Board of Supervisors Memorandum

February 18, 2020

Final Impact Fee Land Use Assumptions Report
and Infrastructure Improvement Plan

Background

Please find attached the final Impact Fee Land Use Assumptions Report (LUAR) and Infrastructure Improvement Plan (IIP) for Board of Supervisors consideration and approval. Draft versions of these reports were presented at the January 14, 2020 Board meeting and no public comments were made or received subsequent to that meeting. Questions raised by Board members at that meeting regarding growth rates and Thornydale Road were addressed in the attached memorandum dated January 21, 2020 (Attachment 1).

The final LUAR (Attachment 2) and IIP (Attachment 3) reflect changes made to the draft reports as a result of comments received from stakeholders, including Southern Arizona Homebuilders Association and others, from October through December of 2019. These changes include the removal of several projects and the lowering of the assumed residential impact fee from $9,250 to $8,523. Although the IIP is based on an assumed fee amount, State statute requires approval of the final LUAR and IIP before the fee amount can be approved.

Next Steps

If the LUAR and IIP are approved, state statute requires a 30-day waiting period before a draft Fee Study can be brought before the Board for public hearing. The Fee Study will include the proposed fees and the methodology for determining the fees for all land use types. This could be scheduled for the April 7, 2020 Board meeting. State statute again requires a 30-day waiting period before the Fee Study can be approved after the public hearing. Based on these timeframes, adoption of the new fee and ordinance could occur in May 2020, with an effective date of January 1, 2021 to allow for developer planning.

Recommendation

I recommend that the Board of Supervisors adopt the attached final Land Use Assumptions report and the final Infrastructure Improvement Plan at the February 18, 2020 Meeting.

Sincerely,

C.H. Huckelberry
County Administrator

CHH/lab – January 29, 2020

Attachments

c: Jan Lesher, Chief Deputy County Administrator
Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Yves Khawam, PhD, Assistant County Administrator for Public Works
Ana Olivares, Director, Transportation Department

ATTACHMENT 1

MEMORANDUM

Date: January 21, 2020

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Draft Impact Fee Land Use Assumptions Report and Draft Infrastructure Improvement Plan**

Please find below answers to questions raised at the January 14, 2020 Board meeting Addendum 1, Item 12, regarding draft Impact Fee Land Use Assumptions Report (LUAR) and draft Infrastructure Improvement Plan (IIP).

Growth Rates in Northwest benefit area

A comment was made regarding the reported population growth rate in the Northwest area seemed very low when compared to strong growth in the Town of Marana. Population growth in Marana has in fact been strong and as reported on page eight of the draft LUAR having experienced 3.7 percent annual growth from 2013 through 2018. However, the Northwest benefit area as all benefit areas, exclude the incorporated areas and while Marana is experiencing strong growth, unincorporated Pima County and the rural region west of the Town of Marana is only growing at 0.6 percent annually over the same time-period. In fact, there were only 64 residential housing permits recorded in this benefit area from 2015 through 2018, compared to 2,674 total throughout unincorporated Pima County. Similarly, employment in this area reported by Pima Association of Governments to be only four percent of the total region.

Thornydale Road capacity needs

I have detailed the history of Thornydale Road in a memorandum to you dated January 21, 2020. This roadway was not included in the IIP for several reasons; One, new impact fees can only be used to fund roadway capacity that will be needed by new growth and cannot be used to address existing congestion caused by past growth. State statute is explicit in this regard. New growth is anticipated to contribute only a small percentage of the future capacity of this roadway, therefore the majority of the cost of widening would need to be funded by other means. As indicated in the attached January 21, 2020 memorandum, the best possibility for the widening of Thornydale Road will rest with any new initiative of the Regional Transportation Authority (RTA). Second, all projects in the draft IIP need to be funded and constructed within the 10-year timeframe of the program or the collected funds must be refunded. Therefore, only those projects that can be funded and completed within this timeframe are included in the draft IIP. The North benefit area includes the high priority

RTA projects Sunset Road and Silverbell Road and there are simply not enough anticipated funds to include Thornydale Road as well. Anticipated remaining funds are allocated to smaller projects such as a short segment of Orange Grove Road, turn lanes on Linda Vista Boulevard, and traffic signal improvements. It is important to think of impact fees as supplemental funding and not the main source of funding for major roadway capacity improvements.

Proposed Fees

Arizona Revised Statutes Title 11. Counties § 11-1102 requires Board approval of the drafts LUAR and IIP before consideration and approval of the proposed new fees. For this reason, the drafts LUAR and IIP were presented for Public Hearing on January 14, 2020 and the proposed fees will not be presented for Board consideration until April 2020. Because this statute also requires the IIP to be constructed within the 10-year term, it is important that the IIP be fiscally constrained based on anticipated revenues during the 10-year program. Staff has proposed a new residential fee of $8,523 per house, which would be phased in over three years. This fee would remain in place for 10 years, unless modified by the Board. Unlike the current fee ordinance, the proposed fee would not increase annually due to inflation. For comparison, the current residential fee is $6,502 and if it were indexed for inflation, it would be approximately the same as the proposed new fee following 10 years.

Next Steps

The next step in the process is formal adoption of the draft Land Use Assumptions Report and the draft Infrastructure Improvement Plan. This will be scheduled for the February 18, 2020 Board meeting. Once the LUAR and IIP are approved, there is a 30-day waiting period before the draft Fee Study can be brought before the Board for Public Hearing. This will be scheduled for the April 7, 2020 Board meeting. The Fee Study can be approved no sooner than 30 days after the Public Hearing. If approved, the new fees are proposed to become effective January 1, 2021.

CHH/lab

Attachment

c: Jan Lesher, Chief Deputy County Administrator
Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Yves Khawam, PhD, Assistant County Administrator for Public Works
Ana Olivares, Director, Transportation Department

MEMORANDUM

Date: January 21, 2020

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Thornydale Road Widening and Capacity Improvements**

Thornydale Road widening, from Orange Grove Road to Linda Vista Boulevard, was part of the 1997 Highway User Revenue Bond issue with an estimated cost of $26.5 million ($3 million of Bond Funding and $23.5 million of Other Funding).

The project was somewhat controversial since in 1997 the Cactus Ferruginous Pygmy Owl was still listed as an endangered species and significant mitigation measures were required to widen even the first phases of the project from Orange Grove Road to Ina Road and from Ina Road to Cortaro Farms Road, completed in 1999 and 2003 respectively. The total for both phases was $19.8 million, $3.0 million for Orange Grove to Ina Road and $16.8 million for Ina Road to Cortaro Farms Road.

When the 1997 bond program was proposed, the primary complaint in Pima County was that our rural system was overtaxed and needed to be significantly improved by a series of capacity improvements or roadway widening. Again, in 2006, the Regional Transportation Authority (RTA) was primarily designated for roadway capacity improvements in the highway element. Thornydale was not included since we were still in the early stages of implementing the 1997 bond program.

Since both the 1997 bond program and the 2006 RTA, there has been a shift in the focus for transportation improvements from capacity and mobility to maintenance and repair, specifically, pavement preservation. Hence, the decision was made by the Board of Supervisors in April 2018 to amend the scope for Thornydale Road, from Cortaro Farms Road to Linda Vista Boulevard, to pavement repair and shoulder widening.

Transportation agencies in counties, cities and towns, including the State agency, the Arizona Department of Transportation, are under increasing pressure to operate and maintain a transportation system with stagnant revenue sources, rapidly increasing costs, increased roadway utilization due to increased vehicle fuel efficiency and the introduction of electric vehicles that pay no gas taxes. Since 2006, overall fuel efficiency has increased from 22 miles per gallon to nearly 26 miles per gallon, an 18 percent fuel efficiency increase. The

number of electric car models has increased from less than 50 in 2006 to over 200 models in 2018. The purchasing power of the gas tax has been reduced by half since 1990.

The Highway User Revenue Fund (HURF), the main source of revenue for transportation systems (State, county, city or town) has been steadily eroded over time. The gas tax in 1991, as a percentage of HURF, was 44 percent. In 2019, the gas tax is 35 percent. This lack of revenue has caused stressors in the transportation system. For example, in 2010, the pavement condition of Arizona's interstate highway system was rated at 72 percent Good. In eight years, this rating has fallen to 53 percent Good. The national highway system that contains the balance of other state highways had a pavement condition index of Good at 68 percent in 2010, but decreased to 35 percent in 2018. Finally, the cost of construction, maintenance and repair of highway systems has been rapidly increasing as the economy recovers. The Highway Cost Index as reported by the Arizona Department of Transportation in 2016, was 1.0 and increased to 1.47 by 2019. Therefore, $1 of highway improvements in 2016, now costs $1.47 for the same product (47 percent increase).

The actual cost for widening the balance of Thornydale Road to Linda Vista is approximately $21 million. There is no schedule for including the widening project in a future capital improvement program since our focus is on roadway repair, maintenance and pavement rehabilitation. This focus is expected to remain for the next 10 years. The best possibility for any future widening of Thornydale Road will rest with any new initiative of the RTA.

CHH/anc

c: Jan Lesher, Chief Deputy County Administrator
Carmine DeBonis, Jr., Deputy County Administrator for Public Works
Yves Khawam, PhD, Assistant County Administrator for Public Works
Ana Olivares, Director, Transportation Department

ATTACHMENT 2

Pima County, Arizona

Impact Fee Update

Land Use Assumptions

Final Public Report

Prepared by

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Prepared for

PIMA COUNTY

201 North Stone Avenue
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January 22, 2020

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1. INTRODUCTION

The Roadway Development Impact Fee in unincorporated Pima County is assessed for new developments to offset some of the infrastructure costs associated with growth. The County currently charges fees for one public category: roadways. To continue assessing and collecting fees, the County must update its program to comply with the new state statute ARS §11-1102. The update of the Roadway Development Impact Fee program includes preparation of new development impact fee studies, project lists, fee schedules, and county ordinance.

The statute ARS §11-1102 limits the types of "necessary public services" which impact fees can fund. Before assessing the development fees, a County must release to the public a written report of the land use assumptions and an infrastructure improvements plan (IIP) for each fee category. As defined in ARS §11-1102 (V)(6), "'Land use assumptions' means projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the general plan of the county."

This report is a required document that identifies the land use assumptions to be applied in the IIP for roads, and the subsequent calculation of development impact fee rates. These land use assumptions are used to estimate the amount of new development within the service areas from which development impact fees will be assessed. The land use assumptions generally reflect the regional plans, such as the Transportation Improvement Program (TIP) and the Regional Mobility and Accessibility Plan (RMAP), and the region's suballocation of population forecast to the County.

