

MARICOPA, ARIZONA

COMPREHENSIVE
LAND USE ASSUMPTIONS, INFRASTRUCTURE
IMPROVEMENT PLAN, AND DEVELOPMENT IMPACT FEE
ANALYSIS

DECEMBER 2023

PREPARED BY
LRB PUBLIC FINANCE ADVISORS





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DEFINITIONS

The following acronyms or abbreviations are used in this document:

ARS: Arizona Revised Statutes (Enabling Legislation)

ADT: Average Daily Trips

BO: Buildout

DIF: Development Impact Fees

HH: Households

HU: Housing Unit

IIP: Infrastructure Improvement Plan

ITE: Institute of Traffic Engineers

KSF: Thousand Square Feet

LF: Linear Feet

LUA: Land Use Assumptions

LOS: Level of Service

LRB: LRB Public Finance Advisors

MAG: Maricopa Association of Governments

SF: Square Feet

VMT: Vehicle Miles Traveled



SECTION 1: EXECUTIVE SUMMARY

Arizona Revised Statutes (“ARS”) 9-463.05, hereinafter referred to as the “Enabling Legislation”, have determined that a municipality may assess development fees to offset the costs of necessary public services including infrastructure, improvements, real property, engineering and architectural services, financing and professional services associated with the preparation or revision of a development fee.¹ Before the adoption or amendment of a development impact fee (“DIF”), the governing body of the municipality shall adopt or update the land use assumptions (“LUA”) and infrastructure improvements plan (“IIP”) for the designated service area. This report contains the applicable LUA, IIP and DIF analysis.

This update of the City’s Land Use Assumptions, Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

- Parks and Recreational Facilities
- Library Facilities
- Police Facilities
- Fire Facilities
- Street Facilities

This plan also includes all necessary elements required to be in full compliance with Enabling Legislation. The following represents a summary of the recommended fee updates based on this analysis.

TABLE 1.1: PROPOSED SOUTH SERVICE AREA DIF BY LAND USE TYPE

	DEMAND UNIT	PROPOSED PARK DIF	PROPOSED LIBRARY DIF	PROPOSED POLICE DIF	PROPOSED FIRE DIF	PROPOSED ROAD DIF	TOTAL FEE	EXISTING FEE	INCREASE / (DECREASE)
Single Family	HU	\$791	\$248	\$613	\$2,650	\$5,942	\$10,244	\$6,243	\$4,001
Multi-Family	HU	\$643	\$201	\$553	\$3,493	\$4,247	\$9,137	\$4,508	\$4,629
Light Industrial	KSF	\$29	\$9	\$78	\$361	\$1,918	\$2,395	\$1,794	\$601
Industrial Park	KSF	\$21	\$7	\$54	\$250	\$1,327	\$1,659	\$1,221	\$438
Manufacturing	KSF	\$35	\$11	\$76	\$352	\$1,871	\$2,344	\$1,439	\$905
Warehousing	KSF	\$6	\$2	\$27	\$127	\$673	\$836	\$614	\$222
Assisted Living	KSF	\$18	\$6	\$209	\$491	\$1,172	\$1,896	\$1,003	\$893
Hotel	KSF	\$18	\$5	\$685	\$1,607	\$3,936	\$6,251	NA**	NA**
Motel	KSF	\$4	\$1	\$287	\$674	\$1,650	\$2,617	NA**	NA**
Church*	KSF	\$8	\$2	\$171	\$550	\$674	\$1,405	\$913	\$492
Day Care	KSF	\$41	\$13	\$2,379	\$5,579	\$10,502	\$18,513	\$10,884	\$7,629
Hospital	KSF	\$52	\$16	\$538	\$1,262	\$3,011	\$4,880	\$2,591	\$2,289
General Office	KSF	\$60	\$19	\$147	\$723	\$4,269	\$5,217	\$3,511	\$1,706
Research & Dev Center	KSF	\$60	\$19	\$150	\$739	\$4,363	\$5,331	\$4,058	\$1,273
Business Park	KSF	\$56	\$18	\$169	\$829	\$4,899	\$5,971	\$4,441	\$1,530
Commercial/Retail	KSF	\$39	\$12	\$1,849	\$4,336	\$10,617	\$16,853	\$8,763	\$8,090

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

¹ ARS § 9-436.05. A



TABLE 1.2: PROPOSED NORTH SERVICE AREA DIF BY LAND USE TYPE

	DEMAND UNIT	PROPOSED PARK DIF	PROPOSED LIBRARY DIF	PROPOSED POLICE DIF	PROPOSED FIRE DIF	PROPOSED ROAD DIF	TOTAL FEE	EXISTING FEE	INCREASE / (DECREASE)
Single Family	HU	\$791	\$248	\$613	\$946	\$5,942	\$8,540	\$5,473	\$3,067
Multi-Family	HU	\$643	\$201	\$553	\$1,247	\$4,247	\$6,891	\$3,989	\$2,902
Light Industrial	KSF	\$29	\$9	\$78	\$129	\$1,918	\$2,162	\$1,417	\$745
Industrial Park	KSF	\$21	\$7	\$54	\$89	\$1,327	\$1,498	\$964	\$534
Manufacturing	KSF	\$35	\$11	\$76	\$126	\$1,871	\$2,118	\$1,140	\$978
Warehousing	KSF	\$6	\$2	\$27	\$45	\$673	\$754	\$481	\$273
Assisted Living	KSF	\$18	\$6	\$209	\$175	\$1,172	\$1,580	\$793	\$787
Hotel	KSF	\$18	\$5	\$685	\$574	\$3,936	\$5,218	NA**	NA**
Motel	KSF	\$4	\$1	\$287	\$241	\$1,650	\$2,183	NA**	NA**
Church*	KSF	\$8	\$2	\$171	\$196	\$674	\$1,051	\$718	\$333
Day Care	KSF	\$41	\$13	\$2,379	\$1,991	\$10,502	\$14,926	\$8,492	\$6,434
Hospital	KSF	\$52	\$16	\$538	\$450	\$3,011	\$4,068	\$2,053	\$2,015
General Office	KSF	\$60	\$19	\$147	\$258	\$4,269	\$4,752	\$2,769	\$1,983
Research & Dev Center	KSF	\$60	\$19	\$150	\$264	\$4,363	\$4,856	\$3,201	\$1,655
Business Park	KSF	\$56	\$18	\$169	\$296	\$4,899	\$5,438	\$3,495	\$1,943
Commercial/Retail	KSF	\$39	\$12	\$1,849	\$1,548	\$10,617	\$14,065	\$6,867	\$7,198

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

The Enabling Legislation indicates that development impact fees are assessed against commercial, residential, and industrial development. These general categories can be expanded to different subcategories to determine the amount of the development fee applicable to the category of development. If development impact fees are waived, the City will reimburse the appropriate development fee accounts for the amount that was waived and provide notice of any such waiver to the infrastructure improvements advisory committee within thirty days.



USER GUIDE FOR DIF CALCULATIONS FOR NON-STANDARD USERS

The schedule above does not include all potential land-use categories but provides a general schedule for which new development may be categorized. **The commercial/retail, light industrial, and general office categories serve as a general designation for most land uses.** In the event of a non-standard user, the City should use the specific components for each fee to determine appropriate fees. Generally speaking, a non-standard users should be assessed using the following methodology:

PARKS AND RECREATION

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Person or Jobs per Unit based on development or Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Apply Level of Service Fee Per Unit.
4. Calculate Fee.

For park and recreation facilities, apply the following formulas:

Residential Development: Person per HH * \$240 = DIF per Unit

Non-Residential Development: Employee per KSF * \$18 = DIF per Unit

LIBRARY

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Person or Jobs per Unit based on development or Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Apply Level of Service Fee Per Unit.
4. Calculate Fee.

For library facilities, apply the following formulas:

Residential Development: Person per HH * \$75 = DIF per Unit

Non-Residential Development: Employee per KSF * \$6 = DIF per Unit

POLICE

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Trips per Unit based on Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Determine Adjustment Factor.
 - a. Calculate Ratio of Trips per Unit Relative to General Office, Light Industrial, or Commercial.
4. Calculate Fee Based on Ratio of Trips Multiplied by Fee for General Office, Light Industrial, or Commercial.

For police facilities, apply the following formulas:

Residential Development: Person per HH * \$864 = DIF per Unit

Non-Residential Development: Determine General Land Use (i.e., general commercial, general office, or light industrial) Fee * Adjustment Factor (calculated based on weekday trips / general land use average trips) = DIF per Unit

GENERAL LAND USE CATEGORY	COST PER CALL	CALLS PER KSF	AVERAGE DIF PER UNIT
Industrial / Distribution / Warehousing	\$864	0.09	\$77.76
Commercial	\$864	2.14	\$1,848.96
Institutional	\$864	1.60	\$1,382.40

* Adjustment Factor = DIF



FIRE: NORTH SERVICE AREA

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Trips per Unit based on Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Determine Adjustment Factor.
 - a. Calculate Ratio of Trips per Unit Relative to General Office, Light Industrial, or Commercial.
4. Calculate Fee Based on Ratio of Trips Multiplied by Fee for General Office, Light Industrial, or Commercial.

For police facilities, apply the following formulas:

Residential Development: Person per HH * \$4,299 = DIF per Unit

Non-Residential Development: Determine General Land Use (i.e., general commercial, general office, or light industrial) Fee * Adjustment Factor (calculated based on weekday trips / general land use average trips) = DIF per Unit

GENERAL LAND USE CATEGORY	COST PER CALL	CALLS PER KSF	AVERAGE DIF PER UNIT
Industrial / Distribution / Warehousing	\$4,299	0.03	\$129
Commercial	\$4,299	0.36	\$1,548
Institutional	\$4,299	0.37	\$1,591

* Adjustment Factor = DIF

FIRE: SOUTH SERVICE AREA

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Trips per Unit based on Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Determine Adjustment Factor.
 - a. Calculate Ratio of Trips per Unit Relative to General Office, Light Industrial, or Commercial.
4. Calculate Fee Based on Ratio of Trips Multiplied by Fee for General Office, Light Industrial, or Commercial.

For police facilities, apply the following formulas:

Residential Development: Person per HH * \$12,044 = DIF per Unit

Non-Residential Development: Determine General Land Use (i.e., general commercial, general office, or light industrial) Fee * Adjustment Factor (calculated based on weekday trips / general land use average trips) = DIF per Unit

GENERAL LAND USE CATEGORY	COST PER CALL	CALLS PER KSF	AVERAGE DIF PER UNIT
Industrial / Distribution / Warehousing	\$12,044	0.03	\$361
Commercial	\$12,044	0.36	\$4,336
Institutional	\$12,044	0.37	\$4,456

* Adjustment Factor = DIF



STREETS

1. Determine Demand Unit (Housing Unit or Thousand Square Feet).
2. Determine Trips per Unit based on Institute of Traffic Engineers (ITE) Manual, 11th Edition.
3. Determine Adjustment Factors
 - a. Using ITE Manual, Determine Adjustment Factors for Outbound (50%) and Pass By Trips.
4. Apply Trip Length Multiplier to Calculate VMT by Land Use
5. Calculate Fee Based on VMT Multiplied by Cost per VMT (\$102.29).

For street infrastructure facilities, apply the following formula:

- Define weekday trips (ITE Manual by Land Use Type) * 50% * Pass-by Data and Rates Adjustment Factor (ITE Manual) * local trip length = VMT per Unit
- VMT per Unit * \$102.29 = DIF Per Unit

It is also important to note that publicly funded schools and charter schools are exempt from development impact fees (see ARS 9-500.18 and ARS 15-189.01). This prohibition does not include fees assessed or collected for streets and water and sewer utility functions or other government facilities.



SECTION 2: LAND USE ASSUMPTIONS

Before the adoption or amendment of a development fee, the governing body of the municipality shall adopt or update the LUA and IIP for the designated service area. These plans should include the duration of the projections, a description of the necessary public services included in the infrastructure improvements plan and a map of the service area. This section provides the required documentation of the assumptions that were used for this analysis. **Appendix A** includes a general description of land uses evaluated in this analysis.

POPULATION & HOUSEHOLDS

According to Census data from 2020, the estimated average household (“HH”) size for occupied residential units in the City is 3.30 persons per HH for single family units, and 2.68 persons for multi-family. This analysis also considers vacant households when determining total population and levels of service. Since vacant households would have paid a development impact fee, this analysis applies an estimated population to these households based on the average household size shown below.

TABLE 2.1: ESTIMATE OF AVERAGE HH SIZE

	TOTAL UNITS	OCCUPIED HH UNITS	POPULATION IN OCCUPIED HH UNITS	ESTIMATE OF AVERAGE HH SIZE (BASED ON OCCUPIED HH)
Single Family Units	17,819	15,064	49,701	3.30
Multi-Family Units	272	245	657	2.68
Total	18,091	15,309	50,358	

Source: 2020 American Community Survey 5-Year Estimates, Data Profiles

DP04 Selected Housing Characteristics - Housing Occupancy, S2504: Physical Housing Characteristics for Occupied Housing Units, B25033 Total

Population in Occupied Housing Units by Tenure by Units in Structure, B25008 Total Population in Occupied Housing Units by Tenure

For purposes of determining average HH size, five-year ACS data was used, as this establishes a more accurate average. Historic redistricting Census data illustrates a more accurate estimate of current population figures and highlights the substantial growth that has occurred within the City from 2010 to 2020. Population has increased from 43,482 to 58,125, a 34 percent increase. Housing units (“HU”) have increased by 22 percent over the same period.

TABLE 2.2: HISTORIC POPULATION AND HH GROWTH

AREA	2020		2010		CHANGE** 2010-2020		PERCENT CHANGE** 2010-2020	
	POPULATION	HU	POPULATION	HU	POPULATION	HU	POPULATION	HU
Pinal County Total*	425,264	172,878	375,770	159,222	49,494	13,656	13.2%	8.6%
Maricopa	58,125	20,955	43,482	17,240	14,643	3,715	33.7%	21.5%

* Pinal County Totals exclude portions of cities in other counties.

**Change is a difference calculated as 2020 value - 2010 value; Percent Change is a rate calculated as (2020 value - 2010 value)/ 2010 value.

Source: Maricopa Association of Governments, Prepared 8/12/2021

U.S. Census Bureau, 2010 and 2020 Decennial Census, PL 94-171.

The IIP population was estimated starting with the 2020 HUs as the base units. The average HH size information from **Table 2.1** was then multiplied by total HUs to determine the IIP population, including vacant HH. The City’s building permit data was then added to this base in order to determine the current population base for this analysis.

TABLE 2.3: ESTIMATE OF CURRENT IIP POPULATION AND HOUSEHOLDS

	EST SFR	EST MFR	TOTAL	SFR POPULATION	MFR POPULATION	TOTAL ESTIMATED POPULATION
1-Apr-20	20,640	315	20,955	68,098	845	68,943
1-Jul-20	20,826	315	21,141	68,712	845	69,556
2021	23,079	315	23,394	76,145	845	76,990
2022	24,661	315	24,976	81,365	845	82,209

* Ratio calculated based on the distribution of total units found in **Table 2.1**. Dwelling Unit Count data from Maricopa City shows a total of 24,970 built single family units and 1,116 multi-family built units as of 12/20/2022, supporting the analysis above.

Source: <https://maricopa-az.maps.arcgis.com/apps/dashboards/28949881231e423da502474ac2e62a96>



BUILDING SQUARE FOOTAGE

Using Pinal County Assessor's tax information and parcel data, an estimate of building square footage ("SF") is summarized in **Table 2.4**.

TABLE 2.4: CURRENT BUILDING SQUARE FOOTAGES

LAND USE TYPE	SF	SF PER CAPITA
Single Family Residential	50,441,683	655
Multifamily Residential	225,035	3
Total Residential	50,666,718	658
Agricultural	114,937	1
Distribution / Warehousing	367,584	5
Industrial	176,228	2
Commercial	1,450,418	19
Institutional	665,132	9
Office / Other	205,492	3
Total Non-Residential	2,979,791	39

DEVELOPMENT POTENTIAL

Data on entitled and projects under construction illustrate the potential for continued growth within the City. A total of 27,714 units are estimated for the next ten years, or an average of 2,771 units per year. This results in an additional population range of 74,319 to 91,437, using a low 2.68 persons per HH (based on the multi-family average) and a high of 3.3 persons per HH (based on the average HH size for single family units). The City anticipates that, while development potential suggests an average of 2,771 new units per year, economic factors may cause a

slowing of this growth. As such, the LUA suggests a population increase of 53,026 people, with 17,200 new units over the next ten years.

TABLE 2.5: ILLUSTRATION OF DEVELOPMENT POTENTIAL

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL
New Units	2,128	3,322	2,659	2,651	3,495	3,187	2,661	2,661	2,542	2,408	27,714
New Population (High)	7,021	10,962	8,771	8,747	11,532	10,516	8,779	8,779	8,386	7,945	91,437
New Population (Low)	5,706	8,910	7,129	7,109	9,373	8,548	7,135	7,135	6,816	6,457	74,319

Source: Maricopa City, See **Appendix B** for more details.

EXISTING EMPLOYMENT

Existing employment data provided by the US Census (**Table 2.6**) illustrates the distribution of employees within the City and without, based on household employment. To determine the existing employment within the City, the Maricopa Association of Governments ("MAG") employment statistics for 2020 (**Table 2.7**) were used to calculate the employment per capita, which will be multiplied by the 2022 population.

TABLE 2.6: US CENSUS EMPLOYMENT DATA

2019	COUNT
Employed in the Selection Area	2,626
Employed in the Selection Area but Living Outside	1,732
Employed and Living in the Selection Area	894
Living in the Selection Area	20,273
Living in the Selection Area but Employed Outside	19,379
Living and Employed in the Selection Area	894

Source: US Census 2019 On the Map Data

TABLE 2.7: MAG 2020 EMPLOYMENT INFORMATION

COUNT	DESCRIPTION
261	Business Locations
228	Employers
4,970	Jobs
58,125	Population
11.70	Population per Job

Source: 2020 Arizona COG/MPO Employer Database, business locations with 5+ employees. Note: Jobs 10+ rounded to nearest 10

In addition, US Census OnTheMap data for 2019 is used to determine the proportionate impact of residential and non-residential demand for park and library facilities. The proportionate share is based on estimated demand hours for each land use, with residents allocated 24 hours per day and inflow employment allocated 8 hours per day, 4 days per week, and 50 weeks per year. Multiplying the applicable impact hours by the demand unit yields the total annual impact hours for both residential and nonresidential categories. Residential's proportionate share of the total impact hours is 99%, while the nonresidential share is 1%, as shown in **Table 2.8**.



TABLE 2.8: DISTRIBUTION OF RESIDENTIAL AND NON-RESIDENTIAL IMPACT BASED ON EMPLOYMENT FACTORS

RESIDENTIAL	DEMAND UNITS	DEMAND HOURS	DAYS PER WEEK	TOTAL WEEKS	1K PERSON HOURS
Residents Not Working	31,427	24	7	52	274,546
Workers Living in City	25,648	16	7	52	149,374
Residential					423,920
Non-Residential	Demand Units	Demand Hours	DAYS PER WEEK	TOTAL WEEKS	Person Hours
Inflow Employment	1,732	8	4	50	2,771
Non-Residential					2,771
Combined Total					426,691
% Residential					99%
% Non-Residential					1%

Note: 2021 ACS Data represents a five-year average from 2017-2021. This is compared to 2019 employment data.

