

bae urban economics

TOD Mixed-Income Housing Market Demand Study

Submitted to Sustainable Communities Working Group

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Table of Contents

EXECUTIVE SUMMARY	I
Key Findings	i
INTRODUCTION	1
Study Purpose	1
Report Organization	2
THE TOD OPPORTUNITY	3
METRO Light Rail and Stations	3
Regional and Local Planning Efforts	4
Transit Ridership	6
Employment by Transit	8
DEMOGRAPHIC AND ECONOMIC TRENDS	11
Population and Household Characteristics	11
HOUSING MARKET TRENDS	18
Housing Characteristics.....	19
Housing Production.....	21
For Sale Market Trends	25
Rental Housing Market Trends.....	29
MIXED-INCOME HOUSING DEMAND ESTIMATE	35
Methodology	35
Demand Estimate Outputs	37
CONCLUSION	38
APPENDIX A: EXISTING AND PLANNED LIGHT RAIL STATIONS	39
APPENDIX B: POPULATION AND HOUSEHOLD DATA	40
APPENDIX C: HOUSING SUPPLY DATA	48
APPENDIX D: DEMAND ESTIMATE DATA	53





EXECUTIVE SUMMARY

The Phoenix metropolitan region is engaged in one of the most ambitious efforts in the United States to reshape its urban landscape through investment in light rail transit along with related land use and community planning efforts. In the context of this major new investment, this study has been commissioned by a partnership of local organizations known as the Sustainable Communities Working Group (SCWG) to analyze the potential demand for residential and mixed-use development around existing and planned light rail station areas in the cities of Phoenix, Mesa, and Tempe. The findings from this study will be used by the SCWG in ongoing efforts to structure a Sustainable Communities Fund and create a dynamic new financial tool for changing the development paradigm in the Valley of the Sun.

Key Findings

- The Study Area of Phoenix, Tempe, and Mesa has experienced rapid population growth over the past decade. Key demographic growth segments include small households, seniors, and single-person households.
- Despite robust economic growth in the earlier part of the decade, real median household incomes declined both in the study area and across the Phoenix metro region between 2000 and 2009.
- Many households currently experience high housing cost burdens across the income spectrum from extremely-low income to moderate income households.

Representative Household Types by Income Level, 2009

	<p><u>Moderate Income: 80% to 120% AMI</u></p> <p>Law Clerk \$39,202</p> <p>Middle School Teacher \$37,073</p> <p>Household Income: \$76,275</p>		<p><u>Very-Low Income: 50% AMI</u></p> <p>Office Clerk \$27,690</p> <p>Housewife \$0</p> <p>Household Income: \$27,690</p>
	<p><u>Low-Income: 60% AMI</u></p> <p>Child Care Worker \$18,781</p> <p>Veterinary Assistant \$19,769</p> <p>Household Income: \$38,550</p>		<p><u>Extremely-Low Income: 30% AMI</u></p> <p>Single elderly on SSI \$13,000</p> <p>Household Income: \$13,000</p>

- Since 2005, the proportion of multi-family buildings has constituted a growing share of the total housing built in the Study Area. Housing near transit has tended to achieve greater market acceptance than other types of rental housing based on the combination of amenities and locational access offered by this housing type.
- In the ongoing economic recession, condominiums and townhouses have tended to retain their value better than single family homes.
- In 2010, there was unmet demand for approximately 61,448 new TOD housing units serving households across the income spectrum based on an assessment of housing cost burdens by household income and household type.
- Between 2010 and 2040, there will be additional demand for approximately 70,000 additional units located with one half mile of a transit station in the Study Area.
- The development potential of each station area will vary according to local land use planning, community amenities and employment concentrations, but on average this Study shows market support for an average of approximately 2,000 new housing units per light rail station area through 2040.

Demand for Mixed-Income TOD Housing, 2010-2040, Phoenix, Mesa, and Tempe

Year	0-30% AMI	30-50% AMI	50-80% AMI	80-100% AMI	100-120% AMI	120%+ AMI	TOD	Average
							Demand (a)	Demand by Station (b)
2010	26,435	17,393	11,443	2,480	1,564	2,133	61,448	2,195
2015	3,528	2,350	2,555	1,171	956	2,439	12,999	464
2020	3,548	2,356	2,449	1,110	902	2,299	12,664	258
2025	3,492	2,306	2,215	984	790	2,012	11,799	193
2030	3,346	2,206	2,056	906	724	1,844	11,083	176
2035	3,140	2,077	2,051	918	740	1,886	10,813	172
2040	2,909	1,923	1,864	830	667	1,701	9,894	157
Demand by AMI	46,399	30,611	24,634	8,398	6,343	14,314	130,699	

Notes:

(a) TOD demand reflects the additional demand generated within each five-year period.

