employment				
Industrial	8,449	2,182	6,117	150
Commercial	19,693	4,519	14,999	175
Office & Other Services	20,976	4,013	16,017	946
Institutional	12,484	3,532	7,963	989
Total	**61,602**	**14,246**	**45,096**	**2,260**
Nonres. Floor Area (x1,000)				
Industrial	7,300	1,885	5,285	130
Commercial	8,409	1,930	6,405	75
Office & Other Services	7,069	1,352	5,398	319
Institutional	13,431	3,800	8,567	1,064
Total	**36,208**	**8,967**	**25,654**	**1,587**

Source: Cells shaded yellow from Maricopa Association of Governments 2019 Socioeconomic Projections. Cells without shading calculated by TischlerBise.

Nonresidential Projections

Based on MAG projections, Pinal County's total employment will increase to 94,350 jobs over the next 10 years. MAG projects employment for 2025, 2035, and 2040, and this analysis uses a linear projection to project employment from 2020 to 2025, 2025 to 2035, and 2035 to 2040. TischlerBise converts projected employment to projected floor area using the same steps outlined in the previous section. This results in a total nonresidential floor area projection of 57.7 million square feet in 2030.

Employment and nonresidential floor area projections are used to illustrate the possible future pace of service demands, revenues, and expenditures. To the extent these factors change, the projected need for infrastructure will also change. If development occurs at a more rapid rate than projected, the demand for infrastructure will increase at a corresponding rate. If development occurs at a slower rate than is projected, the demand for infrastructure will also decrease.

Figure D7: Nonresidential Projections

2030 Projections	Countywide	Unincorporated Areas	Incorporated Areas	Excluded Areas
Employment				
Industrial	14,303	4,528	9,624	151
Commercial	27,380	7,503	19,686	192
Office & Other Services	31,155	7,326	22,876	953
Institutional	21,513	6,929	13,590	994
Total	**94,350**	**26,286**	**65,775**	**2,290**
Nonres. Floor Area (x1,000)				
Industrial	12,358	3,912	8,315	130
Commercial	11,691	3,204	8,406	82
Office & Other Services	10,499	2,469	7,709	321
Institutional	23,144	7,454	14,620	1,069
Total	**57,692**	**17,039**	**39,050**	**1,603**

Source: Cells shaded yellow from Maricopa Association of Governments 2019 Socioeconomic Projections. Cells without shading calculated by TischlerBise.

VEHICLE MILES OF TRAVEL

Pinal County will use vehicle miles of travel (VMT) as the demand units for Street Facilities fees and it will use average weekday vehicle trips (AWVT) for Public Safety Facilities fees. Components used to determine VMT include average weekday vehicle trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

Residential Trip Generation Rates

ITE publishes vehicle trip generation rates for residential development. Based on the 10th Edition of Trip Generation (2017) the national average for single-family units is 9.44 (ITE 210) average weekday vehicle trip ends per dwelling. Multi-family residential development generates 5.44 (ITE 221) average weekday vehicle trip ends per dwelling. All other development generates 5.00 average weekday vehicle trip ends.

Nonresidential Trip Generation Rates

For nonresidential development, TischlerBise uses trip generation rates published in Trip Generation, Institute of Transportation Engineers, 10th Edition (2017). The prototype for industrial development is Industrial Park (ITE 130) which generates 3.37 average weekday vehicle trip ends per 1,000 square feet of floor area. Assisted living development uses Assisted Living (ITE 254) as a proxy and generates 2.60 average weekday vehicle trip ends per bed. For hotel development, the proxy is Hotel (ITE 310), and this type of development generates 8.36 average weekday vehicle trip ends per room. Institutional development uses Elementary School (ITE 520) and generates 19.52 average weekday vehicle trip ends per 1,000 square feet of floor area. For office & other services development, the proxy is General Office (ITE 710), and it generates 9.74 average weekday vehicle trip ends per 1,000 square feet of floor area. The prototype for commercial development is Shopping Center (ITE 820) which generates 37.75 average weekday vehicle trips per 1,000 square feet of floor area.

Figure D8: Average Weekday Vehicle Trip Ends by Land Use

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit[1]	Wkdy Trip Ends Per Employee[1]	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	4.96	3.05	1.63	615
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq Ft	1.74	5.05	0.34	2,902
254	Assisted Living	bed	2.60	4.24	0.61	na
310	Hotel	room	8.36	14.34	0.58	na
520	Elementary School	1,000 Sq Ft	19.52	21.00	0.93	1,076
530	High School	1,000 Sq Ft	14.07	22.25	0.63	1,581
540	Community College	student	1.15	14.61	0.08	na
610	Hospital	1,000 Sq Ft	10.72	3.79	2.83	354
710	General Office (average size)	1,000 Sq Ft	9.74	3.28	2.97	337
715	Single Tenant Office	1,000 Sq Ft	11.25	3.77	2.98	335
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
820	Shopping Center (average size)	1,000 Sq Ft	37.75	16.11	2.34	427

1. Trip Generation, Institute of Transportation Engineers, 10th Edition (2017).

Trip Rate Adjustments

Average Weekday Vehicle Trips are used as a measure of demand by land use. Vehicle trips are estimated using average weekday vehicle trip ends from the reference book, *Trip Generation, 10th Edition*, published by the Institute of Transportation Engineers (ITE) in 2017. A vehicle trip end represents a vehicle entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate the development fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. The basic trip adjustment factor is 50 percent. As discussed further below, the development fee methodology includes additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Commuter Trip Adjustment

Residential development has a larger trip adjustment factor of 62 percent to account for commuters leaving Pinal County for work. According to the 2009 National Household Travel Survey (see Table 30) weekday work trips are typically 31 percent of production trips (i.e., all out-bound trips, which are 50 percent of all trip ends). As shown in Figure D9, the U.S. Census Bureau's OnTheMap web application indicates that 78 percent of resident workers traveled outside of Pinal County for work in 2017. In combination, these factors (31 percent X 50 percent X 78 percent = 12 percent) support the additional 12 percent allocation of trips to residential development.

Figure D9: Commuter Trip Adjustment

Trip Adjustment Factor for Commuters[1]	
Employed Residents	147,232
Residents Living and Working in Pinal County	32,644
Residents Commuting Outside Pinal County for Work	114,588
Percent Commuting out of Pinal County	78%
Additional Production Trips[2]	12%
Residential Trip Adjustment Factor	62%

1. U.S. Census Bureau, OnTheMap Application (version 6.6) and LEHD Origin-Destination Employment Statistics, 2017.

2. According to the National Household Travel Survey (2009)*, published in December 2011 (see Table 30), home-based work trips are typically 30.99 percent of "production" trips, in other words, out-bound trips (which are 50 percent of all trip ends). Also, LED OnTheMap data from 2017 indicate that 78 percent of Pinal County's workers travel outside the county for work. In combination, these factors (0.3099 x 0.50 x 78 = 0.12) account for 12 percent of additional production trips. The total adjustment factor for residential includes attraction trips (50 percent of trip ends) plus the journey-to-work commuting adjustment (12 percent of production trips) for a total of 62 percent.
*http://nhts.ornl.gov/publications.shtml ; Summary of Travel Trends - Table "Daily Travel Statistics by Weekday vs. Weekend"

Adjustment for Pass-By Trips

For commercial and institutional development, the trip adjustment factor is less than 50 percent because these types of development attract 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, ITE data indicate 34 percent of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66 percent 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 percent multiplied by 50 percent, or approximately 33 percent of the trip ends.

Demand Indicators – Average Weekday Vehicle Trips

Shown in Figure D10 are the demand indicators for residential and nonresidential land uses related to average weekday vehicle trips (AWVT). For residential development, the table displays AWVT per housing unit. For nonresidential development, the table displays AWVT generated per 1,000 square feet of floor area (per room for Hotel, and per bed for Assisted Living).