Source: US Census 2021 American Community Survey 5-Year Estimates, US Census 2019 On the Map Data

TRIP STATISTICS

Some of the services evaluated in this report utilize vehicle trips to determine proportionality, derived using the Institute of Traffic Engineers ("ITE") trip generation rates. **Table 2.9** illustrates the ITE trip weekday generation rates for general land use categories, measured in trip ends per demand unit.

TABLE 2.9: ITE TRIP GENERATION STATISTICS

ITE CODE	LAND USE / SIZE	DEMAND UNIT	WEEKDAY TRIP ENDS PER DEMAND UNIT	WEEKDAY TRIP ENDS PER EMPLOYEE	EMPLOYEES PER DEMAND UNIT	SQ FT PER EMP
210	Single Family	Residential Unit	9.43	NA	NA	NA
220	Multifamily	Residential Unit	6.74	NA	NA	NA
110	Light Industrial	KSF	4.87	3.10	1.57	637
130	Industrial Park	KSF	3.37	2.91	1.16	864
140	Manufacturing	KSF	4.75	2.51	1.89	528
150	Warehousing	KSF	1.71	5.05	0.34	2,953
254	Assisted Living	KSF	4.19	4.24	0.99	1,012
310	Hotel*	KSF	13.72	14.34	0.96	1,045
320	Motel*	KSF	5.75	25.17	0.23	4,376
520	Elementary School	KSF	19.52	22.50	0.87	1,153
540	Community College	KSF	20.25	14.61	1.39	721
560	Church**	KSF	2.41	5.80	0.42	2,407
565	Day Care	KSF	47.62	21.38	2.23	449
610	Hospital	KSF	10.77	3.77	2.86	350
710	General Office	KSF	10.84	3.33	3.26	307
760	Research & Dev Center	KSF	11.08	3.37	3.29	304
770	Business Park	KSF	12.44	4.04	3.08	325
820	Commercial/Retail	KSF	37.01	17.42	2.12	471

* The hotel and motel weekday trips per KSF is a calculation based on ITE trips per room and the existing average SF per room.

** Church land uses are based on the Synagogue ITE data since ITE does not gather employee data for churches.

Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition, weekday trips.

PROPOSED LAND USE ASSUMPTIONS

Utilizing the information above, the ten-year projections of households, population and non-residential building square footage can be found in **Table 2.10**. The City anticipates that while development potential suggests an average of 2,771 new units per year, economic factors may cause a slowing of this growth. As such, the LUA suggests a population increase of 53,026 people, with 17,200 new units. This analysis assumes a corresponding increase in non-residential development based on the current ratios of building SF per resident.



TABLE 2.10: IIP GROWTH PROJECTIONS

Type	Units/SF	2022	2023	2024	2025	2026	2027
		Current	Year 1	Year 2	Year 3	Year 4	Year 5
Population		82,209	89,032	95,841	100,782	105,719	110,651
Jobs		7,029	7,613	8,195	8,617	9,040	9,461
Single Family	Units	24,661	26,155	27,627	28,681	29,727	30,765
Multifamily Units	Units	315	1,021	1,749	2,295	2,849	3,411
Residential Total	Units	24,976	27,176	29,376	30,976	32,576	34,176
Distribution / Warehousing	SF	392,504	425,078	457,586	481,180	504,750	528,296
Industrial		203,792	219,377	230,688	241,988	253,277	203,792
Commercial		1,677,277	1,805,550	1,898,646	1,991,649	2,084,560	1,677,277
Institutional		769,165	827,988	870,680	913,330	955,936	769,165
Office / Other		237,633	255,806	268,996	282,172	295,336	237,633
Residential Total	Units	Increase in Units	2,200	2,200	1,600	1,600	1,600
Distribution / Warehousing	SF		32,573	32,508	23,594	23,570	23,547
Industrial			15,616	15,585	11,311	11,300	11,289
Commercial			128,528	128,272	93,096	93,003	92,910
Institutional			58,940	58,823	42,692	42,649	42,607
Office / Other			18,210	18,173	13,190	13,176	13,163

TABLE 2.10: IIP GROWTH PROJECTIONS (CONT.)

TYPE	UNITS/SF	2028	2029	2030	2031	2032	10 Yr. NEW GROWTH
		YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	
Population		115,578	120,499	125,416	130,328	135,235	53,026
Jobs		9,883	10,303	10,724	11,144	11,563	4,534
Single Family	Units	31,795	32,817	33,831	34,837	35,835	11,174
Multifamily Units	Units	3,981	4,559	5,145	5,739	6,341	6,026
Residential Total	Units	35,776	37,376	38,976	40,576	42,176	17,200
Distribution / Warehousing	SF	551,819	575,319	598,794	622,247	645,675	253,171
Industrial		264,555	275,821	287,075	298,319	309,551	121,376
Commercial		2,177,377	2,270,101	2,362,731	2,455,269	2,547,714	998,965
Institutional		998,500	1,041,022	1,083,500	1,125,936	1,168,329	458,105
Office / Other		308,486	321,623	334,747	347,857	360,954	141,531
Residential Total	Units	1,600	1,600	1,600	1,600	1,600	17,200
Distribution / Warehousing	SF	23,523	23,499	23,476	23,452	23,429	253,171
Industrial		11,277	11,266	11,255	11,243	11,232	121,376
Commercial		92,817	92,724	92,631	92,538	92,445	998,965
Institutional		42,564	42,521	42,479	42,436	42,393	458,105
Office / Other		13,150	13,137	13,124	13,111	13,097	141,531



SECTION 3: GENERAL INFRASTRUCTURE IMPROVEMENT PLAN REQUIREMENTS

An IIP is required for each proposed development fee and designated service area. These plans should include the duration of the projections, a description of the necessary public services included in the infrastructure improvements plan, and a map of the service area. For each service, the IIP and DIF analysis includes the following information, in accordance with the Enabling Legislation:

INFRASTRUCTURE IMPROVEMENT PLAN PROCESS	
1. Demand and Service Area Analysis	The demand analysis identifies 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. The projected demand for necessary public services or facility expansions required by new service units for a period should not exceed ten years. This section also identifies the service area.
2. Existing Facilities and LOS Analysis	This step identifies the existing facilities evaluated in the IIP and DIF. In addition, a level of service analysis ("LOS") should be completed. The LOS analysis should establish 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. This should be summarized in a table.
3. Excess Capacity Analysis	The excess capacity analysis identifies the total capacity, the level of current usage, and commitments for usage of capacity of the existing necessary public services.
4. Future Facilities Analysis	The future facilities analysis provides the capital plan necessary for both existing and future development. The Enabling Legislation divides the future facility analysis into the following two categories: Cost to Existing: 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. Cost to Future: 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.
5. Revenue Forecast	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.

This information can then be used to determine the appropriate DIF for each service. The sections that follow provide the required IIP and corresponding DIF calculation for the following necessary public services:

- Parks and Recreational Facilities
- Library Facilities
- Police Facilities
- Fire Facilities
- Street Facilities



SECTION 4: PARKS AND RECREATION INFRASTRUCTURE IMPROVEMENT PLAN

Parks development impact fees are typically calculated using a growth driven approach. This method calculates a level of service based on existing conditions within the service area, with the intent to perpetuate that level of service into the future. Impact fees are then calculated to provide the revenue necessary for the entity to provide sufficient facilities to future development as growth occurs within the community. This chapter will establish a LOS based on the existing park facilities and amenities provided to development within the service area.

QUALIFIED FACILITIES

Arizona's Enabling Legislation defines necessary public parks and recreation services as the following:

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

DEMAND & SERVICE AREA ANALYSIS

The demand units for the parks and recreation IIP include population, households, and non-residential building square footage. The service area includes all areas in the City.

Utilizing the information above, the ten-year projections of households, population, and non-residential building square footage can be found below. The City anticipates that, while development potential suggests an average of 2,771 new units per year, economic factors will cause a slowing of this growth. As such, the LUA suggest a population increase of 53,026 people, with 17,200 new units. This analysis assumes a corresponding increase in non-residential development based on the current ratios of building SF per resident.

TABLE 4.1: IIP GROWTH PROJECTIONS

TYPE	UNITS/SF	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Population		82,209	89,032	95,841	100,782	105,719	110,651
Jobs		7,029	7,613	8,195	8,617	9,040	9,461
Single Family	Units	24,661	26,155	27,627	28,681	29,727	30,765
Multifamily Units	Units	315	1,021	1,749	2,295	2,849	3,411
Residential Total	Units	24,976	27,176	29,376	30,976	32,576	34,176

TABLE 4.1: IIP GROWTH PROJECTIONS (CONT.)

TYPE	UNITS/SF	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 Yr. NEW GROWTH
Population		115,578	120,499	125,416	130,328	135,235	53,026
Jobs		9,883	10,303	10,724	11,144	11,563	4,534
Single Family	Units	31,795	32,817	33,831	34,837	35,835	11,174
Multifamily Units	Units	3,981	4,559	5,145	5,739	6,341	6,026
Residential Total	Units	35,776	37,376	38,976	40,576	42,176	17,200

The existing population, along with an estimate of non-residential demand, is the basis for the parks and recreation IIP. To determine non-residential proportionality, this analysis considers demand hours from workers and residences, as found in **Table 4.2**.



TABLE 4.2: CALCULATION TO ALLOCATION OF TRAILS, BIKE LANES, AND OTHER PATHWAYS

RESIDENTIAL	DEMAND UNITS	DEMAND HOURS	DAYS PER WEEK	TOTAL WEEKS	1K PERSON HOURS
Residents Not Working	31,427	24	7	52	274,546
Workers Living in City	25,648	16	7	52	149,374
Residential					423,920
Non-Residential	Demand Units	Demand Hours	DAYS PER WEEK	TOTAL WEEKS	Person Hours
Inflow Employment	1,732	8	4	50	2,771
Non-Residential					2,771
Combined Total					426,691
% Residential					99%
% Non-Residential					1%

Note: 2021 ACS Data represents a five-year average from 2017-2021. This is compared to 2019 employment data.

Source: US Census 2021 American Community Survey 5-Year Estimates, US Census 2019 On the Map Data

EXISTING FACILITIES & LOS ANALYSIS

The City's existing facilities are comprised of park land and amenities, as well as recreation buildings. The park facilities are shown in **Table 4.3**. A tabulation of amenities is shown in **Table 4.4**. The City's existing recreation facilities (buildings) are shown in **Table 4.5**.

TABLE 4.3: EXISTING PARK FACILITIES

AREA	TYPE	TOTAL ACRES	LESS DETENTION	FINAL ACRES	% DIF ELIGIBLE	DIF ELIGIBLE	LAND VALUE	TOTAL IMPROVEMENT VALUE
Copper Sky Park	Regional	92.00	3.00	89.00	0.00%	-	-	-
Pacana Park	Community	24.00	0.00	24.00	100.00%	24.00	\$1,440,000	\$11,619,495
Lake View Park	Community	8.50	0.00	8.50	100.00%	8.50	\$509,874	\$6,176,566*
Bowlin Road Trail Head	Trail Head	0.10	0.00	0.10	100.00%	0.10	\$6,000	\$75,143
Totals		124.60	3.00	121.60		32.60	\$1,955,874	\$17,871,205

*Based on Actual Construction Cost Bid

TABLE 4.4 EXISTING PARK AMENITIES

AREA	UNIT VALUES	COPPER SKY PARK	PACANA PARK	LAKE VIEW PARK	BOWLIN ROAD TRAIL HEAD	TOTALS
TYPE		REGIONAL	COMMUNITY	COMMUNITY	TRAIL HEAD	
Total Acres		92.00	24.00	8.50	0.10	124.60
Less Detention		3.00	-	-	-	3.00
Less Gifted		-	-	-	-	-
Final Acres		89.00	24.00	8.50	0.10	121.60
% City Owned		100%	100%	100%	100%	
% IFA Eligible		-	100%	100%	100%	
Impact Fee Eligible		-	24.00	8.50	0.10	32.60
Land Value		-	\$1,440,000	\$509,874	\$6,000	
AMENITIES						
Parking Stalls	\$7,105	1,400.00	180.00	100.00	8.00	1,688.00
Landscaping	\$85,000	89.00	24.00	8.50	0.10	121.60
Restrooms (Perm.)	\$511,579	3.00	2.00	1.00	-	6.00
Reservable Pavilions	\$100,000	10.00	2.00	2.00	-	14.00
Medium or Small Pavilions	\$50,000	-	1.00	-	-	1.00
Concessions	\$750,000	1.00	1.00	1.00	-	3.00
Fitness Facility	\$125,000	-	1.00	-	-	1.00
Multi-Purpose Field	\$746,053	8.00	3.00	-	-	11.00
Baseball/Softball Field	\$461,842	4.00	2.00	2.00	-	8.00
Tennis Court	\$71,053	2.00	2.00	-	-	4.00
Pickleball Courts	\$100,000	6.00	2.00	-	-	8.00
Volleyball Courts	\$42,632	2.00	-	-	-	2.00



AREA	UNIT VALUES	COPPER SKY PARK	PACANA PARK	LAKE VIEW PARK	BOWLIN ROAD TRAIL HEAD	TOTALS
Basketball Court	\$120,789	2.00	1.50	-	-	3.50
Playground	\$355,263	2.00	1.00	1.00	-	4.00
Skate/Bike Park	\$250,000	1.00	-	-	-	1.00
Splash Pad	\$500,000	1.00	-	-	-	1.00
Picnic Tables	\$2,000	36.00	12.00	-	-	48.00
Barbeque Grills	\$250	12.00	2.00	-	-	14.00
Benches	\$2,500	18.00	12.00	-	-	30.00
Bike Racks	\$1,279	3.00	-	-	-	3.00
Drinking Fountains	\$8,000	6.00	4.00	-	-	10.00
Swing Sets	\$17,000	2.00	1.00	-	-	3.00
Bike Racks	\$500	-	-	-	-	-
Bleachers	\$2,000	16.00	1.00	-	-	17.00
Frisbee Golf Tee	\$7,105	18.00	-	-	-	18.00
Dog Parks	\$30,000	1.00	1.00	-	-	2.00
Walking Path (L.F)	\$30	15,000.00	4,000.00	3,000.00	-	22,000.00
Paved Trail (L.F)	\$85	5,000.00	4,000.00	-	-	9,000.00
Unpaved Trail (L.F)	\$15	10,000.00	-	-	-	10,000.00

TABLE 4.5: EXISTING RECREATION AND OTHER FACILITIES

FACILITIES	COPPER SKY MULTIGENERATIONAL	AQUATIC CENTER	COMMUNITY CENTER
TYPE	MULTI-GEN	POOL	ACTIVITY CENTER
SF	50,000	6,000	8,000
% City Owned	100.00%	100.00%	100.00%
% DIF Eligible	0.00%	0.00%	0.00%
AMENITIES			
Restrooms	10.00	8.00	2.00
Locker Room	2.00	2.00	-
Storage Room Large	2.00	2.00	1.00
Storage Room Small	6.00		2.00
Membership Desk	1.00	-	1.00
Sales Desk	1.00	-	-
Fitness Desk	1.00	-	-
MPR	2.00	-	4.00
MPR SF	1,381.00	125.00	7,200.00
MPR Aux SF	1,399.00	-	-
Office Space SF	700.00	-	500.00
Fitness SF	12,000.00	-	-
Track SF	EST 5,400	-	-
GRP X Rooms	2.00	-	-
GRP X A SF	2,816.00	-	-
GRP X B SF	1,626.00	-	-
Pickleball	6.00	-	-
Volleyball	2.00	-	-
Basketball	2.00	-	-
Basketball SF	13,182.00	-	-
Activity Room SF	1,341.00	-	-
Child Watch SF	1,147.00	-	-
Concessions	1.00	-	-
Kitchen	1.00	-	0.50
Drinking Fountains	3.00	-	2.00
Water Fill Stations	3.00	-	-
Bleachers	4.00	-	-
Bike Rack	1.00	-	-
Slide	-	1.00	-



FACILITIES	COPPER SKY MULTIGENERATIONAL	AQUATIC CENTER	COMMUNITY CENTER
TYPE	MULTI-GEN	POOL	ACTIVITY CENTER
Rockwall	-	1.00	-
Splash Pad	-	1.00	-
Competition Pool	-	1.00	-
Leisure Pool	-	1.00	-
Pool Deck SF	-	14,000.00	-
Pool Boilers	-	1.00	-
Pump Filters	-	4.00	-

It is important to note that the land, amenities, and facilities associated with Copper Sky Park (the multigenerational facility, aquatic center, and community center) are excluded from this analysis when determining development fees. This is based on the exclusions defined in the Enabling Legislation as they relate to aquatic centers and community centers (greater than three thousand square feet in floor area), and to avoid a potential double payment from new development. The Copper Sky facilities were funded by a general obligation bond to be repaid by a secondary property tax from current and future development. Thus, assessing an additional impact fee to new development would result in new development paying a disproportionate allocation.

LEVEL OF SERVICE ANALYSIS

From the existing facilities inventory, this analysis can determine the existing LOS. This section calculates the level of service based on existing assets within the service area, with the intent to perpetuate that level of service into the future, on a per unit basis. The total per unit is shown in **Table 4.6**. The LOS is also calculated on a per acre basis in **Table 4.7**.

TABLE 4.6: EXISTING LOS PER UNIT

PARK TYPE	UNITS	UNIT DESCRIPTION	LOS ALLOCATION	TOTAL DIF PARK ACRES	PER 1,000 UNIT	EST. LAND VALUE	PER UNIT	EST. IMPROV. VALUE	PER UNIT	TOTAL PER UNIT
Residential LOS	82,209	Population	99%	32.39	0.39	\$1,943,171	\$24	\$17,755,138	\$216	\$240
Non-Residential LOS	7,029	Jobs	1%	0.21	0.03	\$12,703	\$2	\$116,067	\$17	\$18
Total			100%	32.60		\$1,955,874		\$17,871,205		

TABLE 4.7: EXISTING LOS PER ACRE

PARK TYPE	LOS ALLOCATION	TOTAL PARK ACRES	EST. LAND VALUE	LAND VALUE PER ACRE	EST. IMPROV. VALUE	IMP. VALUE PER ACRE	TOTAL VALUE PER ACRE
Residential LOS	99%	32.39	\$1,943,171	\$60,000	\$17,755,138	\$548,232	\$608,232
Non-Residential LOS	1%	0.21	\$12,703	\$60,000	\$116,067	\$548,232	\$608,232

EXCESS CAPACITY ANALYSIS

Park and recreation development impact fees are typically calculated using a growth driven approach. This method calculates a level of service based on existing conditions within the service area, with the intent to perpetuate that level of service into the future. Impact fees are then calculated to provide the revenue necessary for the entity to provide sufficient facilities to future development to maintain the LOS. Based on this approach, there is no excess capacity within the system as it relates to traditional park space and amenities.