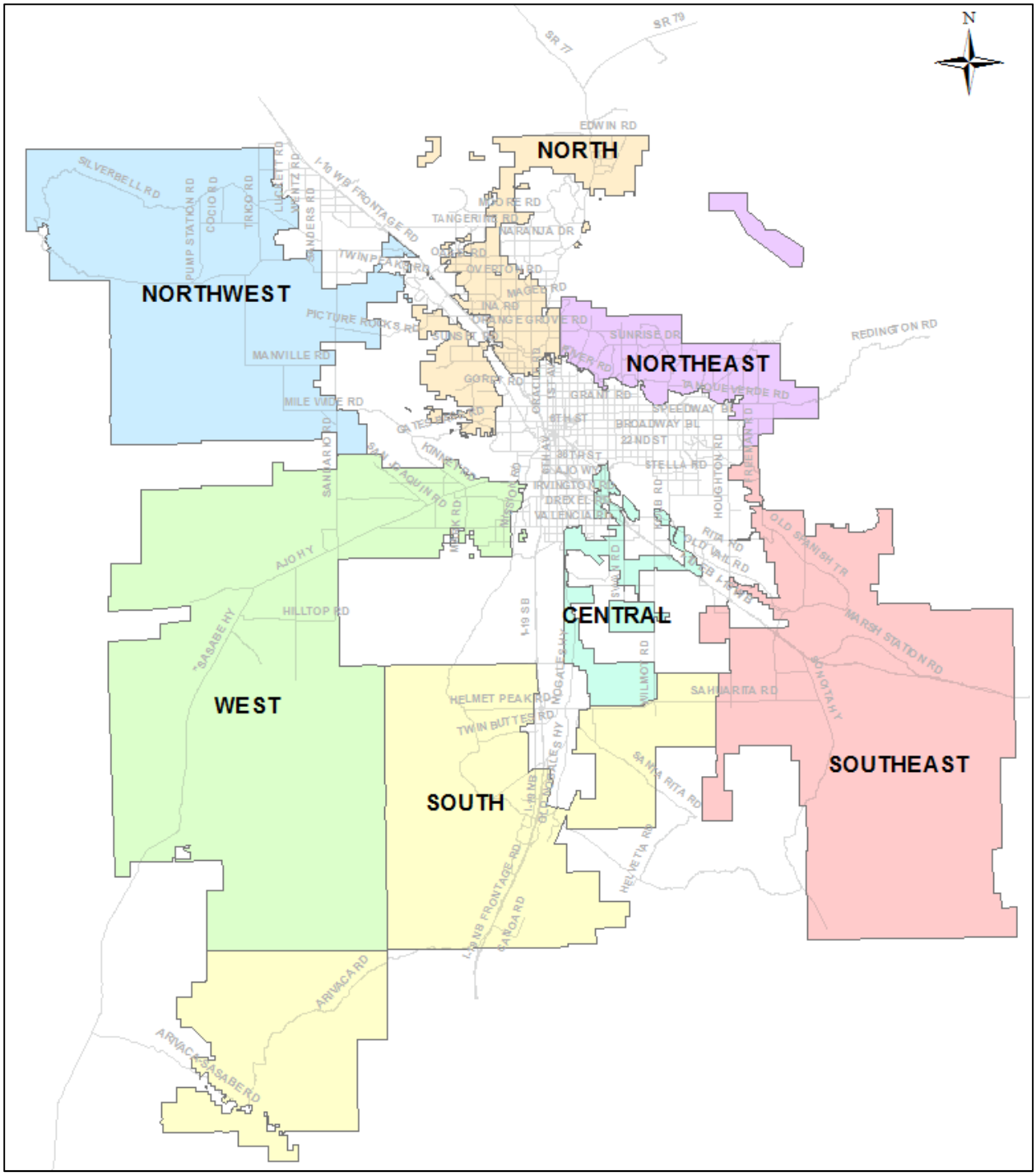
1.1. ALLOCATION OF GROWTH WITHIN SERVICE AREAS

As defined in ARS §11-1102 (V)(9), "'Service area' means any specified area within the boundaries of a county in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan."

Under the current impact fee program, there are ten service areas in unincorporated Pima County: Altar Valley, Avra Valley, Catalina Foothills, Cañada del Oro, San Xavier, Santa Cruz, Silverbell-Tortolita, Southeast, Southwest, and Tucson Mountains.

The County reviewed the existing service areas and modified the boundaries to better align development patterns and projects and to ensure a substantial nexus as required by the statute. By statute, “development fees should result in a beneficial use to the development” paying the fee. The new program generally excludes federal lands, tribal lands, and other conservation areas that are not expected to be developed. As a guideline, major roadways and topographic features such as railroads and Central Arizona Project (CAP) canals were considered when delineating service areas. A map of the seven proposed service areas in unincorporated Pima County is shown in Exhibit 1.

Exhibit 1. Streets Service Areas



2. EXISTING SOCIOECONOMIC CONDITIONS

2.1. POPULATION AND HOUSING

Although Pima County is the second most populous county in Arizona, its population has been growing slower than the state population in the recent years. Based on the US Census Bureau population estimates, population in the County experienced 4.2% growth from 2013-2018 (0.82% per year), compared to 8.1% for the state overall (1.57% per year). General population and housing data from the *2013-2017 American Community Survey (ACS)*[1] from the US Census Bureau are shown in Exhibit 2.

Exhibit 2. Population and Housing Units Census Data

	Pima County	**Arizona**
Population, 2018 estimate (US Census Estimate)	1,027,502	7,171,646
Population, 2013 estimate (US Census Estimate)	997,437	6,634,999
Population, annual percent change	+0.82%	+1.57%
Housing units, 2017 estimate (ACS)	453,948	2,941,894
Homeownership rate, 2017 (ACS)	61.9%	63.1%
Housing units in multi-unit structures, percent, 2017 (ACS)	21.8%	20.3%
Median value of owner-occupied housing units, 2017 (ACS)	$166,300	$193,200
Households, 2017 (ACS)	398,530	2,482,311
Persons per household, 2017 (ACS)	2.53	2.74

The Arizona Department of Economic Security has official population projections for the state, counties, incorporated places, and selected census designated areas. Exhibit 3 shows estimated population growth for each jurisdiction in Pima County from 2013 to 2018[2].

[1] *2013-2017 American Community Survey*. US Census Bureau. <www.census.gov>
[2] *2016-2050 Projections*. https://population.az.gov/sites/default/files/documents/files/pop-prj-04019inc-16-50.xlsx

Exhibit 3. 2013-2018 Population Growth Estimates for Pima County Jurisdictions

Jurisdiction	Annual Growth
Marana	3.7%
Oro Valley	1.8%
Sahuarita	2.3%
South Tucson	0.4%
Tucson	0.7%
Unincorporated Pima County	0.6%

2.2. EMPLOYMENT

The 2013-2017 American Community survey estimates that 4.9% of the population 16 years and over in labor force is unemployed in Pima County, compared to 4.2% in the state. The 2017 employment data in Exhibit 4 is provided by the US Census Bureau.

Exhibit 4. 2017 Employment Data

	Pima County		Arizona	
Employment Status, 2017 (ACS)	Estimate	Percent	Estimate	Percent
Population 16 years and over	814,161	-	5,371,341	-
In labor force	478,706	58.8%	3,197,116	59.5%
Civilian labor force	473,482	58.2%	3,179,802	59.2%
Employed	433,478	53.2%	2,953,891	55.0%
Unemployed	40,004	4.9%	225,911	4.2%
Armed Forces	5,224	0.6%	17,314	0.3%
Not in labor force	335,455	41.2%	2,174,225	40.5%
Civilian labor force	473,482	-	3,179,802	-
% Civilian Labor Force Unemployed	-	8.4%	-	7.1%

3. LAND USE ASSUMPTIONS

The land use assumptions for a 10-year horizon are based on the estimated growth in population and employment in unincorporated Pima County. Growth for both residential and non-residential (commercial) areas was estimated for each service area to determine the percentage of overall County growth which is eligible for inclusion in the IIP. The 10-year planning period will be from 2019 to 2029. The following sections discuss the information and methodology used to develop the land use assumptions. The PAG (Pima Association of Governments) *Transportation Improvement Program (TIP)* and *Regional Mobility and Accessibility Plan (RMAP)*, historic permit information, and other sources were used to inform the development of the growth assumptions

3.1. RESIDENTIAL GROWTH PROJECTIONS

3.1.1. PAG Transportation Improvement Program (TIP)

Trends from the Pima Association of Governments (PAG) were evaluated to assist the development of land use assumptions for unincorporated Pima County. PAG maintains a model of existing conditions as well as a model representing the regional transportation network incorporating the planned 5-year *Transportation Improvement Program*[3] (TIP) projects. This document references the 2017 to 2022 TIP.

PAG provided population estimates for each Transportation Analysis Zone (TAZ) in the region. An average household size of 2.46 people per household was assumed to convert population into number of households. Exhibit 5 shows the 2017-2022 TIP estimated 5-year household growth for each of the proposed service areas.

[3] *Transportation Improvement Program* (TIP). Pima Association of Governments. <https://www.pagnet.org/Programs/TransportationPlanning/PlansandPrograms/TransportationImprovementProgram/tabid/172/Default.aspx>

Exhibit 5. TIP (2017-2022) Estimated Household Growth

Service Area	New HH*	% New HH
Central	2,267	20%
North	1,776	16%
Northeast	485	4%
Northwest	524	5%
South	579	5%
Southeast	2,514	23%
West	2,943	27%
TOTAL	**11,086**	**100%**

*TIP Households includes TAZs that are partially in the County even if most households are in City or other municipality

3.1.2. Permits

The historic number of permits from January 2015 to May 2018 was used to guide the estimation of housing growth in the region. Exhibit 6 shows the residential permits in each of the proposed service areas.

Exhibit 6. 2015-2018 Residential Permits in Unincorporated Pima County

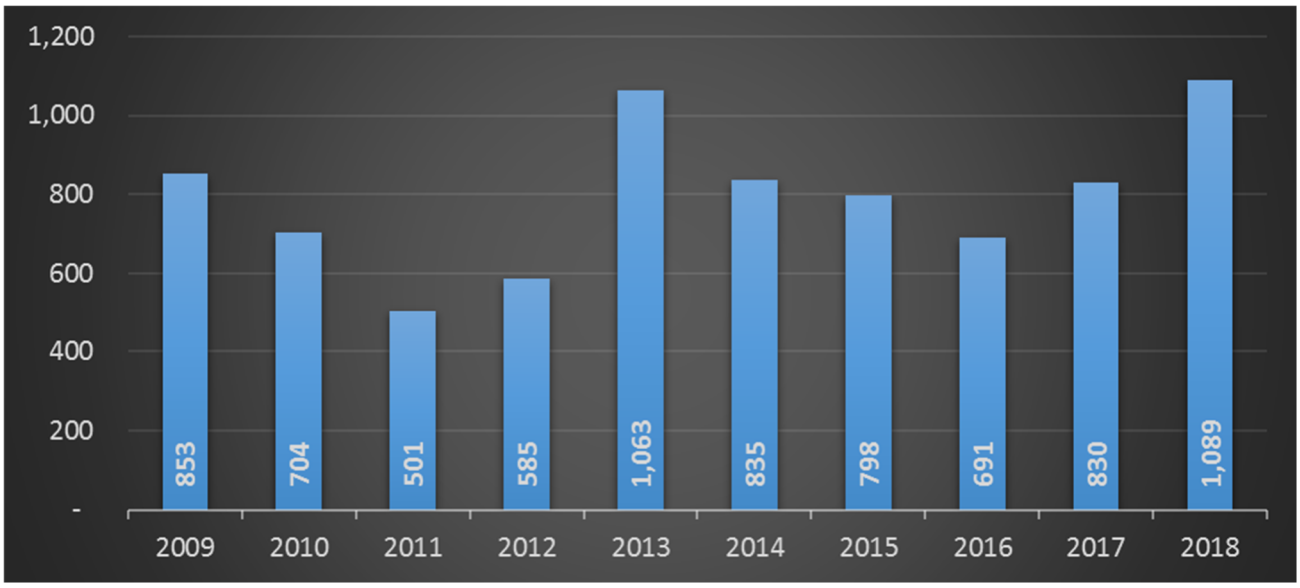
Service Area	Permits	% Permits
Central	10	0.4%
North	407	15%
Northeast	407	15%
Northwest	64	2%
South	210	8%
Southeast	862	32%
West	714	27%
TOTAL	2,674	100%

3.1.3. 10-Year Land Use Assumptions: Residential

There were 2,674 total residential permits issued in unincorporated Pima County from January 2015 to May 2018, which means approximately 783 permits were issued each year. However, as shown in exhibit 7, the number of permits has been slowly increasing to a little over 1,000 permits in 2018 (annualized based in January-May data).

Therefore, it is assumed that the long term trend is for permits to stabilize at approximately 1,000 permits per year, which means that it is estimated that approximately 10,000 new permits will be issued in a 10-year period in the County.

Exhibit 7. 2009-2018 Residential Permits per Year in Unincorporated Pima County



*2018 permits based on annualized January to May data

The proportion of new permits in each service area was estimated based on historic permits, the estimated growth from the 2017-2022 TIP, and knowledge of planned and expected developments. The proposed residential growth for each service area as estimated based on the available data and knowledge of regional trends and expected development is shown in Exhibit 8, along with the historic permit and PAG TIP data for reference.