Figure D10: Demand Indicators by Development Type, Average Weekday Vehicle Trips (AWVT)

Residential Development			
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	AWVT per Housing Unit
Single Family	9.44	62%	5.85
Multi-Family	5.44	62%	3.37
All Other	5.00	62%	3.10

Nonresidential Development			
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	AWVT per 1,000 Sq Ft[1]
Industrial	3.37	50%	1.69
Commercial	37.75	33%	12.46
Office & Other Services	9.74	50%	4.87
Institutional	19.52	33%	6.44
Hotel (per room)	8.36	50%	4.18
Assited Living (per bed)	2.60	50%	1.30

1. See Land Use Assumptions

Trip Length Weighting Factor

The Street Facilities fee methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6a, Table 6b, and Table 6c of the 2017 National Household Travel Survey, vehicle trips from residential development are approximately 117 percent 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 75 percent of the average trip length while other nonresidential development typically accounts for trips that are 73 percent of the average for all trips.

Demand Indicators – Vehicle Miles of Travel

Shown below are the demand indicators for residential and nonresidential land uses related to vehicle miles of travel (VMT). For residential development, the table displays VMT per housing unit. For nonresidential development, the table displays VMT generated per 1,000 square feet of floor area (per room for Hotel, and per bed for Assisted Living).

Figure D11: Demand Indicators, East Street Facilities Service Area

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	0.422	2.89
Multi-Family	5.44	62%	117%	0.422	1.67
Age Restricted / All Other	5.00	62%	117%	0.422	1.53

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	0.422	0.52
Commercial	37.75	33%	75%	0.422	3.94
Office & Other Services	9.74	50%	73%	0.422	1.50
Institutional	19.52	33%	73%	0.422	1.98
Hotel (per room)	8.36	50%	73%	0.422	1.29
Assited Living (per bed)	2.60	50%	73%	0.422	0.40

1. See Land Use Assumptions

Figure D12: Demand Indicators, North Central Street Facilities Service Area

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	4.619	31.63
Multi-Family	5.44	62%	117%	4.619	18.23
Age Restricted / All Other	5.00	62%	117%	4.619	16.75

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	4.619	5.68
Commercial	37.75	33%	75%	4.619	43.16
Office & Other Services	9.74	50%	73%	4.619	16.42
Institutional	19.52	33%	73%	4.619	21.72
Hotel (per room)	8.36	50%	73%	4.619	14.09
Assited Living (per bed)	2.60	50%	73%	4.619	4.38

1. See Land Use Assumptions

Figure D13: Demand Indicators, South Central Street Facilities Service Area

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	8.900	60.95
Multi-Family	5.44	62%	117%	8.900	35.12
Age Restricted / All Other	5.00	62%	117%	8.900	32.28

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	8.900	10.95
Commercial	37.75	33%	75%	8.900	83.15
Office & Other Services	9.74	50%	73%	8.900	31.64
Institutional	19.52	33%	73%	8.900	41.85
Hotel (per room)	8.36	50%	73%	8.900	27.16
Assited Living (per bed)	2.60	50%	73%	8.900	8.45

1. See Land Use Assumptions

Figure D14: Demand Indicators, West Street Facilities Service Area

Residential Development					
Development Type	Avg Weekday Vehicle Trip Ends	Trip Adjustment	Trip Length Wt Factor	Average Trip Length (miles)	Avg Wkdy VMT per Unit
Single Family	9.44	62%	117%	10.519	72.03
Multi-Family	5.44	62%	117%	10.519	41.51
Age Restricted / All Other	5.00	62%	117%	10.519	38.15

Nonresidential Development					
Development Type	AWVTE per 1,000 Sq Ft[1]	Trip Adjustment	Trip Length Weight Factor	Average Trip Length (miles)	Avg Wkdy VMT per 1,000 Sq Ft[1]
Industrial	3.37	50%	73%	10.519	12.94
Commercial	37.75	33%	75%	10.519	98.28
Office & Other Services	9.74	50%	73%	10.519	37.40
Institutional	19.52	33%	73%	10.519	49.46
Hotel (per room)	8.36	50%	73%	10.519	32.10
Assited Living (per bed)	2.60	50%	73%	10.519	9.98

1. See Land Use Assumptions

FUNCTIONAL POPULATION

TischlerBise recommends functional population to allocate the cost of public safety infrastructure to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," which accounts for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states.

Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Pinal County are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside Pinal County are assigned 14 hours to residential development, and inflow commuters are assigned 10 hours to nonresidential development. Based on 2017 functional population data for Pinal County, the Public Safety Facilities fee cost allocation for residential development is 82 percent and 18 percent for nonresidential development.

Figure D15: Functional Population

Demand Units in 2017					
Residential				Demand Hours/Day	Person Hours
	Population	427,603			
	Residents Not Working		280,371	20	5,607,420
	Employed Residents		147,232		
	Employed in Pinal County			32,644	14	457,016
	Employed outside Pinal County			114,588	14	1,604,232
				Residential Subtotal	7,668,668
				Residential Share	**82%**
Nonresidential					
	Non-working Residents		280,371	4	1,121,484
	Jobs Located in Pinal County		60,072		
	Residents Employed in Pinal County			32,644	10	326,440
	Non-Resident Workers (inflow commuters)			27,428	10	274,280
				Nonresidential Subtotal	1,722,204
				Nonresidential Share	**18%**
				Total	9,390,872

Source: Arizona Office of Economic Opportunity (population), U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Version 6.6 (employment).

DEVELOPMENT PROJECTIONS

Provided below are summaries of development projections used in the Development Fee Report. Development projections are used to illustrate a possible future pace of demand for service units and cash flows resulting from revenues and expenditures associated with those demands.

Figure D16: Development Projections Summary – Countywide

Countywide	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	26,116	26,555	26,995	27,434	27,874	28,313	28,750	29,186	29,623	30,060	30,497	4,381
Resident	440,059	452,643	465,559	478,844	492,546	506,701	521,353	536,537	552,286	568,647	585,664	145,605
Total	**466,175**	**479,198**	**492,554**	**506,278**	**520,420**	**535,014**	**550,103**	**565,723**	**581,909**	**598,707**	**616,160**	**149,985**
Resident Population												
Single Family	360,487	370,795	381,376	392,259	403,484	415,079	427,082	439,519	452,421	465,824	479,763	119,276
Multi-Family	19,272	19,824	20,389	20,971	21,571	22,191	22,833	23,498	24,187	24,904	25,649	6,377
All Other	60,299	62,024	63,794	65,614	67,492	69,431	71,439	73,519	75,677	77,919	80,251	19,952
Total	**440,059**	**452,643**	**465,559**	**478,844**	**492,546**	**506,701**	**521,353**	**536,537**	**552,286**	**568,647**	**585,664**	**145,605**
Housing Units												
Single Family	145,971	150,145	154,429	158,836	163,381	168,076	172,937	177,973	183,197	188,624	194,269	48,298
Multi-Family	10,693	10,999	11,313	11,636	11,969	12,313	12,669	13,038	13,420	13,818	14,231	3,538
All Other	38,648	39,753	40,887	42,054	43,258	44,501	45,788	47,121	48,504	49,941	51,436	12,788
Total	**195,312**	**200,897**	**206,630**	**212,526**	**218,608**	**224,890**	**231,393**	**238,132**	**245,122**	**252,384**	**259,936**	**64,624**
Employment												
Industrial	8,449	9,002	9,555	10,108	10,661	11,214	11,832	12,450	13,067	13,685	14,303	5,854
Commercial	19,693	20,326	20,960	21,593	22,227	22,860	23,764	24,668	25,572	26,476	27,380	7,687
Office & Other Services	20,976	21,868	22,759	23,651	24,542	25,434	26,578	27,722	28,866	30,010	31,155	10,179
Institutional	12,484	13,208	13,932	14,655	15,379	16,103	17,185	18,267	19,349	20,431	21,513	9,029
Total	**61,602**	**64,404**	**67,206**	**70,007**	**72,809**	**75,611**	**79,359**	**83,107**	**86,854**	**90,602**	**94,350**	**32,748**
Nonres. Floor Area (x1,000)												
Industrial	7,300	7,778	8,256	8,733	9,211	9,689	10,223	10,756	11,290	11,824	12,358	5,058
Commercial	8,409	8,679	8,950	9,220	9,491	9,761	10,147	10,533	10,919	11,305	11,691	3,282
Office & Other Services	7,069	7,369	7,670	7,970	8,271	8,571	8,957	9,342	9,728	10,114	10,499	3,430
Institutional	13,431	14,209	14,988	15,767	16,545	17,324	18,488	19,652	20,816	21,980	23,144	9,713
Total	**36,208**	**38,036**	**39,863**	**41,690**	**43,518**	**45,345**	**47,815**	**50,284**	**52,753**	**55,222**	**57,692**	**21,483**