(b) Average demand by station incorporates planned light rail and streetcar expansions in Phoenix, Mesa, and Tempe. Demand by station may change if light rail extends into Glendale and Paradise Valley.

Source: BAE, based on data from the 2000 U.S. Census Public Use Microdata Sample (PUMS), and Woods & Poole Economics.

INTRODUCTION

The Phoenix metropolitan region is engaged in one of the most ambitious efforts in the United States to reshape the urban landscape through a major new investment in transit along with related land use and community planning efforts. For decades, growth in the Valley of the Sun has been driven by new residential and commercial development on previously undeveloped greenfield and desert sites. Today, the region comprises nearly 1,500 urbanized square miles and a population of approximately four million.

While the Valley has historically been successful in attracting new households and employers based on a combination of quality of life factors and a favorable business climate, a diverse range of citizens and policymakers are now seeking to provide additional living and workplace choices that move beyond the traditional paradigm of suburban style auto-oriented development. Most notably, the \$1.4 billion investment in light rail transit serving the cities of Phoenix, Mesa, and Tempe promises to change the way that people live and work by catalyzing a new array of mixed-use transit-oriented communities.

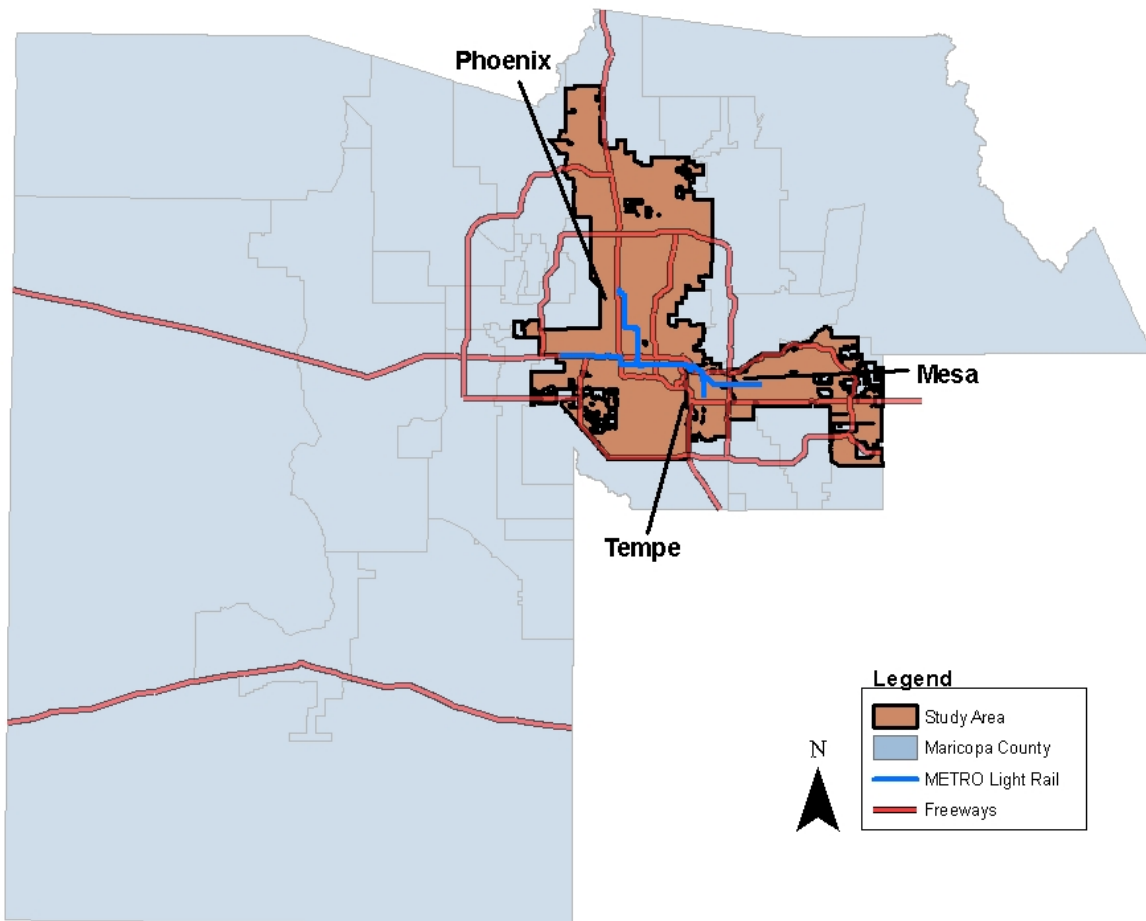
Motivated by the unique opportunity that this major new investment represents, a number of prominent public, private, and non-profit organizations have formed the Sustainable Communities Working Group (SCWG) - a partnership whose primary focus is to make Transit Oriented Development (TOD) a reality in areas well served by mass transit. In addition to providing policy support and advocacy for TOD in the Valley, the SCWG has created a Sustainable Communities Fund to incent, leverage, and guide development of equitable TOD in areas well served by high capacity transit. The Fund is currently capitalized at \$20 million based on initial commitments from the Local Initiatives Support Corporation (LISC) and the Raza Development Fund. This Fund constitutes the Valley's first financial tool focused on changing development patterns through the new equitable TOD paradigm. The Sustainable Communities Fund may be used for:

- Affordable residential development at light rail station areas
- Essential related development such as grocery stores, schools, child care, and health care facilities
- Project costs related to infrastructure development such as sidewalks and shade structures

Study Purpose

The purpose of this study is to analyze the potential demand for residential and mixed-use development around existing and planned station areas in the cities of Phoenix, Mesa, and Tempe. Focused primarily on affordable workforce housing, the study seeks to quantify potential demand for new residential development at station areas in the three cities. The findings from this study will be used by the SCWG in ongoing efforts to grow the Sustainable Communities Fund and create a loan fund structure grounded in market realities.

Figure 1: Study Area



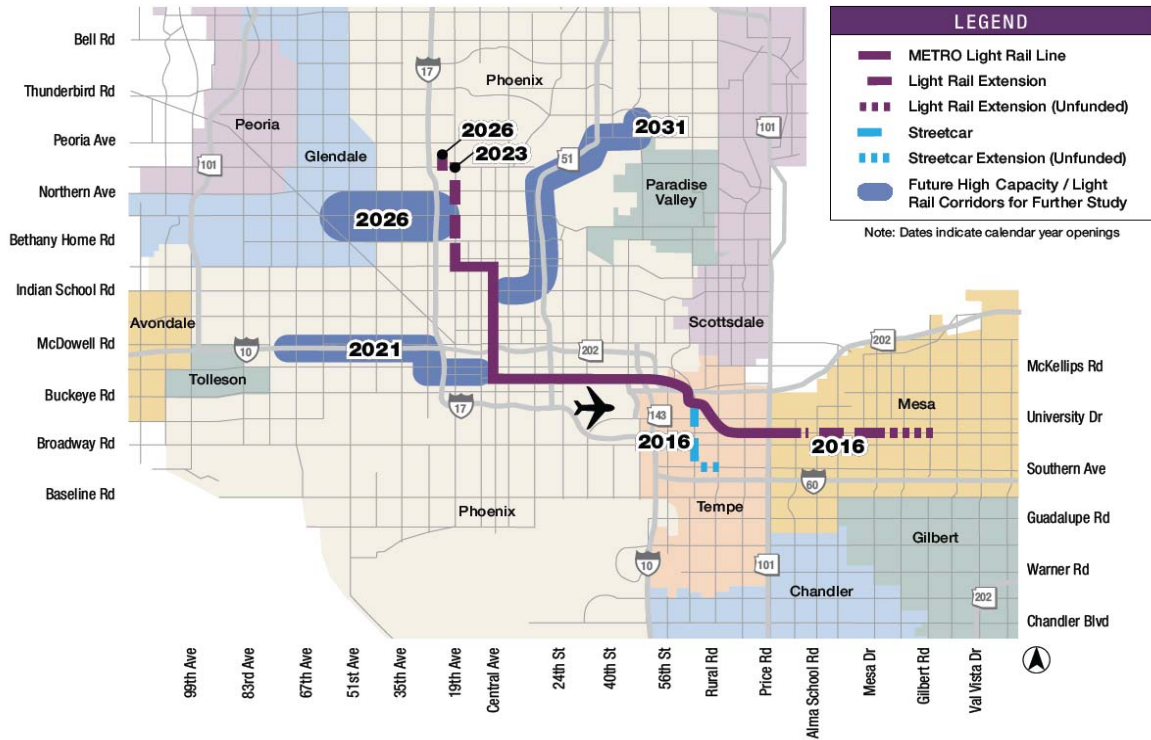
Report Organization

Following this introduction, the report describes TOD opportunities in the three Study Area cities, including a full description of the existing and planned light rail and related transit infrastructure. The report then provides an analysis of demographic and economic trends in the Study Area, focused primarily on the factors driving household growth. Building on this description of demand-side market factors, the report analyzes housing supply trends in the three cities and the broader metro region. Finally, a detailed demand estimate is provided demonstrating household demand for residential development near transit distributed by income level, household type and tenure.