Recreation facilities are typically designed and oversized to serve a greater population base. As a result, there may be excess capacity related to these facilities. However, as described above, the land, amenities, and facilities associated with Copper Sky Park (the multigenerational facility, aquatic center, and community center) are excluded from this analysis when determining development fees. Thus, no excess capacity is calculated for these facilities.

FUTURE FACILITIES ANALYSIS

Future planning for parks is an ongoing process based on the changes in population and community preference. The City will purchase and improve parks to maintain the LOS defined in this document. Actual future improvements will be



determined as development occurs and the opportunity to acquire and improve park land arises. Impact fees will only be assessed to maintain the existing LOS.

Table 4.8 illustrates the new investment needed to perpetuate the existing LOS for residential and non-residential new development. **Table 4.8** further illustrates the estimated demand growth during the planning horizon in the service area. Actual future improvements will be determined as development occurs and the opportunity to acquire and improve park land arises. It is important to note that fees can be used for public facilities that have a useful life of three or more years that are owned or operated on behalf of the City.

TABLE 4.8: NEW INVESTMENT NEEDED TO MAINTAIN CURRENT LOS

	NEW UNITS	UNIT DESCRIPTION	LOS ALLOCATION	PER 1,000 UNIT	ACRES/MILES NEEDED	TOTAL VALUE PER ACRE/MILE	NEW VALUE	BASE COST PER UNIT
Residential LOS	53,026	Population	99%	0.38	20.89	\$608,232	\$12,705,684	\$239.61
Non-Residential LOS	4,534	Jobs	1%	0.03	0.14	\$608,232	\$83,058	\$18.32
Total			100%		21.03		\$12,788,742	

Future investment will be used to acquire additional parks and recreation land, fund new park improvements and amenities, or make improvements to existing park facilities to add capacity to the system. The following types of improvements may be considered:

- ☞ Land Acquisition
- ☞ Sod and Irrigation Improvements
- ☞ Pavilions
- ☞ Restrooms and other Parks and Recreation Buildings
- ☞ Picnic Tables
- ☞ Playgrounds
- ☞ Trailways, Walkways, and Other Pathways
- ☞ Bikeways
- ☞ Volleyball Courts
- ☞ Tennis Courts
- ☞ Basketball Courts
- ☞ Pickleball Courts
- ☞ Other Recreational Courts and Facilities
- ☞ Baseball/Softball Field Facilities
- ☞ Multi-Purpose Fields
- ☞ Field Lighting
- ☞ Concession/ Buildings
- ☞ Parking
- ☞ Skate Parks
- ☞ Dog Parks
- ☞ Other Park and Recreation Amenities

Additionally, the City has identified the following projects as necessary in the near term:

TABLE 4.9: IDENTIFIED CAPITAL PLAN

PROJECT NAME	PROJECT TOTAL COST BY FUNDING SOURCE
Contingency	\$655,423
Development Impact Fee Study	\$6,388
Dog Park	\$255,010
Heritage Park Development	\$1,846,677
Lakes Park Amenities	\$750,000
Lakes Park	\$5,098,669
Multi-Use Trail Master Plan	\$148,000
Parks Civic Center Park	\$4,000,000
Trails Development	\$600,000
Trails Development	\$60,000
Total	\$13,420,167

Table 4.9 illustrates the City's estimated cost to expand park facilities, with a total estimated investment of over \$13.4M. The City's provided level of investment would allow for an investment of over \$12.7M (**Table 4.8**). In order to achieve the identified capital plan, alternative funding mechanisms will need to be identified.

DEVELOPMENT FEE CALCULATION

The calculation of the DIF relies upon the information contained in this analysis. The timing of construction for growth-related park facilities will depend on the rate of development and the availability of funding. For purposes of this analysis, a specific construction schedule is not required.



The construction of park facilities can lag development without impeding continued development activity. This analysis assumes that construction of needed park facilities will proceed on a pay-as-you-go basis.

The calculation of the park impact fee is based on the growth-driven approach, which is based on the increase, or **growth**, in demand. The growth-driven methodology utilizes the existing LOS and perpetuates that LOS into the future. Impact fees are then calculated to provide sufficient funds for the entity to expand or provide additional facilities, as growth occurs within the community. Under this methodology, impact fees are calculated to ensure new development provides sufficient investment to maintain the current LOS standards in the community. This approach is often used for public facilities that are not governed by specific capacity limitations and do not need to be built before development occurs (e.g., park facilities).

PARKS AND RECREATION DIF CALCULATION

Utilizing the estimated land value and improvement value per unit by park type to provide the same level of improvements into the future, with the addition of the professional expense (cost to complete LUA, IIP and DIF), the proposed fee is shown in **TABLE 4.11**.

TABLE 4.10: DIF ALLOCATION OF COST

	NEW UNITS	UNIT DESCRIPTION	LOS ALLOCATION	NEW VALUE	BASE COST PER UNIT	PROF. EXP. PER UNIT	TOTAL PER UNIT
Residential LOS	53,026	Population	99%	\$12,705,684	\$239.61	\$0.18	\$239.79
Non-Residential LOS	4,534	Jobs	1%	\$83,058	\$18.32	\$0.01	\$18.33
Total			100%	\$12,788,742			

TABLE 4.11: PROPOSED PARKS AND RECREATION DIF BY LAND USE TYPE

	DEMAND UNIT	PERSONS PER HH	LOS PER UNIT	PROPOSED FEE	EXISTING FEE	\$ INCREASE/ (DECREASE)
Single Family	HU	3.30	\$240	\$791	\$1,207	(\$416)
Multi-Family	HU	2.68	\$240	\$643	\$814	(\$171)
LAND USE / SIZE	DEMAND UNIT	JOBS PER DEMAND UNIT ⁽¹⁾	LOS PER UNIT	PROPOSED FEE	EXISTING FEE	\$ INCREASE/ (DECREASE)
Light Industrial	KSF	1.57	\$18	\$29	\$63	(\$60)
Industrial Park	KSF	1.16	\$18	\$21	\$87	(\$42)
Manufacturing	KSF	1.89	\$18	\$35	\$18	(\$52)
Warehousing	KSF	0.34	\$18	\$6	\$54	(\$12)
Assisted Living	KSF	0.99	\$18	\$18	\$32	(\$36)
Hotel	KSF	0.96	\$18	\$18	\$7	NA**
Motel	KSF	0.23	\$18	\$4	\$63	NA**
Church*	KSF	0.42	\$18	\$8	\$36	(\$28)
Day Care	KSF	2.23	\$18	\$41	\$122	(\$81)
Hospital	KSF	2.86	\$18	\$52	\$156	(\$104)
General Office (avg size)	KSF	3.26	\$18	\$60	\$163	(\$103)
Research & Dev Center	KSF	3.29	\$18	\$60	\$188	(\$128)
Business Park	KSF	3.08	\$18	\$56	\$169	(\$113)
Commercial/Retail	KSF	2.12	\$18	\$39	\$129	(\$90)

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

(1) Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition



SECTION 5: LIBRARY INFRASTRUCTURE IMPROVEMENT PLAN

QUALIFIED FACILITIES

Arizona's Enabling Legislation defines necessary public library services as the following:

Library facilities of up to ten thousand square feet that provide a direct benefit to development, not including equipment, vehicles, or appurtenances.

DEMAND & SERVICE AREA ANALYSIS

The demand units for the library IIP includes population, households, and non-residential building square footage. The service area includes all areas in the City.

Utilizing the information above, the ten-year projections of households, population, and non-residential building square footage can be found below. The City anticipates that, while development potential suggests an average of 2,771 new units per year, economic factors will cause a slowing of this growth. As such, the LUA suggests a population increase of 53,026 people, with 17,200 new units. This analysis assumes a corresponding increase in non-residential development based on the current ratios of building SF per resident.

TABLE 5.1: IIP GROWTH PROJECTIONS

TYPE	UNITS/SF	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Population		82,209	89,032	95,841	100,782	105,719	110,651
Jobs		7,029	7,613	8,195	8,617	9,040	9,461
Single Family	Units	24,661	26,155	27,627	28,681	29,727	30,765
Multifamily Units	Units	315	1,021	1,749	2,295	2,849	3,411
Residential Total	Units	24,976	27,176	29,376	30,976	32,576	34,176

TABLE 5.1: IIP GROWTH PROJECTIONS (CONT.)

TYPE	UNITS/SF	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 YR. NEW GROWTH
Population		115,578	120,499	125,416	130,328	135,235	53,026
Jobs		9,883	10,303	10,724	11,144	11,563	4,534
Single Family	Units	31,795	32,817	33,831	34,837	35,835	11,174
Multifamily Units	Units	3,981	4,559	5,145	5,739	6,341	6,026
Residential Total	Units	35,776	37,376	38,976	40,576	42,176	17,200

The existing population, along with an estimate of non-residential demand is the basis for library IIP. To determine non-residential proportionality, this analysis considers demand hours from workers and residences, as found in **Table 5.2**.

TABLE 5.2: CALCULATION TO ALLOCATION OF TRAILS, BIKE LANES, AND OTHER PATHWAYS

RESIDENTIAL	DEMAND UNITS	DEMAND HOURS	DAYS PER WEEK	TOTAL WEEKS	1K PERSON HOURS
Residents Not Working	31,427	24	7	52	274,546
Workers Living in City	25,648	16	7	52	149,374
Residential					423,920
Non-Residential	Demand Units	Demand Hours	DAYS PER WEEK	TOTAL WEEKS	Person Hours
Inflow Employment	1,732	8	4	50	2,771
Non-Residential					2,771
Combined Total					426,691
% Residential					99%
% Non-Residential					1%

Note: 2021 ACS Data represents a five-year average from 2017-2021. This is compared to 2019 employment data.

Source: US Census 2021 American Community Survey 5-Year Estimates, US Census 2019 On the Map Data



EXISTING FACILITIES & LOS ANALYSIS

The Maricopa Public Library provides full library services, materials in all formats, programming for all ages, and public access to computers. The City's existing facilities consist of the main library, a cultural center, and a postal office, for a total of 27,196 square feet of building space. The original cost of these facilities totaled \$12M. The cultural center and post office are not DIF eligible facilities. The library encompasses 18,000 SF of the total building square footage, or \$7,942,344 of the value. The library supports 140,000 annual visitors, 31,347 card holders, 1,292 annual programs and 30 employees. The Enabling Legislation allows for the inclusion of 10,000 SF of library space.

TABLE 5.3: EXISTING LIBRARY FACILITIES

LIBRARY	BUILDING SF	TOTAL COST	LIBRARY SF	DISTRIBUTION OF SF	COST TO LIBRARY	COST PER SQ. FT.	ELIGIBLE
Main Library	27,196	\$12,000,000	18,000	66%	\$7,942,344	\$441	Yes/Portion
Cultural Center			9,000	33%	\$3,971,172	\$441	No
Contract Postal			196	1%	\$86,483	\$441	No

LEVEL OF SERVICE ANALYSIS

The LOS for the library system is expressed as SF per unit (population and jobs). Based on the proportionate allocation found in **Table 5.2**, a LOS for residential and non-residential development is calculated in **Table 5.4**. **Table 5.5** identifies the new facilities needed to maintain the existing LOS.

TABLE 5.4: LIBRARY LOS

	UNITS	UNIT DESCRIPTION	LOS ALLOCATION	TOTAL LIBRARY SF	PER UNIT	ELIGIBLE SF	PER UNIT
Residential LOS	82,209	Population	99%	17,883	0.22	9,935	0.12
Non-Residential LOS	7,029	Jobs	1%	117	0.02	65	0.01
Total			100%	18,000		10,000	

TABLE 5.5: NEW FACILITIES TO MAINTAIN LOS

	NEW UNITS	UNIT DESCRIPTION	LOS ALLOCATION	PER UNIT	SF NEEDED
Residential LOS	53,026	Population	99%	0.12	6,408
Non-Residential LOS	4,534	Jobs	1%	0.01	42
Total			100%		6,450

EXCESS CAPACITY ANALYSIS

Existing library facilities are considered at capacity and future facilities are needed to maintain the SF LOS needed for new development. Therefore, no excess capacity is included in this analysis.

FUTURE FACILITIES ANALYSIS

Table 5.6 illustrates the proposed new facilities to expand the City's library system. The investment needed to perpetuate the existing LOS for residential and non-residential new development is found in **Table 5.7**. It is important to note that fees can be used for public facilities that have a useful life of three or more years that are owned or operated on behalf of the City.

TABLE 5.6: PROPOSED NEW LIBRARY FACILITIES

	SQUARE FOOTAGE	BASE COST*	CONST. YEAR	CONST. YEAR COST	DIF ELIGIBLE %	DIF ELIGIBLE SF	DIF ELIGIBLE COST
New Facility	13,200	\$7,260,000	2025	\$8,166,513	48.9%	6,450	\$3,990,455

*Future facilities based on a construction cost per SF of \$550. Cost are inflated to construction year based on four percent annual construction inflation.

TABLE 5.7: PROPOSED ALLOCATION OF FACILITIES TO NEW DEVELOPMENT BY TYPE

	SQUARE FOOTAGE	EST. COST	CONST. YEAR	CONST. YEAR COST	DIF ELIGIBLE %	DIF ELIGIBLE SF	DIF ELIGIBLE COST	DEMAND SERVED	UNIT OF DEMAND
Residential	6,408	\$3,524,536	2025	\$3,964,624	100.0%	6,408	\$3,964,539	53,026	Population
Non-Residential	42	\$23,040	2025	\$25,917	100.0%	42	\$25,917	4,534	Jobs



DEVELOPMENT FEE CALCULATION

The calculation of the DIF relies upon the information contained in this analysis. The library DIF is based on the plan-based methodology. Using this approach, fees are calculated based on a defined set of capital costs specified for future development. The improvements are identified in a capital plan or IIP as growth-related system improvements. The City's existing facilities are proportionately allocated to the new development, providing an equitable distribution of the existing and proposed facilities that will serve development. The total cost is divided by the total demand units the improvements are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Fees are then calculated based on many variables centered on proportionality and level of service.

LIBRARY DIF CALCULATION

Utilizing the proposed future facilities, with the addition of the professional expense (cost to complete the LUA, IIP, and DIF), the proposed fee is shown in **TABLE 5.9**.

TABLE 5.8: DIF ALLOCATION OF COST

	DIF ELIGIBLE SF	DIF ELIGIBLE COST	DEMAND SERVED	UNIT OF DEMAND	BASE COST PER UNIT	PROFESSIONAL EXPENSE	PER UNIT	TOTAL PER UNIT
Residential	6,408	\$3,964,539	53,026	Population	\$74.77	\$14,737	\$0.28	\$75.04
Non-Residential	42	\$25,917	4,534	Jobs	\$5.72	\$96	\$0.02	\$5.74

TABLE 5.9: PROPOSED LIBRARY DIF BY LAND USE TYPE

	DEMAND UNIT	PERSONS PER HH	LOS PER UNIT	PROPOSED FEE	EXISTING FEE	\$ INCREASE/ (DECREASE)
Single Family	HU	3.30	\$75	\$248	\$131	\$117
Multi-Family	HU	2.68	\$75	\$201	\$88	\$113
LAND USE / SIZE	DEMAND UNIT	JOBS PER DEMAND UNIT ⁽¹⁾	LOS PER UNIT	PROPOSED FEE	EXISTING FEE	\$ INCREASE/ (DECREASE)
Light Industrial	KSF	1.57	\$6	\$9	\$9	\$0
Industrial Park	KSF	1.16	\$6	\$7	\$6	\$1
Manufacturing	KSF	1.89	\$6	\$11	\$9	\$2
Warehousing	KSF	0.34	\$6	\$2	\$2	(\$0)
Assisted Living	KSF	0.99	\$6	\$6	\$5	\$1
Hotel	KSF	0.96	\$6	\$5	\$3	NA**
Motel	KSF	0.23	\$6	\$1	\$0	NA**
Church*	KSF	0.42	\$6	\$2	\$4	(\$2)
Day Care	KSF	2.23	\$6	\$13	\$13	(\$0)
Hospital	KSF	2.86	\$6	\$16	\$16	\$0
General Office (avg size)	KSF	3.26	\$6	\$19	\$17	\$2
Research & Dev Center	KSF	3.29	\$6	\$19	\$20	(\$1)
Business Park	KSF	3.08	\$6	\$18	\$18	(\$0)
Commercial/Retail	KSF	2.12	\$6	\$12	\$14	(\$2)

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

1. Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition



SECTION 6: POLICE INFRASTRUCTURE IMPROVEMENT PLAN

QUALIFIED FACILITIES

Arizona's Enabling Legislation defines necessary public police services as the following:

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

DEMAND & SERVICE AREA ANALYSIS

This element focuses on the specific demand unit related to police services – calls for service. The demand analysis identifies the existing demand on public facilities and the future demand generated from new development. The demand analysis also provides projected annual growth in demand units over the planning horizon of the IIP. Call data used to determine the average calls for residential and non-residential development is from fiscal year ("FY") 2019-2021. The service area includes all areas in the City.

Table 6.1 illustrates the call ratio per developed unit. The call ratio analysis establishes the existing LOS for residential and non-residential land uses. A review of existing businesses in the City shows a mix of business types. This suggests the call data is based on a variety of businesses that reflect a cross-section of the types of businesses that will likely continue to develop in the City.

TABLE 6.1: HISTORIC POLICE CALL DATA BY LAND USE CATEGORY

CALL ANALYSIS	MEASUREMENT	DEVELOPED UNITS OR KSF	HISTORIC CALLS	EXISTING LOS (CALLS PER DEVELOPED UNIT)
RESIDENTIAL				
Single Family	per Unit	23,079	16,480	0.71
Multifamily	per Unit	315	202	0.64
Subtotal Residential:		23,394	16,683	0.71
NON-RESIDENTIAL				
Industrial / Distribution / Warehousing	per KSF	544	50	0.09
Commercial	per KSF	1,450	3,106	2.14
Institutional	per KSF	665	1,062	1.60
Office / Other	per KSF	205	34	0.17
Subtotal Non-Residential:		2,865	4,252	
Other Calls (Traffic, Non-Attributable)			2,325	
Total			23,260	
Total Included in IIP Calculation			20,934	

In order to determine the demand placed upon existing public facilities by new development, this analysis projects the additional call volume that undeveloped land uses will generate. An in-depth analysis has been prepared to determine the number of developed units or acres of land in each zoning category, and the number of calls per unit or acre of land has been assigned to each land use category. **Table 6.2** illustrates the projected future police calls based upon the number of historic calls by land use category.