Figure D17: Development Projections Summary – Unincorporated Areas

Unincorporated Areas	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	261	264	268	271	275	278	282	286	290	294	298	37
Resident	222,443	226,887	230,345	233,269	236,257	242,366	248,844	255,704	261,494	267,825	274,378	51,935
Total	**222,704**	**227,151**	**230,613**	**233,540**	**236,532**	**242,644**	**249,126**	**255,990**	**261,784**	**268,119**	**274,676**	**51,972**
Resident Population												
Single Family	182,221	185,861	188,694	191,089	193,537	198,541	203,848	209,467	214,210	219,397	224,765	42,544
Multi-Family	9,742	9,937	10,088	10,216	10,347	10,614	10,898	11,199	11,452	11,729	12,016	2,275
All Other	30,480	31,089	31,563	31,964	32,373	33,210	34,098	35,038	35,831	36,699	37,597	7,116
Total	**222,443**	**226,887**	**230,345**	**233,269**	**236,257**	**242,366**	**248,844**	**255,704**	**261,494**	**267,825**	**274,378**	**51,935**
Housing Units												
Single Family	73,786	75,260	76,407	77,377	78,368	80,395	82,543	84,819	86,739	88,840	91,013	17,227
Multi-Family	5,405	5,513	5,597	5,668	5,741	5,889	6,047	6,214	6,354	6,508	6,667	1,262
All Other	19,536	19,926	20,230	20,487	20,749	21,286	21,855	22,457	22,966	23,522	24,097	4,561
Total	**98,727**	**100,699**	**102,234**	**103,532**	**104,858**	**107,570**	**110,445**	**113,489**	**116,059**	**118,869**	**121,778**	**23,050**
Employment												
Industrial	2,182	2,401	2,619	2,838	3,056	3,275	3,526	3,776	4,027	4,277	4,528	2,346
Commercial	4,519	4,705	4,891	5,077	5,263	5,449	5,860	6,271	6,681	7,092	7,503	2,984
Office & Other Services	4,013	4,255	4,496	4,738	4,979	5,221	5,642	6,063	6,484	6,905	7,326	3,313
Institutional	3,532	3,755	3,978	4,202	4,425	4,648	5,104	5,560	6,017	6,473	6,929	3,397
Total	**14,246**	**15,115**	**15,985**	**16,854**	**17,724**	**18,593**	**20,132**	**21,670**	**23,209**	**24,747**	**26,286**	**12,040**
Nonres. Floor Area (x1,000)												
Industrial	1,885	2,074	2,263	2,452	2,641	2,830	3,046	3,263	3,479	3,696	3,912	2,027
Commercial	1,930	2,009	2,088	2,168	2,247	2,327	2,502	2,678	2,853	3,028	3,204	1,274
Office & Other Services	1,352	1,434	1,515	1,597	1,678	1,759	1,901	2,043	2,185	2,327	2,469	1,116
Institutional	3,800	4,040	4,280	4,520	4,760	5,000	5,491	5,982	6,473	6,964	7,454	3,655
Total	**8,967**	**9,557**	**10,147**	**10,737**	**11,326**	**11,916**	**12,941**	**13,965**	**14,990**	**16,014**	**17,039**	**8,072**

Figure D18: Development Projections Summary – Incorporated Areas

Incorporated Areas	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	25,669	26,102	26,536	26,969	27,403	27,836	28,266	28,696	29,126	29,556	29,986	4,317
Resident	208,791	216,930	226,388	236,747	247,463	255,508	263,682	272,005	281,964	291,994	302,459	93,668
Total	**234,460**	**243,032**	**252,924**	**263,716**	**274,866**	**283,344**	**291,948**	**300,701**	**311,090**	**321,550**	**332,444**	**97,984**
Resident Population												
Single Family	171,037	177,704	185,452	193,938	202,717	209,307	216,003	222,821	230,979	239,196	247,768	76,730
Multi-Family	9,144	9,500	9,915	10,368	10,838	11,190	11,548	11,913	12,349	12,788	13,246	4,102
All Other	28,610	29,725	31,021	32,440	33,909	35,011	36,131	37,272	38,636	40,011	41,445	12,835
Total	**208,791**	**216,930**	**226,388**	**236,747**	**247,463**	**255,508**	**263,682**	**272,005**	**281,964**	**291,994**	**302,459**	**93,668**
Housing Units												
Single Family	69,258	71,957	75,095	78,531	82,085	84,754	87,465	90,226	93,530	96,857	100,328	31,070
Multi-Family	5,074	5,271	5,501	5,753	6,013	6,209	6,407	6,610	6,852	7,095	7,350	2,276
All Other	18,337	19,052	19,882	20,792	21,733	22,440	23,158	23,889	24,763	25,644	26,563	8,226
Total	**92,668**	**96,280**	**100,478**	**105,076**	**109,832**	**113,402**	**117,030**	**120,724**	**125,145**	**129,596**	**134,241**	**41,573**
Employment												
Industrial	6,117	6,451	6,785	7,120	7,454	7,788	8,155	8,522	8,890	9,257	9,624	3,507
Commercial	14,999	15,443	15,887	16,332	16,776	17,220	17,713	18,206	18,699	19,192	19,686	4,686
Office & Other Services	16,017	16,667	17,316	17,966	18,615	19,265	19,987	20,709	21,432	22,154	22,876	6,859
Institutional	7,963	8,463	8,962	9,462	9,961	10,461	11,087	11,712	12,338	12,964	13,590	5,627
Total	**45,096**	**47,024**	**48,951**	**50,879**	**52,806**	**54,734**	**56,942**	**59,150**	**61,359**	**63,567**	**65,775**	**20,679**
Nonres. Floor Area (x1,000)												
Industrial	5,285	5,574	5,863	6,151	6,440	6,729	7,046	7,363	7,681	7,998	8,315	3,030
Commercial	6,405	6,594	6,784	6,974	7,163	7,353	7,563	7,774	7,985	8,195	8,406	2,001
Office & Other Services	5,398	5,617	5,836	6,054	6,273	6,492	6,736	6,979	7,222	7,466	7,709	2,311
Institutional	8,567	9,104	9,642	10,179	10,717	11,254	11,927	12,600	13,274	13,947	14,620	6,053
Total	**25,654**	**26,889**	**28,124**	**29,359**	**30,593**	**31,828**	**33,273**	**34,717**	**36,161**	**37,606**	**39,050**	**13,396**