THE TOD OPPORTUNITY

METRO Light Rail and Stations

Figure 2: METRO Light Rail and Planned Extensions



Source: Graphic from METRO, 2011

METRO light rail is a 20-mile light-rail transit system that runs through Phoenix, Tempe, and Mesa. The light rail system began service in December 2008, and operates on a dedicated trackway separated from automobiles along city streets, primarily at the center of the roadway. Trains arrive every 12 minutes during weekday periods, and every 15 to 20 minutes on weekends. The \$1.4 billion project was financed by a combination of federal, state, and local funds. In 2011, ridership increased by six percent to 12.8 million passengers, up from 12.1 million in 2010.

METRO is currently planning a 37-mile extension of the system using a mix of light rail and streetcar technologies. The Central Mesa and Northwest extensions will incorporate light rail technology, and the Central Tempe extension will use modern streetcar technology. The Central Mesa extension will run through Mesa’s downtown, and is expected to be completed in 2016. The Central Tempe extension is planned for 2016, and will extend 2.6 miles south into existing neighborhoods and businesses. The Northwest extension is planned for 2026. Specific routes and transit modes have not yet been developed for three other extensions. Existing and planned stations are listed in Appendix A to this report.

Regional and Local Planning Efforts

Various planning efforts are currently underway at the regional and local levels to support light rail. Many of these efforts focus on combining public transportation with land use and economic development strategies to create diverse and vibrant places for people to live and work by transit. Strategies include coordinating transportation and regional growth, station area planning, form-based codes, economic development, and community outreach.

Regional: Maricopa Association of Governments

The Maricopa Association of Governments (MAG) is in the process of completing a “Sustainable Transportation and Land Use Integration Study” to provide a toolkit and effective strategies for MAG member agencies to spur transit-oriented development. The study analyzes development patterns and densities needed to support high-capacity transit, and also examine the feasibility of different land use growth scenarios within the Region and along the light rail corridor.¹

Phoenix

The City of Phoenix has been active in station area planning and zoning to induce place-making around transit. In 2003, the city adopted an interim TOD overlay along the entire Phoenix transit corridor that established design standards to encourage pedestrian-scale environments. The City designed a process to translate this interim overlay into a permanent code. In 2010, the city adopted the Downtown Code, which replaced previous zoning districts (i.e., C-1, R-3, etc.) with replacement districts, also known as “Character Areas” (i.e., Business Core, Downtown Gateway, etc.), for a two-square mile area around downtown Phoenix. The city worked closely with the community to define appropriate place types and establish criteria for height, density, lot coverage, and frontage for each Character Area. The City also built in a sustainability bonus, which can be used to reduce or increase height, density, parking, and lot coverage.

Phoenix is expanding this effort, with an emphasis on station area planning. The City has identified six transit districts, each one approximately the same size as the area covered in the Downtown Code. With input from neighborhood residents and local village planning committees, the City hopes to identify appropriate place types for each of these transit districts, incorporate these changes into the General Plan by the end of this year, and translate these policies into new zoning codes.

Tempe

The City of Tempe has targeted transportation and land use policies to revitalize its urban core. In 1997, the city established the Apache Boulevard Specific Area Redevelopment Plan to encourage commercial and residential investments along Apache Boulevard through the use of public private partnerships. The objectives included developing underutilized property, preserving older buildings, and promoting multi-modal transportation options.

¹ Maricopa Association of Governments website: <http://www.bqaz.org/sustainOverview.asp?mS=m16>

Tempe has also been proactive about implementing measures to support transit. In 2006, the city amended its zoning code to encourage sustainable development along light rail. The Tempe Transportation Overlay District (TOD) established guidelines for street frontages, streetscape design, ground floor uses, maximum setbacks, and maximum parking ratios. The City has also implemented parking management strategies in its downtown through the Downtown Tempe Community (DTC), promoted car sharing programs, and is considering other efforts to consolidate parking across different projects.

Mesa

Mesa's local planning efforts incorporate zoning regulations, station area plans, and economic development strategies. In 2008, Mesa adopted a new land use category, MU/TOD (mixed-use transit-oriented development), which extended this district to all properties within 660 feet from an existing or proposed light rail station. Mesa is also in the process of implementing a form-based code, which regulates the relationship between the public realm and the form of buildings at the street level. Mesa has also adopted two station area plans (Town Center Concept Plan and the West Main Street Neighborhood Area Plan), and is in the processing of completing a third plan (Central Main Street Neighborhood Area Plan). These plans encourage pedestrian-scale designs and higher intensity development around light rail stations.