Exhibit 8. Population and Housing Land Use Assumptions: 10-Year Growth

	HISTORIC PERMITS 01/15-05/18		PAG TIP 2017-22*		PROPOSED 10-YR GROWTH	
Service Area	**Permits**	**% Permits**	**New HH**	**% New HH**	**Permits**	**% Permits**
Central	10	0.4%	2,267	20%	900	9%
North	407	15%	1,776	16%	1,700	17%
Northeast	407	15%	485	4%	900	9%
Northwest	64	2%	524	5%	400	4%
South	210	8%	579	5%	600	6%
Southeast	862	32%	2,514	23%	2,900	29%
West	714	27%	2,943	27%	2,600	26%
TOTAL	**2,674**	**100%**	**11,086**	**100%**	**10,000**	**100%**

*TIP Households includes TAZs that are partially in the County even if most households are in City or other municipality

3.2. EMPLOYMENT GROWTH PROJECTIONS

3.2.1. PAG Transportation Improvement Program (TIP)

Employment projections are also important to estimate the amount of new infrastructure needed to serve planned new development at each service area. The PAG TIP data includes five-year (2017-2022) estimates of the number of employees for each Transportation Analysis Zone (TAZ) in the region. Exhibit 9 shows the TIP estimated employment growth for the proposed service areas.

Exhibit 9. TIP (2017-2022) Estimated Employment Growth

Service Area	New Jobs*	% New Jobs
Central	3,534	26%
North	4,294	32%
Northeast	1,245	9%
Northwest	512	4%
South	715	5%
Southeast	853	6%
West	2,465	18%
TOTAL	**13,618**	**100%**

*TIP Employment includes TAZs that are partially in the County even if most households are in City or other municipality

3.2.2. PAG Regional Mobility and Accessibility Plan (RMAP)

The Pima Association of Governments (PAG) updates its long-range *Regional Mobility and Accessibility Plan*[4] (RMAP) every four years. The current RMAP was formally adopted by PAG's Regional Council on May 26, 2016 and identifies projects, goals, and performance measures for the transportation system of the Tucson metropolitan area over the next 30 years (2045). The RMAP includes information on existing (2018) number of jobs in unincorporated Pima County by sector, as shown in Exhibit 10.

Exhibit 10. Existing Jobs in Unincorporated Pima County (March 2018)

Sector	Industrial	Retail	Office	Total
Existing	19,771	9,774	53,328	82,873
% Existing Jobs	24%	12%	64%	100%

The RMAP data was evaluated to help guide the projected distribution of employment in the various sectors (industrial, retail, office).

[4] *Regional Mobility and Accessibility Plan* (RMAP). Pima Association of Governments. <https://www.pagregion.com/documents/rmap/rmap2045/2045RMAP.pdf>

3.2.3. 10-Year Land Use Assumptions: Employment

Based on the 2017 third quarter forecast by the University of Arizona Economic and Business Research Center[5] (EBRC), a 0.95% annual growth in jobs was estimated in unincorporated Pima County. The proposed employment growth is also consistent with the most recent EBRC forecast (May 2019) for the County as a whole of 0.9% per year from 2017-2022. Currently there are 82,873 existing jobs in unincorporated Pima County; therefore approximately 8,245 new jobs are expected in a 10-year period.

Three non-residential employment sectors are considered in this report: retail, office and industrial. Based on the 2017-2022 TIP employment growth, the existing distribution of jobs by sector, and discussions with the County concerning planned and expected development, the projected number of jobs for the region is shown in Exhibit 11. The TIP job projections are included in the exhibit for reference.

Exhibit 11. Employment Land Use Assumptions: 10-Year Growth

	PAG TIP 2017-22*		PROPOSED 10-YR GROWTH		% Jobs by Land Use			Jobs by Land Use		
Service Area	**New Jobs**	**% Jobs**	**Jobs**	**% Jobs**	**Ind**	**Retail**	**Office**	**Ind**	**Retail**	**Office**
Central	3,534	26%	1,731	21%	63%	3%	34%	1,091	52	589
North	4,294	32%	1,731	21%	25%	15%	60%	433	260	1,039
Northeast	1,245	9%	907	11%	5%	13%	82%	45	118	744
Northwest	512	4%	247	3%	60%	3%	37%	148	7	92
South	715	5%	412	5%	30%	10%	60%	124	41	247
Southeast	853	6%	1,484	18%	30%	25%	45%	445	371	668
West	2,465	18%	1,731	21%	15%	14%	71%	260	242	1,229
TOTAL	**13,618**	**100%**	**8,245**	**100%**				**2,546**	**1,092**	**4,607**

*TIP Employment includes TAZs that are partially in the County even if most households are in City or other municipality

[5]University of Arizona Economic and Business Research Center <https://ebr.eller.arizona.edu/>

4. SUMMARY

This report provides 10-year growth projections for unincorporated Pima County for the purposes of the roadway impact fee study update. The estimated population and employment growth data for 2029 conditions is provided in Exhibit 12.

Exhibit 12. Residential and Employment Land Use Assumptions: 10-Year Growth

Service Area	**Permits**	**Jobs by Land Use**		
		Ind	**Retail**	**Office**
Central	900	1,091	52	589
North	1,700	433	260	1,039
Northeast	900	45	118	744
Northwest	400	148	7	92
South	600	124	41	247
Southeast	2,900	445	371	668
West	2,600	260	242	1,229
TOTAL	**10,000**	**2,546**	**1,092**	**4,607**

These assumed land assumptions will be used in the infrastructure improvements plan (IIP) to estimate the amount of new facilities needed to serve the projected new development. ARS §9-463.05 (D)(3) requires the land use assumptions to be updated at least every five years.

APPENDIX

- **List of Preparers**
- **January 2015 – May 2018 Permits**
- **2017-2022 TIP Population Growth Map by TAZ**
- **2017-2022 TIP Employment Growth by TAZ**

List of Preparers

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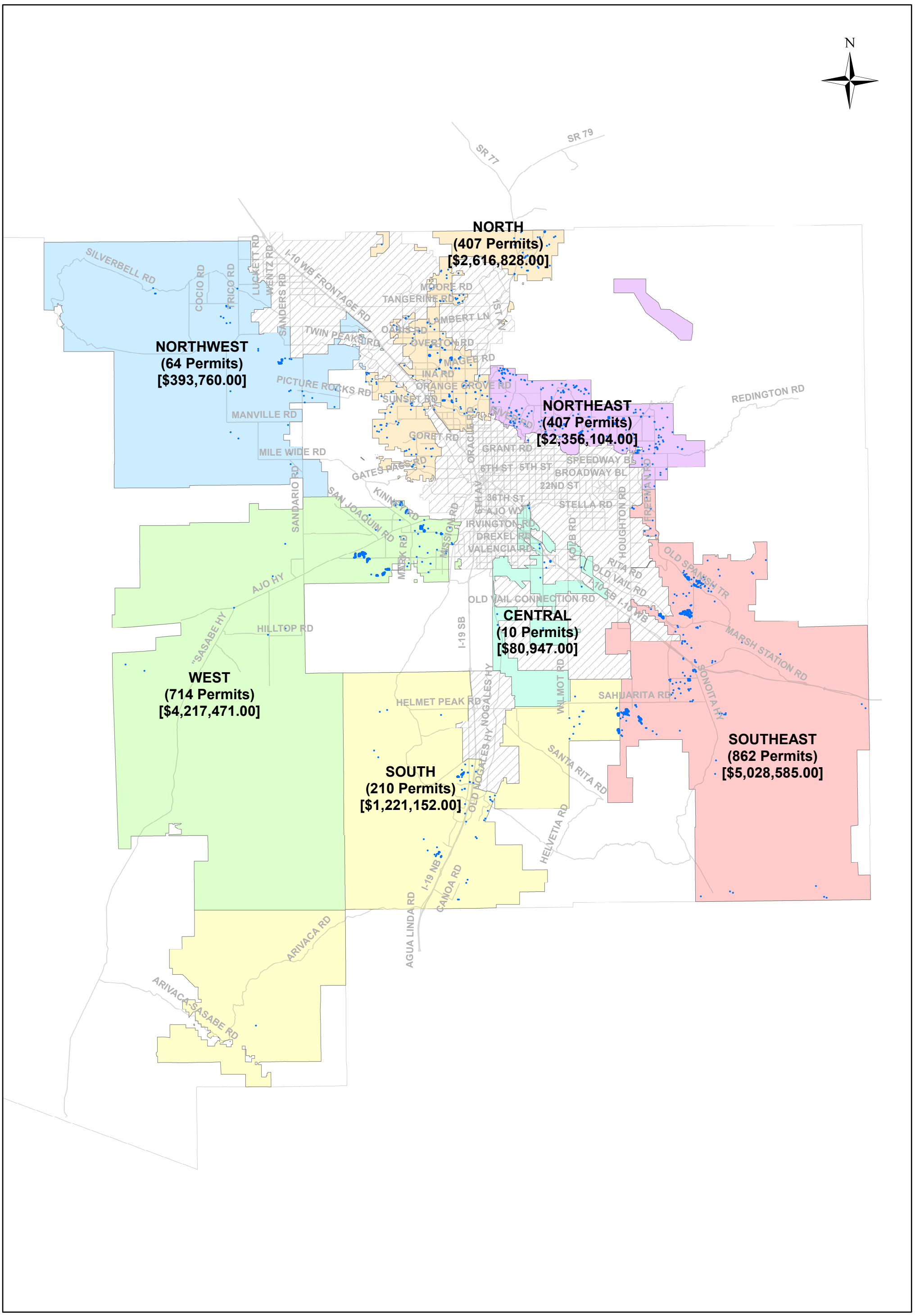
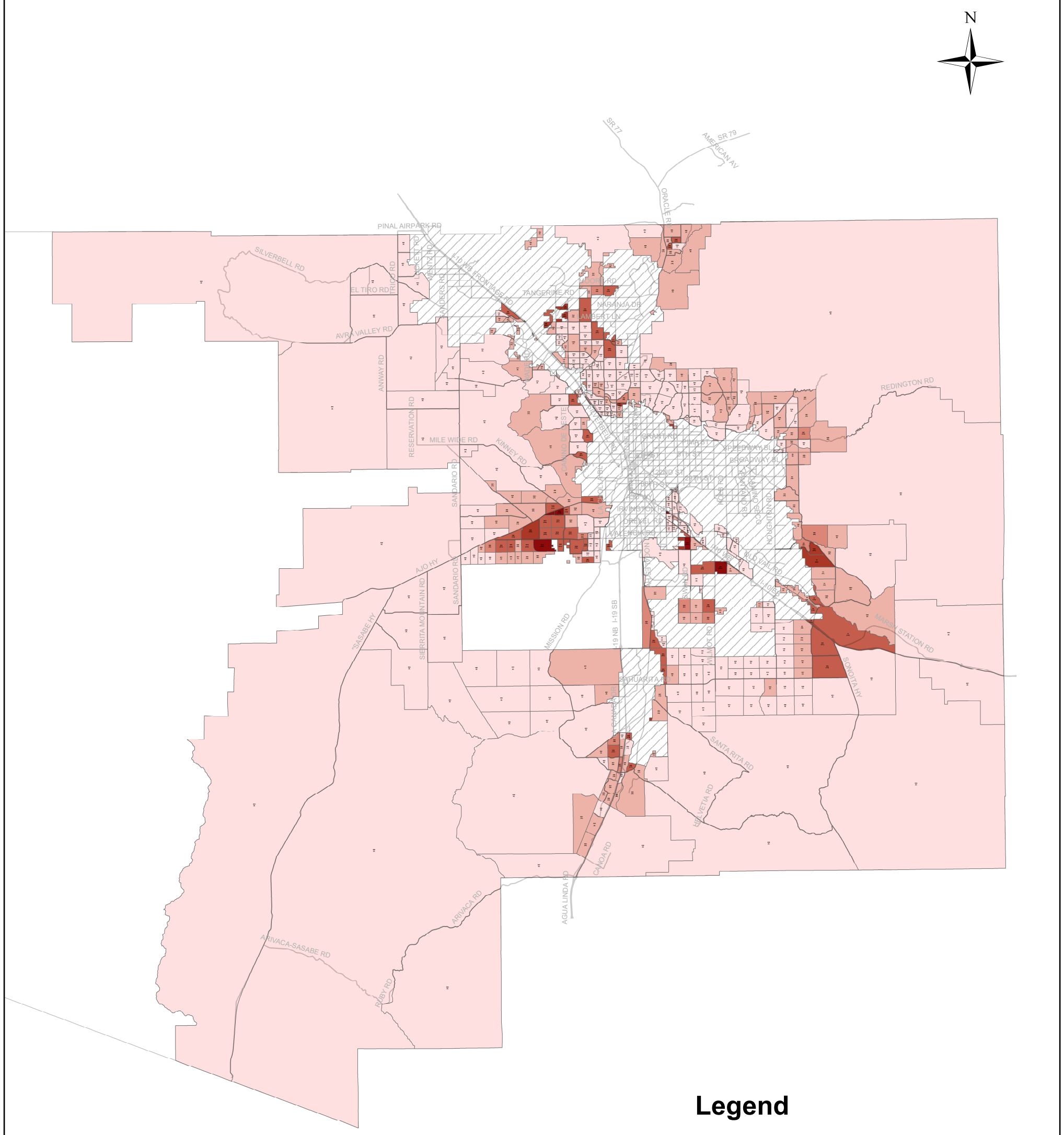