Figure D19: Development Projections Summary – Excluded Areas

Excluded Areas	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	186	189	191	194	196	199	202	205	207	210	213	27
Resident	8,825	8,826	8,826	8,828	8,826	8,827	8,827	8,827	8,828	8,828	8,827	2
Total	**9,011**	**9,015**	**9,017**	**9,022**	**9,022**	**9,026**	**9,029**	**9,032**	**9,035**	**9,038**	**9,040**	**29**
Resident Population												
Single Family	7,229	7,230	7,230	7,232	7,230	7,231	7,231	7,231	7,231	7,232	7,231	2
Multi-Family	386	387	387	387	387	387	387	387	387	387	387	0
All Other	1,209	1,209	1,209	1,210	1,209	1,210	1,210	1,210	1,210	1,210	1,210	0
Total	**8,825**	**8,826**	**8,826**	**8,828**	**8,826**	**8,827**	**8,827**	**8,827**	**8,828**	**8,828**	**8,827**	**2**
Housing Units												
Single Family	2,927	2,928	2,928	2,928	2,928	2,928	2,928	2,928	2,928	2,928	2,928	1
Multi-Family	214	214	214	215	214	214	214	215	215	215	214	0
All Other	775	775	775	775	775	775	775	775	775	775	775	0
Total	**3,917**	**3,917**	**3,917**	**3,918**	**3,917**	**3,918**	**3,918**	**3,918**	**3,918**	**3,918**	**3,918**	**1**
Employment												
Industrial	150	150	150	151	151	151	151	151	151	151	151	1
Commercial	175	178	181	185	188	191	191	191	191	191	192	17
Office & Other Services	946	946	947	947	948	948	949	950	951	952	953	7
Institutional	989	990	991	992	993	994	994	994	994	994	994	5
Total	**2,260**	**2,265**	**2,270**	**2,274**	**2,279**	**2,284**	**2,285**	**2,286**	**2,287**	**2,288**	**2,290**	**30**
Nonres. Floor Area (x1,000)												
Industrial	130	130	130	130	130	130	130	130	130	130	130	1
Commercial	75	76	77	79	80	82	82	82	82	82	82	7
Office & Other Services	319	319	319	319	319	319	320	320	320	321	321	2
Institutional	1,064	1,065	1,066	1,067	1,068	1,069	1,069	1,069	1,069	1,069	1,069	5
Total	**1,587**	**1,590**	**1,593**	**1,595**	**1,598**	**1,601**	**1,601**	**1,602**	**1,602**	**1,602**	**1,603**	**16**

STREET FACILITIES DEVELOPMENT PROJECTIONS

Provided below are summaries of development projections used in the Development Fee Report related to Street Facilities.

Figure D20: Development Projections Summary – East Street Facilities Fee Service Area

East Fee Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
Unincorporated Areas	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	0	0	0	0	0	0	0	0	0	0	0	0
Resident	29,566	29,846	30,126	30,405	30,685	30,965	31,808	32,651	33,494	34,338	35,181	5,615
Total	**29,566**	**29,846**	**30,126**	**30,405**	**30,685**	**30,965**	**31,808**	**32,651**	**33,494**	**34,338**	**35,181**	**5,615**
Resident Population												
Single Family	24,220	24,449	24,678	24,907	25,136	25,366	26,056	26,747	27,438	28,129	28,820	4,599
Multi-Family	1,295	1,307	1,319	1,332	1,344	1,356	1,393	1,430	1,467	1,504	1,541	246
All Other	4,051	4,090	4,128	4,166	4,205	4,243	4,359	4,474	4,590	4,705	4,821	769
Total	**29,566**	**29,846**	**30,126**	**30,405**	**30,685**	**30,965**	**31,808**	**32,651**	**33,494**	**34,338**	**35,181**	**5,615**
Housing Units												
Single Family	9,807	9,900	9,993	10,086	10,178	10,271	10,551	10,831	11,110	11,390	11,670	1,862
Multi-Family	718	725	732	739	746	752	773	793	814	834	855	136
All Other	2,597	2,621	2,646	2,670	2,695	2,719	2,794	2,868	2,942	3,016	3,090	493
Total	**13,122**	**13,247**	**13,371**	**13,495**	**13,619**	**13,743**	**14,117**	**14,492**	**14,866**	**15,240**	**15,614**	**2,492**
Employment												
Industrial	265	285	304	324	343	363	371	379	387	395	403	138
Commercial	807	819	831	843	855	867	885	903	920	938	956	149
Office & Other Services	300	318	335	353	370	388	445	502	559	616	674	374
Institutional	216	229	241	254	266	279	358	437	515	594	673	457
Total	**1,588**	**1,650**	**1,712**	**1,773**	**1,835**	**1,897**	**2,059**	**2,220**	**2,382**	**2,544**	**2,706**	**1,118**
Nonres. Floor Area (x1,000)												
Industrial	229	246	263	280	297	314	321	327	334	341	348	119
Commercial	345	350	355	360	365	370	378	385	393	401	408	64
Office & Other Services	101	107	113	119	125	131	150	169	188	208	227	126
Institutional	232	246	259	273	287	300	385	470	554	639	724	492
Total	**907**	**949**	**990**	**1,032**	**1,073**	**1,115**	**1,233**	**1,352**	**1,470**	**1,589**	**1,707**	**800**

Figure D21: Development Projections Summary – North Central Street Facilities Fee Service Area

North Central Fee Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
Unincorporated Areas	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	39	39	39	40	40	40	40	40	40	40	41	2
Resident	116,610	119,546	122,482	125,418	128,354	131,290	134,818	138,345	141,873	145,401	148,928	32,318
Total	**116,649**	**119,585**	**122,521**	**125,458**	**128,394**	**131,330**	**134,858**	**138,386**	**141,913**	**145,441**	**148,969**	**32,320**
Resident Population												
Single Family	95,524	97,930	100,335	102,740	105,145	107,550	110,440	113,330	116,219	119,109	121,999	26,475
Multi-Family	5,107	5,236	5,364	5,493	5,621	5,750	5,904	6,059	6,213	6,368	6,522	1,415
All Other	15,979	16,381	16,783	17,186	17,588	17,990	18,474	18,957	19,440	19,924	20,407	4,428
Total	**116,610**	**119,546**	**122,482**	**125,418**	**128,354**	**131,290**	**134,818**	**138,345**	**141,873**	**145,401**	**148,928**	**32,318**
Housing Units												
Single Family	38,680	39,654	40,628	41,602	42,576	43,550	44,720	45,890	47,060	48,230	49,401	10,720
Multi-Family	2,834	2,905	2,976	3,048	3,119	3,190	3,276	3,362	3,447	3,533	3,619	785
All Other	10,241	10,499	10,757	11,015	11,273	11,530	11,840	12,150	12,460	12,770	13,080	2,838
Total	**51,755**	**53,058**	**54,361**	**55,665**	**56,968**	**58,271**	**59,836**	**61,402**	**62,968**	**64,533**	**66,099**	**14,344**
Employment												
Industrial	454	539	624	710	795	880	981	1,082	1,183	1,284	1,386	932
Commercial	1,887	1,967	2,048	2,128	2,209	2,289	2,423	2,556	2,690	2,823	2,957	1,070
Office & Other Services	1,251	1,370	1,489	1,607	1,726	1,845	1,973	2,101	2,228	2,356	2,484	1,233
Institutional	1,418	1,485	1,551	1,618	1,684	1,751	1,864	1,976	2,089	2,202	2,315	897
Total	**5,010**	**5,361**	**5,712**	**6,063**	**6,414**	**6,765**	**7,240**	**7,715**	**8,191**	**8,666**	**9,141**	**4,131**
Nonres. Floor Area (x1,000)												
Industrial	392	466	539	613	687	760	848	935	1,022	1,110	1,197	805
Commercial	806	840	874	909	943	977	1,034	1,091	1,149	1,206	1,263	457
Office & Other Services	422	462	502	542	582	622	665	708	751	794	837	416
Institutional	1,526	1,597	1,669	1,740	1,812	1,884	2,005	2,126	2,247	2,369	2,490	964
Total	**3,145**	**3,365**	**3,584**	**3,804**	**4,024**	**4,243**	**4,552**	**4,861**	**5,169**	**5,478**	**5,787**	**2,642**

Figure D22: Development Projections Summary – South Central Street Facilities Fee Service Area