Moreover, Mesa aims to link light rail to economic development in the downtown by creating opportunities for job creation. The city estimates that there are 232 acres of developable property in Mesa along the light rail corridor, and the City owns approximately one-third of the developable vacant land.² The City aims to leverage these vacant parcels to encourage education and health care industries to locate within the City. The City has hired a full-time economic development downtown project manager to coordinate these efforts, and has identified multiple funding sources to stimulate new job growth in the downtown.

Summary

Each city has implemented policies to encourage transit-supportive developments and design around light rail stations. There are TOD projects under construction and in various planning stages in all cities although the downturn in the housing market has slowed projects in the pipeline. The land use policies established by these cities set a stage for meaningful change along transit corridors.

² City of Mesa, *Central Mesa LRT Extension*, 2011

Transit Ridership

Since the light rail line began operations in December 2008, ridership has increased by six percent from 2008 ridership levels, reaching 12.8 million passengers in 2011. BAE reviewed data provided by METRO between April 2009 and April 2011 and analyzed ridership by station (see Table 1). While this dataset does not provide detailed information on the origins and destinations of light rail passengers, it is a useful proxy for reviewing activity levels among the different stations along the transit line.

The busiest light rail stations are the park and ride stations at the end of the line, and the stations adjacent to major employment or education destinations. The Sycamore/Main and Montebello/19th Street park and ride stations have the highest weekday boardings. Over 75,000 passengers boarded these stations in April 2011, which is significantly higher than the average boardings at stations within the line (approximately 25,000 per station). This suggests there are a number of patrons who drive from outer areas not served by light rail, park at the end of the line, and take light rail to commute to work or for other purposes. The stations with the next highest ridership are close to the ASU Tempe campus, and the Van Buren/1st station in downtown Phoenix. These destinations attract both student and working populations.

Table 1: Total Weekday Passenger Boardings by Station, April 2011 (a)

	Station	Boardings	Rank	Notes
Phoenix	Montebello/19th	75,344	2	Park and ride
	19th/Camelback	36,209	9	Park and ride
	7th/Camelback	22,049		
	Central/Camelback	24,654		Park and ride
	Campbell/Central	27,287		
	Indian School/Central	34,524		
	Osborn/Central	20,495		
	Thomas/Central	38,314	8	
	Encanto/Central	11,631		
	McDowell/Central	39,196	6	
	Roosevelt/Central	20,248		
	Van Buren/1st	39,913	5	Downtown Phoenix
	Van Buren/Central	33,569		Downtown Phoenix
	Jefferson/1st	19,491		Downtown Phoenix
	Washington/Central	21,358		Downtown Phoenix
	3rd/Washington	29,641		Downtown Phoenix
	3rd/Jefferson	17,411		Downtown Phoenix
	12th/Jefferson	7,486		
	12th/Washington	6,036		
24th/Jefferson	10,965			
24th/Washington	12,188			
38th/Washington	8,434		Park and ride	
44th/Washington	25,686			
Tempe	Priest/Washington	38,862	7	
	Center Pkwy/Washington	6,437		
	Mill/3rd	31,289		
	5th/College	46,121	4	ASU - Tempe
	University/Rural	63,925	3	ASU - Tempe
	Dorsey/Apache	19,653		Park and ride
	McClintock/Apache	35,881	10	Park and ride
	Smith Martin/Apache	9,496		
	Price/Apache	30,138		Park and ride
Mesa	Sycamore/Main	84,144	1	Park and ride

(a) Highlighted cells show stations with the highest total weekday boardings in April 2011.

Sources: METRO; BAE, 2011

Between April 2009 and April 2011, nine stations increased ridership by fifty percent or more (see Table 2). Seven of the stations are located within Phoenix, while the remaining two are in Tempe. Especially for stations for which ridership has more than doubled, it is interesting to note that many of these stations are outside of the downtown and ASU campuses, with the exception of two stations. The reasons driving ridership increases may include greater frequency of local residents using light rail for certain trips, or a change in the density of households living proximate to light rail. METRO recently completed a passenger survey of light rail riders along the entire line which found that nearly 80 percent of all riders were students and workers, with college students forming the single largest passenger category³.