Pima County Impact Fee Improvement Program
01/2015 - 05/2018 Permits

PSOMAS
January 2020



Legend

All TAZs

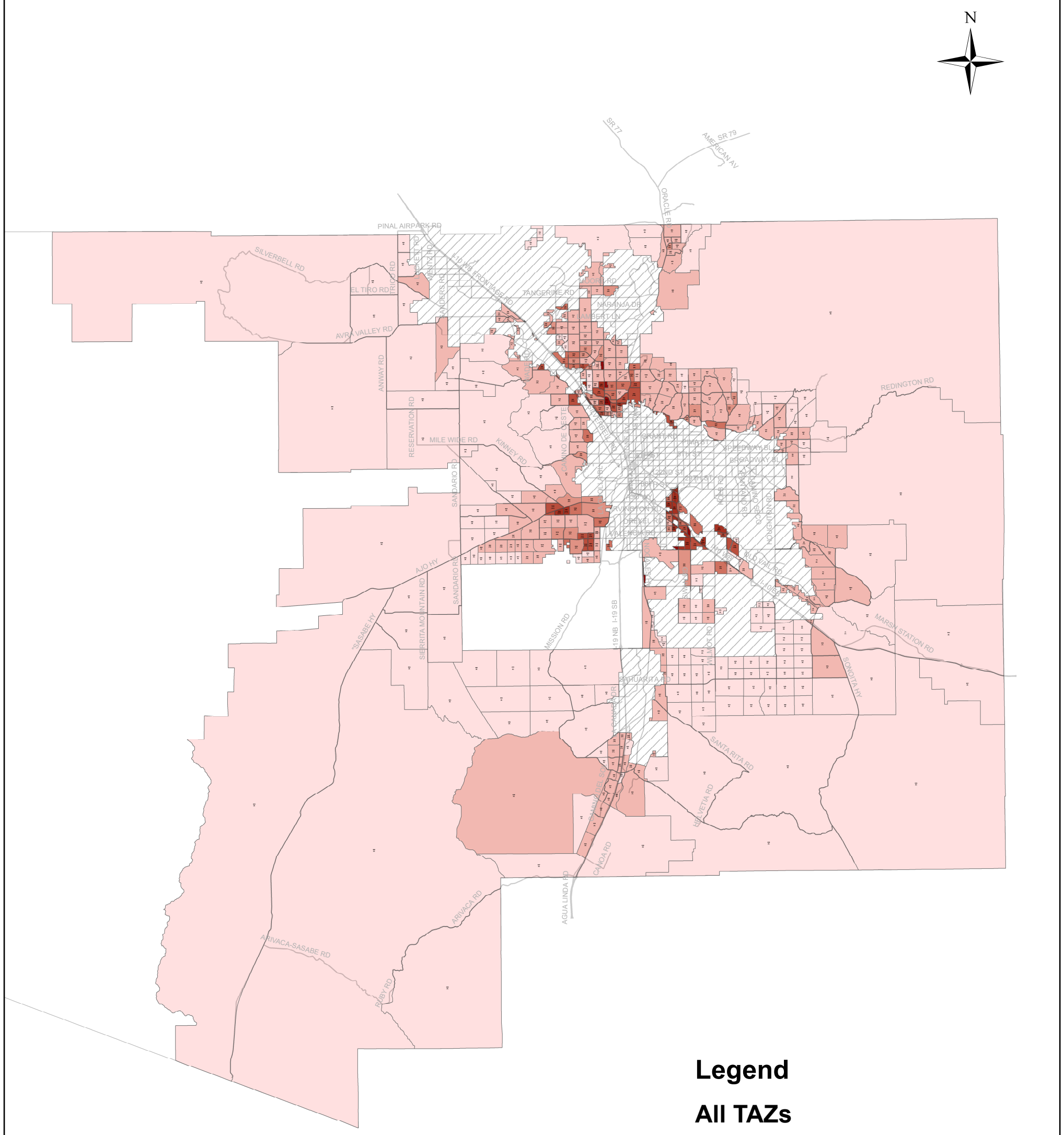
Population: 5-Year Growth/sqmi

- <= 1
- 2 - 50
- 51 - 100
- 101 - 300
- 301 - 500
- > 500

*Zoom in for TAZ Information:
XX - TAZ
(XX) - Population growth/sqmi

Pima County Impact Fee Improvement Program
2017-2022 TIP Population Growth per Square Mile by TAZ

PSOMAS
January 2020



Legend

All TAZs

Employment: 5-Year Growth/sqmi

- <= 1
- 2 - 25
- 26 - 50
- 51 - 100
- 101 - 200
- 201 - 500
- > 500

*Zoom in for TAZ Information:
XX - TAZ
(XX) - Employment growth/sqmi

Pima County Impact Fee Improvement Program
2017-2022 TIP Employment Growth per Square Mile by TAZ

PSOMAS
January 2020

ATTACHMENT 3

Pima County, Arizona

Impact Fee Update

Street Facilities

Infrastructure Improvements Plan

Final Public Report

Prepared by

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January 22, 2020

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1. INTRODUCTION

The Roadway Development Impact Fee in unincorporated Pima County is assessed for new developments to offset some of the infrastructure costs associated with growth. The County currently charges fees for one public category: roadways. To continue assessing and collecting fees, the County must update its program to comply with the new state statute ARS §11-1102. The update of the Roadway Development Impact Fee program includes preparation of new development impact fee studies, project lists, fee schedules, and county ordinance.

Before assessing the development fees, a County must release to the public a written report of the land use assumptions and an infrastructure improvements plan (IIP) for each fee category. As defined in ARS §11-1102 (V)(5), "'Infrastructure improvements plan' means a written plan that identifies each necessary public service or facility expansion that is proposed to be the subject of development fees and otherwise complies with the requirements of this section and may be the county's capital improvements plan". The statute ARS §11-1102 limits the types of "necessary public services" which impact fees can fund.

This report is a required document that identifies the infrastructure needs for the street facilities in unincorporated Pima County. The analysis only includes arterials and major collectors, since roadways with lower classifications are generally internal to development and are constructed during the development process. This analysis will be used in the subsequent calculation of impact fee rates.

The land use assumptions that are used in this report to evaluate infrastructure needs are documented separately in the Land Use Assumptions report. The Land Use Assumptions report provides a quantification of expected future development within each of the service areas for which impact fees will be assessed.

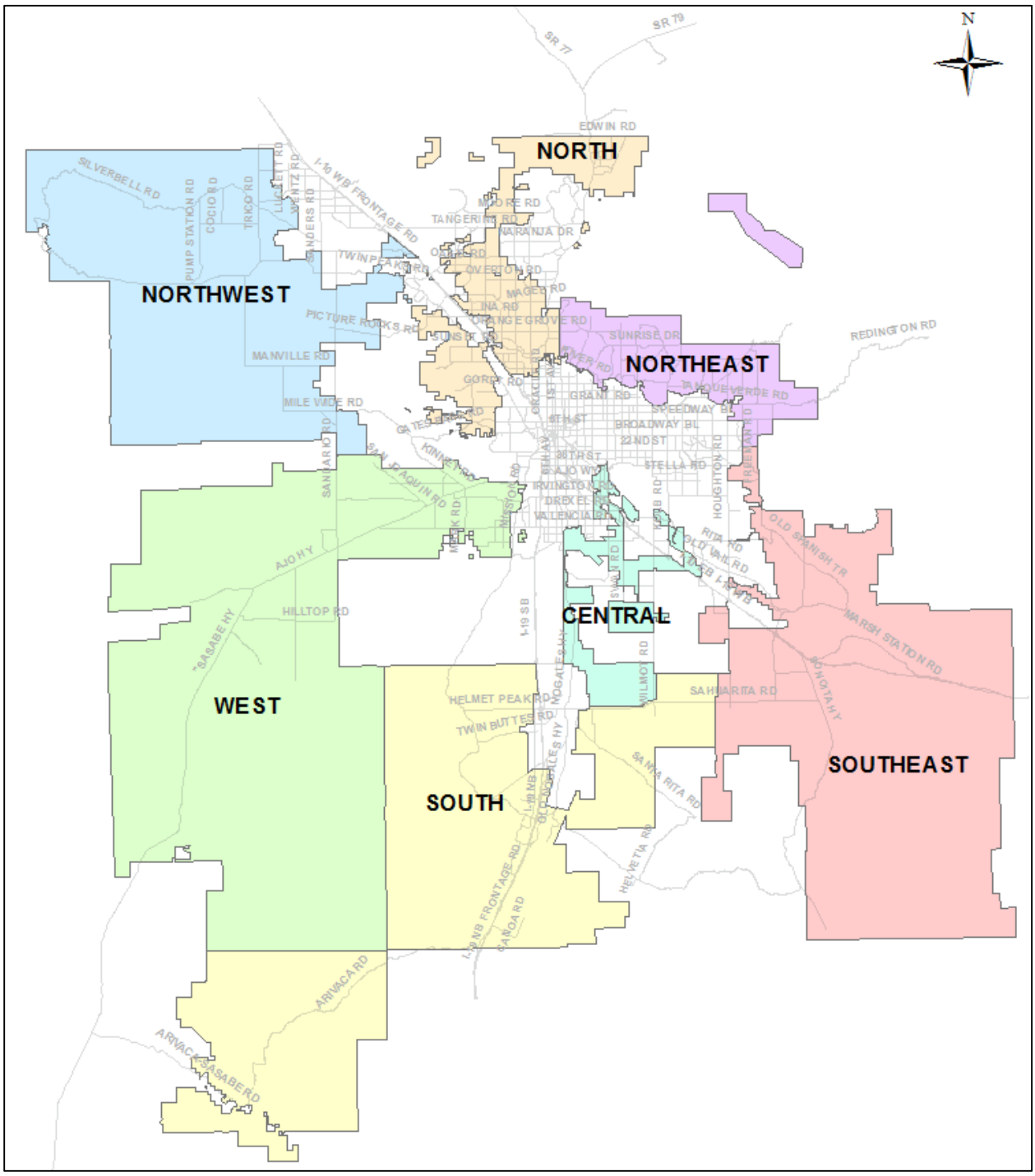
1.1. ALLOCATION OF GROWTH WITHIN SERVICE AREAS

As defined in ARS §11-1102 (V)(9), "'Service area' means any specified area within the boundaries of a county in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan".

The existing impact fee program includes ten service areas in unincorporated Pima County: Altar Valley, Avra Valley, Catalina Foothills, Cañada del Oro, San Xavier, Santa Cruz, Silverbell-Tortolita, Southeast, Southwest, and Tucson Mountains. The County reviewed the existing service areas and modified the boundaries to better align development patterns and projects and to ensure a substantial nexus as required by the statute.