South Central Fee Area Unincorporated Areas	2020 Base Year	2021 1	2022 2	2023 3	2024 4	2025 5	2026 6	2027 7	2028 8	2029 9	2030 10	10-Year Increase
Population												
Group Quarters	159	162	165	167	170	173	176	178	181	183	186	27
Resident	51,816	52,202	52,588	52,974	53,360	53,746	55,276	56,806	58,336	59,867	61,397	9,581
Total	**51,975**	**52,364**	**52,753**	**53,141**	**53,530**	**53,919**	**55,452**	**56,984**	**58,517**	**60,050**	**61,583**	**9,608**
Resident Population												
Single Family	42,447	42,763	43,079	43,395	43,711	44,027	45,281	46,534	47,788	49,041	50,295	7,848
Multi-Family	2,269	2,286	2,303	2,320	2,337	2,354	2,421	2,488	2,555	2,622	2,689	420
All Other	7,100	7,153	7,206	7,259	7,312	7,365	7,574	7,784	7,994	8,203	8,413	1,313
Total	**51,816**	**52,202**	**52,588**	**52,974**	**53,360**	**53,746**	**55,276**	**56,806**	**58,336**	**59,867**	**61,397**	**9,581**
Housing Units												
Single Family	17,188	17,316	17,444	17,572	17,700	17,828	18,335	18,843	19,351	19,858	20,366	3,178
Multi-Family	1,259	1,268	1,278	1,287	1,297	1,306	1,343	1,380	1,418	1,455	1,492	233
All Other	4,551	4,585	4,619	4,652	4,686	4,720	4,855	4,989	5,123	5,258	5,392	841
Total	**22,998**	**23,169**	**23,340**	**23,512**	**23,683**	**23,854**	**24,533**	**25,212**	**25,892**	**26,571**	**27,250**	**4,252**
Employment												
Industrial	1,105	1,180	1,255	1,330	1,405	1,480	1,584	1,689	1,793	1,897	2,002	897
Commercial	1,067	1,109	1,151	1,193	1,235	1,277	1,421	1,564	1,708	1,851	1,995	928
Office & Other Services	1,131	1,189	1,246	1,304	1,361	1,419	1,589	1,759	1,930	2,100	2,270	1,139
Institutional	1,263	1,369	1,475	1,580	1,686	1,792	1,984	2,175	2,367	2,558	2,750	1,487
Total	**4,566**	**4,846**	**5,127**	**5,407**	**5,688**	**5,968**	**6,578**	**7,187**	**7,797**	**8,406**	**9,016**	**4,450**
Nonres. Floor Area (x1,000)												
Industrial	955	1,020	1,084	1,149	1,214	1,279	1,369	1,459	1,549	1,639	1,729	775
Commercial	456	474	491	509	527	545	607	668	729	790	852	396
Office & Other Services	381	401	420	439	459	478	536	593	650	708	765	384
Institutional	1,359	1,473	1,586	1,700	1,814	1,928	2,134	2,340	2,546	2,752	2,959	1,600
Total	**3,150**	**3,366**	**3,582**	**3,798**	**4,014**	**4,230**	**4,645**	**5,060**	**5,475**	**5,890**	**6,304**	**3,154**

Figure D23: Development Projections Summary – West Street Facilities Fee Service Area

West Fee Area	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	10-Year
Unincorporated Areas	Base Year	1	2	3	4	5	6	7	8	9	10	Increase
Population												
Group Quarters	8	8	8	8	8	8	8	8	9	9	9	1
Resident	10,377	10,500	10,623	10,746	10,869	10,992	11,529	12,065	12,601	13,138	13,674	3,298
Total	**10,385**	**10,508**	**10,631**	**10,754**	**10,877**	**11,000**	**11,537**	**12,073**	**12,610**	**13,147**	**13,683**	**3,299**
Resident Population												
Single Family	8,500	8,601	8,702	8,803	8,904	9,005	9,444	9,883	10,323	10,762	11,202	2,701
Multi-Family	454	460	465	471	476	481	505	528	552	575	599	144
All Other	1,422	1,439	1,456	1,472	1,489	1,506	1,580	1,653	1,727	1,800	1,874	452
Total	**10,377**	**10,500**	**10,623**	**10,746**	**10,869**	**10,992**	**11,529**	**12,065**	**12,601**	**13,138**	**13,674**	**3,298**
Housing Units												
Single Family	3,442	3,483	3,524	3,565	3,605	3,646	3,824	4,002	4,180	4,358	4,536	1,094
Multi-Family	252	255	258	261	264	267	280	293	306	319	332	80
All Other	911	922	933	944	955	965	1,012	1,060	1,107	1,154	1,201	290
Total	**4,605**	**4,660**	**4,715**	**4,769**	**4,824**	**4,879**	**5,117**	**5,355**	**5,593**	**5,831**	**6,069**	**1,464**
Employment												
Industrial	239	267	295	324	352	380	409	438	467	496	525	286
Commercial	279	295	312	328	345	361	421	481	540	600	660	381
Office & Other Services	1,093	1,111	1,130	1,148	1,167	1,185	1,220	1,254	1,289	1,324	1,359	266
Institutional	271	275	279	283	287	291	337	383	429	475	521	250
Total	**1,882**	**1,949**	**2,016**	**2,083**	**2,150**	**2,217**	**2,387**	**2,556**	**2,726**	**2,895**	**3,065**	**1,183**
Nonres. Floor Area (x1,000)												
Industrial	206	231	255	280	304	328	353	378	403	429	454	247
Commercial	119	126	133	140	147	154	180	205	231	256	282	163
Office & Other Services	368	375	381	387	393	399	411	423	434	446	458	89
Institutional	292	296	300	304	309	313	363	412	462	511	561	269
Total	**986**	**1,027**	**1,069**	**1,111**	**1,153**	**1,195**	**1,307**	**1,418**	**1,530**	**1,642**	**1,754**	**768**

VMT PROJECTIONS

Figure D24: VMT Projections Summary – East Street Facilities Fee Service Area

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	2.89
Multi-Family	HU	221	5.44	62%	117%	1.67
All Other	HU	240	5.00	62%	117%	1.53
Industrial	KSF	130	3.37	50%	73%	0.52
Commercial	KSF	820	37.75	33%	75%	3.94
Office & Other Services	KSF	710	9.74	50%	73%	1.50
Institutional	KSF	520	19.52	33%	73%	1.98

Avg Trip Length (miles)	0.422
Vehicle Capacity Per Lane	7,500

	East Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	6 2026	7 2027	8 2028	9 2029	10 2030	10-Year Increase
Development	Single Family Units	9,807	9,900	9,993	10,086	10,178	10,271	10,551	10,831	11,110	11,390	11,670	**1,862**
	Multi-Family Units	718	725	732	739	746	752	773	793	814	834	855	**136**
	All Other Units	2,597	2,621	2,646	2,670	2,695	2,719	2,794	2,868	2,942	3,016	3,090	**493**
	Industrial KSF	229	246	263	280	297	314	321	327	334	341	348	**119**
	Commercial KSF	345	350	355	360	365	370	378	385	393	401	408	**64**
	Office & Other Services KSF	101	107	113	119	125	131	150	169	188	208	227	**126**
	Institutional KSF	232	246	259	273	287	300	385	470	554	639	724	**492**
Avg Weekday Vehicle Trips	Single-Family Trips	57,401	57,944	58,486	59,029	59,572	60,115	61,752	63,390	65,027	66,664	68,301	**10,900**
	Multi-Family Trips	2,423	2,446	2,469	2,492	2,515	2,538	2,607	2,676	2,745	2,814	2,883	**460**
	All Other Trips	8,050	8,126	8,202	8,278	8,354	8,430	8,660	8,889	9,119	9,349	9,578	**1,529**
	Residential Trips	67,873	68,515	69,157	69,799	70,441	71,083	73,019	74,955	76,891	78,827	80,763	**12,889**
	Industrial Trips	386	414	443	471	500	528	540	552	563	575	587	**201**
	Commercial Trips	4,293	4,357	4,420	4,484	4,548	4,612	4,707	4,801	4,896	4,991	5,085	**793**
	Office & Other Services Trips	492	521	550	579	608	637	730	824	918	1,012	1,105	**613**
	Institutional Trips	1,497	1,584	1,672	1,759	1,846	1,933	2,480	3,026	3,572	4,118	4,664	**3,167**
	Nonresidential Trips	6,668	6,876	7,085	7,293	7,502	7,711	8,457	9,203	9,949	10,695	11,441	**4,773**
	Total Vehicle Trips	74,541	75,392	76,242	77,093	77,943	78,794	81,476	84,158	86,840	89,522	92,204	**17,663**
VMT	**Vehicle Miles of Travel (VMT)**	**35,602**	**35,984**	**36,366**	**36,747**	**37,129**	**37,511**	**38,697**	**39,884**	**41,070**	**42,257**	**43,443**	**7,841**
	Annual Increase		382	382	382	382	382	1,186	1,186	1,186	1,186	1,186	
Demand	Arterial Lane Miles	4.75	4.80	4.85	4.90	4.95	5.00	5.16	5.32	5.48	5.63	5.79	**1.05**
	Annual Increase		0.05	0.05	0.05	0.05	0.05	0.16	0.16	0.16	0.16	0.16	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