TABLE 6.2: POLICE CALL PROJECTIONS

CALL ANALYSIS	MEASUREMENT	UNDEVELOPED UNITS OR KSF	IIP ADDITIONAL CALLS	TOTAL COMBINED CALLS*
RESIDENTIAL				
Single Family	per Unit	11,174	7,934	24,414
Multifamily	per Unit	6,026	3,857	4,059
Subtotal Residential:		17,200	11,791	28,474
NON-RESIDENTIAL				
Industrial / Distribution / Warehousing	per KSF	375	34	84
Commercial	per KSF	999	2,138	5,244
Institutional	per KSF	458	733	1,795
Office / Other	per KSF	142	24	58
Subtotal Non-Residential:		1,973	2,929	7,181
Other Calls (Traffic, Non-Attributable)			1,635	3,960
Total			16,355	39,615
Total Included in IIP Calculation			14,720	35,654

*Based on the sum of "Historic Calls" as shown in Table 6.1 and the "IIP Additional Calls" in Table 6.2.

IIP Additional Calls are calculated based on the Existing LOS as shown in Table 6.1, multiplied by the Undeveloped Units.

EXISTING FACILITIES & LOS ANALYSIS

In order to quantify the demands placed upon existing public facilities by new development activity, the IIP provides an inventory of the City's existing facilities. The inventory of existing facilities is important to properly determine the excess capacity of existing facilities and the utilization of excess capacity by new development. As shown in Table 6.3, there is a total of 19,300 building square feet attributed to police, with an estimated value of nearly \$12M. In addition, the City has 57 vehicles or pieces of equipment dedicated to police services.

TABLE 6.3: EXISTING POLICE FACILITIES

CURRENT POLICE	SF	VALUE PER SF	TOTAL COST
Police Headquarters	11,300	\$382	\$4,319,574
Communications, Property & Evidence	8,000	\$959	\$7,673,684
Total Existing SF	19,300	\$621	\$11,993,258

TABLE 6.4: EXISTING POLICE EQUIPMENT

EQUIPMENT	QUANTITY	VALUE PER UNIT	TOTAL COST
Fully Marketed Police Car	35	\$78,158	\$2,735,526
Motorcycle	2	\$44,053	\$88,105
Unmarked Sedans	20	\$44,763	\$895,263
Total	57	\$65,244	\$3,718,895

LEVEL OF SERVICE ANALYSIS

Level of service for police facilities focuses on the specific demand unit related to police services – calls for service. The demand analysis identifies the existing demand on public facilities and the anticipated future demand generated from new development, based on historic trends. The demand analysis considers growth in demand units over the planning horizon of the IIP and ultimate build-out. Call data used to determine the average calls for residential and non-residential development is from FY 2019-2021.

The LOS for purposes of this analysis is calls per development type. Table 6.1 illustrates the existing level of service expressed in calls per development type. Based on the historic LOS, the City anticipates an additional 16,355 annual calls at the end of the IIP planning horizon, with 14,720 attributed to new development.

EXCESS CAPACITY ANALYSIS

Existing police facilities are considered at capacity and future facilities are needed to maintain the SF LOS needed for new development. Therefore, no excess capacity is included in this analysis.



FUTURE FACILITIES ANALYSIS

Future facilities are needed to maintain the SF LOS needed for new development. The following facilities are planned within the IIP planning horizon:

TABLE 6.5: NEW POLICE FACILITIES

FACILITIES	CONST. YEAR	TOTAL SF	BASE COST*	CONST. YEAR COST	% TO POLICE	TOTAL POLICE SF	COST TO POLICE	DIF ELIGIBLE %	TOTAL DIF ELIGIBLE COST
New Facility	2025	13,571	\$8,433,187	\$9,486,188	100%	13,571	\$9,486,188	100.0%	\$9,486,188
Land Acquisition	2024		\$0	\$0	100%	-	\$0	100.0%	\$0
Total		13,571	\$8,433,187	\$9,486,188		13,571	\$9,486,188	100.0%	\$9,486,188

*Future facilities based on a construction cost per SF of \$621. Costs are inflated to construction year based on four percent annual construction inflation.

TABLE 6.6: NEW POLICE EQUIPMENT

FACILITIES	NEW CALLS	CONST. YEAR	NEW VEHICLES	BASE COST	CONST. YEAR COST	% TO POLICE	NEW VEHICLES	COST TO POLICE	DIF ELIGIBLE %	TOTAL DIF ELIGIBLE COST
New Vehicles	1,889	2023	5.14	\$335,573	\$348,996	100%	5	\$348,996	100.0%	\$348,996
New Vehicles	1,888	2024	5.14	\$335,395	\$362,763	100%	5	\$362,763	100.0%	\$362,763
New Vehicles	1,372	2025	3.74	\$243,730	\$274,163	100%	4	\$274,163	100.0%	\$274,163
New Vehicles	1,368	2026	3.72	\$243,019	\$284,298	100%	4	\$284,298	100.0%	\$284,298
New Vehicles	1,370	2027	3.73	\$243,375	\$296,102	100%	4	\$296,102	100.0%	\$296,102
New Vehicles	1,369	2028	3.73	\$243,197	\$307,722	100%	4	\$307,722	100.0%	\$307,722
New Vehicles	1,368	2029	3.72	\$243,019	\$319,797	100%	4	\$319,797	100.0%	\$319,797
New Vehicles	1,366	2030	3.72	\$242,664	\$332,103	100%	4	\$332,103	100.0%	\$332,103
New Vehicles	1,364	2031	3.71	\$242,309	\$344,881	100%	4	\$344,881	100.0%	\$344,881
New Vehicles	1,365	2032	3.72	\$242,486	\$358,939	100%	4	\$358,939	100.0%	\$358,939
Total			40	\$2,614,767	\$3,229,764		40	\$3,229,764	100.0%	\$3,229,764

DEVELOPMENT FEE CALCULATION

The police DIF is based on the plan-based methodology. Using this approach, development fees are calculated based on a defined set of capital costs specified for future development. The improvements are identified in a capital plan or IIP as growth-related system improvements. The City's existing facilities are proportionately allocated to the new development calls for service, providing an equitable distribution of the existing and proposed facilities that will serve development. The total cost is divided by the total demand units the improvements are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Fees are then calculated based on many variables centered on proportionality and level of service.

TABLE 6.7: ESTIMATE OF POLICE COST PER CALL

	DIF ELIGIBLE COST	DEMAND SERVED (FUTURE CALLS)	COST PER CALL
New Facilities	\$9,486,188	14,720	\$644
Equipment	\$3,229,764	14,720	\$219
Professional Expense	\$14,833	14,720	\$1
Total	\$12,730,785		\$864

POLICE DIF CALCULATION

The cost per call is then multiplied by the actual demand unit of measurement, or calls per unit for each development type, as shown in TABLE 6.8. The total cost per call includes the cost per call for facilities, equipment, and professional expenses.



TABLE 6.8: PROPOSED POLICE DIF BY LAND USE TYPE

	DEMAND UNIT	PERSONS PER HH	ADJUSTMENT FACTOR	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Single Family	HU	3.30	0%	\$613	\$496	\$117
Multi-Family (Including Mobile Homes)	HU	2.68	0%	\$553	\$334	\$219
LAND USE / SIZE	DEMAND UNIT	TRIPS PER DEMAND UNIT ⁽¹⁾	ADJUSTMENT FACTOR ⁽²⁾	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Light Industrial	KSF	4.87	100%	\$78	\$242	(\$164)
Industrial Park	KSF	3.37	69%	\$54	\$164	(\$110)
Manufacturing	KSF	4.75	98%	\$76	\$191	(\$115)
Warehousing	KSF	1.71	35%	\$27	\$84	(\$57)
Assisted Living	KSF	4.19	11%	\$209	\$134	\$75
Hotel	KSF	13.72	37%	\$685	\$408	NA**
Motel	KSF	5.75	16%	\$287	\$163	NA**
Church*	KSF	2.41	12%	\$171	\$124	\$47
Day Care	KSF	47.62	129%	\$2,379	\$1,534	\$845
Hospital	KSF	10.77	29%	\$538	\$345	\$193
General Office (avg size)	KSF	10.84	100%	\$147	\$475	(\$328)
Research & Dev Center	KSF	11.08	102%	\$150	\$549	(\$399)
Business Park	KSF	12.44	115%	\$169	\$607	(\$438)
Commercial/Retail	KSF	37.01	100%	\$1,849	\$1,216	\$633

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

1. Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition, weekday trips.

2. Adjustment factor determined as a ratio of trips per demand unit relative to the base demand unit (i.e., general commercial, general office, or light industrial).



SECTION 7: FIRE INFRASTRUCTURE IMPROVEMENT PLAN

QUALIFIED FACILITIES

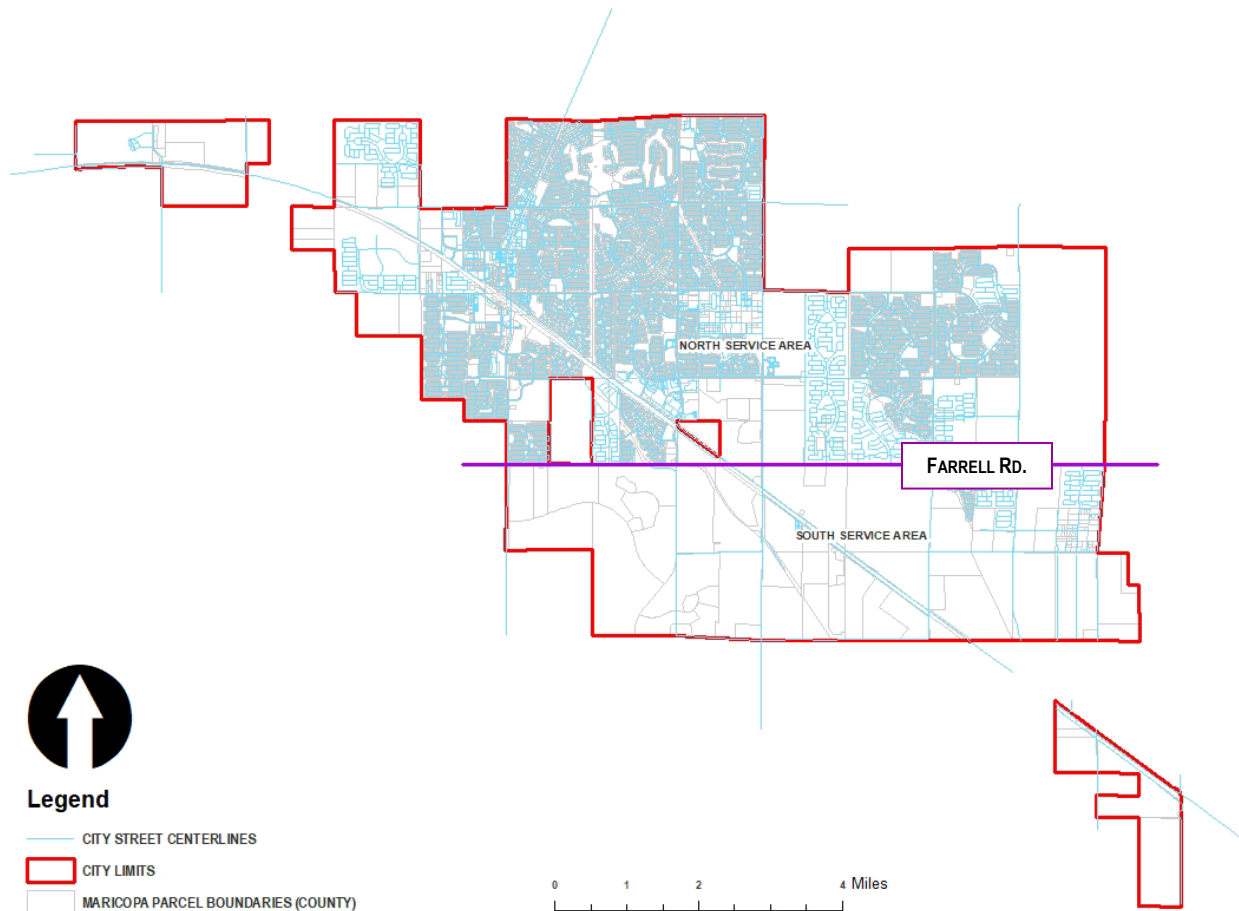
Arizona's Enabling Legislation defines necessary public fire services as the following:

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

DEMAND & SERVICE AREA ANALYSIS

Most of the expected development in the City is projected to occur in the southern portion of the City where there are insufficient facilities to serve new development in the IIP plan. For this reason, the analysis recommends two service areas for Fire Facilities, shown in **Figure 7.1**.

FIGURE 7.1: FIRE SERVICE AREAS



The North Service Area excludes the Rancho El Dorado South subdivision (now known as "Province"), which is subject to its own agreement. The costs of new apparatus will be allocated to both service areas, while the costs of building a new fire station will be allocated to the southern service area only.

The demand element focuses on the specific demand unit related to fire services – calls for service. The demand analysis identifies the existing demand on public facilities and the future demand generated from new development.



The demand analysis also provides projected annual growth in demand units over the planning horizon of the IIP. Call data used to determine the average calls for residential and non-residential development is from FY 2019-2021. The demand analysis evaluates all areas in the City.

Table 7.1 illustrates the call ratio per developed unit. The call ratio analysis establishes the existing LOS for residential and non-residential land uses. A review of existing businesses in the City shows a mix of business types. This suggests the call data is based on a variety of businesses that reflect a cross-section of the types of businesses that will likely continue to develop in the City.

TABLE 7.1: HISTORIC FIRE CALL DATA BY LAND USE CATEGORY

CALL ANALYSIS	MEASUREMENT	DEVELOPED UNITS OR KSF	HISTORIC CALLS	EXISTING LOS (CALLS PER DEVELOPED UNIT)
RESIDENTIAL				
Single Family	per Unit	23,079	4,967	0.22
Multifamily	per Unit	315	91	0.29
Subtotal Residential:		23,394	5,058	0.22
NON-RESIDENTIAL				
Industrial / Distribution / Warehousing	per KSF	544	15	0.03
Commercial	per KSF	1,450	521	0.36
Institutional	per KSF	665	247	0.37
Office / Other	per KSF	205	12	0.06
Subtotal Non-Residential:		2,865	795	
Other Calls (Traffic, Non-Attributable)			274	
Total			6,127	
Total Included in IIP Calculation			5,854	

In order to determine the demand placed upon existing public facilities by new development, this analysis projects the additional call volume that undeveloped land uses will generate. An in-depth analysis has been prepared to determine the number of developed units or acres of land in each zoning category and the number of calls per unit or acre of land has been assigned to each land use category. **Table 7.2** illustrates the projected future fire calls based upon the number of historic calls by land use category.

TABLE 7.2: FIRE CALL PROJECTIONS

CALL ANALYSIS	MEASUREMENT	UNDEVELOPED UNITS OR KSF	IIP ADDITIONAL CALLS	TOTAL COMBINED CALLS*
RESIDENTIAL				
Single Family	per Unit	11,174	2,458	7,425
Multifamily	per Unit	6,026	1,748	1,839
Subtotal Residential:		17,200	4,206	9,264
NON-RESIDENTIAL				
Industrial	per KSF	375	11	26
Commercial	per KSF	999	360	881
Institutional	per KSF	458	169	416
Office / Other	per KSF	142	8	20
Subtotal Non-Residential:		1,973	548	1,343
Other Calls (Traffic, Non-Attributable)			222	496
Total			4,976	11,103
Total Included in IIP Calculation			4,754	10,608

*Based on the sum of "Historic Calls" as shown in **Table 7.1** and the "IIP Additional Calls" in **Table 7.2**

IIP Additional Calls are calculated based on the Existing LOS as shown in **Table 7.1**, multiplied by the Undeveloped Units.

EXISTING FACILITIES & LOS ANALYSIS

In order to quantify the demands placed upon existing public facilities by new development activity, the IIP provides an inventory of the City's existing facilities. The inventory of existing facilities is important to properly determine the excess



capacity of existing facilities and the utilization of excess capacity by new development. As shown in **Table 7.3**, there is a total of 55,595 building square feet attributed to fire, with an estimated value of over \$32M. In addition, the City has 30 vehicles or pieces of equipment dedicated to fire services.

TABLE 7.3: EXISTING FIRE FACILITIES

CURRENT FIRE	SQUARE FEET	COST PER SF	TOTAL COST
Station 571	10,995.00	\$583	\$6,406,034
Station 572	5,848.00	\$583	\$3,407,229
Station 574	7,828.00	\$583	\$4,560,840
Station 575	8,116.00	\$583	\$4,728,638
Administrative	12,000.00	\$583	\$6,991,579
Fire Fleet Area	10,807.50	\$583	\$6,296,791
TOTAL	55,594.50	\$583	\$32,391,111

TABLE 7.4: EXISTING FIRE EQUIPMENT

APPARATUS DESCRIPTION	QUANTITY	UNIT COST	TOTAL COST
Ladder Truck	1.00	\$1,989,474	\$1,989,474
Pumper	3.00	\$2,415,789	\$7,247,368
Ladder Tender	1.00	\$1,421,053	\$1,421,053
Reserve Ladder	1.00	\$1,989,474	\$1,989,474
Reserve Pumper	2.00	\$2,415,789	\$4,831,579
Water Tender	1.00	\$568,421	\$568,421
Type 3 Brush Truck	1.00	\$639,474	\$639,474
Type 6 Brush Truck	1.00	\$305,526	\$305,526
Battalion Vehicle	1.00	\$135,000	\$135,000
Reserve BC	1.00	\$135,000	\$135,000
Chief Vehicle	3.00	\$39,789	\$119,368
Operations Chief Vehicle	1.00	\$72,474	\$72,474
Support Service Vehicle	1.00	\$49,737	\$49,737
Support 571	1.00	\$163,421	\$163,421
Fleet Services Vehicle	1.00	\$184,737	\$184,737
Station Car	3.00	\$39,789	\$119,368
EMS Vehicle	1.00	\$61,105	\$61,105
PUB ED Trailer	1.00	\$99,474	\$99,474
SCBA Trailer	1.00	\$142,105	\$142,105
Miscellaneous Trailers	3.00	\$7,578	\$22,735
6 x 6 Polaris UTV	1.00	\$48,316	\$48,316
TOTAL	30.00	\$678,174	\$20,345,209

LEVEL OF SERVICE ANALYSIS

Level of service for fire facilities focuses on the specific demand unit related to fire services – calls for service. The demand analysis identifies the existing demand on public facilities and the anticipated future demand generated from new development, based on historic trends. The demand analysis considers growth in demand units over the planning horizon of the IIP and ultimate build-out. Call data used to determine the average calls for residential and non-residential development is from FY 2019-2021.

The LOS for purposes of this analysis is calls per development type. **Table 7.1** illustrates the existing level of service expressed in calls per development type. Based on the historic LOS, the City anticipates an additional 4,976 annual calls at the end of the IIP planning horizon, with 4,754 attributed to new development.

EXCESS CAPACITY ANALYSIS

Existing fire facilities are considered at capacity and future facilities are needed to maintain the SF LOS needed for new development. Therefore, no excess capacity is included in this analysis.



