Arizona Apartment Market Analysis

Prepared for:

Arizona Multihousing Association

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Executive Summary

This report addresses multiple factors related to the apartment industry in the State of Arizona, including a current outlook on the state of the industry. Data is provided by municipalities within Maricopa and Pima counties and includes permits, inventory, rents, vacancies, and other industry specific data. In addition, an economic and fiscal impact analysis was conducted which calculates the impacts of both projected annual construction as well as current operations of existing apartment communities in Arizona. Economic impacts (jobs, wages and economic output) as well as fiscal impacts (government revenues) generated for the state, counties and local governments are provided. Finally, the future needs of Arizona for apartment housing is addressed, including a forecast for the apartment market in Arizona by class. Barriers and solutions to development and affordability are also discussed.

Current State of the Industry

- As of 2016, there were an estimated 2,960,219 residential units in Arizona and about 2,519,052 were counted as occupied units, or households as of 2016.
- In terms of total residential rentals (including single family), about 37%, or 926,038, of total households were renter occupied. Single family rental housing represented 44% of total renter households and apartments represented 48% of renter households (as of 2016).
- The number of apartment permits has been increasing since 2012 and demand has grown steadily each year. Indeed, in 2016 and 2017 more than 10,000 units were permitted each year and 2018 appears to be on track for similar results.
- The average apartment in Greater Phoenix is 826 square feet. Cities with newer communities have an average of more than 1,000 square feet per unit.
- The Greater Phoenix average rent per month was $938 in the second quarter of 2018, up from $908 at year-end 2017. In Greater Tucson, rents averaged $682 in the second quarter up slightly from $670 at year-end.
- Occupancy has been strong in the state's two major metropolitan areas. Indeed, as of the second quarter of 2018, Greater Phoenix recorded an average vacancy rate of 7.1% and Greater Tucson's rate was 6.7%.

Economic & Fiscal Impact Analysis

- Each year, thousands of jobs are created throughout the State in the construction industry from new apartment development. The University of Arizona projects an average of 9,443 units will be built each year from 2018 through 2030. **In total the estimated $1.1 billion in construction activity for these communities generates an estimated 14,374 jobs in the state each year with wages of $746.6 million and a total economic impact of $2.0 billion each year.**

- The 14,374 construction jobs created each year represents an estimated 9.8% of the total construction industry in Arizona.

- There are approximately 575,000 apartment units in Arizona as of 2018. The following table provides the impacts of the operations of those apartment units (and does not include the impact of single family rentals). Based on averages of about 44 units per employee, the Arizona apartment industry is estimated to employ 12,138 people throughout the State. The operations of the communities create a ripple effect that generate an estimated 9,769 indirect and induced jobs. **In total, the apartment industry generates an annual impact of 21,907 jobs, $695.9 million in wages and $3.8 billion in annual economic output each year.**

- The total annual economic output activity for construction and operations would equate to hosting over 10 Super Bowls each year in the State of Arizona.

Economic Impact Summary
Arizona
(2018 Dollars)

Construction	
Jobs (direct, indirect, induced)	14,374
Wages ($mil)	$746.6
Economic Output ($ mil)	$2,030.6
Operations	
Jobs (direct, indirect, induced)	21,907
Wages ($mil)	$695.9
Economic Output ($ mil)	$3,758.6

1/ The total may not equal the sum of the impacts due to rounding.
Sources: AMA; Elliott D. Pollack & Co.; IMPLAN

- The apartment construction industry creates significant tax revenues for the State, counties and local governments. **Indeed, construction of the projected 9,443 apartment units each year generates an estimated $182.5 million from impact fees and tax collections.**

- The operations of the estimated 575,000 apartment units throughout Arizona also generate significant revenues for governments including property taxes, retail sales taxes on supply purchases, residential rental taxes, utility taxes and secondary revenues from employees. **In total, the State, counties and local governments collect an estimated $561.8 million each year from the Arizona apartment industry operations.**

Fiscal Impact Summary Arizona Apartment Impact (2018 Dollars)				
	State of Arizona	**County Governments**	**Local Governments**	**Total**
Impact from Construction				
Prime contracting tax	$36,954,200	$5,291,900	$17,766,800	**$60,012,900**
Speculative builder's tax	$4,680,900	$670,300	$2,250,500	**$7,601,700**
Impact fees	N/A	$3,760,000	$41,844,000	**$45,604,000**
Use Tax	$7,932,500	N/A	$2,725,400	**$10,657,900**
Employee generated taxes	$26,056,600	$18,230,700	$14,310,900	**$58,598,200**
Total - Construction	**$75,624,200**	**$27,952,900**	**$78,897,600**	**$182,474,700**
Ongoing Annual Operations				
Property tax	N/A	$134,927,000	$216,803,000	**$351,730,000**
Retail sales tax (supply purchases)	$520,700	$86,000	$268,500	**$875,200**
Residential rental tax	N/A	N/A	$91,899,600	**$91,899,600**
Utility tax	$27,414,500	$4,525,300	$15,646,800	**$47,586,600**
Employee generated taxes	$28,091,100	$22,981,700	$18,591,000	**$69,663,800**
Total - Operations	**$56,026,300**	**$162,520,000**	**$343,208,900**	**$561,755,200**

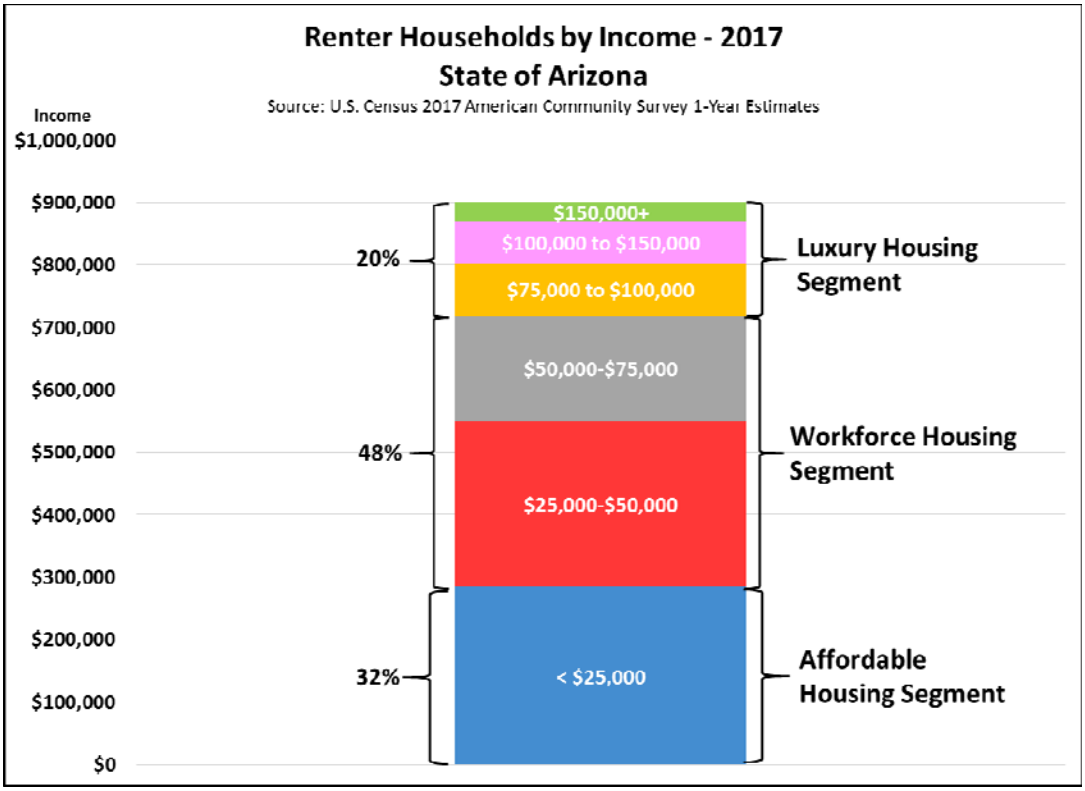
NOTE: All of the above figures are estimates based on the calculations outlined in the methodology section of this report. The figures are intended only as a general guideline as to how they could be impacted by the project. The above figures are based on the current economic structure and tax rates. County impact fees are levied by Pima and Pinal counties.

Sources: AMA; Elliott D. Pollack & Co.; IMPLAN; ATRA

Future Needs Assessment

The demand for multi-family housing in the State of Arizona is higher than any other period of history. A significant percentage of millennials (the largest age cohort in the United States) are reaching their peak rental years and, because they are delaying marriage, will prefer apartments for a longer period of time. In addition, the retirement home cycle also appears extremely strong. The pool of baby boomers selling houses and renting is also likely to increase. **According to the University of Arizona, multi-family permit activity will average about 9,443 units each year through 2030.**

Arizona renters will demand a variety of rental housing that can generally be categorized into "affordable", "workforce", and "luxury". Across the state, 32% of renter households need affordable housing (earning less than $25,000). Households best accommodated by workforce housing (earning between $25,000 and $75,000) represents 48% of the total market. Finally, the luxury rental housing segment (earning over $75,000) is estimated to be 20% of the market.



Using these income guidelines, the following forecast for apartment growth was formulated.

Multi-Family Demand Forecast by Market Segmentation 2018-2030

Year	Affordable	Workforce	Luxury	TOTAL
2018	3,127	4,780	2,009	**9,915**
2019	3,027	4,628	1,945	**9,601**
2020	2,975	4,547	1,911	**9,433**
2021	2,966	4,534	1,906	**9,405**
2022	2,971	4,542	1,909	**9,423**
2023	2,964	4,531	1,905	**9,401**
2024	2,955	4,517	1,899	**9,371**
2025	2,924	4,470	1,879	**9,274**
2026	2,915	4,456	1,873	**9,243**
2027	2,939	4,493	1,889	**9,321**
2028	2,959	4,523	1,901	**9,383**
2029	2,989	4,568	1,920	**9,477**
2030	3,001	4,587	1,928	**9,516**

Source: Univ. of Arizona, Forecasting Project; U.S. Census; Elliott D. Pollack & Co.

Overall, there is currently strong demand in all sectors. The supply that is being delivered and planned, especially in the Greater Phoenix Metro, appears to be mostly in the upper end of the market. This is where the supply/demand imbalance is most noticeable in Arizona. There is strong demand for reasonably priced housing in all forms (for-sale housing, single family rentals, and apartment communities) that are close to employment centers and transportation

routes that do not cost the household more than 30% of their monthly income to own or rent. There is a strong need for future supply to address this need going forward, a portion of which will be met by aging apartment communities that have historically lowered rents over time.

Barriers

Across the state, an estimated 32% of households pay more than 30% of their income for housing expenses. This is known as being cost burdened. Of those cost-burdened, nearly 351,800 households are considered *severely* cost burdened (households that spend 50% or more of their income on housing costs).

Based on the median family income of $65,012 and applying 30% to housing costs, a family in Arizona can afford a home priced up to $269,500. By comparison, for new homes, the median new home price in Greater Phoenix is reported to be just over $303,000 and the median resale price is $253,000. Thus, families at the median income are largely priced out of the new home market, apart from smaller-lot, lower-priced new home communities targeted toward entry-level and value-oriented buyers. For families who earn less than the median family income, home ownership becomes even less attainable. Apartments continue to be a viable solution for affordable housing at each level of income in the state.

A significant amount of new multifamily housing caters to higher income households based on their required rents. While there is demand for these upper income units, the required rent is also a function of land prices and the overall cost to develop the community. With increasing construction costs, traditional apartment communities with rents affordable to the median income household have become harder to finance.

Rental residents will only pay rents that are reasonably within their budget and comparable to other communities with similar amenities and qualities. Rents are a function of a variety of variables including the cost of construction, the cost of land, and compliance with local governance. However, rents must ultimately be competitive in the local marketplace. If any variable to the cost of construction creates higher costs than in other regions, developers will be required to either (1) charge higher rents, (2) absorb the high fees by accepting lower returns and profits on the project or possibly (3) offer a lower price to the owner for the land. If concessions are not an option or the price of land cannot be adjusted, the investment may end up in another location. The result could cause the delay or loss of development in a particular community or the state as a whole.

Government Solutions

Housing affordability has become a top priority of many governments across the state. Many communities are well aware of the persistent and growing need for affordable housing solutions for their residents. As indicated above, major factors that contribute to affordability, such as land prices and the cost of labor and construction materials, are outside the control of governments. In these areas, innovations in housing development are sorely needed.

Within the control of government, there are policies that can be adopted that would help create more opportunities for affordable and workforce housing. There are meaningful

solutions that governments can participate in to help eliminate barriers to affordable housing development. The following may be prospects for consideration:

1. Reduce Regulations – Local cities, towns and counties should consider a review of their development regulations to determine if (1) they may impede the development of affordable housing and (2) changes can be made to encourage the development of new housing. This can be accomplished in many ways. Adjusting land use restrictions, parking requirements, or speeding up the permitting process could all help to reduce overall construction costs and provide a better outlook for lowering required rents.