³ Source, Valley Light Rail, 2012: www.valleymetro.org/newsroom/

Table 2: Change in Weekday Passenger Boardings by Station, April 2009-April 2011 (a)

	<u>Station</u>	<u>% Change</u>	<u>Rank</u>	<u>Notes</u>
Phoenix	Montebello/19th	3%		Park and ride
	19th/Camelback	47%		Park and ride
	7th/Camelback	50%	9	
	Central/Camelback	177%	1	Park and ride
	Campbell/Central	33%		
	Indian School/Central	21%		
	Osborn/Central	8%		
	Thomas/Central	22%		
	Encanto/Central	-5%		
	McDowell/Central	96%	4	
	Roosevelt/Central	-51%		
	Van Buren/1st	77%	6	Downtown Phoenix
	Van Buren/Central	13%		Downtown Phoenix
	Jefferson/1st	-31%		Downtown Phoenix
	Washington/Central	121%	2	Downtown Phoenix
	3rd/Washington	18%		Downtown Phoenix
	3rd/Jefferson	-52%		Downtown Phoenix
	12th/Jefferson	34%		
	12th/Washington	6%		
	24th/Jefferson	67%	7	
24th/Washington	93%	5		
38th/Washington	48%		Park and ride	
44th/Washington	-37%			
Tempe	Priest/Washington	36%		
	Center Pkwy/Washington	110%	3	
	Mill/3rd	-21%		
	5th/College	18%		ASU - Tempe
	University/Rural	38%		ASU - Tempe
	Dorsey/Apache	7%		Park and ride
	McClintock/Apache	47%		Park and ride
	Smith Martin/Apache	43%		
	Price/Apache	64%	8	Park and ride
Mesa	Sycamore/Main	3%		Park and ride

Notes:

(a) Highlighted cells show all stations that increased boardings by greater than 50 percent between April 2009 and April 2011.

Sources: METRO; BAE, 2011

Employment by Transit

BAE reviewed MAG employment data in order to estimate the percentage of all jobs in the Study Area located within a half-mile radius of existing light rail stations. Based on data from 2005, office, public administration, and other jobs were more likely to be located close to light rail compared to retail or industrial jobs. Among the cities in the Study Area, Tempe had the highest proportion of jobs (20 percent) located within a half-mile radius from a light rail station. Planned extensions of the transit system will increase the coverage area, and provide greater access to more employment opportunities.

BAE used GIS to identify socio-economic analysis zones (SAZ) located within a half mile of each light rail station, and analyzed MAG data to determine the number of jobs within each of the following categories: retail, office, industrial, public, and other. MAG's dataset included employment figures from 2005, the latest year for which baseline data were available. One limitation with this dataset is that it does not reflect any employment changes that may have occurred as a result of the new light rail line, which came online in December 2008, or any changes from the 2008 recession. MAG is currently in the process of revising its baseline employment figures and projections.

Table 3: Jobs Distribution Within 1/2-Mile from Existing Light Rail Stations, 2005 (a)

	Retail	Office	Industrial	Public	Other	Total
All jobs in						
Phoenix	200,642	268,050	199,146	124,125	145,219	937,182
Tempe	42,662	50,735	66,996	24,889	12,961	198,243
Mesa	<u>82,478</u>	<u>29,403</u>	<u>32,345</u>	<u>36,135</u>	<u>37,724</u>	<u>218,085</u>
Total	325,782	348,188	298,487	185,149	195,904	1,353,510
Jobs located within 1/2-mile of existing light rail stations (b)						
Phoenix	16,039	75,525	12,480	21,588	28,828	154,460
Tempe	7,499	9,268	5,025	14,151	2,895	38,838
Mesa	<u>3,278</u>	<u>-</u>	<u>1,657</u>	<u>1,451</u>	<u>506</u>	<u>6,892</u>
Total	26,816	84,793	19,162	37,190	32,229	200,190
% of all jobs in city within 1/2-mile of existing light rail stations (b)						
Phoenix	8%	28%	6%	17%	20%	16%
Tempe	18%	18%	8%	57%	22%	20%
Mesa	<u>4%</u>	<u>0%</u>	<u>5%</u>	<u>4%</u>	<u>1%</u>	<u>3%</u>
Total	8%	24%	6%	20%	16%	15%

Notes:

(a) MAG is in the process of revising its employment estimates. These employment figures are based on estimates provided by MAG from 2005. These figures do not reflect employment changes that may have resulted from the light rail line or the 2008 economic recession.

(b) There are currently 28 light rail stations in the system.

Sources: MAG, 2007; BAE, 2011

MAG's dataset shows that there were about 200,000 jobs in the Study Area located within a half mile of a light rail station. Phoenix led the cities with the most jobs close to light rail, with approximately 155,000 jobs. Tempe had about 39,000 jobs, and Mesa had approximately 6,800 jobs near light rail. Mesa showed very few transit-accessible jobs, because the city only has one light rail station along the existing line. There are four new stations planned for Mesa that will be completed in 2016.