FUTURE FACILITIES ANALYSIS

Future facilities are needed to maintain the SF LOS needed for new development. The following facilities are planned within the IIP planning horizon:

TABLE 7.5: NEW FIRE FACILITIES

FACILITIES	CONST. YEAR	TOTAL SF	BASE COST*	CONST. YEAR COST	% TO FIRE	TOTAL FIRE SF	COST TO FIRE	DIF ELIGIBLE %	TOTAL DIF ELIGIBLE COST
New Facility	2025	45,151	\$32,734,475	\$36,821,832	100%	45,151	\$36,821,832	100.0%	\$36,821,832
Land Acquisition	2024		\$0	\$0	100%	-	\$0	100.0%	\$0
Total		45,151	\$32,734,475	\$36,821,832		45,151	\$36,821,832		\$36,821,832

*Future facilities based on a construction cost per SF of \$725, based on construction bids from surrounding communities.

TABLE 7.6: NEW FIRE EQUIPMENT

FACILITIES	NEW CALLS	CONST. YEAR	NEW VEHICLES	BASE COST	CONST. YEAR COST	% TO FIRE	NEW VEHICLES	COST TO FIRE	DIF ELIGIBLE %	TOTAL DIF ELIGIBLE COST
New Vehicles	604	2023	3.10	\$2,099,284	\$2,183,255	100%	3.10	\$2,183,255	100.0%	\$2,183,255
New Vehicles	605	2024	3.10	\$2,102,759	\$2,274,344	100%	3.10	\$2,274,344	100.0%	\$2,274,344
New Vehicles	442	2025	2.27	\$1,536,231	\$1,728,051	100%	2.27	\$1,728,051	100.0%	\$1,728,051
New Vehicles	441	2026	2.26	\$1,532,755	\$1,793,107	100%	2.26	\$1,793,107	100.0%	\$1,793,107
New Vehicles	443	2027	2.27	\$1,539,706	\$1,873,288	100%	2.27	\$1,873,288	100.0%	\$1,873,288
New Vehicles	443	2028	2.27	\$1,539,706	\$1,948,220	100%	2.27	\$1,948,220	100.0%	\$1,948,220
New Vehicles	442	2029	2.27	\$1,536,231	\$2,021,575	100%	2.27	\$2,021,575	100.0%	\$2,021,575
New Vehicles	446	2030	2.29	\$1,550,133	\$2,121,464	100%	2.29	\$2,121,464	100.0%	\$2,121,464
New Vehicles	444	2031	2.28	\$1,543,182	\$2,196,429	100%	2.28	\$2,196,429	100.0%	\$2,196,429
New Vehicles	444	2032	2.28	\$1,543,182	\$2,284,286	100%	2.28	\$2,284,286	100.0%	\$2,284,286
Total			24	\$16,523,169	\$20,424,019		24	\$20,424,019		\$20,424,019

DEVELOPMENT FEE CALCULATION

The fire DIF is based on the plan-based methodology. Using this approach, development fees are calculated based on a defined set of capital costs specified for future development. The improvements are identified in a capital plan or IIP as growth-related system improvements. The City's existing facilities are proportionately allocated to the new development calls for service, providing an equitable distribution of the existing and proposed facilities that will serve development. The total cost is divided by the total demand units the improvements are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Fees are then calculated based on many variables centered on proportionality and level of service.

TABLE 7.7: ESTIMATE OF FIRE COST PER CALL

	DIF ELIGIBLE COST	DEMAND SERVED (FUTURE CALLS)	COST PER CALL
New Facilities	\$36,821,832	4,754	\$7,745
Equipment	\$20,424,019	4,754	\$4,296
Professional Expense	\$14,833	4,754	\$3
Total	\$57,260,684		\$12,044

This analysis recommends two service areas for Fire Facilities, shown in **Figure 7.1**.

NORTH SERVICE AREA FIRE DIF CALCULATION

For the North Service Area, the cost factors include apparatus and professional services. The cost per call is then multiplied by the actual demand unit of measurement, or calls per unit for each development type, as shown in **TABLE 7.8**.



TABLE 7.8: PROPOSED NORTH SERVICE AREA FIRE DIF BY LAND USE TYPE

	DEMAND UNIT	PERSONS PER HH	ADJUSTMENT FACTOR	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Single Family	HU	3.30	0%	\$946	\$674	\$272
Multi-Family (Including Mobile Homes)	HU	2.68	0%	\$1,247	\$454	\$793
LAND USE / SIZE	DEMAND UNIT	TRIPS PER DEMAND UNIT ⁽¹⁾	ADJUSTMENT FACTOR ⁽²⁾	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Light Industrial	KSF	4.87	100%	\$129	\$316	(\$187)
Industrial Park	KSF	3.37	69%	\$89	\$214	(\$125)
Manufacturing	KSF	4.75	98%	\$126	\$250	(\$124)
Warehousing	KSF	1.71	35%	\$45	\$110	(\$65)
Assisted Living	KSF	4.19	11%	\$175	\$176	(\$1)
Hotel	KSF	13.72	37%	\$574	\$532	NA**
Motel	KSF	5.75	16%	\$241	\$213	NA**
Church*	KSF	2.41	12%	\$196	\$162	\$34
Day Care	KSF	47.62	129%	\$1,991	\$2,003	(\$12)
Hospital	KSF	10.77	29%	\$450	\$451	(\$1)
General Office (avg size)	KSF	10.84	100%	\$258	\$620	(\$362)
Research & Dev Center	KSF	11.08	102%	\$264	\$717	(\$453)
Business Park	KSF	12.44	115%	\$296	\$793	(\$497)
Commercial/Retail	KSF	37.01	100%	\$1,548	\$1,588	(\$40)

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

1. Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition, weekday trips.

2. Adjustment factor determined as a ratio of trips per demand unit relative to the base demand unit (i.e., general commercial, general office, or light industrial).

SOUTH SERVICE AREA FIRE DIF CALCULATION

For the South Service Area, the cost factors include future facilities, apparatus, and professional services. The cost per call is then multiplied by the actual demand unit of measurement, or calls per unit for each development type, as shown in TABLE 7.9.

TABLE 7.9: PROPOSED SOUTH SERVICE AREA FIRE DIF BY LAND USE TYPE

	DEMAND UNIT	PERSONS PER HH/	ADJUSTMENT FACTOR	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Single Family	HU	3.30	0%	\$2,650	\$1,444	\$1,206
Multi-Family (Including Mobile Homes)	HU	2.68	0%	\$3,493	\$973	\$2,520
LAND USE / SIZE	DEMAND UNIT	TRIPS PER DEMAND UNIT ⁽¹⁾	ADJUSTMENT FACTOR ⁽²⁾	PROPOSED FEE	EXISTING FEE	\$ CHANGE
Light Industrial	KSF	4.87	100%	\$361	\$693	(\$332)
Industrial Park	KSF	3.37	69%	\$250	\$471	(\$221)
Manufacturing	KSF	4.75	98%	\$352	\$549	(\$197)
Warehousing	KSF	1.71	35%	\$127	\$243	(\$116)
Assisted Living	KSF	4.19	11%	\$491	\$386	\$105
Hotel	KSF	13.72	37%	\$1,607	\$1,169	NA**
Motel	KSF	5.75	16%	\$674	\$468	NA**
Church*	KSF	2.41	12%	\$550	\$357	\$193
Day Care	KSF	47.62	129%	\$5,579	\$4,395	\$1,184
Hospital	KSF	10.77	29%	\$1,262	\$989	\$273
General Office (avg size)	KSF	10.84	100%	\$723	\$1,362	(\$639)
Research & Dev Center	KSF	11.08	102%	\$739	\$1,574	(\$835)
Business Park	KSF	12.44	115%	\$829	\$1,739	(\$910)
Commercial/Retail	KSF	37.01	100%	\$4,336	\$3,484	\$852

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.

1. Source: Institute of Traffic Engineers (ITE) Manual, 11th Edition, weekday trips.

2. Adjustment factor determined as a ratio of trips per demand unit relative to the base demand unit (i.e., general commercial, general office, or light industrial).



SECTION 8: STREET INFRASTRUCTURE IMPROVEMENT PLAN

QUALIFIED FACILITIES

Arizona's Enabling Legislation defines necessary street public services as the following:

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.

DEMAND & SERVICE AREA ANALYSIS

The service area for the streets IIP includes all areas within the current municipal boundaries of the City. This document identifies the necessary future system improvements for the service area that will maintain the existing LOS into the future.

The demand units utilized in this analysis include residential units, non-residential building SF and trip generation statistics. As new development and redevelopment occurs within the City, it generates increased demand on City infrastructure. The system improvements attributed to new developments identified in this study are designed to maintain the existing LOS performance targets for any new or redeveloped property within the City. The LOS service targets are measured against the LOS provided to existing development. The base service unit by land use is found in **Table 8.1**. This is based on average daily trip ("ADT") statistics provided by the Institute of Transportation Engineers ("ITE"), with the appropriate adjustment factors applied, as described below.

ADJUSTMENT FACTORS

Outbound Adjustment: A vehicle trip end represents a vehicle either entering or exiting a development. Thus, all trip counts are adjusted by 50 percent to represent outbound traffic only.

Pass-By Adjustment: The Institute of Transportation Engineers provides a pass-by adjustment for land uses surveyed. This represents an adjustment for land uses that attract vehicles as they pass by on arterial and collector roads, on their way to the primary destination. The pass-by adjustment is reflected as a percentage, reflecting the proportion of trips that are passing by on the way to another destination. Thus, the formula for determining the adjustment factor is expressed as: $ADT * (1-N)$, where N = the pass-by adjustment.

Based on the above adjustments, the base service unit by land use is found in **Table 8.1**.

TABLE 8.1: BASE SERVICE UNITS BY LAND USE TYPE

DEVELOPMENT TYPE	ITE CODE	ADT (WEEKDAY)*	UNIT	OUTBOUND ADJUSTMENT	PASS BY ADJUSTMENT	ADJUSTED TRIPS	TOTAL TRIP ADJUSTMENT	ADJUSTED TRIP RATE
Single-Family	210	9.43	HU	50%	0%	50%	50%	4.72
Multi-Family	220	6.74	HU	50%	0%	50%	50%	3.37
Light Industrial	110	4.87	KSF	50%	0%	50%	50%	2.44
Industrial Park	130	3.37	KSF	50%	0%	50%	50%	1.69
Manufacturing	140	4.75	KSF	50%	0%	50%	50%	2.38
Warehousing	150	1.71	KSF	50%	0%	50%	50%	0.86
Assisted Living	254	4.19	KSF	50%	29%	36%	36%	1.49
Hotel	310	13.72	KSF	50%	29%	36%	36%	4.87
Motel	320	5.75	KSF	50%	29%	36%	36%	2.04
Church	560	2.41	KSF	50%	29%	36%	36%	0.86
Day Care	565	47.62	KSF	50%	44%	28%	28%	13.33
Hospital	610	10.77	KSF	50%	29%	36%	36%	3.82
General Office	710	10.84	KSF	50%	0%	50%	50%	5.42
Research & Dev Center	760	11.08	KSF	50%	0%	50%	50%	5.54



DEVELOPMENT TYPE	ITE CODE	ADT (WEEKDAY)*	UNIT	OUTBOUND ADJUSTMENT	PASS BY ADJUSTMENT	ADJUSTED TRIPS	TOTAL TRIP ADJUSTMENT	ADJUSTED TRIP RATE
Business Park	770	12.44	KSF	50%	0%	50%	50%	6.22
Commercial / Retail	820	37.01	KSF	50%	29%	36%	36%	13.14

*Trip Generation, Institute of Transportation Engineers (ITE), 11th Edition, weekday trips.

Note: List is not all-inclusive. For additional Land Uses, see the ITE Manual.

The above base demand units are then applied to the IIP demand units as shown in **Table 8.2 – Table 8.3**.

TABLE 8.2: IIP GROWTH PROJECTIONS

TYPE	UNITS/SF	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Population		82,209	89,032	95,841	100,782	105,719	110,651
Single Family	Units	24,661	26,155	27,627	28,681	29,727	30,765
Multifamily Units	Units	315	1,021	1,749	2,295	2,849	3,411
Residential Total	Units	24,976	27,176	29,376	30,976	32,576	34,176
Distribution / Warehousing	SF	392,504	425,078	457,586	481,180	504,750	528,296
Industrial		188,175	203,792	219,377	230,688	241,988	253,277
Commercial		1,548,749	1,677,277	1,805,550	1,898,646	1,991,649	2,084,560
Institutional		710,225	769,165	827,988	870,680	913,330	955,936
Office / Other		219,423	237,633	255,806	268,996	282,172	295,336

TABLE 8.2: IIP GROWTH PROJECTIONS (CONT.)

TYPE	UNITS/SF	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 Yr. NEW GROWTH
Population		115,578	120,499	125,416	130,328	135,235	53,026
Single Family	Units	31,795	32,817	33,831	34,837	35,835	11,174
Multifamily Units	Units	3,981	4,559	5,145	5,739	6,341	6,026
Residential Total	Units	35,776	37,376	38,976	40,576	42,176	17,200
Distribution / Warehousing	SF	551,819	575,319	598,794	622,247	645,675	253,171
Industrial		264,555	275,821	287,075	298,319	309,551	121,376
Commercial		2,177,377	2,270,101	2,362,731	2,455,269	2,547,714	998,965
Institutional		998,500	1,041,022	1,083,500	1,125,936	1,168,329	458,105
Office / Other		308,486	321,623	334,747	347,857	360,954	141,531

The residential and non-residential demand data is converted to ADT for each land use category, shown in **Table 8.3**. The existing and future trip statistics used in this analysis were prepared by the City and professional consultants based on the best available information and industry standard practice.

TABLE 8.3: CALCULATION OF AVERAGE ANNUAL DAILY TRIPS

TYPE	TRIP RATIO	CURRENT TRIPS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Single Family	4.72	116,277	123,321	130,261	135,231	140,163	145,057
Multifamily Units	3.37	1,062	3,441	5,894	7,734	9,601	11,495
Distribution / Warehousing	0.86	336	363	391	411	432	452
Industrial	2.38	447	484	521	548	575	602
Commercial	13.14	20,348	22,037	23,722	24,945	26,167	27,388
Institutional	6.93	4,922	5,330	5,738	6,033	6,329	6,624
Office / Other	5.42	1,189	1,288	1,386	1,458	1,529	1,601

TABLE 8.3: CALCULATION OF AVERAGE ANNUAL DAILY TRIPS (CONT.)

TYPE	TRIP RATIO	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 Yr. NEW GROWTH
Single Family	4.72	149,913	154,732	159,513	164,256	168,962	52,685
Multifamily Units	3.37	13,416	15,364	17,339	19,340	21,369	20,308
Distribution / Warehousing	0.86	472	492	512	532	552	216
Industrial	2.38	628	655	682	709	735	288



TYPE	TRIP RATIO	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 Yr. NEW GROWTH
Commercial	13.14	28,608	29,826	31,043	32,259	33,473	13,125
Institutional	6.93	6,919	7,214	7,508	7,802	8,096	3,174
Office / Other	5.42	1,672	1,743	1,814	1,885	1,956	767

Trips are then converted to vehicle miles traveled (“VMT”), based on applying estimated trip length for each land use category. **Table 8.4** provides the local estimated trip length assumptions and calculated VMT.

TABLE 8.4: CALCULATION OF LOCAL TRIP LENGTHS

VMT	NATIONAL AVERAGE TRIP LENGTH (MILES)*	TRIP LENGTH	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Single Family	12.32	58.09	1,432,528	1,519,313	1,604,819	1,666,045	1,726,806	1,787,102
Multifamily Units	12.32	41.52	13,078	42,390	72,616	95,285	118,286	141,619
Distribution / Warehousing	7.70	6.58	2,584	2,798	3,013	3,168	3,323	3,478
Industrial	7.70	18.29	3,441	3,727	4,012	4,219	4,425	4,632
Commercial	7.90	103.79	160,752	174,092	187,406	197,069	206,722	216,366
Institutional	7.70	53.36	37,896	41,041	44,180	46,458	48,733	51,007
Office / Other	7.70	41.73	9,157	9,917	10,676	11,226	11,776	12,326

* U.S. Department of Transportation, Federal Highway Administration, 2017 National Household Transportation Survey, adjusted for land use.

TABLE 8.4: CALCULATION OF LOCAL TRIP LENGTHS (CONT.)

VMT	NATIONAL AVERAGE TRIP LENGTH (MILES)*	TRIP LENGTH	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 Yr. NEW GROWTH
Single Family	12.32	58.09	1,846,933	1,906,300	1,965,202	2,023,640	2,081,612	649,084
Multifamily Units	12.32	41.52	165,285	189,282	213,612	238,274	263,268	250,190
Distribution / Warehousing	7.70	6.58	3,633	3,788	3,942	4,097	4,251	1,667
Industrial	7.70	18.29	4,838	5,044	5,250	5,456	5,661	2,220
Commercial	7.90	103.79	226,000	235,624	245,239	254,844	264,439	103,687
Institutional	7.70	53.36	53,278	55,547	57,813	60,078	62,340	24,444
Office / Other	7.70	41.73	12,874	13,423	13,970	14,517	15,064	5,907

* U.S. Department of Transportation, Federal Highway Administration, 2017 National Household Transportation Survey, adjusted for land use.

EXISTING FACILITIES & LOS ANALYSIS

The City’s existing system consists of 148 miles of roadways (excluding State highways), with a capacity of 1,019,760 trips based on a LOS D.² The existing daily volume and VMT accounts for roughly 32 percent of the current system capacity.

TABLE 8.5: ANALYSIS OF EXISTING ROAD SYSTEM AND DEMAND

	LENGTH (MILES)	DAILY VOLUME	LOS D CAPACITY	LOS D VOLUME-TO-CAPACITY RATIO	LANE MILES	% OF TOTAL	ACTUAL VMT	POTENTIAL VMT	VMT VOLUME TO CAPACITY RATIO
Totals	147.55	330,000	1,019,760	32.4%	326.64	22.3%	411,143	1,292,410	31.8%

Based on LOS D

A detail of all road segments analyzed can be found in **Appendix C**

Based on the local trip lengths, **Table 8.6** illustrates the VMT per service unit.

²LOS is measured using a letter grade A through F, where A represents free flowing traffic with absolutely no congestion and F represents grid lock. The City has adopted an acceptable standard of LOS D for its street network and intersections, which typically allows roads to utilize 84 percent of the total available capacity.