2. Incentivize Affordable Units – There is a myriad of ways to help encourage affordable housing. This could include density bonuses, expedited approvals, below market pricing of underutilized government land, and various forms of tax incentives made available to developers who include affordable housing could help a project become viable. Tax incentives could include waiving city imposed development fees such as permit fees, impact fees, utility hook-up fees, and other fees, or a reimbursement of construction sales tax, or granting a GPLET to the property.

Excessive taxation (expressed in the form of taxes, fees, and project delays) can result in less production of a product at a higher relative price. In the context of this study, the "product" is housing development within the State of Arizona. Pricing, including sales prices and monthly rent requirements, is influenced by the cost of development. Ultimately, a region can be harmed if the cost to produce housing increases beyond the point that it becomes unaffordable to its target demographic. These costs include regulation and impact fees that are influenced by government policies.

1.0 Introduction

1.1 Purpose of Study

The purpose of this study is to analyze the apartment market in Arizona including current trends, impacts and future needs. The study is comprised of the following tasks.

1. **Current State of the Industry**: An economic and market analysis of the current state of the apartment market in Arizona. Data is provided by county as well as by city within Maricopa and Pima counties and includes permits, inventory, rents, vacancies, and other industry specific data.

2. **Economic & Fiscal Impact Analysis**: This part of the study provides the impacts of both projected annual construction as well as current operations of existing apartment communities in Arizona. Economic impacts (jobs, wages and economic output) as well as fiscal impacts (government revenues) generated for the state, counties and local governments are provided.

3. **Future Needs Assessment**: This task provides a forecast for the apartment market in Arizona as well as an assessment of future needs by class, including barriers to development.

In addition, economic and fiscal impacts will be provided on an incremental basis as well as for 10 selected cities throughout the State.

1.2 Limiting Conditions

This study prepared by Elliott D. Pollack & Company is subject to the following considerations and limiting conditions.

- It is our understanding that this study is for the client's due diligence and other planning purposes. Neither our report, nor its contents, nor any of our work were intended to be included and, therefore, may not be referred to or quoted in whole or in part, in any registration statement, prospectus, public filing, private offering memorandum, or loan agreement without our prior written approval.

- The reported recommendation(s) represent the considered judgment of Elliott D. Pollack & Company based on the facts, analyses and methodologies described in the report.

- Except as specifically stated to the contrary, this study will not give consideration to the following matters to the extent they exist: (i) matters of a legal nature, including issues of legal title and compliance with federal, state and local laws and ordinances;

and (ii) environmental and engineering issues, and the costs associated with their correction. The user of this study will be responsible for making his/her own determination about the impact, if any, of these matters.

- This study is intended to be read and used as a whole and not in parts.

- Estimates regarding specific land use, construction costs and operating data were provided by the client as well as reputable market resources as specified in the tables within this report. Data has been reviewed and verified to determine its reasonableness and applicability to the project.

- The economic and fiscal impact study evaluates the potential "gross impacts" of construction and operations activities. The term "gross impacts" as used in this study refers to the total revenue, jobs and economic output that would be generated by the construction and operations. The study does not consider the potential impact on other businesses or real estate property in the trade area that may occur as a result of the apartment industry.

- The analysis is based on the current tax structure and rates imposed by the State, counties, and local governments. Changes in those rates would alter the findings of this study.

- All dollar amounts are stated in current dollars and, unless indicated, do not take into account the effects of inflation.

Our analysis is based on currently available information and estimates and assumptions about long-term future development trends. Such estimates and assumptions are subject to uncertainty and variation. Accordingly, we do not represent them as results that will be achieved. Some assumptions inevitably will not materialize and unanticipated events and circumstances may occur; therefore, the actual results achieved may vary materially from the forecasted results. The assumptions disclosed in this study are those that are believed to be significant to the projections of future results.

2.0 Current State of the Apartment Market

2.1 Arizona Statewide Apartment Industry

As of 2016, there were an estimated 2,960,219 residential units in Arizona. Multi-family apartment units (3 or more units) represented about 18.9% of the total, or 559,103 units. This inventory estimate is based on the most recent data available from the American Community Survey. Since the end of 2016, more than 15,000 multi-family apartment units have been permitted in Arizona and demand for apartments is currently strong.

Maricopa County's multi-family inventory totaled 408,031 units in 2016, or about 73% of the State's total apartment inventory, while Pima County's inventory totaled 87,152 units, or 16% of State.

The apartment share of total residential units was highest in Maricopa County (23.8%) followed by 19.1% in Pima County. The lower share of multi-family units in rural counties is partially due to the greater number of mobile home parks in those areas.

Residential Inventory

County	SF Units	Townhomes	MF Units	Other	Total Units	MF % of Total
Apache*	22,774	1,159	1,389	7,403	32,725	4.2%
Cochise	38,407	2,256	7,081	13,127	60,871	11.6%
Coconino	44,326	4,461	10,197	6,294	65,278	15.6%
Gila*	23,307	602	1,623	7,606	33,138	4.9%
Graham*	8,329	386	894	3,659	13,268	6.7%
Greenlee*	2,794	97	230	1,303	4,424	5.2%
La Paz*	6,316	380	510	9,028	16,234	3.1%
Maricopa	1,102,688	112,111	408,031	88,560	1,711,390	23.8%
Mohave	68,920	3,904	9,996	30,997	113,817	8.8%
Navajo*	39,290	2,075	3,026	13,163	57,554	5.3%
Pima	273,032	42,820	87,152	53,572	456,576	19.1%
Pinal	123,844	3,529	7,762	35,573	170,708	4.5%
Santa Cruz*	13,373	1,177	2,550	1,025	18,125	14.1%
Yavapai	76,076	7,249	8,812	22,660	114,797	7.7%
Yuma	46,856	3,734	9,850	30,874	91,314	10.8%
Arizona	**1,890,332**	**185,940**	**559,103**	**324,844**	**2,960,219**	**18.9%**

Note: Multi-family data is 3 or more units, Other is boat, RV, Van and mobile homes. Data as of 2016.
Source: American Community Survey (counties with * are based on 5-year ACS data)

According to the ACS, of the 2,960,219 total residential units in the state, about 2,519,052 were counted as occupied units, or "households" as of 2016. In terms of total residential rental, about 37%, or 926,038, households were renter occupied. Single family rental housing

represents 44% of total renter households and multi-family an additional 48%. The remainder of the residential rental market consists of townhomes (3%) and boats, RV's or mobile homes (6%).

Arizona Occupied Housing			
Type	Total Households	Owner Occupied	Renter Occupied
Single Family	1,656,373	1,300,894	355,479
Town homes	155,163	80,057	75,106
Multi-family (3+)	475,242	35,083	440,159
Other	232,863	177,569	55,294
Total	**2,519,052**	**1,593,014**	**926,038**
Percent of Total	100%	63.2%	36.8%

Other: Boat, RV, Van and Mobile Homes

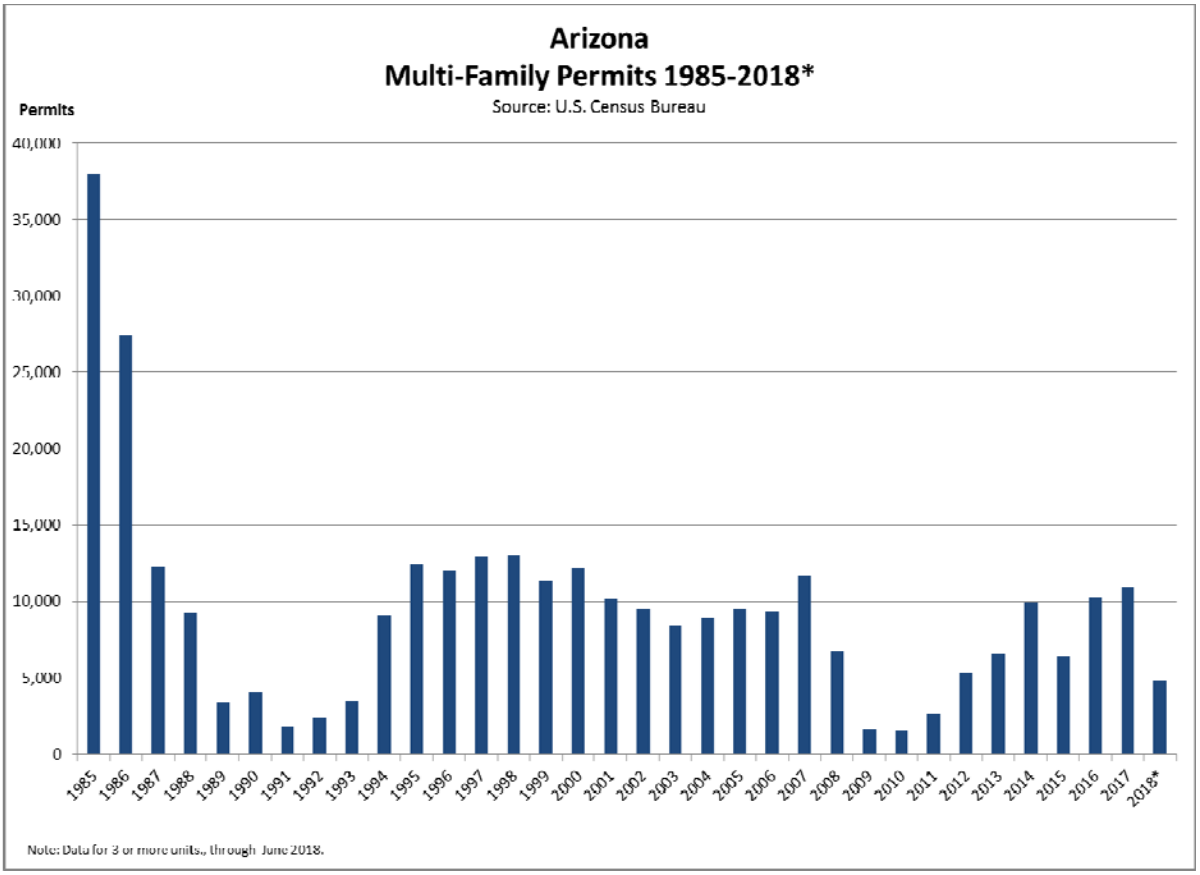
Source: 2016 American Community Survey

Apartment History

Like many major markets across the country, apartment permits peaked in the mid 1980s due to favorable tax laws (prior to the 1986 Tax Reform Act, essentially reducing investment in tax shelters). This boom period was followed by several years of virtually no construction activity in the early 1990s after the tax laws were changed and there was an oversupply of units on the market. The experiences of Arizona were not unlike that of the rest of the U.S., and it is likely that there will never again be a period of unrestrained apartment construction as there was in the '80s.

From 1994 through 2001, there was more consistent permitting activity, with an annual average of just over 11,500 units. However, from 2002 through 2006 there was a noticeable decline in apartment demand as lower interest rates made it easier and more affordable for individuals to own a home rather than rent. While apartment permits increased temporarily during the housing boom in 2007, due to the recession they quickly declined once again to the lowest levels since the early 1990s.

The number of apartment permits increased again in 2012 and demand has grown steadily since then. Indeed, in 2016 and 2017 more than 10,000 units were permitted each year and 2018 appears to be on track for similar results.


Arizona
Multi-Family Permits 1985-2018*
Source: U.S. Census Bureau
Permits
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
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1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018*
Note: Data for 3 or more units, through June 2018.

2.2 Maricopa and Pima County Apartment Market

The following table provides an inventory of apartment units within communities of 50 units or more in cities throughout Greater Phoenix (Maricopa County) and Greater Tucson (Pima County). Very few communities offer four our more bedrooms per unit. In Greater Phoenix, two-bedroom units are the most popular while in Greater Tucson, one-bedroom units are more prevalent.

Apartment Unit Inventory by Number of Bedrooms

	Studio	1	2	3	4	5+	Total	% of Total Housing
Greater Phoenix	**17,271**	**122,161**	**137,671**	**20,584**	**1,939**	**136**	**299,762**	**16%**
Anthem	-	108	152	94	-	-	354	4%
Apache Junction	-	41	176	246	10	-	473	2%
Avondale	26	1,718	2,276	611	19	5	4,655	18%
Buckeye	-	40	229	259	50	-	578	3%
Carefree	8	36	22	-	-	-	66	2%
Cave Creek	-	96	64	-	-	-	160	6%
Chandler	255	7,804	10,663	1,988	51	-	20,761	22%
El Mirage	-	48	56	72	32	-	208	2%
Fountain Hills	-	136	393	34	-	-	563	4%
Gilbert	86	3,653	5,361	912	36	-	9,976	13%
Glendale	1,099	10,373	10,478	1,397	33	-	23,380	26%
Goodyear	28	1,216	1,480	321	-	-	3,045	11%
Guadalupe	-	52	69	62	14	-	197	12%
Litchfield Park	-	132	152	20	-	-	304	12%
Mesa	1,874	15,365	18,486	1,810	130	-	37,665	19%
Peoria	108	2,661	3,514	648	88	-	7,019	10%
Phoenix	11,093	55,482	55,346	7,312	381	6	129,620	22%
Queen Creek	-	206	327	132	-	-	665	7%
Scottsdale	785	10,068	12,446	1,824	5	-	25,128	20%
Sun City	-	12	170	-	-	-	182	1%
Sun City West	-	88	76	-	-	-	164	1%
Surprise	-	736	1,116	331	79	-	2,262	4%
Tempe	1,885	11,799	14,179	2,380	1,011	125	31,379	43%
Tolleson	-	50	400	118	-	-	568	23%
Youngtown	24	241	40	13	-	-	318	12%
Greater Tucson	**4,826**	**31,855**	**25,771**	**5,277**	**1,596**	**119**	**69,484**	**15%**
Green Valley	-	128	188	40	-	-	356	2%
Marana	-	266	427	189	-	-	882	6%
Oro Valley	-	258	410	116	-	-	784	4%
Tucson	4,826	31,203	24,746	4,932	1,596	159	67,462	29%

Source: RealData; U.S. Census Bureau American Community Survey

The Greater Phoenix average rent per month was $938 in the second quarter of 2018, up from $908 at year-end 2017. Cities with higher than average rents are likely a function of one of two things (or both). Higher household incomes in a community and the preference of residents for more upscale development can demand higher rents. Also, more recently built apartment communities can also demand higher rents, which is likely the case for some of the growing communities on the outskirts of Maricopa County and in Pinal County.