Figure D25: VMT Projections Summary – North Central Street Facilities Fee Service Area

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	31.63
Multi-Family	HU	221	5.44	62%	117%	18.23
All Other	HU	240	5.00	62%	117%	16.75
Industrial	KSF	130	3.37	50%	73%	5.68
Commercial	KSF	820	37.75	33%	75%	43.16
Office & Other Services	KSF	710	9.74	50%	73%	16.42
Institutional	KSF	520	19.52	33%	73%	21.72

Avg Trip Length (miles)	4.619
Vehicle Capacity Per Lane	7,500

	North Central Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	6 2026	7 2027	8 2028	9 2029	10 2030	10-Year Increase
Development	Single Family Units	38,680	39,654	40,628	41,602	42,576	43,550	44,720	45,890	47,060	48,230	49,401	**10,720**
	Multi-Family Units	2,834	2,905	2,976	3,048	3,119	3,190	3,276	3,362	3,447	3,533	3,619	**785**
	All Other Units	10,241	10,499	10,757	11,015	11,273	11,530	11,840	12,150	12,460	12,770	13,080	**2,838**
	Industrial KSF	392	466	539	613	687	760	848	935	1,022	1,110	1,197	**805**
	Commercial KSF	806	840	874	909	943	977	1,034	1,091	1,149	1,206	1,263	**457**
	Office & Other Services KSF	422	462	502	542	582	622	665	708	751	794	837	**416**
	Institutional KSF	1,526	1,597	1,669	1,740	1,812	1,884	2,005	2,126	2,247	2,369	2,490	**964**
Avg Weekday Vehicle Trips	Single-Family Trips	226,388	232,089	237,789	243,489	249,189	254,889	261,738	268,586	275,435	282,283	289,132	**62,743**
	Multi-Family Trips	9,557	9,798	10,038	10,279	10,520	10,760	11,049	11,339	11,628	11,917	12,206	**2,649**
	All Other Trips	31,748	32,547	33,346	34,146	34,945	35,745	36,705	37,665	38,626	39,586	40,547	**8,799**
	Residential Trips	267,693	274,433	281,174	287,914	294,654	301,394	309,492	317,590	325,688	333,786	341,884	**74,191**
	Industrial Trips	661	785	909	1,033	1,157	1,281	1,428	1,576	1,723	1,870	2,017	**1,356**
	Commercial Trips	10,038	10,465	10,893	11,321	11,748	12,176	12,887	13,597	14,308	15,019	15,729	**5,692**
	Office & Other Services Trips	2,053	2,248	2,443	2,638	2,833	3,028	3,238	3,447	3,657	3,867	4,077	**2,024**
	Institutional Trips	9,827	10,288	10,750	11,211	11,673	12,134	12,915	13,696	14,477	15,258	16,039	**6,213**
	Nonresidential Trips	22,578	23,787	24,995	26,203	27,411	28,620	30,468	32,317	34,165	36,014	37,863	**15,284**
	Total Vehicle Trips	290,272	298,220	306,168	314,117	322,065	330,013	339,960	349,907	359,854	369,800	379,747	**89,475**
VMT	**Vehicle Miles of Travel (VMT)**	**1,523,735**	**1,564,274**	**1,604,812**	**1,645,351**	**1,685,890**	**1,726,428**	**1,776,491**	**1,826,554**	**1,876,617**	**1,926,680**	**1,976,743**	**453,008**
	Annual Increase		40,539	40,539	40,539	40,539	40,539	50,063	50,063	50,063	50,063	50,063	
Demand	Arterial Lane Miles	203.16	208.57	213.97	219.38	224.79	230.19	236.87	243.54	250.22	256.89	263.57	**60.40**
	Annual Increase		5.41	5.41	5.41	5.41	5.41	6.68	6.68	6.68	6.68	6.68	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

Figure D26: VMT Projections Summary – South Central Street Facilities Fee Service Area

Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	60.95
Multi-Family	HU	221	5.44	62%	117%	35.12
All Other	HU	240	5.00	62%	117%	32.28
Industrial	KSF	130	3.37	50%	73%	10.95
Commercial	KSF	820	37.75	33%	75%	83.15
Office & Other Services	KSF	710	9.74	50%	73%	31.64
Institutional	KSF	520	19.52	33%	73%	41.85

Avg Trip Length (miles)	8.900
Vehicle Capacity Per Lane	7,500

	South Central Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	6 2026	7 2027	8 2028	9 2029	10 2030	10-Year Increase
Development	Single Family Units	17,188	17,316	17,444	17,572	17,700	17,828	18,335	18,843	19,351	19,858	20,366	**3,178**
	Multi-Family Units	1,259	1,268	1,278	1,287	1,297	1,306	1,343	1,380	1,418	1,455	1,492	**233**
	All Other Units	4,551	4,585	4,619	4,652	4,686	4,720	4,855	4,989	5,123	5,258	5,392	**841**
	Industrial KSF	955	1,020	1,084	1,149	1,214	1,279	1,369	1,459	1,549	1,639	1,729	**775**
	Commercial KSF	456	474	491	509	527	545	607	668	729	790	852	**396**
	Office & Other Services KSF	381	401	420	439	459	478	536	593	650	708	765	**384**
	Institutional KSF	1,359	1,473	1,586	1,700	1,814	1,928	2,134	2,340	2,546	2,752	2,959	**1,600**
Avg Weekday Vehicle Trips	Single-Family Trips	100,597	101,346	102,095	102,845	103,594	104,343	107,314	110,285	113,255	116,226	119,197	**18,600**
	Multi-Family Trips	4,247	4,278	4,310	4,342	4,373	4,405	4,530	4,656	4,781	4,907	5,032	**785**
	All Other Trips	14,107	14,212	14,317	14,422	14,528	14,633	15,049	15,466	15,882	16,299	16,716	**2,608**
	Residential Trips	118,951	119,837	120,723	121,609	122,495	123,381	126,893	130,406	133,919	137,432	140,944	**21,993**
	Industrial Trips	1,609	1,718	1,827	1,936	2,045	2,155	2,306	2,458	2,610	2,762	2,914	**1,305**
	Commercial Trips	5,676	5,899	6,123	6,346	6,569	6,793	7,556	8,319	9,083	9,846	10,609	**4,934**
	Office & Other Services Trips	1,856	1,951	2,045	2,140	2,234	2,329	2,608	2,888	3,167	3,446	3,726	**1,869**
	Institutional Trips	8,753	9,486	10,219	10,952	11,685	12,419	13,746	15,074	16,402	17,730	19,058	**10,305**
	Nonresidential Trips	17,893	19,054	20,214	21,374	22,535	23,695	26,217	28,739	31,262	33,784	36,306	**18,413**
	Total Vehicle Trips	136,844	138,891	140,937	142,983	145,029	147,076	153,111	159,146	165,181	171,216	177,251	**40,406**
VMT	**Vehicle Miles of Travel (VMT)**	**1,355,900**	**1,372,704**	**1,389,507**	**1,406,311**	**1,423,114**	**1,439,918**	**1,493,019**	**1,546,121**	**1,599,222**	**1,652,324**	**1,705,425**	**349,525**
	Annual Increase		16,804	16,804	16,804	16,804	16,804	53,102	53,102	53,102	53,102	53,102	
Demand	Arterial Lane Miles	180.79	183.03	185.27	187.51	189.75	191.99	199.07	206.15	213.23	220.31	227.39	**46.60**
	Annual Increase		2.24	2.24	2.24	2.24	2.24	7.08	7.08	7.08	7.08	7.08	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