TABLE 8.6: VMT CALCULATIONS PER SERVICE UNIT

DEVELOPMENT TYPE	ITE CODE	ADT (WEEKDAY)*	UNIT	OUTBOUND ADJUSTMENT	PASS BY ADJUSTMENT	ADJUSTED TRIPS	TOTAL TRIP ADJUSTMENT	ADJUSTED TRIP RATE	TRIP LENGTH	VMT PER SERVICE UNIT
Single-Family	210	9.43	HU	50%	0%	50%	50%	4.72	12.32	58.09
Multi-Family	220	6.74	HU	50%	0%	50%	50%	3.37	12.32	41.52
Light Industrial	110	4.87	KSF	50%	0%	50%	50%	2.44	7.70	18.75
Industrial Park	130	3.37	KSF	50%	0%	50%	50%	1.69	7.70	12.97
Manufacturing	140	4.75	KSF	50%	0%	50%	50%	2.38	7.70	18.29
Warehousing	150	1.71	KSF	50%	0%	50%	50%	0.86	7.70	6.58
Assisted Living	254	4.19	KSF	50%	29%	36%	36%	1.49	7.70	11.45
Hotel	310	13.72	KSF	50%	29%	36%	36%	4.87	7.90	38.48
Motel	320	5.75	KSF	50%	29%	36%	36%	2.04	7.90	16.13
Church	560	2.41	KSF	50%	29%	36%	36%	0.86	7.70	6.59
Day Care	565	47.62	KSF	50%	44%	28%	28%	13.33	7.70	102.67
Hospital	610	10.77	KSF	50%	29%	36%	36%	3.82	7.70	29.44
General Office	710	10.84	KSF	50%	0%	50%	50%	5.42	7.70	41.73
Research & Dev Center	760	11.08	KSF	50%	0%	50%	50%	5.54	7.70	42.66
Business Park	770	12.44	KSF	50%	0%	50%	50%	6.22	7.70	47.89
Commercial / Retail	820	37.01	KSF	50%	29%	36%	36%	13.14	7.90	103.79

*Trip Generation, Institute of Transportation Engineers (ITE), 11th Edition.

Note: List is not all-inclusive. For additional Land Uses, See the ITE Manual.

Using the above trips statistics for weekday ADT, adjustment factors, and trip lengths, the total VMT for the service area is calculated below.

TABLE 8.7: PROJECTED VMT FOR SERVICE AREA

VMT	TRIP LENGTH	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Single Family	58.09	1,432,528	1,519,313	1,604,819	1,666,045	1,726,806	1,787,102
Multifamily Units	41.52	13,078	42,390	72,616	95,285	118,286	141,619
Distribution / Warehousing	6.58	2,584	2,798	3,013	3,168	3,323	3,478
Industrial	18.29	3,441	3,727	4,012	4,219	4,425	4,632
Commercial	103.79	160,752	174,092	187,406	197,069	206,722	216,366
Institutional	53.36	37,896	41,041	44,180	46,458	48,733	51,007
Office / Other	41.73	9,157	9,917	10,676	11,226	11,776	12,326
Total VMT		1,659,437	1,793,279	1,926,721	2,023,469	2,120,072	2,216,529

TABLE 8.7: PROJECTED VMT FOR SERVICE AREA (CONT.)

VMT	TRIP LENGTH	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 YR. NEW GROWTH
Single Family	58.09	1,846,933	1,906,300	1,965,202	2,023,640	2,081,612	649,084
Multifamily Units	41.52	165,285	189,282	213,612	238,274	263,268	250,190
Distribution / Warehousing	6.58	3,633	3,788	3,942	4,097	4,251	1,667
Industrial	18.29	4,838	5,044	5,250	5,456	5,661	2,220
Commercial	103.79	226,000	235,624	245,239	254,844	264,439	103,687
Institutional	53.36	53,278	55,547	57,813	60,078	62,340	24,444
Office / Other	41.73	12,874	13,423	13,970	14,517	15,064	5,907
Total VMT		2,312,841	2,409,008	2,505,029	2,600,904	2,696,635	1,037,198

LEVEL OF SERVICE ANALYSIS

The street LOS assesses the level of congestion on a roadway segment or intersection. LOS is measured using a letter grade A through F, where A represents free flowing traffic with absolutely no congestion and F represents grid lock. The City has adopted an acceptable standard of LOS D for its street network and intersections, which typically allows



roads to utilize 84 percent of the total available capacity. The LOS is further evaluated based on the existing system capacity relative to lane miles and VMT. The City's existing LOS is also defined by 10,325 trip capacity per lane mile.³

EXCESS CAPACITY ANALYSIS

The existing daily volume and VMT accounts for roughly 32 percent of the current system capacity, as shown **Table 8.5**, illustrating available capacity in the existing system to continue to serve future development activity. In addition, this analysis assumes a similar system capacity allocation will apply to future road projects, as they are often oversized to handle development beyond the 10-year planning horizon.

FUTURE FACILITIES ANALYSIS

The City has identified the growth-related projects needed within the next ten years. Capital projects related to curing existing deficiencies were not included in the calculation of the development impact fees. Total future projects applicable to new development are shown below.

TABLE 8.8: NEW STREET CAPITAL PROJECTS

FACILITY NAME	FACILITY TYPE	AREA TYPE	NEW LANES	LENGTH (MILES)	ESTIMATED COST	DIF ELIGIBLE %	DIF ELIGIBLE COST
White & Parker Rd	Arterial	Suburban	2	3.00	12,200,000	100%	12,200,000
Hartman Rd	Arterial	Suburban	2	0.96	5,400,000	100%	5,400,000
Hartman Rd	Arterial	Rural	3	0.34	3,150,000	100%	3,150,000
Murphy Rd	Arterial	Suburban	1	0.42	2,350,000	100%	2,350,000
Murphy Rd	Arterial	Suburban	2	1.01	9,300,000	100%	9,300,000
Murphy Rd	Bridge	Suburban	2	0.20	1,300,000	100%	1,300,000
Hartman Rd	Arterial	Suburban	2	0.25	2,560,000	100%	2,560,000
Honeycutt Rd	Arterial	Suburban	1.5	2.01	21,950,000	100%	21,950,000
Bowlin Rd	Arterial	Suburban	2	0.25	1,750,000	100%	1,750,000
Bowlin Rd	Arterial	Suburban	2	0.50	800,000	100%	800,000
Bowlin Rd	Arterial	Suburban	2	0.25	3,260,000	100%	3,260,000
Cowtown Rd	Arterial	Suburban	3	1.10	8,600,000	100%	8,600,000
Cowtown Rd	Arterial	Suburban	3	1.30	8,200,000	100%	8,200,000
East/West Corridor	Parkway	Suburban	4	2.50	43,000,000	100%	43,000,000
Farrell Rd Bridge	Arterial	Suburban	2	0.20	4,900,000	50%	2,450,000
Edwards Avenue Underpass	Arterial	Suburban	2	2.00	1,150,000	100%	1,150,000
Peters and Nall	Arterial	Suburban	2	1.00	9,300,000	100%	9,300,000
White and Parker	Arterial	Suburban	2	0.50	2,570,000	100%	2,570,000
SR 347	Arterial	Suburban	1	0.40	3,100,000	100%	3,100,000
SR 238	Arterial	Suburban	2	2.00	24,300,000	52%	12,600,000
Green Road Overpass	Bridge	Suburban	4	0.25	34,000,000	50%	17,000,000
Garvey Ave	Arterial	Suburban	2	0.20	2,117,326	100%	2,117,326
Garvey Ave	Arterial	Suburban	2	0.46	1,306,000	100%	1,306,000
Edwards Avenue	Arterial	Suburban	1	0.35	800,000	100%	800,000
Traffic Signal					1,696,298	100%	1,696,298
Smith-Enke and SR 347	Arterial	Suburban		0.10	2,700,000	100%	2,700,000
Pedestrian Overpass	Bridge	Suburban		0.25	2,800,000	100%	2,800,000
Citywide Signal Interconnect					500,000	100%	500,000
Traffic Signals/Roundabouts					12,118,302	100%	12,118,302
Total					\$227,177,926		\$196,027,926
New Lane Miles							47.945
Cost per Lane Mile							\$4,088,600

An evaluation of the proposed future street improvements provides the total of new lane miles added to the system and the cost per lane mile. The evaluation is expanded upon by calculating the additional lane miles added to the

³ Source: 2020 LUA, IIP and Development Fee Report as well as a comparison of capacity variables for proposed future transportation projects.



system by dividing the new VMT by the vehicles per lane mile LOS as shown in **Table 8.9**. Based on this analysis, a total of 100.45 lane miles will need to be added to the system for a total of \$507M. Based on the current capacity ratios, as shown in **Table 8.5**, approximately 32 percent of this cost is considered DIF eligible (based on a LOS D with 31.8 percent of the system at capacity), or a cost of \$161,335,086. The City's capital improvement plan anticipates a total cost of nearly \$200M (2023 Costs) within the next 10 years, thus alternative funding mechanisms may be needed to ensure all projects within the plan can be constructed.

TABLE 8.9: EVALUATION OF NEW LANE MILES AND COST TO MAINTAIN LOS

TYPE	CURRENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Total VMT	1,659,437	1,793,279	1,926,721	2,023,469	2,120,072	2,216,529
New VMT		133,842	133,442	96,748	96,603	96,457
Capacity per Lane Mile		10,325	10,325	10,325	10,325	10,325
Additional Lane Miles		12.96	12.92	9.37	9.36	9.34
Cost per Lane Mile	\$4,088,600	\$4,252,144	\$4,422,230	\$4,599,119	\$4,783,084	\$4,974,407
Growth Related Cost		\$55,120,189	\$57,153,720	\$43,095,032	\$44,751,469	\$46,471,469

TABLE 8.9: EVALUATION OF NEW LANE MILES AND COST TO MAINTAIN LOS (CONT.)

TYPE	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	10 YR. NEW GROWTH
Total VMT	2,312,841	2,409,008	2,505,029	2,600,904	2,696,635	1,037,198
New VMT	96,312	96,166	96,021	95,876	95,730	1,037,198
Capacity per Lane Mile	10,325	10,325	10,325	10,325	10,325	10,325
Additional Lane Miles	9.33	9.31	9.30	9.29	9.27	100.45
Cost per Lane Mile	\$5,173,383	\$5,380,319	\$5,595,531	\$5,819,353	\$6,052,127	
Growth Related Cost	\$48,257,466	\$50,111,989	\$52,037,661	\$54,037,209	\$56,113,459	\$507,149,663
Cost per VMT						\$489
DIF Eligible Allocation						31.8%
DIF Eligible Cost						\$161,335,086

DEVELOPMENT FEE CALCULATION

The street DIF is based on the plan-based methodology. Using this approach, development fees are calculated based on a defined set of capital costs specified for future development. The improvements are identified in a capital plan or IIP as growth-related system improvements. The City's existing facilities are proportionately allocated to the new development calls for service, providing an equitable distribution of the existing and proposed facilities that will serve development. The total cost is divided by the total demand units the improvements are designed to serve. Under this methodology, it is important to identify the existing level of service and determine any excess capacity in existing facilities that could serve new growth. Fees are then calculated based on many variables centered on proportionality and level of service.

As detailed in **Section 9**, the Enabling Legislation (see ARS 9-463.05.12) requires a municipality to provide a credit for any excess construction contracting or similar excise taxes, calculated as the percentage in "excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications". The revenue credit from this excess levy is also included below.

TABLE 8.10: ESTIMATE OF COST PER VMT

	DIF ELIGIBLE COST	DEMAND SERVED (VMT)	COST PER VMT
New Facilities	\$161,335,086	1,037,198	\$155.55
Professional Expense	\$14,833	1,037,198	\$0.01
Excise Tax Credit	-\$55,258,520	1,037,198	-\$53.28
Total	\$106,091,400		\$102.29

STREET DIF CALCULATION

The cost per VMT is then multiplied by the actual demand unit of measurement, or VMT per unit for each development type, as shown in **Table 8.11**. The total cost per VMT includes facilities and professional expenses.



TABLE 8.11: PROPOSED STREET DIF BY LAND USE TYPE

DEVELOPMENT TYPE	DEMAND UNIT	ITE CODE	VMT PER SERVICE UNIT	COST PER VMT	PROPOSED FEE	EXISTING FEE	\$ INCREASE/ (DECREASE)
Single-Family	HU	210	58.09	\$102	\$5,942	\$2,965	\$2,977
Multi-Family	HU	220	41.52	\$102	\$4,247	\$2,299	\$1,948
Light Industrial	KSF	110	18.75	\$102	\$1,918	\$761	\$1,157
Industrial Park	KSF	130	12.97	\$102	\$1,327	\$517	\$810
Manufacturing	KSF	140	18.29	\$102	\$1,871	\$603	\$1,268
Warehousing	KSF	150	6.58	\$102	\$673	\$267	\$406
Assisted Living	KSF	254	11.45	\$102	\$1,172	\$424	\$748
Hotel	KSF	310	38.48	\$102	\$3,936	\$868	NA**
Motel	KSF	320	16.13	\$102	\$1,650	\$348	NA**
Church	KSF	560	6.59	\$102	\$5,458	\$1,976	\$3,482
Day Care	KSF	565	102.67	\$102	\$5,662	\$2,049	\$3,613
Hospital	KSF	610	29.44	\$102	\$674	\$392	\$282
General Office	KSF	710	41.73	\$102	\$10,502	\$4,820	\$5,682
Research & Dev Center	KSF	760	42.66	\$102	\$3,011	\$1,085	\$1,926
Business Park	KSF	770	47.89	\$102	\$4,269	\$1,494	\$2,775
Commercial / Retail	KSF	820	103.79	\$102	\$4,363	\$1,727	\$2,636

Note: This list is not all-inclusive. For additional Land Uses, See the ITE Manual.

Source: Trip Generation, Institute of Transportation Engineers (ITE), 11th Edition.

*Church figures based on the Synagogue category. ITE does not gather employee data for the Church category.

**The existing fee is calculated per room, whereas the proposed fee is estimated per KSF, so a comparison of change is not possible.



SECTION 9: IIP REVENUE ANALYSIS

The proposed fees are estimated to recoup the capital cost necessary to maintain the LOS. **Table 9.1** illustrates the estimated revenues generated from development fees based on the growth assumptions and recommendations of this report.

TABLE 9.1: CALCULATION OF DIF REVENUES

TYPE	UNIT	10 YEAR NEW GROWTH	PARKS & RECREATION		LIBRARY		POLICE	
			FEE	REVENUE GENERATED	FEE	REVENUE GENERATED	FEE	REVENUE GENERATED
Single Family	HU	11,174	\$791	\$8,833,675	\$248	\$2,766,606	\$613	\$6,854,579
Multifamily Units	HU	6,026	\$643	\$3,872,009	\$201	\$1,212,669	\$553	\$3,332,137
Industrial / Distribution / Warehousing	KSF	375	\$6	\$2,323	\$2	\$728	\$78	\$29,125
Commercial	KSF	999	\$39	\$38,879	\$12	\$12,177	\$1,849	\$1,847,046
Institutional	KSF	458	\$16	\$7,466	\$5	\$2,338	\$1,382	\$633,284
Office / Other	KSF	142	\$60	\$8,440	\$19	\$2,643	\$147	\$20,788
Total				\$12,762,793		\$3,997,161		\$12,716,958

TABLE 9.1: CALCULATION OF DIF REVENUES (CONT.)

TYPE	UNIT	10 YEAR NEW GROWTH	FIRE		STREETS	
			FEE	REVENUE GENERATED	FEE	REVENUE GENERATED
Single Family	HU	11,174	\$2,650	\$29,607,524	\$9,036	\$100,973,692
Multifamily Units	HU	6,026	\$3,493	\$21,047,372	\$6,459	\$38,920,364
Industrial / Distribution / Warehousing	KSF	375	\$361	\$135,331	\$2,917	\$1,092,453
Commercial	KSF	999	\$4,336	\$4,331,351	\$16,147	\$16,129,907
Institutional	KSF	458	\$4,456	\$2,041,443	\$5,979	\$2,738,901
Office / Other	KSF	142	\$723	\$102,276	\$6,492	\$918,859
Total				\$57,265,298		\$160,774,177

Arizona Enabling Legislation requires that this analysis include a forecast of revenues generated by new service units other than development fees, including 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.

TABLE 9.2: ILLUSTRATION OF ESTIMATED REVENUES GENERATED FROM NEW DEVELOPMENT

LOCAL TAXES	2023 ESTIMATED	PER CAPITA	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
General Fund							
Local Taxes							
Local Sales Taxes	\$25,936,500	\$315	\$2,152,429	\$2,148,142	\$1,559,061	\$1,557,502	\$1,555,943
Franchise Taxes	\$750,900	\$9	\$62,316	\$62,192	\$45,137	\$45,092	\$45,047
Licenses and Permits							
Permit Fees	\$7,499,374	\$91	\$622,361	\$621,122	\$450,792	\$450,342	\$449,891
Business License/Registry	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intergovernmental							
State Shared Sales Tax	\$11,218,630	\$136	\$931,016	\$929,162	\$674,359	\$673,685	\$673,011
State Shared Income Tax	\$8,319,720	\$101	\$690,440	\$689,065	\$500,104	\$499,604	\$499,104
Vehicle License Tax	\$4,861,179	\$59	\$403,422	\$402,618	\$292,209	\$291,917	\$291,624
Charges for Services							
Administrative Fees	\$49,000	\$1	\$4,066	\$4,058	\$2,945	\$2,942	\$2,940
Development Services Fees	\$149,561	\$2	\$12,412	\$12,387	\$8,990	\$8,981	\$8,972
Transit Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library	\$28,000	\$0	\$2,324	\$2,319	\$1,683	\$1,681	\$1,680



LOCAL TAXES	2023 ESTIMATED	PER CAPITA	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Park and Recreation Fees	\$1,927,050	\$23	\$159,923	\$159,604	\$115,836	\$115,720	\$115,605
Public Safety Fees	\$239,635	\$3	\$19,887	\$19,847	\$14,405	\$14,390	\$14,376
Fines and Forfeits							
Magistrate Court Fees	\$502,500	\$6	\$41,702	\$41,619	\$30,206	\$30,175	\$30,145
Interest on Investments							
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous							
Miscellaneous	\$877,562	\$11	\$72,827	\$72,682	\$52,751	\$52,698	\$52,645
General Fund Total	\$62,359,611	\$759	\$5,175,125	\$5,164,817	\$3,748,479	\$3,744,730	\$3,740,982
Special Revenue Funds							
Highway User Revenue Fund							
Intergovernmental	\$5,765,161	\$70	\$478,442	\$477,489	\$346,548	\$346,201	\$345,855
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants							
Intergovernmental*	\$52,242,294	\$635	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Local Road Maintenance							
Contributions from Developers	\$80,000	\$1	\$6,639	\$6,626	\$4,809	\$4,804	\$4,799
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local Road Maintenance							
Intergovernmental	\$3,018,240	\$37	\$250,479	\$249,980	\$181,428	\$181,247	\$181,066
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Revenue Fund Total	\$61,105,695	\$743	\$2,235,560	\$2,234,095	\$2,032,785	\$2,032,252	\$2,031,720
Total	\$123,465,306	\$1,502	\$7,410,685	\$7,398,912	\$5,781,264	\$5,776,982	\$5,772,701

TABLE 9.2: ILLUSTRATION OF ESTIMATED REVENUES GENERATED FROM NEW DEVELOPMENT (CONT.)