In Greater Tucson, rents averaged $682 in the second quarter up slightly from $670 at year-end. Marana and Oro Valley, outside of Tucson, averaged much higher rents of $997 and $1,079, respectively.

Average Rent by City

Place	Avg. Rent	Place	Avg. Rent
Greater Phoenix			
Anthem	$1,158	Peoria	$987
Apache Junction	$644	Phoenix	$866
Avondale	$845	Downtown	$1,055
Buckeye	$826	Excluding Downtown	$857
Carefree	$930	Queen Creek	$1,272
Cave Creek	$1,302	Scottsdale	$1,276
Chandler	$1,142	Scottsdale-South	$1,118
El Mirage	$604	Scottsdale-North	$1,310
Fountain Hills	$1,318	Sun City	$1,098
Gilbert	$1,126	Sun City West	$700
Glendale	$826	Surprise	$954
Goodyear	$1,074	Tempe	$1,032
Guadalupe	$607	Tempe South	$1,081
Higley	$886	Tempe North	$1,021
Litchfield Park	$1,120	Tolleson	$712
Mesa	$879	Youngtown	$551
		Greater Phoenix Average	**$938**
Greater Tucson			
Green Valley	$857	Oro Valley	$1,276
Marana	$1,272	Tucson	$1,118
		Greater Tucson	**$682**

Note: Submarkets broken down by zip code.
Phoenix Downtown 85007, 85003 and 85004; Scottsdale South includes 85257;Scottsdale North excludes 85257 and 85251; Tempe South includes 85281 and 85282; Tempe North includes 85283 and 85284

Source: RealData, Inc. 50+ units, 2018 Q2.

The inventory within each community was further separated into categories reflecting a range of monthly rents. Units with rents less than $500 per month comprise 3% of the Greater Phoenix inventory and 9% of the Greater Tucson inventory. On the other end of the rent scale, rents higher than $1,250 represent 14% of the inventory in Greater Phoenix and only 1% of inventory in Greater Tucson.

Apartment Inventory by Monthly Rent

	Less than $500	$500-$749	$750-$999	$1,000-$1,250	$1,250-$1,499	$1,500 or More
Greater Phoenix	**3%**	**17%**	**35%**	**32%**	**9%**	**5%**
Anthem	-	-	-	100%	-	-
Apache Junction	44%	19%	37%	-	-	-
Avondale	7%	2%	32%	58%	-	-
Buckeye	55%	14%	-	10%	-	21%
Carefree	-	-	100%	-	-	-
Cave Creek	-	-	-	-	100%	-
Chandler	0%	2%	9%	68%	17%	4%
El Mirage	38%	-	62%	-	-	-
Fountain Hills	-	-	-	33%	27%	41%
Gilbert	1%	-	25%	50%	23%	2%
Glendale	2%	30%	43%	24%	2%	-
Goodyear	-	-	11%	85%	4%	-
Guadalupe	33%	37%	30%	-	-	-
Higley	-	-	100%	-	-	-
Litchfield Park	-	-	-	100%	-	-
Mesa	1%	16%	57%	22%	4%	-
Peoria	2%	4%	33%	51%	7%	2%
Phoenix	3%	26%	39%	23%	6%	3%
Queen Creek	-	-	-	66%	34%	-
Scottsdale	-	-	10%	46%	21%	23%
Sun City	-	-	-	100%	-	-
Sun City West	-	100%	-	-	-	-
Surprise	7%	3%	-	84%	6%	-
Tempe	5%	4%	37%	27%	14%	13%
Tolleson	-	87%	13%	-	-	-
Youngtown	20%	80%	-	-	-	-
Greater Tucson	**9%**	**53%**	**27%**	**9%**	**1%**	**0%**
Green Valley	-	45%	55%	-	-	-
Marana	9%	-	19%	72%	-	-
Oro Valley	-	-	18%	82%	-	-
Tucson	9%	54%	27%	8%	1%	0%

Source: RealData, Inc. 50+ units, 2018 Q2.

Vacancy rates have been strong in the state's two major metropolitan areas. Indeed, as of the second quarter of 2018, Greater Phoenix recorded an average vacancy rate of 7.1% and Greater Tucson's rate was 6.7%. The year-end data is also provided due to the seasonality of apartment occupancy in some communities.

Average Vacancy by City

Place	2017 Q4	2018 Q2
Greater Phoenix	**7.4%**	**7.1%**
Anthem	6.0%	7.0%
Apache Junction	1.8%	1.5%
Avondale	4.6%	4.4%
Buckeye	16.6%	13.2%
Carefree	3.0%	8.0%
Cave Creek	3.0%	8.0%
Chandler	8.0%	7.5%
El Mirage	0.5%	1.0%
Fountain Hills	5.0%	34.3%
Gilbert	13.6%	7.4%
Glendale	5.9%	5.9%
Goodyear	11.4%	11.4%
Guadalupe	0.0%	0.0%
Higley	1.0%	4.0%
Litchfield Park	5.0%	8.0%
Mesa	5.9%	5.9%
Peoria	5.8%	8.8%
Phoenix	7.6%	6.9%
Queen Creek	22.0%	7.7%
Scottsdale	8.7%	8.2%
Sun City	7.0%	5.0%
Sun City West	2.0%	1.0%
Surprise	4.1%	3.2%
Tempe	7.1%	9.2%
Tolleson	1.0%	3.0%
Youngtown	1.8%	3.0%
Greater Tucson	**5.9%**	**6.7%**
Green Valley	3.7%	2.7%
Marana	5.6%	7.0%
Oro Valley	6.0%	3.3%
Tucson	5.9%	6.7%

Source: RealData, Inc. 50+ units, 2018 Q2.

Apartment vacancy rates (excluding properties in the lease up phase) are higher in communities with rents above $1,250. At that price, vacancies jump to 7.2% and 9.6% (for rents $1,500 or more).

Apartment Vacancy Rate by Monthly Rent (Excluding Properties in Lease Up)

	Less than $500	$500-$749	$750-$999	$1,000-$1,249	$1,250-$1,499	$1,500 or More
Greater Phoenix	**4.8%**	**4.7%**	**5.6%**	**5.4%**	**7.2%**	**9.6%**
Anthem	-	-	-	7.0%	-	-
Apache Junction	0.0%	0.0%	6.0%	-	-	-
Avondale	3.3%	2.0%	4.5%	4.9%	-	-
Buckeye	2.0%	3.0%		0.0%	-	-
Carefree	-	-	8.0%	-	-	-
Cave Creek	-	-	-	-	8.0%	
Chandler	0.0%	9.0%	2.7%	5.1%	6.6%	7.0%
El Mirage	0.0%	-	2.0%	-	-	-
Fountain Hills	-	-	-	3.0%	15.0%	
Gilbert	0.0%	-	2.8%	5.2%	5.8%	3.0%
Glendale	0.8%	5.1%	4.8%	4.9%	5.0%	-
Goodyear	-	-	2.0%	4.1%	3.0%	-
Guadalupe	0.0%	0.0%	0.0%	-	-	-
Higley	-	-	4.0%	-	-	-
Litchfield Park	-	-	-	8.0%	-	-
Mesa	1.3%	3.5%	4.7%	4.5%	18.5%	-
Peoria	2.0%	2.0%	4.5%	6.4%	7.0%	-
Phoenix	5.8%	5.0%	6.4%	5.3%	6.5%	9.6%
Queen Creek	-	-	-	9.5%	4.0%	-
Scottsdale	-	-	4.5%	5.5%	6.8%	7.6%
Sun City	-	-	-	5.0%	-	-
Sun City West	-	1.0%	-	-	-	-
Surprise	0.0%	0.0%	-	4.1%	5.0%	-
Tempe	9.2%	5.0%	6.4%	7.6%	7.6%	13.4%
Tolleson	-	2.0%	5.0%	-	-	-
Youngtown	11.0%	1.0%	-	-	-	-
Greater Tucson	**8.0%**	**6.6%**	**5.1%**	**7.5%**	**5.8%**	**4.0%**
Green Valley	-	1.0%	3.5%	-	-	-
Marana	0.0%	-	9.0%	8.7%	-	-
Oro Valley	-	-	1.0%	4.0%	-	-
Tucson	8.1%	6.6%	5.1%	7.8%	5.8%	4.0%

Note: "-" denotes no units available at the price; "0.0%" denotes zero vacancy at the price

Source: RealData, Inc. 50+ units, 2018 Q2.

The following table reflects data on the number of units built in each city by decade. The 1980s received the largest share of total number of units built in both the Greater Phoenix and Greater Tucson markets. This was likely due to favorable tax law in the mid-80s. That decade was followed by little to no construction in the early 1990s after the tax law was changed.

Units Built by Decade by City

	Pre-1960	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2018
Greater Phoenix	**2,966**	**7,635**	**42,621**	**105,905**	**40,428**	**58,956**	**41,251**
Anthem	-	-	-	-	-	354	-
Apache Junction	-	-	-	-	-	385	88
Avondale	-	54	168	600	432	3,258	143
Buckeye	-	-	-	140	-	316	122
Carefree	-	-	-	66	-	-	-
Cave Creek	-	-	-	-	-	160	-
Chandler	-	-	127	5,054	4,888	5,760	4,932
El Mirage	-	-	-	-	128	80	-
Fountain Hills	-	-	-	-	333	-	230
Gilbert	-	-	-	2,631	498	3,818	3,029
Glendale	-	1,030	3,097	11,839	3,056	3,604	754
Goodyear	237	69	-	60	264	1,832	583
Guadalupe	-	-	-	60	-	72	65
Higley	-	-	-	72	-	-	-
Litchfield Park	-	-	-	-	-	304	-
Mesa	-	456	7,002	19,201	3,888	4,446	2,672
Peoria	-	-	218	1,129	770	4,209	693
Phoenix	2,673	3,919	23,366	48,785	14,728	22,675	13,474
Queen Creek	-	-	-	-	-	440	225
Scottsdale	-	404	3,818	5,986	7,427	1,070	6,423
Sun City	-	-	-	-	182	-	-
Sun City West	-	-	-	-	-	164	-
Surprise	-	-	-	-	278	1,848	136
Tempe	56	1,703	4,691	10,206	3,556	3,550	7,617
Tolleson	-	-	-	76	-	492	-
Youngtown	-	-	134	-	-	119	65
Greater Tucson	**586**	**3,578**	**16,092**	**31,032**	**6,562**	**5,624**	**6,010**
Green Valley	-	-	-	160	144	52	-
Marana	-	-	-	-	196	80	606
Oro Valley	-	-	-	-	144	138	502
Tucson	586	3,578	16,092	30,872	6,078	5,354	4,902

Source: RealData, Inc. 50+ units, 2018 Q2.

The average apartment size in Greater Phoenix 826 square feet per unit. Some cities with newer communities have an average of more than 1,000 square feet per unit. Areas with older communities (such as Youngtown and Tucson) have smaller apartment sizes.

Average Apartment Size and Rents per Square Foot by City

Place	SF/Unit	Rent/SF	Place	SF/Unit	Rent/SF
Greater Phoenix					
Anthem	1,126	$1.03	Higley	565	$1.57
Apache Junction	991	$0.65	Litchfield Park	940	$1.19
Avondale	866	$1.01	Mesa	820	$1.10
Buckeye	1,160	$0.71	Peoria	944	$1.05
Carefree	735	$1.27	Phoenix	777	$1.13
Cave Creek	875	$1.49	Queen Creek	955	$1.33
Chandler	944	$1.22	Scottsdale	918	$1.40
El Mirage	954	$0.63	Sun City	1,135	$0.97
Fountain Hills	1,003	$1.32	Sun City West	749	$0.93
Gilbert	960	$1.18	Surprise	965	$1.01
Glendale	779	$1.07	Tempe	843	$1.24
Goodyear	919	$1.17	Tolleson	913	$0.78
Guadalupe	985	$0.60	Youngtown	685	$0.83
			Greater Phoenix	**826**	**$1.15**
Greater Tucson					
Green Valley	808	$0.95	Oro Valley	1,016	$1.06
Marana	941	$1.06	Tucson	741	$0.95
			Greater Tucson	**746**	**$0.95**

3.0 Economic & Fiscal Impact of the Arizona Apartment Market

Economic impact analysis examines the regional implications of an activity in terms of three basic measures: output, earnings, and job creation. Fiscal impact analysis evaluates the public revenues and costs created by a particular activity. In a fiscal impact analysis, the primary revenue sources of a city, county, or state government are analyzed to determine how the activity may financially affect them. For this study, the analysis focuses on the impact of a typical year of construction as well as the annual impact of the ongoing operations of the apartment industry in Arizona.