The new program generally excludes federal lands, tribal lands, and other conservation areas that are not expected to be developed. As a guideline, major roadways and topographic features were considered when delineating service areas. A map of the seven proposed service areas in unincorporated Pima County is shown in Exhibit 1.

Exhibit 1. Streets Service Areas



2. NECESSARY PUBLIC SERVICES

As defined in ARS §11-1102 (V)(7)(c), necessary public services include any "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 county, traffic signals and rights-of-way and improvements thereon. Improvements to rights-of-way do not include streetcars, railways or other forms of transportation and their corresponding tracks." Necessary public services must include facilities that "have a life expectancy of three or more years and that are owned and operated by or on behalf of the county".

This IIP includes funding for additional travel lanes, turn lanes and other intersection improvements, and right-of-way acquisition for future roadway projects.

2.1. EXISTING NEEDS

For each necessary public service for which impact fees will be used, this document shall include the following:

Per ARS §11-1102 (F)(1):

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

Per ARS §11-1102 (F)(2):

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

Pima County and the consultant team identified the roadway projects which will be included in the development fee study as necessary public services. These projects, summarized in Exhibit 2, are necessary mainly due to the expected growth which was documented in the Land Use Assumptions report. The table includes the costs for all projects, and the detailed cost calculations and assumptions for new projects are included in the appendix. The total cost of these projects is $201,947,891. The projects include the following:

- Central
  - Valencia Road, 0.9 miles east of Kolb Road to 0.8 miles west of Old Vail Road (RTA)
    - This project will widen Valencia Road to a 6-lane divided roadway with shoulders, sidewalks, and drainage improvements.
  - Swan Road/Los Reales Road intersection
    - This project will provide intersection improvements including necessary turn lanes and the construction of either a traffic signal or a roundabout. The exact improvements will not be known until a detailed traffic study can be completed.
  - ITS Improvements
    - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.
  - Country Club Road, I-10 to Valencia Road
    - This project consists of purchasing right-of-way along Country Club Road in preparation for a future widening to 4 lanes. A separate ADOT project is planned to construct a new traffic interchange at I-10 and Country Club Road.
- Southeast
  - Houghton Road, 0.2 mi south of Golf Links Road to Escalante Road (RTA)
    - This is a portion of the larger RTA project which spans 13 miles from Tanque Verde Road to I-10. Improvements in this section include widening to a 6-lane divided roadway with shoulders, drainage improvements, and sidewalks.

Exhibit 2. Necessary Streets Facilities

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost
CENTRAL	1	Valencia Road	0.9 mi east of Kolb Road	0.8 mi west of Old Vail Road	Widening	6	0.7	$12,600,000
	2	Swan Road/Los Reales Road	N/A	N/A	Intersection Improvements	N/A	1.0	$2,000,000
	3	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	17	$733,771
	4	Country Club Road	I-10	Valencia Road	ROW Purchase	N/A	N/A	$5,424,518
	Central Service Area Total							**$20,758,289**
SOUTHEAST	5	Houghton Road	0.2 mi south of Golf Links Road	Escalante Road	Widening	6	0.8	$14,400,000
	6	Valencia Road	Houghton Road	Old Spanish Trail	New Construction	2	2.6	$16,000,000
	7	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	2	$86,326
	8	Houghton Road	I-10	Andrada Polytech	Widening	4	2.9	$34,800,000
	9	Colossal Cave Road - 2 Locations	Mary Ann Cleveland Way	Camino Loma Alta	Turn Lanes/ Intersection Improvements	N/A	2	$3,068,410
	Southeast Service Area Total							**$68,354,736**

Exhibit 2 (cont'd). Necessary Streets Facilities

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost
NORTH	10	Silverbell Road	Sunset Road	Sunset Dunes	Widening	3	2.0	$18,000,000
			Benjamen Road	Abington Road				
	11	Orange Grove Road	La Cañada Drive	Oracle Rd	Widening	4	0.9	$10,800,000
	12	Sunset Road	I-10	River Road	New Construction	3	0.3	$11,381,500
	13	Linda Vista Road - 3 Locations	Hartman Road	Camino de Oeste	Turn Lanes	N/A	3	$900,000
	14	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	38	$1,640,194
	North Service Area Total							**$42,721,694**
NORTHEAST	15	1st Avenue	Orange Grove Road	Ina Road	Widening	4	1.0	$6,556,000
	16	Houghton Road	Speedway Boulevard	Drachman Street	Widening	4	0.3	$9,000,000
	17	Houghton Road/ Catalina Highway	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000
	18	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	26	$1,122,238
	19	Tanque Verde Road/Soldier Trail	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000
	20	Orange Grove Road	1st Avenue	Camino de Michael	Widening	4	0.45	$5,400,000
	Northeast Service Area Total							**$26,078,238**

Exhibit 2 (cont'd). Necessary Streets Facilities

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost
NORTHWEST	21	Sandario Road/Picture Rocks Road	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000
	22	Twin Peaks Road	Twin Peaks Road	Saguaro Highlands	Widening	4	0.55	$6,600,000
							North Service Area Total	**$8,600,000**
SOUTH	23	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	8	$345,304
	24	Andrada Road	West Access for Hook M	1 mile west of Houghton	New Construction	2	1.8	$11,070,000
							South Service Area Total	**$11,415,304**
WEST	25	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	10	$431,630
	26	Valencia Road	Mission Road	1/4 mi W of Cardinal Ave	Widening	6	1.0	$18,000,000
	27	Camino Verde/Valencia Road	N/A	N/A	Intersection Improvements	N/A	1	$500,000
	28	Irvington Road	Sunset Boulevard	Ajo Way	New Construction	2	0.8	$5,088,000
							West Service Area Total	**$24,019,630**
							TOTALS	**$201,947,891**

- Southeast (cont'd)
    - Valencia Road, Houghton Road to Old Spanish Trail
        - This project consists of construction of a new two-lane roadway between Houghton Road and Old Spanish Trail with shoulders, drainage improvements and a new bridge over the Pantano Wash.
    - ITS Improvements
        - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.
    - Houghton Road, I-10 to Andrada Polytech
        - This project includes widening Houghton Road to a 4-lane divided roadway with shoulders and drainage improvements.
    - Colossal Cave Road, 2 locations between Mary Ann Cleveland Way and Camino Loma Alta
        - This will include intersection improvements at two intersections along Colossal Cave Road, likely to be at Mary Ann Cleveland Way, Via Rancho Del Lago, or Camino Loma Alta. Intersection improvements may include construction of turn lanes, traffic signals, or roundabouts. The exact improvements and locations will not be known until a detailed traffic study is completed.
- North
    - Silverbell Road, Sunset Road to Sunset Dunes Place and Benjamen Road to Abington Road (RTA)
        - This is a portion of the larger RTA project from Ina Road to Grant Road. This section will include improving the roadway to a 3-lane section with shoulders, sidewalks and drainage improvements.
    - Orange Grove Road, La Cañada Drive to Oracle Road
        - This project consists of widening Orange Grove Road to a 4-lane roadway with shoulders, sidewalks, and drainage improvements to match the recently improved segment to the west.

- Sunset Road, I-10 to River Road (RTA)
    - This is a portion of the larger RTA project from Silverbell Road to River Road. Phase 1, from Silverbell Road to I-10 has been completed. Phase 2 (this project) will include construction of a new 3-lane roadway from the existing terminus at the I-10 westbound frontage road to River Road. This project includes a bridge over the Rillito River, shoulders, sidewalks and drainage improvements.
- Linda Vista Road, 3 locations between Hartman Road and Camino de Oeste
    - This will include turn lane improvements at three intersections along Linda Vista Road, likely at Hartman Road, Bald Eagle Avenue, and Camino de Oeste. The exact improvements will not be known until detailed traffic studies are completed.
- ITS Improvements
    - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.

- Northeast
    - 1st Avenue, Orange Grove Road to Ina Road (RTA)
        - This project includes widening the roadway to a 4-lane divided roadway with shoulders, sidewalks and drainage improvements.
    - Houghton Road, Speedway Boulevard to Drachman Street (RTA)
        - This is a portion of the larger RTA project which spans 13 miles from Tanque Verde Road to I-10. Improvements in this section include widening to a 4-lane divided roadway with new bridges (over the Tanque Verde and Agua Caliente washes), shoulders, sidewalks and drainage improvements.
    - Houghton Road/Catalina Highway intersection
        - This project will provide intersection improvements including turn lanes and the construction of either a traffic signal or a roundabout. The exact improvements will not be known until a detailed traffic study can be completed.

- ITS Improvements
    - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.
- Tanque Verde Road/Soldier Trail intersection
    - This project will provide intersection improvements including the construction of a traffic signal or a roundabout. The exact improvements will not be known until a detailed traffic study can be completed.
- Orange Grove Road, 1st Avenue to Camino de Michael
    - This project includes widening Orange Grove Road to a 4-lane divided roadway with shoulders and drainage improvements.

- Northwest
    - Sandario Road/Picture Rocks Road intersection
        - This project will provide intersection improvements including turn lanes and construction of either a traffic signal, or a roundabout. The exact improvements will not be known until a detailed traffic study can be completed.
    - Twin Peaks Road, Twin Peaks Road to Saguaro Highlands
        - This project consists of widening the roadway to a 4-lane divided roadway over Rattlesnake Pass. The roadway will also include shoulders, sidewalks, and drainage improvements.
- South
    - ITS Improvements
        - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.
    - Andrada Road, west access of Hook M to 1 mile west of Houghton Road
        - Andrada Road will be an extension to the west from the existing paved roadway; the project will include construction of a 2-lane roadway with shoulders, and drainage improvements.

- West
    - ITS Improvements
        - The ITS (Intelligent Transportation System) improvements consist of new technology which will be installed at existing signalized intersections. The improvements allow signal timing and coordination to be adjusted in near real-time to decrease delays and improve traffic flow.
    - Valencia Road, Mission Road to ¼ mile west of Cardinal Avenue
        - This project consists of widening Valencia Road to a 6-lane divided roadway to match the roadway to the east. The project will also include shoulders, sidewalks, and drainage improvements.
    - Camino Verde/Valencia Road intersection
        - This project will include the construction of new turn lanes which may also require reconstruction of a portion of the traffic signal to accommodate the wider intersection approaches.
    - Irvington Road, Sunset Boulevard to Ajo Way
        - This project consists of constructing a new 2-lane roadway to extend Irvington Road from its current terminus at Sunset Boulevard to Ajo Way. The roadway will include shoulders and drainage improvements.

Based on the 10-year framework required by the statute, the analysis included years 2019 through 2029. The street facilities projects for that period include approximately 57 lane-miles of new and improved roadways, physical intersection improvements at 10 locations, ITS improvements at 101 intersections, and right-of-way purchase for the future Country Club Road corridor widening.

Historical traffic volumes for each roadway project are available in the Pima Association of Governments (PAG) *Transportation Data Management System*[1]. Data was also supplemented using Pima County traffic counts available on the County website. Further, PAG maintains a model representing the regional transportation network incorporating the planned 5-year *Transportation Improvement Program*[2] (TIP) projects. The 2017 to 2022 TIP was reviewed during the preparation of this report. In addition, PAG provides estimated traffic volumes for year 2045 as part of the Regional Mobility and Accessibility Plan (RMAP).

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[1] *PAG Transportation Data Management System (TDMS).* < https://pag.ms2soft.com/tcds/tsearch.asp?loc=Pag&mod=>
[2] *PAG Transportation Improvement Program* (TIP). <https://www.pagnet.org/Programs/TransportationPlanning/PlansandPrograms/TransportationImprovementProgram/tabid/172/Default.aspx>

The PAG models do not directly include ITE trip generation rates, which are typically used to determine how much traffic a development will generate. Instead, the model develops trip generation based on the characteristics of each Traffic Analysis Zone (TAZ), such as employment and population. Trips are then distributed on the surrounding roadway network based on origins and destinations, trip length, travel time, and available roadway capacity.