LOCAL TAXES	2023 ESTIMATED	PER CAPITA	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
General Fund							
Local Taxes							
Local Sales Taxes	\$25,936,500	\$315	\$1,554,384	\$1,552,825	\$1,551,266	\$1,549,707	\$1,548,147
Franchise Taxes	\$750,900	\$9	\$45,002	\$44,957	\$44,911	\$44,866	\$44,821
Licenses and permits							
Permit Fees	\$7,499,374	\$91	\$449,440	\$448,989	\$448,539	\$448,088	\$447,637
Business License/Registry	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Intergovernmental							
State Shared Sales Tax	\$11,218,630	\$136	\$672,336	\$671,662	\$670,988	\$670,313	\$669,639
State Shared Income Tax	\$8,319,720	\$101	\$498,604	\$498,104	\$497,604	\$497,103	\$496,603
Vehicle License Tax	\$4,861,179	\$59	\$291,332	\$291,040	\$290,748	\$290,456	\$290,163
Charges for Services							
Administrative Fees	\$49,000	\$1	\$2,937	\$2,934	\$2,931	\$2,928	\$2,925
Development Services Fees	\$149,561	\$2	\$8,963	\$8,954	\$8,945	\$8,936	\$8,927
Transit Revenues	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Library	\$28,000	\$0	\$1,678	\$1,676	\$1,675	\$1,673	\$1,671
Park and Recreation Fees	\$1,927,050	\$23	\$115,489	\$115,373	\$115,257	\$115,141	\$115,025
Public Safety Fees	\$239,635	\$3	\$14,361	\$14,347	\$14,333	\$14,318	\$14,304
Fines and Forfeits							
Magistrate Court Fees	\$502,500	\$6	\$30,115	\$30,085	\$30,055	\$30,024	\$29,994
Interest on Investments							
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous							



LOCAL TAXES	2023 ESTIMATED	PER CAPITA	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
Miscellaneous	\$877,562	\$11	\$52,593	\$52,540	\$52,487	\$52,434	\$52,382
General Fund Total	\$62,359,611	\$759	\$3,737,233	\$3,733,485	\$3,729,737	\$3,725,988	\$3,722,240
Special Revenue Funds							
Highway User Revenue Fund							
Intergovernmental	\$5,765,161	\$70	\$345,508	\$345,162	\$344,815	\$344,469	\$344,122
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grants							
Intergovernmental	\$52,242,294	\$635	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000
Local Road Maintenance							
Contributions from Developers	\$80,000	\$1	\$4,794	\$4,790	\$4,785	\$4,780	\$4,775
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local Road Maintenance							
Intergovernmental	\$3,018,240	\$37	\$180,884	\$180,703	\$180,521	\$180,340	\$180,158
Investment Earnings	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Special Revenue Fund Total	\$61,105,695	\$743	\$2,031,187	\$2,030,654	\$2,030,121	\$2,029,588	\$2,029,056
Total	\$123,465,306	\$1,502	\$5,768,420	\$5,764,139	\$5,759,858	\$5,755,577	\$5,751,296

In considering the funding of future facilities, this analysis has determined the portion of future projects that will be funded by development impact fees as growth-related system improvements. No other revenues from other government agencies, grants, or developer contributions have been identified within the IIP to offset future capital costs related to growth. If these revenues become available in the future, the DIF analysis should be revised.

Other revenues, such as general fund revenues and utility rate revenues, will be necessary to fund non-growth-related improvements and fund growth-related projects when sufficient DIF revenues are not available. In the latter case, DIF revenues will be used to repay these revenues for growth-related projects.

CONSTRUCTION TAX OFFSET

The Enabling Legislation (see ARS 9-463.05.12) requires a municipality to provide a credit for any excess construction contracting or similar excise taxes, calculated as the percentage in "excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications". The City's current average transaction privilege tax rate is two percent. The contracting rate (prime, speculative building, and owner builder) is 3.5 percent, or an excess of 1.5 percent. The revenue credit from this excess levy is calculated below.

TABLE 9.3: EXCISE TAX CREDIT CALCULATION

Year	Total Construction Revenues	Estimated Taxable Sales	Construction Revenues at 2.0%	Excess
2023	\$17,048,592	\$487,102,629	\$9,742,053	\$7,306,539
2022	\$13,528,413	\$386,526,086	\$7,730,522	\$5,797,891
2021	\$8,103,959	\$231,541,686	\$4,630,834	\$3,473,125
Average				\$5,525,852
10 Year Credit				\$55,258,520

NECESSITY OF DEVELOPMENT IMPACT FEES

An entity may only impose development impact fees on development activity if the entity's plan for financing system improvements establishes that these fees are necessary to achieve parity between existing and new development. This analysis has identified the improvements to public facilities and the funding mechanisms to complete the suggested improvements. Development impact fees are identified as a necessary funding mechanism to help offset the costs of capital improvements related to new growth.



APPENDIX A: ITE LAND USE DEFINITIONS

ITE CLASSIFICATION DEFINITIONS

SINGLE-FAMILY DWELLINGS (ITE LAND USE CODE 210)

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision. This classification includes individual manufactured/mobile housing units.

MULTI-UNIT (ITE LAND USE CODE 220)

Apartments are rental dwelling units located within the same building with at least three other dwelling units, for example, quadraplexes and all types of apartment buildings. The studies included in this land use did not identify whether the apartments were low-rise, mid-rise, or high-rise. Low-rise apartment (Land Use 221), high-rise apartment (Land Use 222) and mid-rise apartment (Land Use 223) are related uses.

LIGHT INDUSTRIAL (ITE LAND USE CODE 110)

A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment. Industrial Park (Land Use 130) and manufacturing (Land Use 140) are related uses.

MANUFACTURING (ITE LAND USE CODE 140)

A manufacturing facility is an area where the primary activity is the conversion of raw materials nor parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, a manufacturing facility typically has an office and may provide space for warehouse, research, and associated functions. General light industrial (Land Use 110) and industrial park (Land Use 130) are related uses.

WAREHOUSING (ITE LAND USE CODE 150)

A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), high cube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.

ASSISTED LIVING (ITE LAND USE CODE 254)

An assisted living complex is a residential setting that provides either routine general protective oversight or assistance with activities necessary for independent living to persons with mental or physical limitations. The typical resident has difficulty managing an independent living arrangement but does not require nursing home care. Its centralized services typically include dining, housekeeping, social and physical activities, medication administration, and communal transportation. The complex commonly provides separate living quarters for each resident. Alzheimer's and ALS care are commonly offered at an assisted living facility. Living quarters for these patients may be located separately from the other residents. Assisted care commonly bridges the gap between independent living and a nursing home. In some areas of the country, an assisted living residence may be called personal care, residential care, or domiciliary care. Staff may be available at an assisted care facility 24 hours a day, but skilled medical care—which is limited in nature—is not required. Congregate care facility (Land Use 253), continuing care retirement community (Land Use 255), and nursing home (Land Use 620) are related uses.

HOTEL (ITE LAND USE CODE 310)

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

**MOTEL (ITE LAND USE CODE 320)**

Motels are places of lodging that provide sleeping accommodations and often a restaurant. Motels generally offer free on-site parking and provide little or no meeting space and few (if any) supporting facilities. Exterior corridors accessing rooms—immediately adjacent to a parking lot—commonly characterize motels. Hotel (Land Use 310), all suites hotel (Land Use 311), business hotel (Land Use 312) and resort hotel (Land Use 330) are related uses.

ELEMENTARY SCHOOL (ITE LAND USE CODE 520)

An elementary school is a public school that typically serves students attending kindergarten through the fifth or sixth grade. An elementary school is usually centrally located in a residential community to facilitate student access. Bus service is commonly provided to students living beyond a specified distance from the school. Middle school/junior high school (Land Use 522), private school (K-8) (Land Use 530), private school (K-12) (Land Use 532), charter elementary school (Land Use 536), and charter school (K-12) (Land Use 538) are related uses.

COMMUNITY COLLEGE (ITE LAND USE CODE 540)

This land use includes 2-year junior, community, and technical colleges. A junior/community college may have a sizeable evening program. University/college (Land Use 550) is a related use.

CHURCH/SYNAGOGUE (ITE LAND USE CODE 560 & 561)

A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary. It may also house meeting rooms, classrooms, and, occasionally, dining, catering, or event facilities. Synagogue (Land Use 561) and mosque (Land Use 562) are related uses. A synagogue is a building in which public worship services are held. A synagogue may also house a sanctuary, meeting rooms, classrooms and, occasionally, dining, catering, or event facilities. Church (Land Use 560) and mosque (Land Use 562) are related uses.

DAY CARE (ITE LAND USE CODE 565)

A day care center is a facility where care for pre-school age children is provided, normally during daytime hours. A day care facility generally includes classrooms, offices, eating areas, and playgrounds. A center may also provide after-school care for school-age children.

HOSPITAL (ITE LAND USE CODE 610)

A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. In this context, the term “hospital” does not refer to a medical clinic (a facility that provides diagnoses and outpatient care only) or a nursing home (a facility devoted to the care of persons unable to care for themselves), which are covered elsewhere in this report. Clinic (Land Use 630) and free-standing emergency room (Land Use 650) are related uses.

GENERAL OFFICE (ITE LAND USE CODE 710)

A general office building is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building houses multiple tenants that can include, as examples, professional services, insurance companies, investment brokers, a banking institution, a restaurant, or other service retailers. A general office building with a gross floor area of 10,000 square feet or less is classified as a small office building (Land Use 712). Corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), medical-dental office building (Land Use 720), office park (Land Use 750), research and development center (Land Use 760), and business park (Land Use 770) are additional related uses.

RESEARCH & DEVELOPMENT CENTER (ITE LAND USE CODE 760)

A research and development center is a facility or group of facilities devoted almost exclusively to research and development activities. The range of specific types of businesses contained in this land use category varies significantly. Research and development centers may contain offices and light fabrication areas. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), and business park (Land Use 770) are related uses.



BUSINESS PARK (ITE LAND USE CODE 770)

A business park consists of a group of flex-type or incubator one- or two-story buildings served by a common roadway system. The tenant space is flexible and lends itself to a variety of uses. The rear side of the building is often served by a garage door. Tenants may be start-up companies or small mature companies that require a variety of space. The space may include offices, retail and wholesale stores, restaurants, recreational areas and warehousing, manufacturing, light industrial, or scientific research functions. A common mix is 20 to 30 percent office/commercial and 70 to 80 percent industrial/warehousing. Industrial Park (Land Use 130), general office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), and research and development center (Land Use 760) are related uses.

COMMERCIAL/RETAIL (ITE LAND USE CODE 820)

A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has at least 150,000 square feet of gross leasable area (GLA). It often has more than one anchor store. Various names can be assigned to a shopping center within this size range, depending on its specific size and tenants, such as community center, regional center, superregional center, fashion center, and power center.

A shopping center of this size typically contains more than retail merchandising facilities. Office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities are common tenants.

A shopping center of this size can be enclosed or open-air. The vehicle trips generated at a shopping center are based upon the total GLA of the center. In the case of a smaller center without an enclosed mall or peripheral buildings, the GLA is the same as the gross floor area of the building.

The 150,000 square feet GLA threshold value between community/regional shopping center and shopping plaza (Land Use 821) is based on an examination of trip generation data. For a shopping plaza that is smaller than the threshold value, the presence or absence of a supermarket within the plaza has a measurable effect on site trip generation. For a shopping center that is larger than the threshold value, the trips generated by its other major tenants mask any effects of the presence or absence of an on-site supermarket. Shopping plaza (40-150k) (Land Use 821), strip retail plaza (<40k) (Land Use 822), and factory outlet center (Land Use 823) are related uses.



APPENDIX B: DEVELOPMENT POTENTIAL ANALYSIS

TABLE B.1: ILLUSTRATION OF DEVELOPMENT POTENTIAL

NAME	UNITS PLANNED	REMAINING	FY START	FY END	UNITS PER YEAR	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Moonlight Ridge	2,200	2,200	2024	2033	220	-	-	244	244	244	244	244	244	244	244	244
Hogenes Farm Phase 1 & 2	812	812	2024	2029	135	-	-	162	162	162	162	162	-	-	-	-
Flatz 520	358	179	2022	2024	90	90	90	-	-	-	-	-	-	-	-	-
Palomino Ridge Phase 1	226	226	2024	2028	57	-	-	57	57	57	57	-	-	-	-	-
Province	2,214	221	2022	2024	111	111	111	-	-	-	-	-	-	-	-	-
Lakes at Rancho El Dorado	2,265	566	2022	2027	113	113	113	113	113	113	-	-	-	-	-	-
Copper Sky Mixed Use	146	146	2023	2025	73	-	73	73	-	-	-	-	-	-	-	-
Santa Rosa Crossing	351	70	2022	2024	14	35	35	-	-	-	-	-	-	-	-	-
Palo Brea	522	26	2022	2023	13	26	-	-	-	-	-	-	-	-	-	-
Avalea / Trilogy	7,452	7,452	2027	2040	573	-	-	-	-	-	573	573	573	573	573	573
Daltessa Heights	932	932	2027	2034	133	-	-	-	-	-	133	133	133	133	133	133
El Rancho Santa Rosa	720	720	2023	2028	144	-	144	144	144	144	144	-	-	-	-	-
Santa Rosa Springs	788	158	2022	2025	53	53	53	53	-	-	-	-	-	-	-	-
Hancock	253	253	2024	2026	127	-	-	127	127	-	-	-	-	-	-	-
Desert Passage	769	769	2022	2025	256	256	256	256	-	-	-	-	-	-	-	-
REV @ Porter	194	194	2022	2024	97	97	97	-	-	-	-	-	-	-	-	-
San Trava	1,527	1,527	2023	2033	153	-	153	153	153	153	153	153	153	153	153	153
Eagle Shadow	9,547	9,547	2024	2039	636	-	-	636	636	636	636	636	636	636	636	636
Rancho Mirage	2,136	1,495	2022	2029	214	214	214	214	214	214	214	214	-	-	-	-
Tortosa	3,514	1,054	2022	2029	151	151	151	151	151	151	151	151	-	-	-	-
Honeycutt Run	209	209	2024	2025	209	-	-	209	-	-	-	-	-	-	-	-
Sorrento	2,110	1,583	2022	2032	158	158	158	158	158	158	158	158	158	158	158	-
Anderson Farms	2,256	2,256	2022	2032	226	226	226	226	226	226	226	226	226	226	226	-
Cortona	1,480	1,480	2024	2038	106	-	-	106	106	106	106	106	106	106	106	106
Red Valley Ranch	595	595	2026	2031	119	-	-	-	-	119	119	119	119	119	-	-
Hartman Ranch	1,769	1,769	2027	2037	177	-	-	-	-	-	177	177	177	177	177	177
The Sanctuary	1,083	1,083	2027	2035	135	-	-	-	-	-	135	135	135	135	135	135
Anderson Russell	3,250	3,250	2032	2045	250	-	-	-	-	-	-	-	-	-	-	250
Copa Flats	312	312	2022	2023	312	312	-	-	-	-	-	-	-	-	-	-
Home at Maricopa	536	536	2023	2028	107	-	107	107	107	107	107	-	-	-	-	-
Maricopa 40	184	184	2024	2027	61	-	-	61	61	61	-	-	-	-	-	-
Seasons Living	146	146	2023	2025	73	-	73	73	-	-	-	-	-	-	-	-



NAME	UNITS PLANNED	REMAINING	FY START	FY END	UNITS PER YEAR	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Hampton Edison	151	151	2022	2024	76	76	76	-	-	-	-	-	-	-	-	-
New Units						1,916	2,128	3,322	2,659	2,651	3,495	3,187	2,661	2,661	2,542	2,408
Avg HH Size	3.30		New Population (High)			6,322	7,021	10,962	8,771	8,747	11,532	10,516	8,779	8,779	8,386	7,945
Avg HH Size (Multifamily)	2.68		New Population (Low)			5,138	5,706	8,910	7,129	7,109	9,373	8,548	7,135	7,135	6,816	6,457

*Current and future units within Rancho El Dorado South ("Province") subdivision are exempt from payment of development fees.