3.1 Economic Impact Methodology

Economic impact analysis examines the economic implications of an activity in terms of output, earnings, and employment. The different types of economic impacts are known as direct, indirect, and induced, according to the manner in which the impacts are generated. For instance, direct employment consists of permanent jobs held by construction employees. Indirect employment is those jobs created by businesses that provide goods and services essential to the construction of the project. These businesses range from manufacturers (who make goods) to wholesalers (who deliver goods). Finally, the spending of the wages and salaries of the direct and indirect employees on items such as food, housing, transportation and medical services creates induced employment in all sectors of the economy, throughout the state. These secondary effects are captured in the analysis conducted in this study.

Multipliers have been developed to estimate the indirect and induced impacts of various direct economic activities. IMPLAN, a nationally recognized provider of local multipliers, developed the multipliers used in this study. The economic impact is categorized into three types of impacts:

(1) **Employment Impact** – the total wage and salary and self-employed jobs in a region. Jobs include both part time and full-time workers.

(2) **Earnings Impact** – the personal income, earnings or wages, of the direct, indirect and induced employees. Earnings include total wage and salary payments as well as benefits of health and life insurance, retirement payments and any other non-cash compensation.

(3) **Economic Output** – also referred to economic activity, relates to the gross receipts for goods or services generated by the company's operations.

3.2 Fiscal Impact Methodology

Fiscal impact analysis studies the public revenues associated with a particular economic activity. The primary revenue sources of local, county, and state governments (i.e., taxes) are analyzed to determine how an activity may affect the various jurisdictions. This section will evaluate the impact of the apartment industry on the State of Arizona, counties and local governments.

Weighted average tax rates are used to provide an estimated overall impact on county and local governments.

The fiscal impact figures cited in this report have been generated from information provided by a variety of sources including the U.S. Bureau of the Census; the U.S. Department of Labor; the Internal Revenue Service; the State of Arizona; the Arizona Tax Research Association; and the U.S. Consumer Expenditure Survey. Elliott D. Pollack & Company has relied upon the estimates of construction cost and operating revenues outlined in this study. Unless otherwise stated, all dollar values are expressed in 2018 dollars.

Fiscal impacts are categorized by type in this study, similar to economic impact analysis. The major sources of revenue generation for governmental entities are related to the proposed construction and ongoing operations.

Construction impacts relate to the revenues generated from construction and include state and local sales taxes levied on construction materials. These are the "primary" revenues generated from the construction. In addition, the direct, indirect and induced employees supported by the construction activity also generate revenues to local and state governments. For instance, employees will spend part of their salaries on retail goods (thereby paying sales taxes), pay property taxes on real estate they own and contribute to the other revenue sources that are shared by the State with counties and local cities. In addition, part of the State's collection of sales taxes on construction materials is also shared with counties and local cities. They are referred to in this report as "secondary" impacts.

The ongoing operations of a real estate project also create beneficial fiscal effects for a community. The primary source of revenue for the apartment industry would be generated from sales taxes, property taxes and residential rental taxes. The following is a description of the applicable revenue sources that will be considered for this analysis.

- Prime Contracting Tax
  The State, counties and cities levy a sales tax on materials used in the construction of buildings and land improvements. That tax is calculated by State law under the assumption that 65% of the construction cost of the facility and its land improvements are related to construction materials with the remaining 35% as a deduction for labor. The sales tax rate is then applied to the 65% materials figure.

  The prime contracting tax is a one-time collection by the governmental entity. The State currently levies a 5.6% sales tax on construction activity (a portion of which is shared with local governments), the weighted average rate for counties is 0.71% and the weighted tax rate for local government contracting is 2.38%.

- Speculative Builders Tax
  The speculative builder's tax is levied on the total selling price of improved real property at the time of closing of escrow (if sold within two years of being built). Similar to the prime contracting tax, all amounts subject to the tax are allowed a 35% deduction. If

the real property has already been subject to the prime contracting tax, the speculative builder's tax is levied on the difference between the construction value and the sales price. As specific data is not available, this analysis assumes that 20% of communities are sold within two years of completion and, thus, pay the speculative builder's tax.

- Use Tax
  The State, counties and local cities charge a use tax that is assessed on items purchased outside the jurisdiction and brought in for storage, use or consumption. This tax rate will be applied to a portion of the FF&E (furniture, fixture and equipment) estimate of the development. The use tax rate for the State is 5.6%. The weighted average use tax rate for local governments is 1.92%.

- Retail Sales Tax
  The State, counties, and local cities in Arizona charge sales tax on retail goods. The sales tax rate for the State is 5.6%. Portions of this tax are redistributed through revenue sharing to counties and cities throughout Arizona based on population. The weighted average sales tax rates for counties and local governments are 0.71% and 2.21%, respectively. These tax rates are applied to estimated spending employees. Based on data from the U.S. Consumer Expenditure Survey, the projected extent of retail spending by new residents and the resulting sales tax receipts was calculated. In addition, the employees of the project are projected to spend money at retail and restaurant establishments or purchase other local goods.

- Utility Sales Tax
  The State, counties and cities also charge a tax on utility revenues. The sales tax rate for the State is 5.6% (though portions of these collections are shared through the revenue sharing program). The weighted average sales tax rates for counties and local governments are 0.71% and 2.45%, respectively. These tax rates are applied to the projected utility usage of apartment communities throughout Arizona.

- Property Tax
  Property taxes are collected on each apartment community. The taxable value for the residences was based on average assessed values provided by historical records of each county's assessor. Dwelling units are considered residential property and assessed at a 10% rate. The weighted average property tax rates for county, local governments and school districts used in the analysis are 4.8412, 1.6053 and 6.1735 per $100 of assessed value, respectively. The county rates include special districts such as fire, library and flood districts.

- Residential Rental Tax
  Residential rents are also subject to tax at the local government level. Rates range from 1.0% in Sierra Vista, Cochise County to as high as 4.0% in Fredonia, Coconino County and San Luis in Yuma County. The weighted average tax rate for local governments throughout the state is about 1.73%. This figure considers all cities and, thus, includes cities that do not levy a residential rental tax at all. Indeed, excluding those cities, the

weighted average residential rental tax rate for cities that do levy the tax is 2.1%. This weighted average tax rate is applied to the project rent collections at apartment communities throughout Arizona.

- Impact Fees
  Cities (as well as a few counties) in Arizona levy utility and development impact fees on a new or proposed development project to pay for all or a portion of the costs of providing public services to the new development such as water, waste water, public safety, fire, streets, parks and libraries. The average impact fee per city in Arizona is estimated to be about $4,400 per unit for this analysis.

- State Shared Revenues
  Each city in Arizona receives a portion of State revenues from four different sources - State sales tax (see description above), State income tax, vehicle license tax and highway user tax. The formulas for allocating these revenues are primarily based on population. Counties also share in the revenue sources of the State, with the exception of income tax.

  State Income Tax

  The State of Arizona collects taxes on personal income. The tax rate used in the analysis averages about 1.6% for earnings. This percentage is based on the most recently available income tax data from the Arizona Department of Revenue. The factor is applied to the projected wage levels of direct, indirect and induced employees supported by the construction and operations of the project. Portions of this tax are redistributed through revenue sharing to cities throughout Arizona based on population.

  HURF Taxes

  The State of Arizona collects specific taxes for the Highway User Revenue Fund (HURF). Both the registration fees and the motor vehicle fuel tax (gas tax) are considered in this analysis. The motor vehicle fuel tax is $0.18 per gallon and is calculated based on a vehicle traveling 12,700 miles per year at 16.6 miles per gallon. Registration fees average $65 per employee in the State of Arizona. These factors are applied to the projected direct and indirect employee count. Portions of these taxes are distributed to cities and counties throughout Arizona based on a formula that includes population and the origin of gasoline sales.

  Vehicle License Tax

  The vehicle license tax is a personal property tax placed on vehicles at the time of annual registration. This factor is applied to the projected direct, indirect and induced employee count. The average tax used in this analysis is $343 and portions of the total collections are distributed to the Highway User Revenue Fund. The remaining funds are shared between cities and counties in accordance with population-based formulas.

The above tax categories represent the largest sources of revenues that would be generated to city, county, and State governments. This analysis considers gross tax collections and does not differentiate among dedicated purposes or uses of such gross tax collections.

3.3 Impact of Apartment Construction

Each year, thousands of jobs are created throughout the State in the construction industry from new apartment development. The University of Arizona projects an average of 9,443 units will be built each year from 2018 through 2030. Along with the average size of 812 square feet per unit at an average construction cost of $150 per square foot and a projected sales price for new product (sold within two years of completion) of $245 per square foot, these figures are used to estimate the total statewide construction impact on the economy and government revenues.

Assumptions
Arizona Apartment Construction Impact
(2018 Dollars)

Average annual units built	9,443
Average sf per unit	812
Construction cost per sf	$150
FF&E per unit	$15,000
Sales cost per sf (new product)	$245
% Communities sold within 2 years	20%

Source: AMA; RealData; U.S. Census Bureau; University of Arizona

3.3.1 Economic Impact of Construction

The $1.1 billion of apartment construction in Arizona generates 8,900 direct construction jobs with wages of $463.6 million. The ripple effect of this activity generates an additional 5,474 indirect and induced jobs with wages of $283.0 million. In total, the apartment construction industry generates an estimated 14,374 jobs in the state with wages of $746.6 million and a total economic impact of $2.0 billion each year.

Economic Impact of Construction
Arizona Apartment Impact
(2018 Dollars)

Impact Type	Jobs	Wages ($ mil)	Economic Output ($ mil)
Direct	8,900	$463.6	$1,149.7
Indirect	1,634	$103.4	$316.6
Induced	3,840	$179.6	$564.3
Total	**14,374**	**$746.6**	**$2,030.6**

1/ The total may not equal the sum of the impacts due to rounding.
Source: AMA; Elliott D. Pollack & Company; IMPLAN

3.3.2 Fiscal Impacts

The apartment construction industry creates significant tax revenues for the State, counties and local governments as shown on the following tables.

The state of Arizona is estimated to receive approximately $75.6 million each year from construction. This includes $49.6 million in direct prime contracting taxes, speculative builder's tax and use taxes as well as an estimated $26.0 million in secondary tax revenues generated by construction employees. The speculative builder's tax calculations assume 20% of properties are sold within two years of completion, and that all prime contracting tax has already been paid on the property being sold.

Fiscal Impact of Construction
Arizona Apartment Impact
State of Arizona
(2018 Dollars)

	Primary Revenues			Secondary Revenues					
Impact Type	Prime Contracting Tax	Speculative Builder's Tax	Use Tax	Employee Spending Sales Tax	Personal Income Tax	Unempl. Tax	Vehicle License Tax	Highway User Tax	**Total Revenues**
Direct	$36,954,200	$4,680,900	$7,932,500	$5,297,000	$7,324,600	$1,682,100	$1,301,600	$683,600	**$65,856,500**
Indirect	N/A	N/A	N/A	$1,111,400	$1,634,300	$308,900	$239,000	$125,500	**$3,419,100**
Induced	N/A	N/A	N/A	$2,131,000	$2,635,200	$725,800	$561,600	$295,000	**$6,348,600**
Total	**$36,954,200**	**$4,680,900**	**$7,932,500**	**$8,539,400**	**$11,594,100**	**$2,716,800**	**$2,102,200**	**$1,104,100**	**$75,624,200**

1/ The figures are intended only as a general guideline as to how the State could be impacted by the project. The above figures are based on the current economic structure and tax rates of the State.

Source: AMA; Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; ATRA

The counties throughout Arizona collect an estimated $28.0 million from apartment construction activity each year. This includes $9.7 million in direct prime contracting tax, impact fees and speculative builder's tax.

Fiscal Impact of Construction
Arizona Apartment Impact
County Governments
(2018 Dollars)

	Primary Revenues			Secondary Revenues			
Impact Type	Prime Contracting Tax	Impact Fees	Speculative Builder's Tax	Employee Spending Sales Tax	Employee Property Tax	State Shared Revenues	**Total Revenues**
Direct	$5,291,900	$3,760,000	$670,300	$874,400	$7,998,200	$2,418,400	**$21,013,200**
Indirect	N/A	N/A	N/A	$183,500	$1,468,800	$470,300	**$2,122,600**
Induced	N/A	N/A	N/A	$351,800	$3,451,000	$1,014,300	**$4,817,100**
Total	**$5,291,900**	**$3,760,000**	**$670,300**	**$1,409,700**	**$12,918,000**	**$3,903,000**	**$27,952,900**

1/ The figures are intended only as a general guideline as to how the counties could be impacted. The above figures are based on the current economic structure and tax rates of the counties.