Starting with the historical and expected growth in the PAG models and adjusting for anticipated growth based on the Land Use Assumptions report and region expertise, traffic volumes for each roadway project were forecasted for years 2019 and 2029. Each vehicular capacity project was forecasted to have low, medium, or high growth during the study period based on historic growth for similar roadways and future traffic growth potential in the area (vacant land, availability of alternative routes, etc.). Based on historic traffic volume growth in the region, the low growth was assumed to be 0.7% per year, medium growth was assumed to be 2.0% per year, and high growth is 4.0% per year. In addition, a few of the infrastructure projects were assigned a custom growth rate based on knowledge of anticipated large development projects in the area.

To estimate the necessary public services, the daily roadway capacity for each project was calculated following the 2013 Florida Department of Transportation (FDOT)[3] standards for LOS D. The FDOT LOS standards are widely applied by planning and transportation departments across the U.S. to estimate planning level capacities for roadways. Exhibit 3 compares traffic volumes and roadway capacities for years 2019 and 2029 for the selected projects.

[3] *Florida Department of Transportation 2013 Quality/Level of Service Handbook* https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/planning/systems/programs/sm/los/pdfs/2013_qlos_handbook.pdf?sfvrsn=22690bd2_0

Exhibit 3. Existing (2019) and Future (2029) Traffic Volumes

Service Area	Project No.	Project	Limits		Existing Volume (veh/day)	Existing Capacity (veh/day)	Future Volume (veh/day)	Future Capacity (veh/day)
CENTRAL	1	Valencia Road	0.9 mi east of Kolb Road	0.8 mi west of Old Vail Road	20,334	17,563	30,099	56,606
	2	Swan Road/Los Reales Road	N/A	N/A	N/A	N/A	N/A	N/A
	3	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
	4	Country Club Road	I-10	Valencia Road	N/A	N/A	N/A	0
SOUTHEAST	5	Houghton Road	0.2 mi south of Golf Links Road	Escalante Road	23,498	17,563	34,783	56,606
	6	Valencia Road	Houghton Road	Old Spanish Trail	N/A	N/A	7,200	17,563
	7	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
	8	Houghton Road	I-10	Andrada Polytech	13,758	17,563	20,365	37,611
	9	Colossal Cave Road - 2 Locations	N/A	N/A	N/A	N/A	N/A	N/A

Exhibit 3 (cont'd). Existing (2019) and Future (2029) Traffic Volumes

Service Area	Project No.	Project	Limits		Existing Volume (veh/day)	Existing Capacity (veh/day)	Future Volume (veh/day)	Future Capacity (veh/day)
NORTH	10	Silverbell Road	Sunset Road	Sunset Dunes Place	10,862	12,744	13,240	17,563
			Benjamen Road	Abington Road				
	11	Orange Grove Road	La Cañada Drive	Oracle Rd	18,093	17,563	26,783	37,611
	12	Sunset Road	I-10	River Road	N/A	N/A	10,781	15,479
	13	Linda Vista Road - 3 Locations	Hartman Road	Camino de Oeste	N/A	N/A	N/A	N/A
	14	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
NORTHEAST	15	1st Avenue	Orange Grove Road	Ina Road	15,306	17,563	16,412	37,611
	16	Houghton Road	Speedway Boulevard	Drachman Street	11,939	17,563	14,553	37,611
	17	Houghton Road/Catalina Highway	N/A	N/A	N/A	N/A	N/A	N/A
	18	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
	19	Tanque Verde Road/Soldier Trail	N/A	N/A	N/A	N/A	N/A	N/A
	20	Orange Grove Road	1st Avenue	Camino de Michael	14,352	17,563	21,244	37,611

Exhibit 3 (cont'd). Existing (2019) and Future (2029) Traffic Volumes

Service Area	Project No.	Project	Limits		Existing Volume (veh/day)	Existing Capacity (veh/day)	Future Volume (veh/day)	Future Capacity (veh/day)
NORTHWEST	21	Sandario Road/Picture Rocks Road	N/A	N/A	N/A	N/A	N/A	N/A
	22	Twin Peaks Road	Twin Peaks Road	Saguaro Highlands	6,444	12,744	15,255	37,611
SOUTH	23	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
	24	Andrada Road	West Access for Hook M	1 mile west of Houghton Road	N/A	N/A	7,994	17,563
WEST	25	ITS Improvements	N/A	N/A	N/A	N/A	N/A	N/A
	26	Valencia Road	Mission Road	1/4 mi W of Cardinal Ave	39,613	37,611	58,636	56,606
	27	Camino Verde/Valencia Road	N/A	N/A	N/A	N/A	N/A	N/A
	28	Irvington Road	Sunset Boulevard	Ajo Way	N/A	N/A	14,179	17,563

2.2. PROJECTED NEEDS

In addition to the existing needs, the statute requires that the following must be included in this document for each necessary public service for which impact fees will be used:

Per ARS §11-1102 (F)(3):

- "A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, including a forecast of the cost of infrastructure, improvements, real property, financing, engineering and architectural services. The description shall be prepared by qualified professionals who are licensed in this state, as applicable."

As indicated in Exhibit 2, the anticipated necessary roadway improvements include approximately 57 lane-miles of new and improved roadways, physical intersection improvements at 10 locations, ITS improvements at 101 intersections, and right-of-way purchase for the future Country Club Road corridor widening. The total cost is $201,947,891. However, only about 46% of the cost of all the necessary improvements are attributable to new development. Based on the ratio of the traffic expected to be generated by development in the next 10 years and the additional capacity which will be added with each project, the estimated total cost attributable to development is $93,911,982, as shown in Exhibit 4. As seen in the exhibit, new development is only responsible for the portion of the new capacity which it will use.

Experience in other jurisdictions has shown that ITS improvements generally result in a capacity increase of approximately 10%, which matches the projected population growth in the County over the next 10 years (the period of this study); therefore, it is estimated that the new growth will use all of the new signal capacity. Turn lanes also result in a capacity increase of approximately 10% based on FDOT guidelines. For RTA projects, the cost attributable to development is capped at the remaining County contribution for that project; in some cases, this results in development contributing less than they would without the cap. The cost of preparing the initial Impact Fee Study is $197,908, and the required update to the impact fee documents in 5 years is expected to cost approximately $95,000. Therefore, the total cost for providing these necessary public services associated with streets is $94,204,890 during the 10-year period.

Exhibit 4. Cost Attributable to Development

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost	% Used by Development	Cost Attributable to Development
CENTRAL	1	Valencia Road	0.9 mi east of Kolb Road	0.8 mi west of Old Vail Road	Widening	6	0.7	$12,600,000	25%	$3,151,503
	2	Swan Road/Los Reales Road	N/A	N/A	Intersection Improvements	N/A	1.0	$2,000,000	100%	$2,000,000
	3	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	17	$733,771	100%	$733,771
	4	Country Club Road	I-10	Valencia Road	ROW Purchase	N/A	N/A	$5,424,518	100%	$5,424,518
	Central Service Area Total							**$20,758,289**	**N/A**	**$11,309,791**
SOUTHEAST	5	Houghton Road	0.2 mi south of Golf Links Road	Escalante Road	Widening	6	0.8	$14,400,000	29%	$4,162,206
	6	Valencia Road	Houghton Road	Old Spanish Trail	New Construction	2	2.6	$16,000,000	41%	$6,559,309
	7	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	2	$86,326	100%	$86,326
	8	Houghton Road	I-10	Andrada Polytech	Widening	4	2.9	$34,800,000	33%	$11,468,518
	9	Colossal Cave Road - 2 Locations	Mary Ann Cleveland Way	Camino Loma Alta	Turn Lanes/ Intersection Improvements	N/A	2	$3,068,410	100%	$3,068,410
	Southeast Service Area Total							**$68,354,736**	**N/A**	**$25,344,769**

Exhibit 4 (cont'd). Cost Attributable to Development

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost	% Used by Development	Cost Attributable to Development
NORTH	10	Silverbell Road	Sunset Road	Sunset Dunes	Widening	3	2.0	$18,000,000	49%	$6,400,000
			Benjamen Road	Abington Road						
	11	Orange Grove Road	La Cañada Drive	Oracle Rd	Widening	4	0.9	$10,800,000	43%	$4,680,931
	12	Sunset Road	I-10	River Road	New Construction	3	0.3	$11,381,500	70%	$3,104,669
	13	Linda Vista Road - 3 Locations	Hartman Road	Camino de Oeste	Turn Lanes	N/A	3	$900,000	100%	$900,000
	14	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	38	$1,640,194	100%	$1,640,194
	North Service Area Total							**$42,721,694**	**N/A**	**$16,725,793**
NORTHEAST	15	1st Avenue	Orange Grove Road	Ina Road	Widening	4	1.0	$6,556,000	6%	$361,622
	16	Houghton Road	Speedway Boulevard	Drachman Street	Widening	4	0.3	$9,000,000	13%	$1,173,691
	17	Houghton Road/ Catalina Highway	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	100%	$2,000,000
	18	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	26	$1,122,238	100%	$1,122,238
	19	Tanque Verde Road/Soldier Trail	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	100%	$2,000,000
	20	Orange Grove Road	1st Avenue	Camino de Michael	Widening	4	0.45	$5,400,000	34%	$1,856,494
	Northeast Service Area Total							**$26,078,238**	**N/A**	**$8,514,045**

Exhibit 4 (cont'd). Cost Attributable to Development

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length /Units	Total Cost	% Used by Development	Cost Attributable to Development
NORTHWEST	21	Sandario Road/Picture Rocks Road	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	100%	$2,000,000
	22	Twin Peaks Road	Twin Peaks Road	Saguaro Highlands	Widening	4	0.55	$6,600,000	35%	$1,594,341
							North Service Area Total	**$8,600,000**	**N/A**	**$3,594,341**
SOUTH	23	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	8	$345,304	100%	$345,304
	24	Andrada Road	West Access for Hook M	1 mile west of Houghton	New Construction	2	1.8	$11,070,000	46%	$5,038,687
							South Service Area Total	**$11,415,304**	**N/A**	**$5,383,991**
WEST	25	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	10	$431,630	100%	$431,630
	26	Valencia Road	Mission Road	1/4 mi W of Cardinal Ave	Widening	6	1.0	$18,000,000	100%	$18,000,000
	27	Camino Verde/Valencia Road	N/A	N/A	Intersection Improvements	N/A	1	$500,000	100%	$500,000
	28	Irvington Road	Sunset Boulevard	Ajo Way	New Construction	2	0.8	$5,088,000	81%	$4,107,621
							West Service Area Total	**$24,019,630**	**N/A**	**$23,039,251**
							TOTALS	**$201,947,891**	**TOTAL ATT. TO DEVELOPMENT**	**$93,911,982**

2.3. MAINTENANCE AND OPERATION OF STREET FACILITIES

The State statute also requires Counties to identify the maintenance and operation costs of the facilities identified in the IIP:

ARS §11-1102 (F)(5):

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

Pima County's website includes information on pavement preservation treatments and costs (http://webcms.pima.gov/cms/One.aspx?pageId=356628), and updated cost information was provided by the County where applicable. The appropriate treatments for new facilities are either preventive (to anticipate deterioration) or maintenance (to extend the life of the roadway). Exhibit 5 shows the approximate costs for those treatments.

Exhibit 5. Pavement Preservation Costs

Treatment	Typical Application	Unit Cost ($/SY)	Treatment Lifespan	Cost per Lane Mile[1]
Preventive	Fog Seal	$1.50	4 years	$13,200
Maintenance	Double Chip/Micro-surface	$8.00	8 years	$70,400

[1] Based on 15-foot lane width to include shoulder

Given the lifespan of the treatments above, it is anticipated that each new road will receive either two preventive treatments (years 4 and 8), or one maintenance treatment (year 8) within the IIP's 10-year period. Considering that the IIP includes approximately 100 lane-miles of facilities to be maintained by Pima County, the annual maintenance costs for the facilities in this IIP would range between $260,000 and $704,000 per year.