APPENDIX C: EXISTING ROAD SYSTEM ANALYSIS

FACILITY NAME	FROM	To	FACILITY TYPE	# OF LANES	LENGTH (MILES)	DAILY VOLUME	THEORETICAL CAPACITY (1)	VOLUME-TO-CAPACITY RATIO	LOS D CAPACITY	LOS D VOLUME-TO-CAPACITY RATIO	LANE MILES	% OF TOTAL	ACTUAL VMT	POTENTIAL VMT	VMT VOLUME TO CAPACITY RATIO
Warren Rd	Papago Rd	Val Vista Rd	Arterial	2	0.96	1,900	12,100	16.0%	10,164	18.7%	1.92	0.6%	1,824	9,757	18.7%
Warren Rd	Val Vista Rd	Louis Johnson Dr	Arterial	2	2.00	1,800	11,800	15.0%	9,912	18.2%	4	1.2%	3,600	19,824	18.2%
Warren Rd	Louis Johnson Dr	Barnes Rd	Arterial	2	0.99	1,100	12,200	9.0%	10,248	10.7%	1.98	0.6%	1,089	10,146	10.7%
Warren Rd	Barnes Rd	Century Rd	Arterial	2	2.00	900	13,000	7.0%	10,920	8.2%	4	1.2%	1,800	21,840	8.2%
Warren Rd	Century Rd	Wildwood Rd	Arterial	2	1.25	700	11,700	6.0%	9,828	7.1%	2.5	0.8%	875	12,285	7.1%
Warren Rd	Wildwood Rd	Robin Rd	Arterial	2	1.75	600	14,200	4.0%	11,928	5.0%	3.5	1.1%	1,050	20,874	5.0%
Ralston Rd	Papago Rd	NO ROAD NAME	Arterial	2	2.00	300	17,200	2.0%	14,448	2.1%	4	1.2%	600	28,896	2.1%
Ralston Rd	Robin Rd	SR 84	Arterial	2	1.07	800	13,800	6.0%	11,592	6.9%	2.14	0.7%	856	12,403	6.9%
White Rd	Peters & Nall Rd	Papago Rd	Arterial	2	1.01	200	11,100	2.0%	9,324	2.1%	2.02	0.6%	202	9,417	2.1%
White Rd	Papago Rd	Val Vista Rd	Arterial	2	0.98	0	0	0.0%	0	0.0%	1.96	0.6%	-	-	0.0%
Porter Rd	Smith-Enke Rd	Honeycutt Rd	Arterial	4	1.01	11,700	26,600	44.0%	22,344	52.4%	4.04	1.2%	11,817	22,567	52.4%
Porter Rd	Honeycutt Rd	Bowlin Rd	Arterial	4	1.01	11,900	28,200	42.0%	23,688	50.2%	4.04	1.2%	12,019	23,925	50.2%
Porter Rd	Bowlin Rd	Maricopa-Casa Grande Highway	Arterial	4	0.58	3,600	30,300	12.0%	25,452	14.1%	2.32	0.7%	2,088	14,762	14.1%
Porter Rd	Maricopa-Casa Grande Highway	Farrell Rd	Arterial	4	0.56	3,800	7,400	51.0%	6,216	61.1%	2.24	0.7%	2,128	3,481	61.1%
Porter Rd	Farrell Rd	Steen Rd	Arterial	2	0.94	1,200	13,600	9.0%	11,424	10.5%	1.88	0.6%	1,128	10,739	10.5%
Porter Rd	Steen Rd	Peters & Nall Rd	Arterial	2	0.98	1,100	12,500	9.0%	10,500	10.5%	1.96	0.6%	1,078	10,290	10.5%
White & Parker Rd	NO ROAD NAME	Smith-Enke Rd	Arterial	2	0.51	1,100	13,500	8.0%	11,340	9.7%	1.02	0.3%	561	5,783	9.7%
White & Parker Rd	Smith-Enke Rd	Honeycutt Rd	Arterial	2	1.02	4,800	13,200	36.0%	11,088	43.3%	2.04	0.6%	4,896	11,310	43.3%
White & Parker Rd	Honeycutt Rd	Bowlin Rd	Arterial	2	1.02	1,800	13,500	13.0%	11,340	15.9%	2.04	0.6%	1,836	11,567	15.9%
White & Parker Rd	Bowlin Rd	Farrell Rd	Arterial	2	0.99	1,900	13,300	14.0%	11,172	17.0%	1.98	0.6%	1,881	11,060	17.0%
White & Parker Rd	Farrell Rd	Maricopa-Casa Grande Highway	Arterial	2	0.30	1,700	12,200	14.0%	10,248	16.6%	0.6	0.2%	510	3,074	16.6%
White & Parker Rd	Maricopa-Casa Grande Highway	Steen Rd	Arterial	4	0.74	2,200	12,000	18.0%	10,080	21.8%	2.96	0.9%	1,628	7,459	21.8%
White & Parker Rd	Steen Rd	Peters & Nall Rd	Arterial	2	1.03	1,500	12,700	12.0%	10,668	14.1%	2.06	0.6%	1,545	10,988	14.1%
White & Parker Rd	Peters & Nall Rd	Miller Rd	Arterial	2	4.10	1,400	12,400	11.0%	10,416	13.4%	8.2	2.5%	5,740	42,706	13.4%
White & Parker Rd	Miller Rd	Barnes Rd	Arterial	2	1.17	1,300	12,700	10.0%	10,668	12.2%	2.34	0.7%	1,521	12,482	12.2%
White & Parker Rd	Barnes Rd	Clayton Rd	Arterial	2	2.17	900	10,800	8.0%	9,072	9.9%	4.34	1.3%	1,953	19,686	9.9%
White & Parker Rd	Clayton Rd	SR 84	Arterial	2	1.00	700	13,000	5.0%	10,920	6.4%	2	0.6%	700	10,920	6.4%
Fuqua Rd	Barnes Rd	Kortsen Rd	Arterial	2	0.99	0	0	0.0%	0	0.0%	1.98	0.6%	-	-	0.0%
Hartman Rd	Farrell Rd	Maricopa-Casa Grande Highway	Arterial	2	1.72	1,000	12,200	8.0%	10,248	9.8%	3.44	1.1%	1,720	17,627	9.8%
Stanfield Rd	Barnes Rd	Kortsen Rd	Arterial	2	1.00	500	12,400	4.0%	10,416	4.8%	2	0.6%	500	10,416	4.8%
Stanfield Rd	Korsten Rd	Cottonwood Ln	Arterial	2	0.99	500	12,100	4.0%	10,164	4.9%	1.98	0.6%	495	10,062	4.9%
Murphy Rd	Honeycutt Rd	Bowlin Rd	Arterial	2	0.42	2,900	13,200	22.0%	11,088	26.2%	0.84	0.3%	1,218	4,657	26.2%
Murphy Rd	Bowlin Rd	Farrell Rd	Arterial	2	1.01	2,700	13,100	21.0%	11,004	24.5%	2.02	0.6%	2,727	11,114	24.5%
Murphy Rd	Farrell Rd	Steen Rd	Arterial	2	1.03	2,700	12,900	21.0%	10,836	24.9%	2.06	0.6%	2,781	11,161	24.9%
Murphy Rd	Steen Rd	Peters & Nall Rd	Arterial	2	1.04	2,700	13,000	21.0%	10,920	24.7%	2.08	0.6%	2,808	11,357	24.7%
Murphy Rd	Peters & Nall Rd	Maricopa-Casa Grande Highway	Arterial	2	0.52	2,600	13,100	20.0%	11,004	23.6%	1.04	0.3%	1,352	5,722	23.6%
Maricopa-Casa Grande Hwy	Pershing Way	Porter Rd	Arterial	4	2.14	11,800	27,400	43.0%	23,016	51.3%	8.56	2.6%	25,252	49,254	51.3%
Maricopa-Casa Grande Hwy	Porter Rd	Farrell Rd	Arterial	4	0.71	9,100	30,400	30.0%	25,536	35.6%	2.84	0.9%	6,461	18,131	35.6%
Maricopa-Casa Grande Hwy	Farrell Rd	White & Parker Rd	Arterial	4	0.52	5,600	24,300	23.0%	20,412	27.4%	2.08	0.6%	2,912	10,614	27.4%
Maricopa-Casa Grande Hwy	White & Parker Rd	Hartman Rd	Arterial	2	2.42	5,100	12,500	41.0%	10,500	48.6%	4.84	1.5%	12,342	25,410	48.6%
Maricopa-Casa Grande Hwy	Hartman Rd	Murphy Rd	Arterial	2	1.45	6,600	12,500	53.0%	10,500	62.9%	2.9	0.9%	9,570	15,225	62.9%
Maricopa-Casa Grande Hwy	Murphy Rd	Anderson Rd	Arterial	2	0.96	8,100	11,900	68.0%	9,996	81.0%	1.92	0.6%	7,776	9,596	81.0%
Maricopa-Casa Grande Hwy	Anderson Rd	Russell Rd	Arterial	2	1.19	8,600	13,600	63.0%	11,424	75.3%	2.38	0.7%	10,234	13,595	75.3%
Maricopa-Casa Grande Hwy	Russell Rd	Val Vista Rd	Arterial	2	0.70	8,500	12,700	67.0%	10,668	79.7%	1.4	0.4%	5,950	7,468	79.7%
Smith-Enke Rd	SR 347	Porter Rd	Arterial	4	1.80	29,400	25,800	114.0%	21,672	135.7%	7.2	2.2%	52,920	39,010	135.7%
Smith-Enke Rd	Porter Rd	White & Parker Rd	Arterial	4	0.99	14,800	26,000	57.0%	21,840	67.8%	3.96	1.2%	14,652	21,622	67.8%
Smith-Enke Rd	White & Parker Rd	NO ROAD NAME	Arterial	2	1.15	0	0	0.0%	0	0.0%	2.3	0.7%	-	-	0.0%
McDavid Rd	Green Rd	Main Rd	Arterial	2	0.24	0	0	0.0%	0	0.0%	0.48	0.1%	-	-	0.0%
McDavid Rd	Main Rd	Edwards Ave	Arterial	2	0.76	100	0	0.0%	0	0.0%	1.52	0.5%	76	-	0.0%



FACILITY NAME	FROM	TO	FACILITY TYPE	# OF LANES	LENGTH (MILES)	DAILY VOLUME	THEORETICAL CAPACITY (1)	VOLUME-TO-CAPACITY RATIO	LOS D CAPACITY	LOS D VOLUME-TO-CAPACITY RATIO	LANE MILES	% OF TOTAL	ACTUAL VMT	POTENTIAL VMT	VMT VOLUME TO CAPACITY RATIO
Edwards Ave	McDavid Rd	SR 347	Arterial	2	0.09	100	0	0.0%	0	0.0%	0.18	0.1%	9	-	0.0%
Honeycutt Rd	SR 347	Pershing Way	Arterial	4	0.23	22,200	27,100	82.0%	22,764	97.5%	0.92	0.3%	5,106	5,236	97.5%
Honeycutt Rd	Pershing Way	Porter Rd	Arterial	4	1.73	20,400	27,600	74.0%	23,184	88.0%	6.92	2.1%	35,292	40,108	88.0%
Honeycutt Rd	Porter Rd	White & Parker Rd	Arterial	4	1.00	11,200	27,300	41.0%	22,932	48.8%	4	1.2%	11,200	22,932	48.8%
Honeycutt Rd	White & Parker Rd	Hartman Rd	Arterial	3	2.01	14,500	18,400	79.0%	15,456	93.8%	6.03	1.8%	29,145	31,067	93.8%
Honeycutt Rd	Hartman Rd	Murphy Rd	Arterial	4	1.24	11,400	25,900	44.0%	21,756	52.4%	4.96	1.5%	14,136	26,977	52.4%
Bowlin Rd	Main Rd	SR 347	Arterial	2	0.71	0	0	0.0%	0	0.0%	1.42	0.4%	-	-	0.0%
Bowlin Rd	SR 347	Porter Rd	Arterial	2	1.12	1,900	14,400	13.0%	12,096	15.7%	2.24	0.7%	2,128	13,548	15.7%
Bowlin Rd	Porter Rd	White & Parker Rd	Arterial	2	0.98	3,700	14,600	25.0%	12,264	30.2%	1.96	0.6%	3,626	12,019	30.2%
Bowlin Rd	White & Parker Rd	Hartman Rd	Arterial	2	2.02	2,600	14,700	18.0%	12,348	21.1%	4.04	1.2%	5,252	24,943	21.1%
Bowlin Rd	Hartman Rd	Murphy Rd	Arterial	2	1.01	200	8,600	2.0%	7,224	2.8%	2.02	0.6%	202	7,296	2.8%
Farrell Rd	Porter Rd	Maricopa-Casa Grande Highway	Arterial	2	0.59	2,400	12,200	20.0%	10,248	23.4%	1.18	0.4%	1,416	6,046	23.4%
Farrell Rd	Maricopa-Casa Grande Highway	White & Parker Rd	Arterial	2	0.42	2,700	12,300	22.0%	10,332	26.1%	0.84	0.3%	1,134	4,339	26.1%
Farrell Rd	White & Parker Rd	Hartman Rd	Arterial	2	2.00	2,100	16,500	13.0%	13,860	15.2%	4	1.2%	4,200	27,720	15.2%
Papago Rd	Amarillo Valley Rd	Green Rd	Arterial	3	1.01	3,100	16,300	19.0%	13,692	22.6%	3.03	0.9%	3,131	13,829	22.6%
Barnes Rd	NO ROAD NAME	Warren Rd	Arterial	2	1.99	500	13,200	4.0%	11,088	4.5%	3.98	1.2%	995	22,065	4.5%
Barnes Rd	White and Parker Rd	Fuqua Rd	Arterial	2	1.00	500	12,900	4.0%	10,836	4.6%	2	0.6%	500	10,836	4.6%
Barnes Rd	Fuqua Rd	Stanfield Rd	Arterial	2	0.97	500	12,700	4.0%	10,668	4.7%	1.94	0.6%	485	10,348	4.7%
Robin Rd	Warren Rd	Ralston Rd	Arterial	2	1.00	400	18,400	2.0%	15,456	2.6%	2	0.6%	400	15,456	2.6%
Hidden Valley Rd	SR 238	La Barranca	Collector	2	0.87	500	6,900	7.0%	5,796	8.6%	1.74	0.5%	435	5,043	8.6%
Warren Rd	Farrell Rd	Pima Rd	Collector	2	8.01	0	0	0.0%	0	0.0%	16.02	4.9%	-	-	0.0%
Ralston Rd	SR 238	Farrell Rd	Collector	2	3.50	1,500	7,000	22.0%	5,880	25.5%	7	2.1%	5,250	20,580	25.5%
Ralston Rd	Farrell Rd	Peters & Nall Rd	Collector	2	5.50	1,200	6,700	18.0%	5,628	21.3%	11	3.4%	6,600	30,954	21.3%
Ralston Rd	Peters & Nall Rd	Papago Rd	Collector	2	1.00	1,200	6,800	17.0%	5,712	21.0%	2	0.6%	1,200	5,712	21.0%
Amarillo Valley Rd	Papago Rd	NO ROAD NAME	Collector	2	1.05	0	0	0.0%	0	0.0%	2.1	0.6%	-	-	0.0%
Amarillo Valley Rd	Century Rd	Clayton Rd	Collector	2	0.32	1,500	6,900	21.0%	5,796	25.9%	0.64	0.2%	480	1,855	25.9%
Amarillo Valley Rd	Clayton Rd	SR 84	Collector	2	2.70	100	4,300	2.0%	3,612	2.8%	5.4	1.7%	270	9,752	2.8%
Hartman Rd	NO ROAD NAME	Honeycutt Rd	Collector	2	0.49	0	0	0.0%	0	0.0%	0.98	0.3%	-	-	0.0%
Hartman Rd	Honeycutt Rd	Bowlin Rd	Collector	2	0.96	1,600	7,100	23.0%	5,964	26.8%	1.92	0.6%	1,536	5,725	26.8%
Stanfield Rd	Miller Rd	Barnes Rd	Collector	2	1.05	0	0	0.0%	0	0.0%	2.1	0.6%	-	-	0.0%
Stanfield Rd	Cottonwood Ln	SR 84	Collector	2	1.00	600	7,100	8.0%	5,964	10.1%	2	0.6%	600	5,964	10.1%
Stanfield Rd	SR 84	Selma Hwy	Collector	2	1.98	700	7,100	10.0%	5,964	11.7%	3.96	1.2%	1,386	11,809	11.7%
Anderson Rd	Farrell Rd	Steen Rd	Collector	2	1.09	0	0	0.0%	0	0.0%	2.18	0.7%	-	-	0.0%
Anderson Rd	Maricopa-Casa Grande Highway	Miller Rd	Collector	2	3.03	900	6,900	13.0%	5,796	15.5%	6.06	1.9%	2,727	17,562	15.5%
Anderson Rd	Miller Rd	Barnes Rd	Collector	2	1.05	700	6,800	10.0%	5,712	12.3%	2.1	0.6%	735	5,998	12.3%
Anderson Rd	Barnes Rd	Kortsen Rd	Collector	2	1.00	600	7,500	8.0%	6,300	9.5%	2	0.6%	600	6,300	9.5%
Anderson Rd	Kortsen Rd	Cottonwood Ln	Collector	2	1.00	600	7,600	8.0%	6,384	9.4%	2	0.6%	600	6,384	9.4%
Russell Rd	Steen Rd	Peters & Nall Rd	Collector	2	0.99	200	6,900	3.0%	5,796	3.5%	1.98	0.6%	198	5,738	3.5%
Russell Rd	Peters & Nall Rd	Maricopa-Casa Grande Highway	Collector	2	1.75	700	6,600	11.0%	5,544	12.6%	3.5	1.1%	1,225	9,702	12.6%
Maricopa-Casa Grande Hwy	SR 347	Pershing Way	Collector	2	0.23	4,600	7,200	64.0%	6,048	76.1%	0.46	0.1%	1,058	1,391	76.1%
Garvey Ave	Smith-Enke Rd	Green Rd	Collector	2	0.85	1,000	7,200	14.0%	6,048	16.5%	1.7	0.5%	850	5,141	16.5%
Garvey Ave	Green Rd	SR 347	Collector	2	1.19	2,400	7,600	32.0%	6,384	37.6%	2.38	0.7%	2,856	7,597	37.6%
Farrell Rd	Warren Rd	Ralston Rd	Collector	2	1.00	1,200	7,400	16.0%	6,216	19.3%	2	0.6%	1,200	6,216	19.3%
Farrell Rd	Ralston Rd	SR 347	Collector	2	4.02	1,800	6,500	28.0%	5,460	33.0%	8.04	2.5%	7,236	21,949	33.0%
Farrell Rd	SR 347	Porter Rd	Collector	2	2.00	2,700	7,500	36.0%	6,300	42.9%	4	1.2%	5,400	12,600	42.9%
Peters & Nall Rd	SR 347	Porter Rd	Collector	2	1.97	1,800	7,000	25.0%	5,880	30.6%	3.94	1.2%	3,546	11,584	30.6%
Peters & Nall Rd	Porter Rd	White & Parker Rd	Collector	2	1.01	700	6,800	10.0%	5,712	12.3%	2.02	0.6%	707	5,769	12.3%
Papago Rd	Warren Rd	Ralston Rd	Collector	2	0.90	1,900	6,500	30.0%	5,460	34.8%	1.8	0.6%	1,710	4,914	34.8%
Papago Rd	Ralston Rd	White Rd	Collector	2	1.00	2,600	6,300	41.0%	5,292	49.1%	2	0.6%	2,600	5,292	49.1%
Papago Rd	White Rd	Amarillo Valley Rd	Collector	2	1.03	2,800	6,500	43.0%	5,460	51.3%	2.06	0.6%	2,884	5,624	51.3%
Papago Rd	Green Rd	SR 347	Collector	2	1.02	3,200	6,400	49.0%	5,376	59.5%	2.04	0.6%	3,264	5,484	59.5%
Val Vista Rd	Warren Rd	Ralston Rd	Collector	2	1.00	0	0	0.0%	0	0.0%	2	0.6%	-	-	0.0%



FACILITY NAME	FROM	TO	FACILITY TYPE	# OF LANES	LENGTH (MILES)	DAILY VOLUME	THEORETICAL CAPACITY (1)	VOLUME-TO-CAPACITY RATIO	LOS D CAPACITY	LOS D VOLUME-TO-CAPACITY RATIO	LANE MILES	% OF TOTAL	ACTUAL VMT	POTENTIAL VMT	VMT VOLUME TO CAPACITY RATIO
Louis Johnson Dr	NO ROAD NAME	Warren Rd	Collector	2	1.99	600	6,800	9.0%	5,712	10.5%	3.98	1.2%	1,194	11,367	10.5%
Miller Rd	SR 347	White & Parker Rd	Collector	2	3.03	200	6,100	4.0%	5,124	3.9%	6.06	1.9%	606	15,526	3.9%
Barnes Rd	Stanfield Rd	Anderson Rd	Collector	2	2.00	200	9,700	2.0%	8,148	2.5%	4	1.2%	400	16,296	2.5%
Century Rd	Warren Rd	Amarillo Valley Rd	Collector	2	3.00	1,000	6,900	15.0%	5,796	17.3%	6	1.8%	3,000	17,388	17.3%
Clayton Rd	Amarillo Valley Rd	Green Rd	Collector	2	0.99	1,400	12,000	12.0%	10,080	13.9%	1.98	0.6%	1,386	9,979	13.9%
Clayton Rd	Green Rd	SR 347	Collector	2	0.99	1,800	6,700	26.0%	5,628	32.0%	1.98	0.6%	1,782	5,572	32.0%
Clayton Rd	NO ROAD NAME	White & Parker Rd	Collector	2	0.49	600	6,400	10.0%	5,376	11.2%	0.98	0.3%	294	2,634	11.2%
Meadowview Rd	Green Rd	SR 347	Collector	2	1.00	300	7,100	4.0%	5,964	5.0%	2	0.6%	300	5,964	5.0%
Meadowview Rd	SR 347	SR 84	Collector	2	0.49	0	0	0.0%	0	0.0%	0.98	0.3%	-	-	0.0%
Totals					147.55	330,000	1,214,000	27.2%	1,019,760	32.4%	326.64	22.3%	411,143	1,292,410	31.8%