Comparing jobs proximate to light rail to all jobs available in the Study Area, only 15 percent of all jobs in the Study Area were located within a half mile of a light rail station. Tempe had the highest

proportion of jobs accessible by light rail (20 percent), followed by Phoenix at 16 percent and Mesa at three percent.

Interestingly, the dataset shows that some industries had a higher propensity to be located close to light rail. Twenty-four percent of all office jobs and 20 percent of all public sector jobs were situated within a half-mile from a light rail station. Retail and industrial jobs were more widely distributed in the Study Area. Only eight percent of retail and six percent of industrial jobs were positioned within a ½-mile from a light rail station. Given recent station planning efforts by the Study Area cities, there may be opportunities to augment the presence of underserved industries along the transit corridor. Encouraging higher densities of jobs, housing, and amenities can be a catalyst for further economic growth along light rail stations.

The proposed extensions of the light rail and street car lines in Phoenix, Tempe, and Mesa are expected to provide greater access to jobs. In particular, the Phoenix West line is expected to serve major government and public services employment centers, and the Mesa extension will provide transit accessibility to downtown jobs. There is also an increased focus on concentrating new industries within the downtown core, including new biomedical and education facilities in downtown Phoenix and Mesa. These new employment centers can add to the employment density along light rail, increase job opportunities, and also boost transit ridership by concentrating employment along the transit corridor.

DEMOGRAPHIC AND ECONOMIC TRENDS

Population and Household Characteristics

Two geographies are examined in this market analysis: the “Study Area” (defined as Phoenix, Tempe, and Mesa) and the “Region” (defined as the Phoenix-Mesa-Glendale Metropolitan Statistical Area, which includes Maricopa and Pinal counties). Trends specific to a city in the Study Area are discussed if they are notable, but for the most part, the report will examine the Phoenix, Tempe, and Mesa area as a whole.

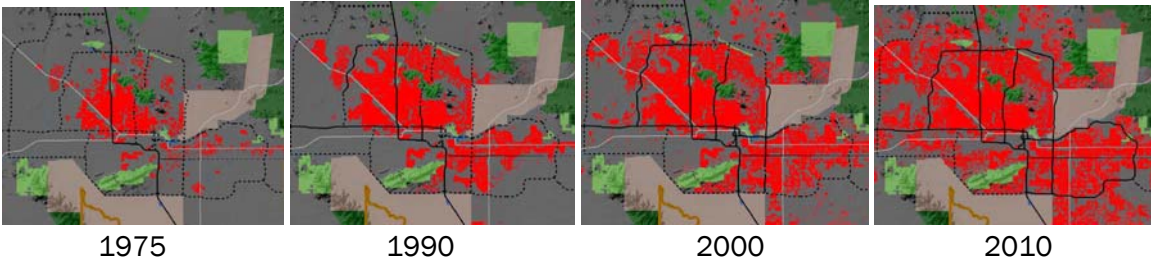
Data sources for this section include the U.S. Census, American Community Survey, Maricopa Association of Governments (MAG), the Maricopa County Assessor, U.S. Department of Housing and Urban Development, the National Association of Home Builders, RealFacts, and Arizona State University, W.P. Carey School of Business. Detailed tables are available as Appendix B for further reference.

Population

Over the past several decades, the Phoenix metropolitan area has seen a steady population growth due to in-migration. Between 2000 and 2010, the Region’s population increased 29 percent, making it the fourteenth largest metropolitan area in the United States. In 2010, the metropolitan area’s population reached 4,192,887 people and 1,537,173 households. Growth was most rapid in Pinal County, which saw a 109 percent increase in population. Maricopa County’s population also expanded significantly by 24 percent. However, growth in the Study Area has slowed from 33 percent between 1990 and 2000 to nine percent in the past decade. In 2010, the Study Area’s population reached 2,046,392 and 746,180 households.

Figure 3 shows a time lapse of population growth over three decades. As population increased, the Region’s urban boundaries expanded outward to accommodate growth. Current projections from the Maricopa Association of Governments expect this trend to continue.

Figure 3: Population Growth in the Region from 1975 to 2010



Source: Graphic from Maricopa Association of Governments, 2008

Household Trends

Family households account for a majority of all households in the Study Area and the Region. In 2010, 63 percent of households in the Study Area (471,180 households) and 68 percent of households in the Region (1,024,971 households) were family households.

Interestingly, there was a concentration of non-family households living in the Study Area.⁴ Phoenix had 184,044 non-family households, followed by Mesa at 56,506, and Tempe at 34,450. A majority of single-person households in the Region also lived within the Study Area. Of all the single-person households in the Region, 52 percent, or 204,944 households, lived in Phoenix, Mesa, and Tempe.