Maintenance and operations of the new street facilities are anticipated to be funded with revenues from the Highway User Revenue Fund (HURF) and Vehicle License Tax (VLT). Pima County's pavement preservation program for arterial and collector roadways includes $16 million in the current fiscal year.

3. TRAVEL DEMAND PER DEMAND UNIT

ARS §11-1102 (F)(4) requires that this document shall include "a table that establishes the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table that establishes the ratio of a service unit to various types of land uses, including residential, commercial and industrial."

Trip generation for future residential, commercial, and industrial developments was estimated based on typical land use categories. The trip generation rates for each land use followed the ITE *Trip Generation Manual*[4] guidelines. Exhibit 6 (Page 25) shows the estimated roadway demand per unit of land use, and descriptions of the factors and land use categories are included in the following sections. Note that the land use categories used to calculate the Equivalent Demand Units (EDUs) for each category are also listed in the table for reference.

3.1. LAND USE CATEGORIES

The land uses are broken into seven categories for ease of reference, including residential, commercial/retail, industrial, hospital/clinic, recreational, office, and charter/private schools. Each land use is discussed in further detail in this section; however, it should be noted that if a land use is not specifically listed in this document, the owner should consult with Pima County to determine what land use category is appropriate for the proposed use (if any).

3.1.1. Single Family Detached

This includes all non-age restricted single family homes (except for mobile homes). The estimated roadway demand per one single family detached home is assumed to be one EDU.

3.1.2. Attached Residential/Multi-Family

This land use includes apartments and townhomes, regardless of unit or building size.

3.1.3. Senior Housing

Senior housing refers to all age-restricted housing, including both single family detached homes and attached/multi-family units.

[4] *Trip Generation Manual*, 10th Edition. Institute of Transportation Engineers (ITE). Washington, D.C., 2017.

3.1.4. Assisted Living/Congregate Care

This includes any complex which provides centralized amenities and/or some level of medical services or medical care.

3.1.5. Mobile Home Park

Any mobile home should be considered under this use.

3.1.6. Hotel/Motel

All hotels and motels are included.

3.1.7. Retail

Retail includes a variety of shopping facilities, including big box stores, grocery stores, home improvement stores/superstores, factory outlets, discount clubs/superstores, nurseries, automobile sales, and other general commercial/retail facilities.

3.1.8. Services

Services include developments such as restaurants, auto repair centers, car washes, day cares, and other similar facilities.

3.1.9. High-Traffic Retail/Services

This category includes fast food restaurants, coffee shops, pharmacies with drive thrus, drive-in banks, gas stations, convenience stores, combination gas station/convenience stores, and other similar high traffic generators.

3.1.10. Industrial

All light, medium, and heavy industrial uses are included, as well as manufacturing uses, warehouses, and self-storage facilities.

3.1.11. Hospital/Clinic

Includes all hospitals and clinics. Clinics often have lab facilities, pharmacies, and a wide range of services (compared to medical offices which usually include a specialized service). Veterinary hospitals/clinics can also be included under this use.

3.1.12. Recreational

This includes athletic clubs, health/fitness clubs, racquet/tennis clubs, and other similar uses.

3.1.13. General Office

All non-medical offices are included in this use.

3.1.14. Medical/Dental/Vet Office

This use includes any medical, dental, or veterinarian office.

3.1.15. Public Schools

All public schools are included, regardless of the grades which the school serves.

3.1.16. Charter/Private Schools

All charter and private schools are included, regardless of the grades which the school serves.

3.2. ITE TRIP GENERATION RATES

The ITE *Trip Generation Manual* contains trip generation rates for a wide variety of land uses by unit of land use (i.e. per dwelling unit for residential developments, per 1,000 square feet for commercial, etc.). The weekday peak hour trip generation rates were applied in the demand unit calculations because the peak hour is generally the controlling period for which necessary roadway improvements are determined.

3.3. PRIMARY TRIPS

Primary trips are trips generated with the specific purpose of visiting a generator. Trips to and from a land use which a driver intended to make without making other stops along the way are considered primary trips. Drivers may choose to divert from their originally intended path to make a secondary stop or may choose to make a stop along their original path. These trips are called diverted trips and pass-by trips, respectively.

The ITE *Trip Generation Handbook*[5] provides the percentage of diverted trips and pass-by trips for each land use except for schools. The calculations for estimating impact fees are based solely on primary trips; therefore, ITE data was used to determine the percentage of primary trips for most land uses, and school primary trips were estimated based on previous experience.

[5] *Trip Generation Handbook*, 3rd Edition. Institute of Transportation Engineers (ITE). Washington, D.C., 2014.

Exhibit 6. Estimate of Streets Facility Demand per Unit of Land Use

Land Use Category	Unit	% Primary Trips	Peak Hour Rate per Unit	Average Trip Length (mi)	% Travel within Unincorporated PC	% Travel on Arterials	% Travel Demand on PC Arterial Network	Vehicle Miles of Travel Demand per Unit - Peak Hour	Representative ITE Category	Proposed EDUs
Residential										
Single Family Detached	Dwelling Unit	100%	0.99	10.7	50%	80%	40%	4.2	210	**1.0**
Attached Residential/Multi-Family	Dwelling Unit	100%	0.56	10.7	50%	80%	40%	2.4	220	**0.6**
Senior Housing	Dwelling Unit	100%	0.30	10.7	50%	80%	40%	1.3	251	**0.3**
Assisted Living/Congregate Care	Dwelling Unit	100%	0.18	10.7	50%	80%	40%	0.8	253	**0.2**
Mobile Home Park	Dwelling Unit	100%	0.46	10.7	50%	80%	40%	2.0	240	**0.5**
Commercial/Retail										
Hotel/Motel	Rooms	100%	0.49	10.7	50%	80%	40%	2.1	310, 320	**0.5**
Retail	1000 sf	66%	3.05	7.9	50%	80%	40%	6.4	820, 823	**1.5**
Services	1000 sf	66%	6.44	7.9	50%	80%	40%	13.4	932, 942	**3.2**
High-Traffic Retail/Services	1000 sf	23%	21.14	7.9	50%	80%	40%	15.4	881, 912, 934	**3.6**
Industrial	1000 sf	70%	0.41	10.7	50%	80%	40%	1.2	110, 130, 140, 150, 151	**0.3**
Hospital/Clinic	1000 sf	60%	2.33	10.7	50%	80%	40%	6.0	610, 630	**1.4**
Recreational	1000 sf	75%	3.45	11.4	50%	80%	40%	11.8	492	**2.8**
Office										
General Office	1000 sf	75%	1.16	12.2	50%	80%	40%	4.2	710	**1.0**
Medical/Dental/Vet Office	1000 sf	75%	3.46	12.2	50%	80%	40%	12.7	720	**3.0**
Public Schools	1000 sf	25%	5.17	4.5	50%	80%	40%	2.3	520, 530	**0.5**
Charter/Private Schools	1000 sf	25%	7.39	7.0	50%	80%	40%	5.2	534, 536, 537	**1.2**

3.4. AVERAGE TRIP LENGTH

The average trip length for a specific land use is available in the National Household Travel Survey (NHTS) *Summary of Travel Trends*[6] report. Table 5b in the NHTS report shows trends in the average person trip length by trip purpose. The table reflects the survey data collected from a sample of U.S. households. Public school trip length was calculated as the average of school trips in the NHTS report and an estimate of elementary school trip length, which is considerably lower given the typical proximity of residences to elementary schools.

3.5. TRAVEL DEMAND ON PIMA COUNTY ARTERIAL ROAD NETWORK

Only trips on the arterial and major collector roadways are considered in the estimation of the development fee amounts. This study assumes that 80% of travel occurs on arterial and major collector roadways for all land use types, which is consistent with national guidelines and local data. Furthermore, travel to/from business and residential units in unincorporated Pima County generally involves travel in multiple jurisdictions. Therefore, it was assumed that 50% of the business/residential travel originating or ending in unincorporated Pima County would take place on Pima County roads based on the location of trip generators and attractors in the County and throughout the region. The travel demand on the Pima County arterial road network is the product of percent travel within the County and percent travel on arterial and major collector roadways.

3.6. VEHICLE MILES OF TRAVEL DEMAND

The vehicle miles of travel demand per unit is the product of four factors previously discussed: percent primary trips, average peak hour trip generation rate, average trip length, and percent travel demand on Pima County arterial network. As an example, the vehicle miles of travel demand for the single family residential use is calculated as follows:

$$VMT\ per\ Unit = \%Primary\ Trips\ \times Average\ Peak\ Hour\ Trip\ Generation\ Rate \times Average\ Trip\ Length \times \%Travel\ on\ PC\ Arterial\ Network$$

$$VMT\ per\ Unit = 100\%\ \times 0.99 \times 10.7 \times 40\%$$

$$VMT\ per\ Unit = 4.2$$

[6] Federal Highway Administration (FHWA). *Summary of Travel Trends: 2017 National Household Travel Survey*. < https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf>

3.7. EQUIVALENT DEMAND PER UNIT (EDU)

An EDU value of 1.0 is assigned to the single family residential land use. The equivalent demand per service unit for all the remaining land uses is calculated as follows, using the multi-family residential land use as an example:

$$EDU_{Multi-Family} = \frac{VMT\ per\ Unit_{Multi-Family}}{VMT\ per\ Unit_{Single-Family}}$$

$$EDU_{Multi-Family} = \frac{2.4}{4.2} = 0.6$$

4. Projected Service Units for New Development

Per ARS §11-1102 (F)(6):

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

Per ARS §11-1102 (F)(7):

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

The Land Use Assumptions report provided the summary of 10-year growth projections for unincorporated Pima County for the purposes of the roadway impact fee study update. The estimated population and employment growth data per service area for 2029 conditions is provided in Exhibit 7. Based on the exhibit, it is estimated that approximately 10,000 new residential permits will be issued in a 10-year period in unincorporated Pima County. Further, approximately 8,245 new jobs are expected by 2029. These assumed land assumptions were used in this IIP to estimate the amount of new facilities needed to serve the projected new developments.

As shown in Exhibit 6, ITE trip generation rates are calculated based on the number of dwelling units for residential land uses. For the remaining land uses, the unit for the ITE trip generation rates is 1,000 S.F. To convert the number of expected new jobs from Exhibit 7 into square footage, averages from the ITE *Trip Generation Manual* were adopted in this study.

Exhibit 7. Residential and Employment Land Use Assumptions: 10-Year Growth

Service Area	Residential Permits	Jobs by Land Use		
		Industrial	Retail	Office
Central	900	1,091	52	589
Southeast	2,900	445	371	668
North	1,700	433	260	1,039
Northeast	900	45	118	744
Northwest	400	148	7	92
Southeast	600	124	41	247
West	2,600	260	242	1,229
TOTAL	**10,000**	**2,546**	**1,092**	**4,607**

Exhibit 8 shows the assumed gross building area per employee for each land use. Further, it is assumed that 80% of new residential permits will be single family units, 10% will be age-restricted units, and 10% will be multi-family units. Exhibit 9 shows the anticipated new units for all land uses.

Exhibit 8. Non-Residential Development Attributes

Land Use	Gross Building Area per Employee (S.F.)
Retail	600
Office	400
Industrial	2,500

Exhibit 9. Anticipated Units by Land Use Type

Land Use		Single Family	Age-Restricted	Multi-Family	Commercial/ Retail	Office	Industrial
Unit		Dwelling	Dwelling	Dwelling	1000 sq. ft.	1000 sq. ft.	1000 sq. ft.
Anticipated Units	**Central**	720	90	90	31	235	2,727
	Southeast	2,320	290	290	223	267	1,113
	North	1,360	170	170	156	416	1,082
	Northeast	720	90	90	71	297	113
	Northwest	320	40	40	4	37	371
	South	480	60	60	25	99	309
	West	2,080	260	260	145	492	649
TOTAL		8,000	1,000	1,000	655	1,843	6,365

5. REVENUE CONSIDERATIONS

Per ARS §11-1102 (F)(8):

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

To provide an equitable obligation of transportation impact fees, both costs and credits must be considered. New development must be given credit for contributions to the various forms of funding which may be used for roadway improvements, such as the contribution of a development impact fee. Other sources of roadway infrastructure funding which can be identified as coming from a new development must be considered as credits for that development.