Source: AMA; Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; ATRA

Primary revenues generated to the local governments totals an estimated $64.6 million including prime contracting tax, speculative builder's tax, impact fees and use taxes levied on furniture, fixtures and equipment. Again, the speculative builder's tax calculation assumes that 20% of the properties are sold within two years of completion and all prime contracting taxes have been paid. Sales tax collections from employee spending are estimated at an additional $4.4 million each year. Other secondary revenues include property taxes and State shared revenues. In total, the local governments would expect to collect an estimated $78.9 million in tax revenue from construction and construction-related activity.

Fiscal Impact of Construction
Arizona Apartment Impact
Local Governments
(2018 Dollars)

	Primary Revenues				Secondary Revenues			
Impact Type	Prime Contracting Tax	Speculative Builder's Tax	Impact Fees	Use Tax	Employee Spending Sales Tax	Employee Property Tax	State Shared Revenues	**Total Revenues**
Direct	$17,766,800	$2,250,500	$41,844,000	$2,725,400	$2,731,400	$2,755,700	$3,405,400	**$73,479,200**
Indirect	N/A	N/A	N/A	N/A	$573,100	$506,100	$692,600	**$1,771,800**
Induced	N/A	N/A	N/A	N/A	$1,098,900	$1,189,000	$1,358,700	**$3,646,600**
Total	**$17,766,800**	**$2,250,500**	**$41,844,000**	**$2,725,400**	**$4,403,400**	**$4,450,800**	**$5,456,700**	**$78,897,600**

1/ The figures are intended only as a general guideline as to how the local governments could be impacted by the activity. The above figures are based on the current economic structure and tax rates.

Source: AMA; Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; ATRA

The following table summarizes the fiscal impact of construction for the State, counties and local governments. In total, apartment construction generates an estimated $182.5 million in tax revenues, on average, each year.

Fiscal Impact of Construction Summary
Arizona Apartment Impact
(2018 Dollars)

	State of Arizona	County Governments	Local Governments	Total
Impact from Construction				
Prime contracting tax	$36,954,200	$5,291,900	$17,766,800	**$60,012,900**
Speculative builder's tax	$4,680,900	$670,300	$2,250,500	**$7,601,700**
Impact fees	N/A	$3,760,000	$41,844,000	**$45,604,000**
Use Tax	$7,932,500	N/A	$2,725,400	**$10,657,900**
Employee generated taxes	$26,056,600	$18,230,700	$14,310,900	**$58,598,200**
Total - Construction	**$75,624,200**	**$27,952,900**	**$78,897,600**	**$182,474,700**

NOTE: All of the above figures are estimates based on the calculations outlined in the methodology section of this report. The figures are intended only as a general guideline as to how they could be impacted by the project. The above figures are based on the current economic structure and tax rates. County impact fees are levied by Pima and Pinal counties.

Sources: AMA; Elliott D. Pollack & Co.; IMPLAN; ATRA

3.4 Impact of Apartment Operations

There are approximately 575,000 apartment units in Arizona as of 2018. This is based on the most recent inventory data from the Census inflated by the number of permits issued-to-date. Each of these apartment communities employ various types of jobs such as security, maintenance technicians, housekeeping, leasing professionals, and managers. To estimate total employment at apartment communities throughout the state an average of 44 units per employee was used. This equates to about 2-3 full-time equivalent jobs for a community with 100 units.

Additional assumptions used in the analysis include the average limited assessed value per unit (to estimate property taxes), the average rent per unit ($893) and average vacancy (7.0%) to calculate residential rental tax collections), the percent of income that is devoted to rent (35%) to estimate household incomes, taxable supplies per employee and the average number of people per apartment unit.

Assumptions
Arizona Apartment Operating Impacts
(2018 Dollars)

Total inventory (units)	575,000
Percent rental units	92.6%
Average units per employee	44
Average full cash value per unit	$83,104
Average limited cash value per unit	$52,334
Average rent per unit	$893
Average vacancy	7.0%
Percent of income devoted to rent	35%
Taxable supplies per employee	$1,000
Average number of people per MF Unit	2.0

Source: AMA; RealData; U.S. Census Bureau; County Assessor Records

3.4.1 Economic Impacts

The Arizona apartment industry is estimated to employ 12,138 people throughout the State. The operations of the communities create a ripple effect that generate an estimated 9,769 indirect and induced jobs. In total, the apartment industry generates an annual impact of 21,907 jobs, $695.9 million in wages and $3.8 billion in annual economic output.

Annual Economic Impact of Operations
Arizona Apartment Impact
Arizona
(2018 Dollars)

Impact Type	Jobs	Wages ($ mil)	Economic Output ($ mil)
Direct	12,138	$249.0	$2,354.6
Indirect	6,200	$280.1	$880.0
Induced	3,570	$166.8	$524.0
Total	**21,907**	**$695.9**	**$3,758.6**

1/ The total may not equal the sum of the impacts due to rounding.

Source: AMA; Elliott D. Pollack & Company; IMPLAN

3.4.2 Fiscal Impacts

The State, counties and local governments receive tax revenues from the operations of the apartment communities. Direct revenues are generated by property taxes, residential rental taxes, utility taxes and sales taxes on taxable supply purchases.

Annual operations of apartment communities generate an estimated $56.0 million in tax revenues for the State. Significant portions of this impact would be generated from direct primary revenues at each community. Additional revenues will be generated by the employees (employee spending sales tax, income tax, unemployment tax, vehicle license tax, and highway user revenue fees). Sales taxes from taxable supply purchases are estimated at about $520,700 each year and utility taxes are projected to total nearly $27.4 million. Employees supported by the industry produce an estimated $28.1 million in taxes.

Annual Fiscal Impact of Operations
Arizona Apartment Impact
State of Arizona
(2018 Dollars)

Primary Revenue	
Retail sales tax (supply purchases)	$520,700
Utility sales tax	$27,414,500
Sub-Total	**$27,935,200**
Secondary Revenue	
Employee Spending Sales Tax	$9,666,900
Personal Income Tax	$9,397,100
Unemployment Tax	$4,140,400
Vehicle License Tax	$3,203,900
Highway User Tax	$1,682,800
Sub-Total	**$28,091,100**
Total Revenue	
GRAND TOTAL	**$56,026,300**

1/ The total may not equal the sum of the impacts due to rounding. All of the above figures are representative of the major revenue sources for the State and are based on the current economic structure and tax rates of the State.

Source: AMA; Elliott D. Pollack & Co.; ADOR; ATRA

Annual operations of the apartment industry generates an estimated $162.5 million in tax revenues for county governments. Primary revenues such as property taxes, utility taxes and retail sales taxes are an estimated $139.5 million each year. Secondary revenue generated by employee spending (employee spending sales tax, property tax, and state shared revenue) would generate an additional $23.0 million.

Annual Fiscal Impact of Operations
Arizona Apartment Impact
County Governments
(2018 Dollars)

Primary Revenue	
Property Tax	$134,927,000
Retail sales tax (supply purchases)	$86,000
Utility Tax	$4,525,300
Sub-Total	**$139,538,300**
Secondary Revenue	
Employee Spending Sales Tax	$2,014,000
Employee Property Tax	$16,357,700
Employee State Shared Revenues	$4,610,000
Sub-Total	**$22,981,700**
Total Revenue	
GRAND TOTAL	**$162,520,000**

1/ Figures are representative of the major revenue sources for the counties and are based on the current economic structure and tax rates.
Source: AMA; Elliott D. Pollack & Co.; ADOR; ATRA

Local governments also benefit from the annual operations of apartment communities throughout Arizona. An estimated $324.6 million is generated from direct primary taxes such as property tax, retail sales tax, residential rental tax and utility taxes. Additional secondary revenues from employees total another $18.6 million. In total, local governments receive an estimated $343.2 million each year from the apartment industry.

Annual Fiscal Impact of Operations
Arizona Apartment Impact
Local Governments
(2018 Dollars)

Primary Revenue	
Property Tax	$216,803,000
Retail sales tax (supply purchases)	$268,500
Residential rental tax	$91,899,600
Utility Tax	$15,646,800
Sub-Total	**$324,617,900**
Secondary Revenue	
Employee Spending Sales Tax	$6,291,300
Employee Property Tax	$5,635,900
Employee State Shared Revenues	$6,663,800
Sub-Total	**$18,591,000**
Total Revenue	
GRAND TOTAL	**$343,208,900**

1/ Figures are representative of the major revenue sources for the local government and are based on the current economic structure and tax rates.
Source: AMA; Elliott D. Pollack & Co.; ADOR; ATRA

The following table summarizes the fiscal impacts of apartment operations. The State of Arizona collects and estimated $56.0 million each while, county government collect about $165.5 million and local governments collect an estimated $343.2 million. In total, an estimated $561.8 million in tax revenue is generated annually.

Fiscal Impact of Operations Summary
Arizona Apartment Impact
(2018 Dollars)

	State of Arizona	County Governments	Local Governments	Total
Ongoing Annual Operations				
Property tax	N/A	$134,927,000	$216,803,000	**$351,730,000**
Retail sales tax (supply purchases)	$520,700	$86,000	$268,500	**$875,200**
Residential rental tax	N/A	N/A	$91,899,600	**$91,899,600**
Utility tax	$27,414,500	$4,525,300	$15,646,800	**$47,586,600**
Employee generated taxes	$28,091,100	$22,981,700	$18,591,000	**$69,663,800**
Total - Operations	**$56,026,300**	**$162,520,000**	**$343,208,900**	**$561,755,200**

NOTE: All of the above figures are estimates based on the calculations outlined in the methodology section of this report. The figures are intended only as a general guideline as to how they could be impacted by the project. The above figures are based on the current economic structure and tax rates. County impact fees are levied by Pima and Pinal counties.

Sources: AMA; Elliott D. Pollack & Co.; IMPLAN; ATRA

3.5 Impact of a 250-Unit Apartment Community

The following tables provide the impacts that would be generated from the construction and operations of a new 250-unit community in Arizona. The assumptions differ from the statewide impact in that the 250-unit community would be a new build and, thus, assessed values and rents would be higher than the statewide averages of all product types. In addition, impacts are also calculated for this incremental analysis in terms of new resident spending in the economy as well as increased state shared revenues that would be generated for the counties and local governments from the addition of new residents.

The assumptions for furniture, fixtures and equipment (FF&E) estimates, average size per unit, vacancies and utility costs remain as described in the statewide impact section. This incremental analysis also assumes that the property is sold within two years of being built.

Analysis Assumptions
250-Unit Apartment Community
(2018 Dollars)

Number of units	250
Average sf per unit	812
Construction cost per sf	$150
FF&E per unit	$15,000
Sales cost per sf (new product)	$245
Average full cash value per unit	$159,000
Average limited cash value per unit	$122,000
Average rent per unit	$1,200
Average vacancy	7.0%
Percent of income devoted to rent	35%
Taxable supplies per employee	$1,000
Average number of people per MF Unit	2.0

Source: AMA; RealData; U.S. Census Bureau; County Assessor Records

3.5.1 Economic Impacts of a 250-Unit Community

A 250-unit community totaling about 203,000 square feet would cost an estimated $30.4 million to build. This construction activity would generate a total of 381 direct, indirect and induced jobs, $19.8 million in wage and $53.8 million in economic output.

Once construction is complete and the apartment community is operating at stabilized levels, a total of 10 jobs would be created throughout the economy with $500,000 in wages and $1.8 million each year in economic activity.

Economic Impact Summary
250-Unit Apartment Community
Arizona
(2018 Dollars)

Construction	
Person years of employment	381
Wages ($mil)	$19.8
Economic Output ($ mil)	$53.8
Operations	
Jobs (direct, indirect, induced)	10
Wages ($mil)	$0.5
Economic Output ($ mil)	$1.8

1/ The total may not equal the sum of the impacts due to rounding.
Sources: AMA; Elliott D. Pollack & Co.; IMPLAN

3.5.2 Fiscal Impacts of a 250-Unit Community

The State, counties and local governments would collect direct taxes as well and secondary taxes generated by employees from the construction and operations of a 250-unit apartment community.

During the construction phase, the state of Arizona is expected to collect an estimated $978,300 in prime contracting tax and an additional $75,200 in additional speculative builder's tax if the property is sold within two years of completion. The furniture, fixtures and equipment would generate an additional $210,000 and the construction employees would generate an estimated $689,800. In total, the state would collect $2.0 million from the construction of a 250-unit apartment community. A county would collect an estimated $585,500 and a local government would collect an average of about $2.0 million. The county and local government collections are based on weighted average tax rates throughout the state. City specific impacts are calculated for ten selected cities below.

Annual operations of a 250-unit apartment community would generate about $221,600 for the State, an average of about $295,370 for a county government and an estimated $566,800 for local governments. Again, these figures include impacts of potential new resident spending throughout the state as well as the increase in population for the county and local governments which would generate increased state shared revenues. That is, a new community increases the available housing stock allowing more residents to live within the specific city or county.