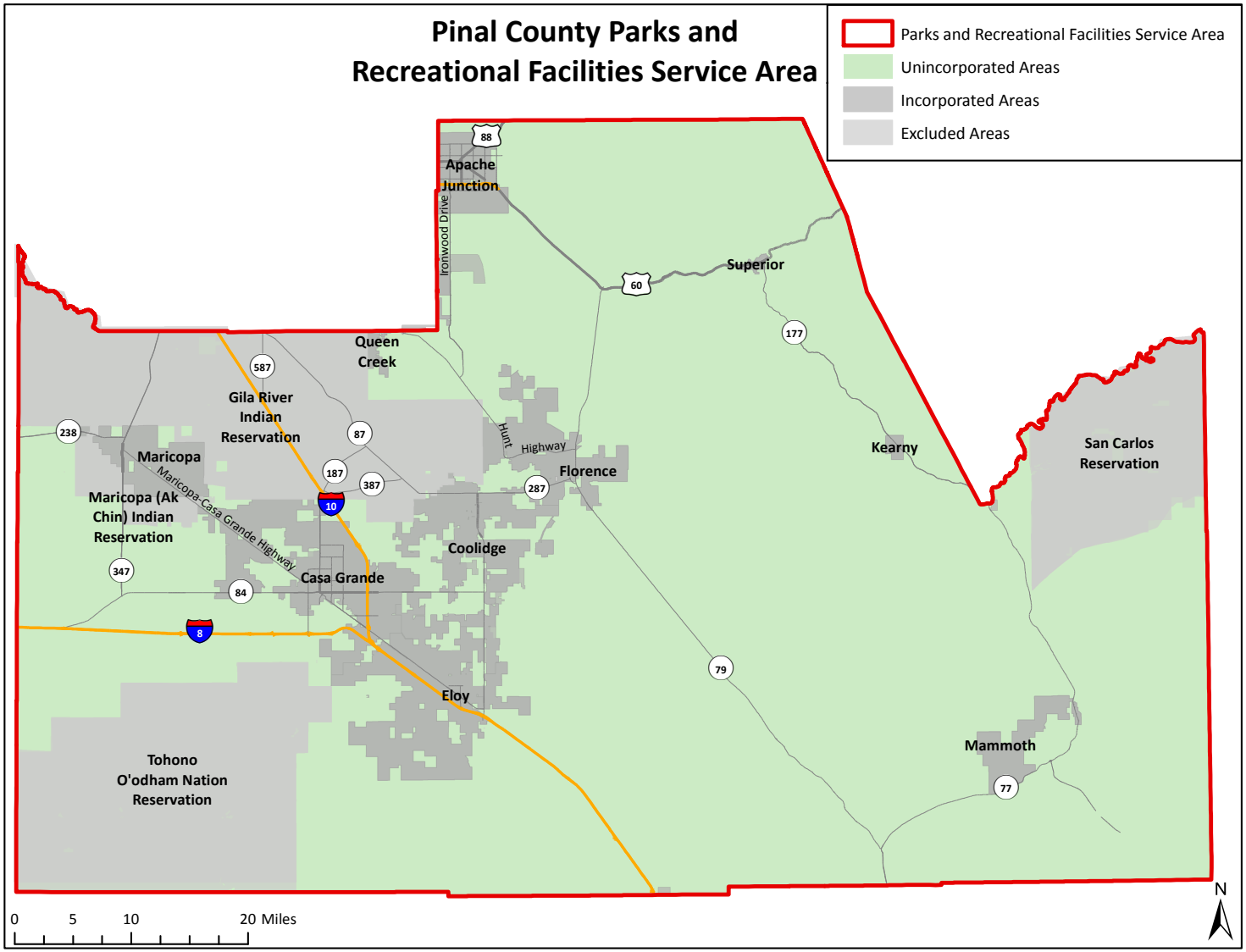
Figure D27: VMT Projections Summary – West Street Facilities Fee Service Area

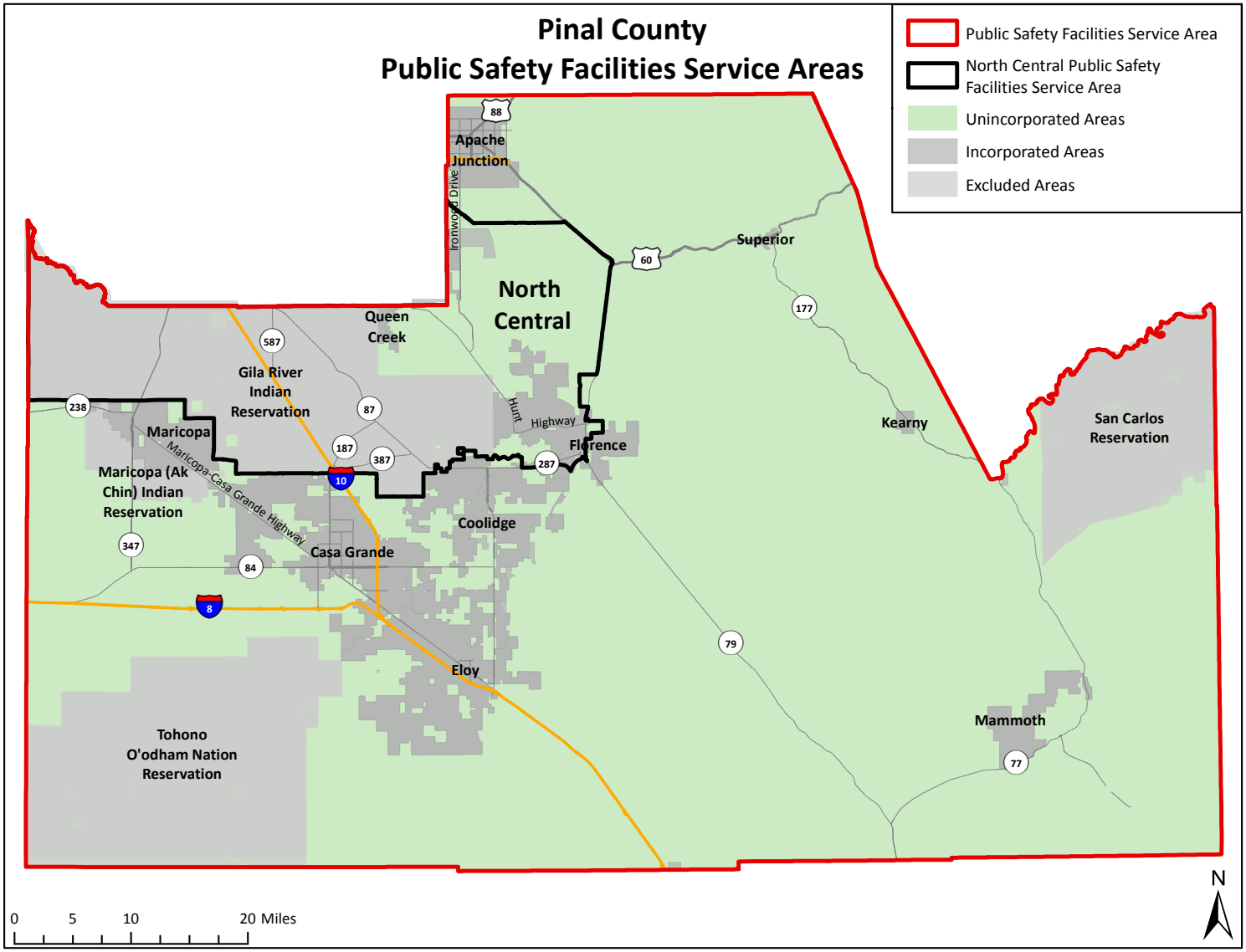
Development Type	Development Unit	ITE Code	Weekday VTE	Trip Adj	Trip Length Wt Factor	Weekday VMT
Single Family	HU	210	9.44	62%	117%	72.03
Multi-Family	HU	221	5.44	62%	117%	41.51
All Other	HU	240	5.00	62%	117%	38.15
Industrial	KSF	130	3.37	50%	73%	12.94
Commercial	KSF	820	37.75	33%	75%	98.28
Office & Other Services	KSF	710	9.74	50%	73%	37.40
Institutional	KSF	520	19.52	33%	73%	49.46