In addition, the costs associated with correcting existing deficiencies cannot be placed as a burden on new development. Any money spent from common improvement funds to address a deficiency must consider credits to new development for which the improvement is associated. At this time, the only continuing revenue source which may be considered as credits to new development is the sales tax contribution to the Regional Transportation Authority (RTA). The County uses HURF/VLT funding for maintenance and operations only, so there is no applicable HURF/VLT credit. Property taxes are not used for expansion/capital projects either, and other state and federal revenues are undeterminable and intermittent.

The RTA credit is based on the estimated sales tax by land use type, using standard construction costs[7] and estimated residential unit sizes as listed below:

a. Single family residence (general and age-restricted) – 2,000 sq. ft. of living space, 400 sq. ft. garage
b. Multi-family residence – 1,115 sq. ft. total space per unit (rental)
c. Assisted living/congregate care – 350 sq. ft. of total space per unit (bed)

[7] *Building Valuation Data – February 2019.* International Code Council, https://www.iccsafe.org/wp-content/uploads/BVD-BSJ-FEB19-converted.pdf , accessed May 2019.

d. Mobile home park – 900 sq. ft. of total space per unit (mobile home)
e. Hotel/motel – 550 sq. ft. of total space per unit (room)

All other impact fee categories use 1,000 square feet of construction to calculate the RTA credit. The RTA tax rate is 0.5% and is applied to the taxable value of new construction, which is 65% of the contract amount pursuant to state law. The tax paid is then adjusted to reflect the share of overall RTA plan projects that are included in this IIP. Exhibit 10 shows the calculation of the RTA credit for each land use type.

Exhibit 10. RTA Credit Calculations

Land Use Category	ICC Building Group	ICC Construction Type	ICC Cost per sq ft	Average	Typical sq ft	Cost per Unit	Taxable Cost Per Unit (65%)	RTA Sales Tax (0.5%)	RTA Sales Tax Credit Factor	RTA Sales Tax Credit per Unit	RTA Sales Tax Credit per Unit, Rounded
Residential											
Single Family Detached	R3 - residential one and two family U - utility (garage)	VB VB	$122.46 $48.73	$122.46 $48.73	2,000 400	$264,412	$171,868	$859.34	8.0%	$68.75	**$69.00**
Attached Residential/ Multi-Family	R2 - residential multi-family	VB	$112.76	$112.76	1,115	$125,727	$81,723	$408.61	8.0%	$32.69	**$33.00**
Senior Housing	R3 - residential one and two family U - utility (garage)	VB VB	$122.46 $48.73	$122.46 $48.73	2,000 400	$264,412	$171,868	$859.34	8.0%	$68.75	**$69.00**
Assisted Living/ Congregate Care	I2 - institutional, nursing homes R4 - care/assisted living	VA IB	$174.02 $191.05	$182.54	350	$63,887	$41,527	$207.63	8.0%	$16.61	**$17.00**
Mobile Home Park	R2 - residential multi-family	VB	$112.76	$112.76	900	$101,484	$65,965	$329.82	8.0%	$26.39	**$27.00**
Commercial/Retail											
Hotel/Motel	R1 - residential hotels	VB	$143.96	$143.96	550	$79,178	$51,466	$257.33	8.0%	$20.59	**$21.00**
Retail	M - mercantile	IIIB	$111.83	$111.83	1,000	$111,830	$72,690	$363.45	8.0%	$29.08	**$30.00**
Services	M - mercantile	IIIB	$111.83	$111.83	1,000	$111,830	$72,690	$363.45	8.0%	$29.08	**$30.00**
High-Traffic Retail/Services	B - business	IIIB	$154.63	$154.63	1,000	$154,630	$100,510	$502.55	8.0%	$40.20	**$41.00**
Industrial	B - business	IIIB	$154.63	$154.63	1,000	$154,630	$100,510	$502.55	8.0%	$40.20	**$41.00**
Hospital/Clinic	I2 - institutional, hospitals	IB	$323.73	$323.73	1,000	$323,730	$210,425	$1,052.12	8.0%	$84.17	**$85.00**
Recreational	A3 - museums, libraries	IIIB	$148.07	$148.07	1,000	$148,070	$96,246	$481.23	8.0%	$38.50	**$39.00**
Office											
General Office	B - business	IIIB	$154.63	$154.63	1,000	$154,630	$100,510	$502.55	8.0%	$40.20	**$41.00**
Medical/Dental/Vet Office	B - business	IIIB	$154.63	$154.63	1,000	$154,630	$100,510	$502.55	8.0%	$40.20	**$41.00**
Public Schools	E - educational	IIIB	$166.43	$166.43	1,000	$166,430	$108,180	$540.90	8.0%	$43.27	**$44.00**
Charter/Private Schools	E - educational	IIIB	$166.43	$166.43	1,000	$166,430	$108,180	$540.90	8.0%	$43.27	**$44.00**

APPENDIX

- **List of Preparers**
- **Detailed Project Cost Calculations**

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Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length/ Units	Project Cost		Total Project Cost	Volume from Development	Added Capacity	% Used by Development	Cost Attributable to Development	Source	Notes
								Per Lane-Mile/Unit	Total							
CENTRAL	1	Valencia Road	0.9 mi east of Kolb Road	0.8 mi west of Old Vail Road	Widening	6	0.7	$3,000,000	$12,600,000	$12,600,000	9,765	39,043	25%	$3,151,503	Outstanding RTA Contribution	County contribution is $4M, and County segment is 0.6 miles
	2	Swan Road/Los Reales Road	N/A	N/A	Intersection Improvements	N/A	1.0	$2,000,000	$2,000,000	$2,000,000			100%	$2,000,000	PCDOT	
	3	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	17	$43,163	$733,771	$733,771			100%	$733,771	PCDOT	
	4	Country Club Road	I-10	Valencia Road	ROW Purchase	N/A	N/A		$5,424,518	$5,424,518			100%	$5,424,518	PCDOT	IF Balance for Central SA
									Central Service Area Total	**$20,758,289**			**N/A**	**$11,309,791**		
SOUTHEAST	5	Houghton Road	0.2 mi south of Golf Links Road	Escalante Road	Widening	6	0.8	$3,000,000	$14,400,000	$14,400,000	11,285	39,043	29%	$4,162,206	Outstanding RTA Contribution	County total remaining contribution for Houghton Road (Tanque Verde to I-10) is $22.2M.
	6	Valencia Road	Houghton Road	Old Spanish Trail	New Construction	2	2.6			$16,000,000	7,200	17,563	41%	$6,559,309	Construction Bids and Design Fees	
	7	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	2	$43,163	$86,326	$86,326			100%	$86,326	PCDOT	
	8	Houghton Road	I-10	Andrada Polytech	Widening	4	2.9	$3,000,000	$34,800,000	$34,800,000	6,607	20,048	33%	$11,468,518	Pima County	
	9	Colossal Cave Road - 2 Locations	Mary Ann Cleveland Way	Camino Loma Alta	Turn Lanes/ Intersection Improvements	N/A	2	$1,534,205	$3,068,410	$3,068,410			100%	$3,068,410	PCDOT	
									Southeast Service Area Total	**$68,354,736**			**N/A**	**$25,344,769**		
NORTH	10	Silverbell Road	Sunset Road Benjamen Road	Sunset Dunes Place Abington Road	Widening	3	2.0	$3,000,000	$18,000,000	$18,000,000	2,379	4,819	49%	$6,400,000	Outstanding RTA Contribution	County contribution is $6.4M
	11	Orange Grove Road	La Cañada Drive	Oracle Rd	Widening	4	0.9	$3,000,000	$10,800,000	$10,800,000	8,689	20,048	43%	$4,680,931	PCDOT with RSC non-construction factors	
	12	Sunset Road	I-10	River Road	New Construction	3	0.3			$11,381,500	10,781	15,479	70%	$3,104,669	Outstanding RTA Contribution	County contribution is $2.35M, estimated cost is from RTA
	13	Linda Vista Road - 3 Locations	Hartman Road	Camino de Oeste	Turn Lanes	N/A	3	$300,000	$900,000	$900,000			100%	$900,000	PCDOT	
	14	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	38	$43,163	$1,640,194	$1,640,194			100%	$1,640,194	PCDOT	
									North Service Area Total	**$42,721,694**			**N/A**	**$16,725,793**		

Service Area	Project No.	Project	Limits		Project Description	# of Lanes	Length/ Units	Project Cost		Total Project Cost	Volume from Development	Added Capacity	% Used by Development	Cost Attributable to Development	Source	Notes
								Per Lane-Mile/Unit	Total							
NORTHEAST	15	1st Avenue	Orange Grove Road	Ina Road	Widening	4	1.0			$6,556,000	1,106	20,048	6%	$361,622	Outstanding RTA Contribution	County contribution is $700K
	16	Houghton Road	Speedway Boulevard	Drachman Street	Widening	4	0.3			$9,000,000	2,614	20,048	13%	$1,173,691	Outstanding RTA Contribution	County total remaining contribution for Houghton Road (Tanque Verde to I-10) is $22.2M; this project is
	17	Houghton Road/ Catalina Highway	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	$2,000,000	$2,000,000			100%	$2,000,000	PCDOT	
	18	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	26	$43,163	$1,122,238	$1,122,238			100%	$1,122,238	PCDOT	
	19	Tanque Verde Road/Soldier Trail	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	$2,000,000	$2,000,000			100%	$2,000,000		
	20	Orange Grove Road	1st Avenue	Camino de Michael	Widening	4	0.45	$3,000,000	$5,400,000	$5,400,000	6,892	20,048	34%	$1,856,494	PCDOT with RSC non-construction factors	
	Northeast Service Area Total									**$26,078,238**			**N/A**	**$8,514,045**		
NORTHWEST	21	Sandario Road/Picture Rocks Road	N/A	N/A	Intersection Improvements	N/A	1	$2,000,000	$2,000,000	$2,000,000			100%	$2,000,000	PCDOT	
	22	Twin Peaks Road	Twin Peaks Road	Saguaro Highlands	Widening	4	0.55	$3,000,000	$6,600,000	$6,600,000	8,811	24,867	35%	$1,594,341	PCDOT	County portion is 0.55 miles of total segment; pay available $ from SA (IF Balance)
	North Service Area Total									**$8,600,000**			**N/A**	**$3,594,341**		
SOUTH	23	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	8	$43,163	$345,304	$345,304			100%	$345,304	PCDOT	
	24	Andrada Road	West Access for Hook M	.8 mile west of Houghton Road	New Construction	2	1.85	$3,000,000	$11,070,000	$11,070,000	7,994	17,563	46%	$5,038,687	PCDOT with RSC non-construction factors	
	South Service Area Total									**$11,415,304**			**N/A**	**$5,383,991**		
WEST	25	ITS Improvements	N/A	N/A	Signal Coordination/ Timing	N/A	10	$43,163	$431,630	$431,630			100%	$431,630	PCDOT	
	26	Valencia Road	Mission Road	1/4 mi W of Cardinal Ave	Widening	6	1.0	$3,000,000	$18,000,000	$18,000,000	19,024	18,995	100%	$18,000,000	PCDOT with RSC non-construction factors	
	27	Camino Verde/Valencia Road	N/A	N/A	Intersection Improvements	N/A	1	$500,000	$500,000	$500,000			100%	$500,000	PCDOT	
	28	Irvington Road	Sunset Boulevard	Ajo Way	New Construction	2	0.8	$3,000,000	$5,088,000	$5,088,000	14,179	17,563	81%	$4,107,621	PCDOT with RSC non-construction factors	
	West Service Area Total									**$24,019,630**			**N/A**	**$23,039,251**		
TOTALS										**$201,947,891**			**TOTAL ATT. TO DEVELOPMENT**	**$93,911,982**		