Fiscal Impact Summary
250-Unit Apartment Community
(2018 Dollars)

	State of Arizona	County Governments	Local Governments	TOTAL
Impact from Construction				
Prime contracting tax	$978,300	$140,100	$470,300	**$1,588,700**
Speculative builder's tax	$75,200	$88,700	$297,900	**$461,800**
Impact fees	N/A	N/A	$1,108,000	**$1,108,000**
Use Tax	$210,000	N/A	$72,200	**$282,200**
Employee generated taxes	$689,800	$356,700	$95,700	**$1,142,200**
Total - Construction	**$1,953,300**	**$585,500**	**$2,044,100**	**$4,582,900**
Operations (annual at buildout)				
Property tax	N/A	$148,250	$238,220	**$386,470**
Resident spending sales tax	$191,900	$31,700	$98,900	**$322,500**
Retail sales tax (supply purchases)	$200	$40	$130	**$370**
Residential rental tax	N/A	N/A	$57,980	**$57,980**
Utility tax	$12,900	$2,120	$7,350	**$22,370**
State shared revenues	N/A	$105,000	$161,700	**$266,700**
Employee generated taxes	$16,600	$8,260	$2,520	**$27,380**
Total - Operations	**$221,600**	**$295,370**	**$566,800**	**$1,083,770**

NOTE: All of the above figures are representative of the major revenue sources for the jurisdictions. The figures are intended only as a general guideline as to how they could be impacted by the project. The above figures are based on the current economic structure and tax rates. County and local government impacts are based on weighted average tax rates throughout the state. Local government impacts include average school district collections.

Sources: AMA; Elliott D. Pollack & Co.; IMPLAN; ATRA

3.5.3 Revenue Impact Estimates for Select Cities

Results of the above analysis would vary based on a number of factors. The following tables provide the impact that would be generated for select cities within Arizona. Tax rates for each of the cities as well as other factors that affect the selected city's results are outlined below. Prime contracting sales taxes vary from 1.5% in Chandler and Gilbert to 4.0% in Oro Valley. Cities, such as Tucson and Oro Valley do not levy a residential rental tax. Oro Valley also does

not have a city property tax. State shared revenues per capita vary from $304 in Tempe to $339 in Tucson.

The work/live percent data is used to calculate the number of employees that live within the city or town where they work. These figures are used to calculate the secondary impacts generated by employees in the model.

Tax Rates and Demographics by City
Select Cities

	Prime Contracting Tax	Impact Fees	Sales Tax	Residential Rental Tax	Utility Tax	Property Tax	School Distrct Property Tax	State Shared Revs / capita	Work/ Live Percent
Chandler	1.5%	$10,253	1.5%	1.5%	1.8%	1.140	6.665	$332	24.7%
Gilbert	1.5%	$7,562	1.5%	1.5%	1.5%	1.028	6.105	$329	22.5%
Goodyear	3.5%	$4,936	2.5%	2.5%	4.0%	1.735	6.808	$322	14.8%
Mesa	1.8%	$3,594	1.8%	1.8%	1.8%	1.097	7.216	$323	33.3%
Phoenix	2.3%	$5,208	2.3%	2.3%	2.3%	2.160	11.636	$321	43.3%
Scottsdale	1.7%	$2,345	1.7%	1.7%	1.7%	1.085	3.704	$303	16.9%
Surprise	3.7%	$2,838	2.2%	2.2%	3.2%	0.759	4.635	$306	27.2%
Tempe	1.8%	$2,665	1.8%	1.8%	1.8%	2.493	7.548	$304	10.4%
Tucson	2.5%	$5,293	2.5%	--	2.5%	1.434	6.555	$339	51.6%
Oro Valley	4.0%	$4,953	2.5%	--	2.5%	--	5.542	$312	19.2%

Source: Model City Tax Code; Arizona Tax Research Association; AMA

During construction of a 250-unit apartment community, Chandler and Gilbert will collect less than $300,000 in prime contracting tax revenue. This is not surprising as their tax rate (1.5%) is the lowest among the ten cities. Oro Valley, on the other hand, whose prime contracting tax rate is 4.0%, will collect an estimated $791,400 from the construction of a 250-unit community. In total, including impact fees, the selected cities collect construction and related activity taxes ranging from $1.2 million in Scottsdale to $3.2 million in the City of Chandler.

Annual operating impacts are also provided in the following table by city. Annual revenue impacts range from $390,350 in Oro Valley to $747,560 in Phoenix. The town of Oro Valley does not levy a property tax (though there are school district tax collected) or a residential rental tax.

Fiscal Impact Summary
250-Unit Apartment Community
Select Cities
(2018 Dollars)

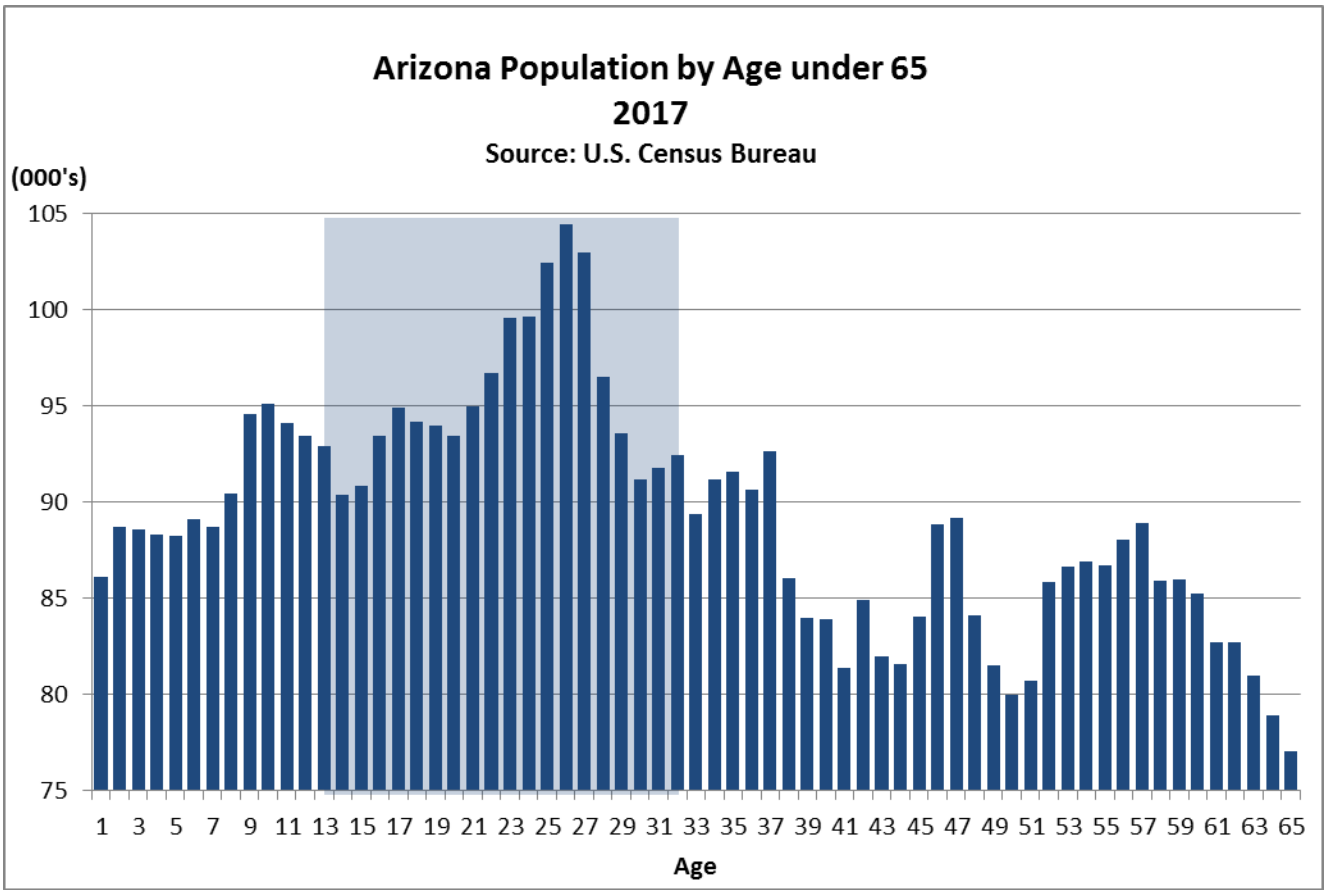
	Chandler	Gilbert	Goodyear	Mesa	Phoenix	Scottsdale	Surprise	Tempe	Tucson	Oro Valley
Construction Impacts										
Prime contracting tax	$296,800	$296,800	$692,400	$346,200	$455,000	$326,400	$732,000	$356,100	$494,600	$791,400
Speculative builder's tax	$187,900	$187,900	$438,500	$219,300	$288,200	$206,700	$463,600	$225,500	$313,200	$501,200
Impact fees	$2,563,000	$1,891,000	$1,234,000	$899,000	$1,302,000	$586,000	$710,000	$666,000	$1,323,000	$1,238,000
Use tax	$56,300	$0	$93,800	$65,600	$86,300	$54,400	$82,500	$67,500	$97,500	$0
Sub-Total	**$3,104,000**	**$2,375,700**	**$2,458,700**	**$1,530,100**	**$2,131,500**	**$1,173,500**	**$1,988,100**	**$1,315,100**	**$2,228,300**	**$2,530,600**
Secondary (Employee) Impacts	$51,400	$45,900	$42,700	$69,600	$157,600	$46,300	$50,200	$36,100	$121,100	$26,400
Total Construction Impacts	**$3,155,400**	**$2,421,600**	**$2,501,400**	**$1,599,700**	**$2,289,100**	**$1,219,800**	**$2,038,300**	**$1,351,200**	**$2,349,400**	**$2,557,000**
Annual On-going Impacts										
Property tax	$239,010	$218,450	$261,620	$254,580	$422,480	$146,640	$165,200	$307,510	$244,670	$169,710
Resident spending sales tax	$50,300	$50,300	$55,900	$58,700	$77,200	$55,400	$49,200	$60,400	$83,900	$55,900
Retail sales tax (supply purchases)	$90	$90	$140	$100	$130	$90	$130	$100	$140	$140
Residential rental tax	$50,220	$50,220	$83,690	$58,590	$77,000	$55,240	$73,650	$60,260	$0	$0
Utility tax	$5,400	$4,500	$12,000	$5,250	$6,900	$4,950	$9,600	$5,400	$7,500	$7,500
State shared revenues	$165,900	$164,400	$161,100	$161,300	$160,400	$151,700	$152,900	$152,200	$169,400	$155,900
Sub-Total	**$510,920**	**$487,960**	**$574,450**	**$538,520**	**$744,110**	**$414,020**	**$450,680**	**$585,870**	**$505,610**	**$389,150**
Secondary (Employee) Impacts	$1,600	$1,480	$1,510	$1,960	$3,450	$1,450	$1,730	$1,210	$3,380	$1,200
Total Operating Impacts	**$512,520**	**$489,440**	**$575,960**	**$540,480**	**$747,560**	**$415,470**	**$452,410**	**$587,080**	**$508,990**	**$390,350**

1/ Figures are representative of the major revenue sources for the cities and are based on the current economic structure and tax rates.
2/ Secondary impacts from employees include employee spending sales tax, employee property taxes on homes they occupy and increased state shared revenues from employees that live and work in the respective city.
Source: AMA; Elliott D. Pollack & Co.; ADOR; ATRA