Avg Trip Length (miles)	10.519
Vehicle Capacity Per Lane	7,500

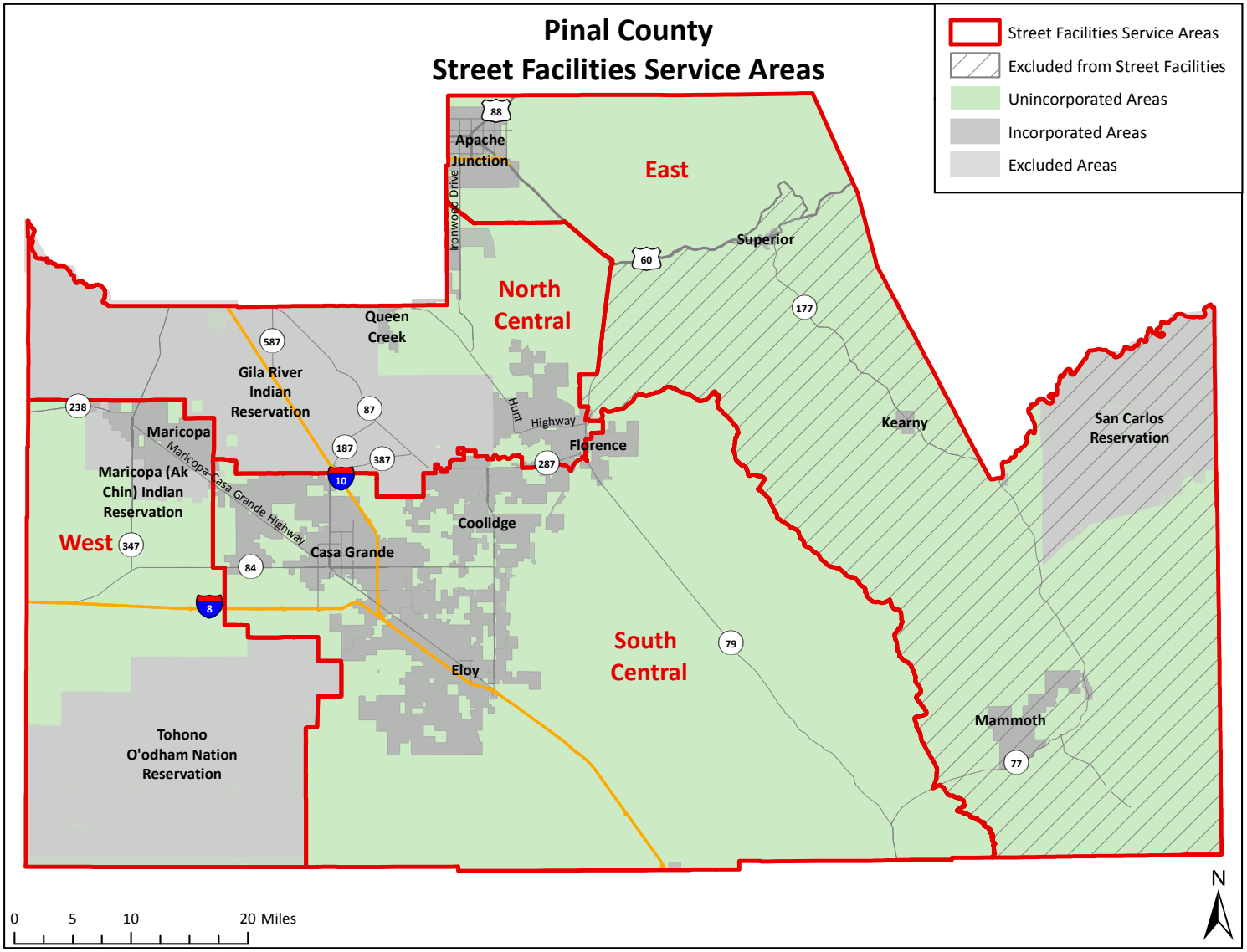
	West Street Facilities Service Area	Base 2020	1 2021	2 2022	3 2023	4 2024	5 2025	6 2026	7 2027	8 2028	9 2029	10 2030	10-Year Increase
Development	Single Family Units	3,442	3,483	3,524	3,565	3,605	3,646	3,824	4,002	4,180	4,358	4,536	**1,094**
	Multi-Family Units	252	255	258	261	264	267	280	293	306	319	332	**80**
	All Other Units	911	922	933	944	955	965	1,012	1,060	1,107	1,154	1,201	**290**
	Industrial KSF	206	231	255	280	304	328	353	378	403	429	454	**247**
	Commercial KSF	119	126	133	140	147	154	180	205	231	256	282	**163**
	Office & Other Services KSF	368	375	381	387	393	399	411	423	434	446	458	**89**
	Institutional KSF	292	296	300	304	309	313	363	412	462	511	561	**269**
Avg Weekday Vehicle Trips	Single-Family Trips	20,145	20,384	20,623	20,862	21,101	21,341	22,382	23,423	24,465	25,506	26,547	**6,402**
	Multi-Family Trips	850	861	871	881	891	901	945	989	1,033	1,077	1,121	**270**
	All Other Trips	2,825	2,859	2,892	2,926	2,959	2,993	3,139	3,285	3,431	3,577	3,723	**898**
	Residential Trips	23,821	24,103	24,386	24,669	24,951	25,234	26,466	27,697	28,928	30,160	31,391	**7,570**
	Industrial Trips	348	389	430	471	512	553	595	638	680	722	764	**416**
	Commercial Trips	1,484	1,571	1,659	1,746	1,833	1,920	2,238	2,556	2,875	3,193	3,511	**2,027**
	Office & Other Services Trips	1,794	1,824	1,854	1,884	1,915	1,945	2,002	2,059	2,116	2,173	2,230	**436**
	Institutional Trips	1,878	1,906	1,933	1,961	1,989	2,017	2,335	2,654	2,973	3,292	3,611	**1,733**
	Nonresidential Trips	5,504	5,690	5,876	6,063	6,249	6,435	7,171	7,907	8,643	9,379	10,115	**4,611**
	Total Vehicle Trips	29,325	29,794	30,262	30,731	31,200	31,669	33,637	35,604	37,571	39,539	41,506	**12,181**
VMT	**Vehicle Miles of Travel (VMT)**	**335,744**	**340,671**	**345,598**	**350,525**	**355,452**	**360,379**	**381,253**	**402,127**	**423,001**	**443,875**	**464,749**	**129,004**
	Annual Increase		4,927	4,927	4,927	4,927	4,927	20,874	20,874	20,874	20,874	20,874	
Demand	Arterial Lane Miles	44.77	45.42	46.08	46.74	47.39	48.05	50.83	53.62	56.40	59.18	61.97	**17.20**
	Annual Increase		0.66	0.66	0.66	0.66	0.66	2.78	2.78	2.78	2.78	2.78	
	Level of Service	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	1.333	

APPENDIX E: SERVICE AREA MAPS





TischlerBise
FISCAL | ECONOMIC | PLANNING


Pinal County
Street Facilities Service Areas
Street Facilities Service Areas
Excluded from Street Facilities
Unincorporated Areas
Incorporated Areas
Excluded Areas
East
North Central
West
South Central
Apache Junction
Superior
Queen Creek
Gila River Indian Reservation
Maricopa
Maricopa (Ak Chin) Indian Reservation
Maricopa-Casa Grande Highway
Hunt Highway
Florence
Coolidge
Casa Grande
Eloy
Kearny
San Carlos Reservation
Mammoth
Tohono O'odham Nation Reservation
Ironwood Drive
88
60
177
587
87
187
387
287
238
10
347
84
8
79
77
0 5 10 20 Miles
N