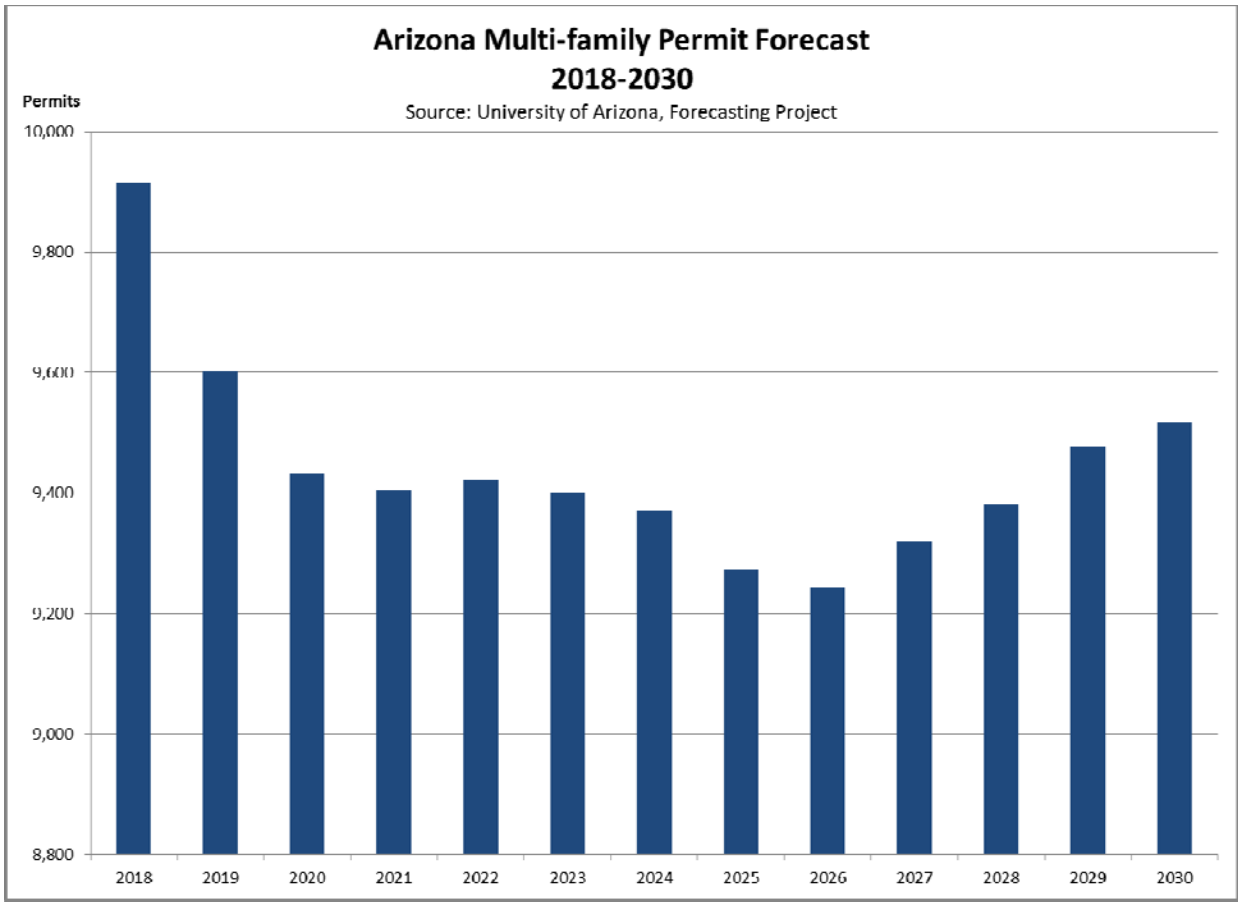
4.0 Future Needs Assessment

4.1 Forecast

The demand for multi-family housing in the State of Arizona is higher than any time including the 1980s. This is mainly due to demographics. There is a significant percentage of the millennial generation (the largest age cohort in the United States) reaching their peak rental years and, because they are delaying marriage, they will prefer apartments for a longer period of time. In addition, the retirement home cycle (downsizing to smaller homes, condos, or apartments) also appears extremely strong based on the number of people who will be reaching 65 and older. The pool of baby boomers selling houses and renting is also likely to increase.

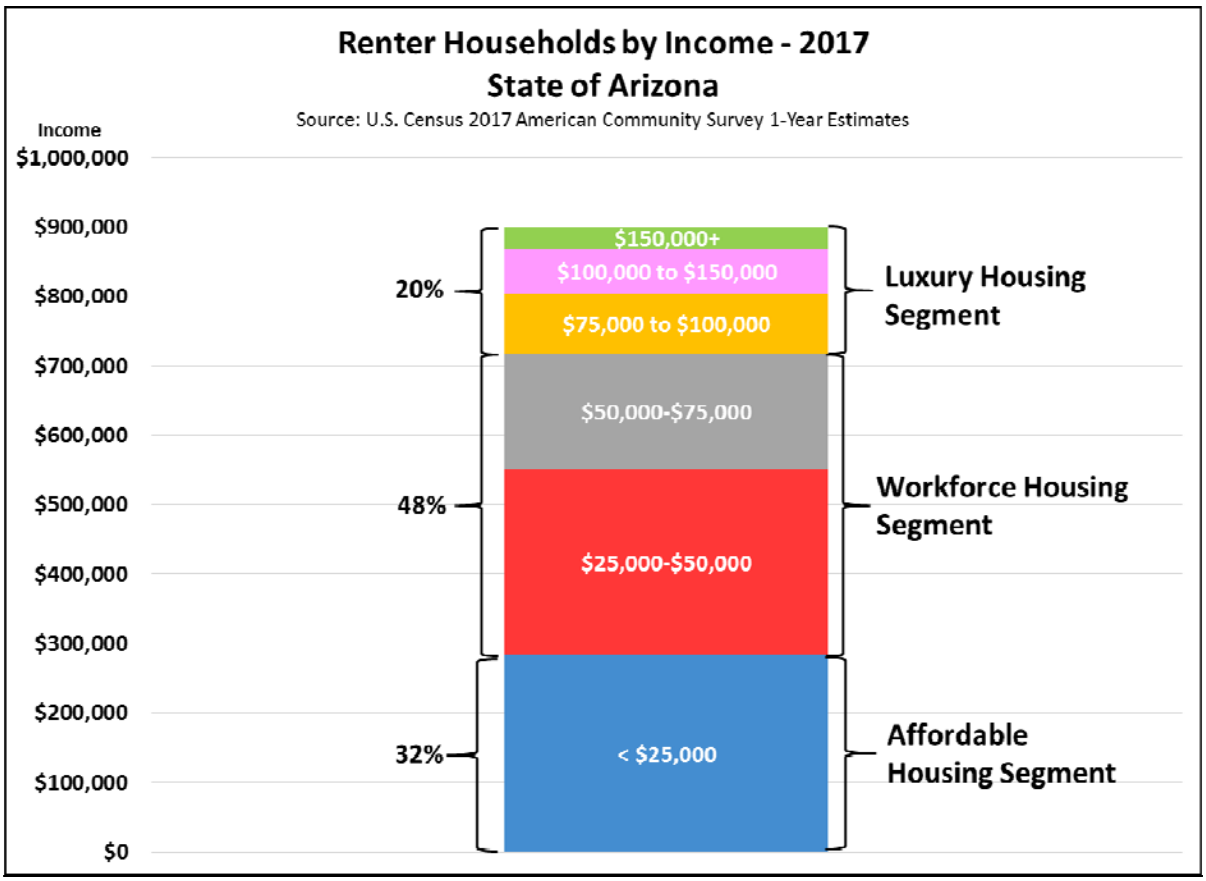


According to the University of Arizona, multi-family permit activity will slow but only slightly from 9,915 in 2018 to an average of about 9,443 each year through 2030.



Arizona renters will need a variety of housing that can generally be categorized into "affordable housing", "workforce housing", and "luxury housing". The demand for these segments can be roughly estimated through household income segmentation. Household income data for the State of Arizona for renter households is presented in the following chart. The income brackets that would allow households to comfortably afford the various types of apartment housing have been identified.

Across the state, approximately 32% of renter households earn an income that would be most appropriate for affordable housing. These households are approximated by households earning less than $25,000 per year. Households best accommodated by workforce housing are represented by the income range between $25,000 and $75,000. Workforce housing demand represents 48% of the total market. Finally, the luxury rental housing segment, or those earning over $75,000 per year, is estimated to be 20% of the market.



While there are some limitations to this approach (household size is not factored, which may preclude some higher income earners to be able to afford a luxury apartment or may prefer single family rentals), the data for apartment dwellers is likely to follow this general pattern. Additionally, there is no indication that future inflation adjusted income levels will shift dramatically for renters over the next several years. Thus, the following table provides an estimate of demand for apartments by segmentation, utilizing the University of Arizona forecast as a guideline for total unit demand.

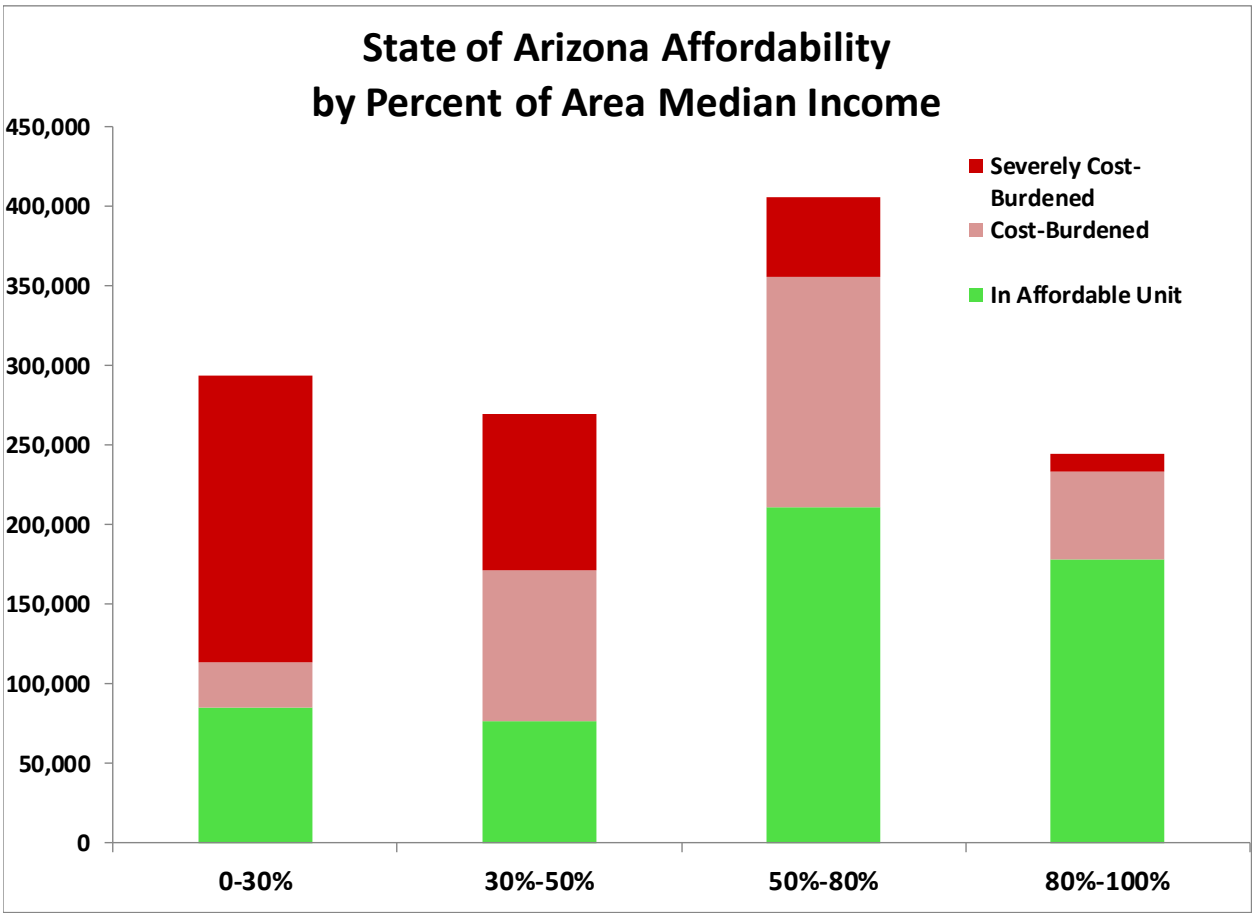
Multi-Family Demand Forecast by Market Segmentation 2018-2030				
Year	Affordable	Workforce	Luxury	TOTAL
2018	3,127	4,780	2,009	**9,915**
2019	3,027	4,628	1,945	**9,601**
2020	2,975	4,547	1,911	**9,433**
2021	2,966	4,534	1,906	**9,405**
2022	2,971	4,542	1,909	**9,423**
2023	2,964	4,531	1,905	**9,401**
2024	2,955	4,517	1,899	**9,371**
2025	2,924	4,470	1,879	**9,274**
2026	2,915	4,456	1,873	**9,243**
2027	2,939	4,493	1,889	**9,321**
2028	2,959	4,523	1,901	**9,383**
2029	2,989	4,568	1,920	**9,477**
2030	3,001	4,587	1,928	**9,516**
Source: Univ. of Arizona, Forecasting Project; U.S. Census; Elliott D. Pollack & Co.				

4.2 Affordability

Across the state, an estimated 32% of households pay more than 30% of their income for housing expenses. This is known as being cost burdened. Of those cost-burdened, nearly 351,800 households are considered *severely* cost burdened (15% of all households). These households spend 50% or more of their income on housing costs.

The overwhelming majority of cost burdened households are found within the lowest income earning segments. Over 71% of households earning between 0% and 50% of the median family income are housing cost burdened. In addition, over 48% of households earning between 50% and 80% are cost burdened.

State of Arizona Median Family Income & Housing Affordability					
% of Median Family Income	Total Households	Households in Affordable Units	Cost-Burdened	Severely Cost Burdened	% Cost-Burdened
0-30%	293,220	85,270	28,525	179,425	70.9%
30%-50%	269,595	76,240	94,785	98,570	71.7%
50%-80%	405,740	210,650	145,160	49,930	48.1%
80%-100%	244,135	177,830	55,470	10,835	27.2%
>100%	1,199,525	1,100,915	85,615	12,995	8.2%
TOTAL	**2,412,210**	**1,650,900**	**409,555**	**351,755**	**31.6%**
Source: U.S. Census 2011-2015 American Community Survey; HUD CHAS Dataset; Elliott D. Pollack & Company					



Low income households (households making 0% to 50% of the area median income) have been identified as the greatest population in need of affordable housing. Throughout the state, there are over 401,305 households in need of an affordable housing option.

This issue is closely tied to the size of each county's population. While every county indicates a need for additional affordable housing units, Maricopa County accounts for the vast majority of need. Maricopa County is followed by Pima County, Pinal County, and Yavapai County.

Low Income Affordability Gap 0% - 50% of Median Income			
Region	**Total Households**	**Households in Affordable Units**	**Affordability Gap**
Arizona	562,815	161,510	**401,305**
Counties			
Apache	6,555	4,535	**2,020**
Cochise	11,940	4,240	**7,700**
Coconino	12,595	4,245	**8,350**
Gila	4,700	2,055	**2,645**
Graham	2,665	1,280	**1,385**
Greenlee	595	320	**275**
La Paz	1,930	970	**960**
Maricopa	328,615	85,085	**243,530**
Mohave	16,505	5,645	**10,860**
Navajo	10,360	5,540	**4,820**
Pima	96,635	24,685	**71,950**
Pinal	31,025	10,840	**20,185**
Santa Cruz	3,755	1,185	**2,570**
Yavapai	20,570	6,180	**14,390**
Yuma	14,360	4,705	**9,655**

Source: U.S. Census 2011-2015 ACS; HUD CHAS Dataset; Elliott D. Pollack & Company

4.2.1 Homeownership Affordability

Based on the median family income of $65,012 and applying 30% to housing costs, a family in Arizona can afford a home priced up to $269,500. For new homes, the median new home price in Greater Phoenix is reported to be just over $303,000 and the median resale price was $253,000. Thus, families at the median income are largely priced out of the new home market, apart from smaller-lot, lower-priced new home communities targeted toward entry-level and value-oriented buyers.

Based on home values estimated by the U.S. Census Bureau, an estimated 71.5% of owner occupied homes (of any housing type) would be affordable to median income earning families. Home ownership affordability also varies across counties. The highest percentage of affordable homes to median income earning families is Greenlee County at 92.6%. The least affordable county is Yavapai County with only 63.8% of homes affordable to median income families.

Home Purchase Affordability		
	Maximum Affordable Home Value	% of Homes Affordable
Arizona	$269,512	71.5%
Counties		
Apache	$157,862	77.3%
Cochise	$236,792	79.7%
Coconino	$327,555	70.0%
Gila	$209,169	69.3%
Graham	$236,845	85.5%
Greenlee	$269,315	92.6%
La Paz	$186,330	83.2%
Maricopa	$283,261	68.3%
Mohave	$207,790	73.3%
Navajo	$209,773	78.2%
Pima	$240,856	72.1%
Pinal	$274,034	85.4%
Santa Cruz	$192,535	67.8%
Yavapai	$258,794	63.8%
Yuma	$192,550	81.4%
Source: HUD; U.S. Census; Elliott D. Pollack & Co.		

For families who earn less than the median family income, home ownership becomes much less attainable. As an example, for families earning 50% of median family income, less than 35% of homes in Arizona would be considered affordable. Only homes valued at $134,760 or less would be an affordable purchase for these families. In these cases, apartments can be an affordable solution.

4.3 Barriers

In the coming years, the distribution of households by income range is not expected to change significantly. So, while the trend in income at least indicates some moves in a positive direction, it also indicates a continual increase of families that will be in need of affordable housing options.

Additionally, as the data has shown, there is already a significant affordability gap in the State. Apartments should continue to be considered a viable solution for affordable housing at each level of income in the state and especially for households earning less than the median income. Affordable housing can be provided in the form of government subsidized units but can also be delivered by the private sector for households earning between 60% and 120% of the median income, commonly referred to as workforce housing.

Overall, there is currently strong demand in all sectors. The supply that is being delivered and planned, especially in the Greater Phoenix Metro, appears to be mostly in the upper end of the market. This is where the supply/demand imbalance is most noticeable in Arizona. There is strong demand for reasonably priced housing in all forms (for-sale housing, single family rentals, and apartment communities) that are close to employment centers and transportation routes that do not cost the household more than 30% of their monthly income to own or rent. There is a strong need for future supply to address this need going forward.

A significant amount of new multifamily housing caters to higher income households based on their required rents. While there is demand for these upper income units, the required rent is also a function of land prices and the overall cost to develop the community. With increasing construction costs, traditional apartment communities with rents affordable to the median income household have become harder to finance.

4.4 Government Solutions

Rental residents will only pay rents that are reasonably within their budget and comparable to other communities with similar amenities and qualities. Rents are a function of a variety of variables including the cost of construction, the cost of land, and compliance with local governance. However, rents must ultimately be competitive in the local marketplace. If any variable to the cost of construction creates higher costs than in other regions, developers will be required to either (1) charge higher rents, (2) absorb the high fees by accepting lower returns and profits on the project or possibly (3) offer a lower price to the owner for the land. If concessions are not an option or the price of land cannot be adjusted, the investment may end up in another location. The result could cause the delay or loss of development in a particular community or the state as a whole.

Housing affordability has become a top priority of many governments across the state. Many communities are well aware of the persistent and growing need for affordable housing solutions for their residents. As indicated above, major factors that contribute to affordability, such as land prices and the cost of labor and construction materials, are outside the control of governments. In these areas, innovations in housing development are sorely needed.

Within the control of government, there are policies that can be adopted that would help create more opportunities for all housing types including affordable and workforce housing. There are meaningful solutions that governments can participate in to help eliminate barriers to affordable housing development. The following may be prospects for consideration:

1. Reduce Regulations

Local cities, towns and counties should consider a review of their development regulations to determine if (1) they may impede the development of all housing types including affordable housing and (2) changes can be made to encourage the development of new housing. This can be accomplished in many ways. Examples of how local governments may overcome barriers include:

- Identifying appropriate sites for housing in the community and rezoning the sites for such uses.
- Adjusting any current land use restrictions.
- Reviewing parking requirements.
- Expediting the permit and review process.
- Adjusting fees including impact fees.

Any reduction or removal of these regulatory hurdles could help to reduce overall construction costs and provide a better outlook for lowering required rents.

2. Incentivize Affordable Units

There is a myriad of ways for governments to help encourage affordable housing and help these types of projects become viable. These could include:

- Density bonuses,
- Expedited approvals,
- Below market pricing of underutilized government land, and
- Various forms of tax incentives made available to developers who include an affordable housing component, such as:
    - Waiving building permit or impact fees
    - Waiving utility hook-up fees
    - Waiving any other city-imposed development cost
    - Reimbursement of a portion of construction sales tax
    - Pursuing GPLET designations

Local governments should also consider pursuing all available resources and programs that may result in the creation of affordable housing or assist households in reducing their housing cost burden. These programs include:

- The LIHTC program which has been a valuable source of affordable housing production in the state.
- The Section 8 Housing Vouchers Program.
- The U.S. Department of Agriculture Rural Development has a number of programs that promote homeownership and provide rental assistance for low and moderate income persons.
- The HOME program funded by HUD provides funding for development of affordable housing and rehabilitation of existing homeowner units.

CDBG funds are an important source of funding for much-needed rehabilitation programs. However, the funds can also be used to improve the infrastructure for housing sites (utilities, streets, etc.) as an incentive for the development of affordable housing complexes. Local communities could use CDBG funds to purchase and improve sites that are then sold at reduced values to builders.

Overall, excessive taxation (expressed in the form of taxes, fees, regulation, and project delays) can result in less production of a product at a higher relative price. In the context of this study, the "product" is housing development within the State of Arizona. Pricing, including sales prices and monthly rent requirements, is influenced by the cost of development. Ultimately, a region can be harmed if the cost to produce housing increases beyond the point that it becomes unaffordable to its target demographic. These costs include regulation and impact fees that are influenced by government policies.

APPENDIX
IMPACTS BY CITY

City of Chandler
Economic and Fiscal Impact
250-Unit Apartment Community

The following tables provide the economic impacts (jobs, wages, and economic output) and fiscal impacts (government revenue) that would be generated from the construction and operations of a new 250-unit community in the City of Chandler. *This summary for the city was completed as part of a statewide analysis describing the economic and fiscal impact of the Arizona apartment industry. Specific details of methodology can be found that report located on the Arizona Multihousing Association website.*

The economic impacts described in this analysis are regional in character and, thus, represent jobs created throughout the region and surrounding communities. The fiscal impacts, on the other hand, are specific to the City of Chandler based on the city's respective tax rates and demographics.

The assumptions used in the analysis assume new construction costs of $150 per square foot with a project sales cost of $245 per square foot. The average size per unit of 812 square feet will receive an estimated $15,000 in furniture, fixtures and equipment (FF&E). Projected rents were estimated at $1,200 per month with an average vacancy rate of 7.0%.

Analysis Assumptions
250-Unit Apartment Community
(2018 Dollars)

Number of units	250
Average sf per unit	812
Construction cost per sf	$150
FF&E per unit	$15,000
Sales cost per sf (new product)	$245
Average full cash value per unit	$159,000
Average limited cash value per unit	$122,000
Average rent per unit	$1,200
Average vacancy	7.0%
Percent of income devoted to rent	35%
Taxable supplies per employee	$1,000
Average number of people per MF Unit	2.0

Source: AMA; RealData; U.S. Census Bureau; County Assessor Records

Economic Impacts

A 250-unit community totaling about 203,000 square feet would cost an estimated $30.4 million to build. This construction activity would generate 236 direct construction jobs with wages of $12.3 million. The ripple effect of this activity would generate an additional 145 indirect and induced jobs with wages of $7.5 million. In total, the activity would generate an estimated 381 jobs in the region with wages of $19.8 million and a total economic impact of $53.8 billion.

Once construction is complete and the apartment community is operating at stabilized levels, an estimated 6 direct jobs would be created with wages of $300,000. Including the ripple effects throughout the economy, a total of 10 jobs would be created with $500,000 in wages and $1.8 million each year in economic activity.

Economic Impact Summary
250-Unit Apartment Community
Arizona
(2018 Dollars)

Impact Type	Jobs	Wages ($ mil)	Economic Output ($ mil)
Construction			
Direct	236	$12.3	$30.4
Indirect	43	$2.7	$8.4
Induced	102	$4.8	$14.9
Total	**381**	**$19.8**	**$53.8**
Operations			
Direct	6	$0.3	$1.1
Indirect	3	$0.1	$0.4
Induced	2	$0.1	$0.2
Total	**10**	**$0.5**	**$1.8**

1/ The total may not equal the sum of the impacts due to rounding.
Source: AMA; Elliott D. Pollack & Company; IMPLAN

Fiscal Impacts

During the construction phase, the City of Chandler would receive an estimated $3.2 million from various revenue sources. Primary (direct revenues) include construction sales tax ($296,800), projected speculative builder's tax ($187,900), impact fees ($2.6 million) and use taxes ($56,300). Secondary revenues are the estimated taxes generated by employees that would and, thus, spend their disposable income within city limits. The secondary revenues are estimated for sales tax ($19,500), property taxes on homes they live in ($25,400) and state-shared revenues ($6,500).

Fiscal Impact of Construction post Annexation
250-Unit Apartment Community
Chandler
(2018 Dollars)

	Primary Revenues				Secondary Revenues			
Impact Type	Construction Sales Tax	Speculative Builder's Tax	Impact Fees	Use Tax	Employee Spending Sales Tax	Employee Property Tax	State Shared Revenues	**Total Revenues**
Direct	$296,800	$187,900	$2,563,000	$56,300	$12,100	$15,700	$4,100	**$3,135,900**
Indirect	N/A	N/A	N/A	N/A	$2,500	$2,900	$800	**$6,200**
Induced	N/A	N/A	N/A	N/A	$4,900	$6,800	$1,600	**$13,300**
Total	**$296,800**	**$187,900**	**$2,563,000**	**$56,300**	**$19,500**	**$25,400**	**$6,500**	**$3,155,400**

1/ The figures are intended only as a general guideline as to how the local governments could be impacted by the activity. The above figures are based on the current economic structure and tax rates.

Source: AMA; Elliott D. Pollack & Co.; IMPLAN; AZ Dept. of Revenue; ATRA

Once construction is completed and operating at stabilized levels, the property would generate ongoing annual taxes during operations. Primary revenues include projected property taxes for the community, spending of the residents within city limits, retail sales taxes on local supply purchases, lease taxes on rents, utility taxes and increased state shared revenues from new residents. Secondary revenues, again, are the estimated impacts generated by the employees that would work and live within city limits.

In total, the City of Chandler is expected to collect $512,520 annually from the operations of a 250-unit apartment community. This includes $510,920 from primary (direct) taxes and $1,600 in taxes generated by the employees that will live in the city of Chandler (24.7%).

Annual Fiscal Impact of Operations 250-Unit Apartment Community Chandler (2018 Dollars)	
Primary Revenue	
Property Tax	$239,010
Resident spending sales tax	$50,300
Retail sales tax (supply purchases)	$90
Lease Tax	$50,220
Utility Tax	$5,400
State Shared Revenues	$165,900
Sub-Total	**$510,920**
Secondary Revenue	
Employee Spending Sales Tax	$600
Employee Property Tax	$570
Employee State Shared Revenues	$430
Sub-Total	**$1,600**
Total Revenue	
GRAND TOTAL	**$512,520**

1/ Figures are representative of the major revenue sources for the local government and are based on the current economic structure and tax rates.
Source: AMA; Elliott D. Pollack & Co.; ADOR; ATRA

Thus, the construction and operations of a 250-unit apartment community within the City of Chandler would generate a significant impact both during construction and ongoing annually. Indeed, the City would collect an estimated $3.2 million during construction and then receive an estimated $512,520 each year ongoing annually.