Tempe stands out among the three cities because a majority of households are non-family households (52 percent). Tempe's population growth (two percent) was also significantly lower than either Phoenix or Mesa, which suggests that there are different dynamics affecting the city. First, Tempe is home to Arizona State University (ASU), which draws a large student population. The city is landlocked on all sides by existing communities, which limits its ability to accommodate growth by expanding its boundaries.

Age Distribution

Census data also reveals that the median age in the Study Area is rising, and the population over the age of 44 is the fastest growing age cohort in the Study Area and the Region. The median age in the Study Area increased from 30.8 in 2000 to 32.3 in 2010. This change has been driven by an increase in the proportion of the population between the ages of 45 to 64, and a simultaneous decline in the proportion of the population between the ages of 20 to 44.

The population under the age of 20 still comprises a significant proportion of the population. In 2010, about 30 percent of the population in the Study Area and Region was under the age of 20, which represents a significant youth population. The Census provides age distributions in five year increments, for ages under five, five to nine, ten to fourteen, and fifteen to nineteen. 2010 Census data reveals that the distribution under each of these categories is approximately 25 percent each.

Between the ages of 20 to 44, 38 percent of the population fell within this age cohort in 2000, and the proportion has declined to 35 percent in 2010. This suggests that the population below 44 comprised a declining proportion of the population in the Study Area. The decline was small, but present in every age cohort, from 20-24, 25-34, and 35-44 (see Table B-2 and B-3 in the appendix).

Between 2000 and 2010, the proportion of the population between the ages of 45 to 64 increased from 19 percent in 2000 to 23 percent in 2010. Moreover, the proportion of the population over the age of 65 also increased from 11.9 percent in 2000 to 12.3 percent in 2010. Mesa had the highest proportion (14.1 percent) of residents over the age 65, followed by Tempe (8.5 percent) and Phoenix (8.4 percent). As the population ages, this cohort is expected to grow in upcoming years.

⁴ The Census defines non-family households as "any household that consists of a householder living alone (a one-person household) or where the householder shares the home exclusively with people to whom he/she is not related."

Household Income

The median household income was \$47,766 in the Study Area, and \$52,796 in the Region. Median incomes were comparable across the cities in the Study Area. Phoenix's median household income was approximately \$47,000, Tempe's was \$48,500, and Mesa's was the highest at \$49,500. Assuming an average household size of about 3 persons per household from the 2010 Census, Study Area household incomes translated to 80-85% of AMI as defined by HUD's 2010 income limits for the Phoenix MSA. The Region's median household income translated to 85-90% of AMI.

Real incomes also declined in the past decade. Table 4 shows a comparison of real median household incomes in 1999 and 2009. Adjusting for inflation, real median household incomes in the Study Area actually fell in the last decade, which means household purchasing power has declined. Among the cities in the Study Area, real median household incomes fell the most in Phoenix, and rose slightly in Mesa. Real incomes declined much faster in the Study Area compared to the Region. If this trend continues, rising transportation and housing costs could create cost burden challenges in the future.

Table 4: Real Median Household Income Comparison, 2000 and 2009 Est. (a) (b)

Median HH Income	Phoenix	Tempe	Mesa	SCWG Cities (c)	Phoenix MSA (d)
1999 (in 2009\$)	\$55,137	\$53,064	\$46,173	\$54,055	\$54,550
2009	\$47,085	\$48,585	\$49,446	\$47,766	\$52,796
% Change	-14.6%	-8.4%	7.1%	-11.6%	-3.2%

Notes:

(a) The American Communities Survey (ACS) publishes demographic estimates based on statistical sampling conducted continuously over the course of 2009.

(b) Median households incomes are inflation adjusted to 2009 dollars using the Bureau of Labor Statistics' CPI index.

(c) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(d) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: Census, 2000; ACS, 2009; BAE, 2011.

Race and Ethnicity

The population of Hispanics increased faster in the Study Area between 2000 and 2010 compared to all other groups. As a proportion of the population, Hispanics accounted for approximately 36 percent of the population in 2010, up from 30 percent in 2000. The population of African Americans also increased to 5 percent. The proportion of Non-Hispanic White declined over the same period, from 61 percent to 52 percent of the population.

The Region experienced different trends in its racial and ethnic composition. Hispanics and Non-Hispanic Whites posted gains in aggregate numbers in the Region. However, in the Study Area, while the proportion of Hispanics increased from 2000 levels, the proportion of Non-Hispanic Whites declined.

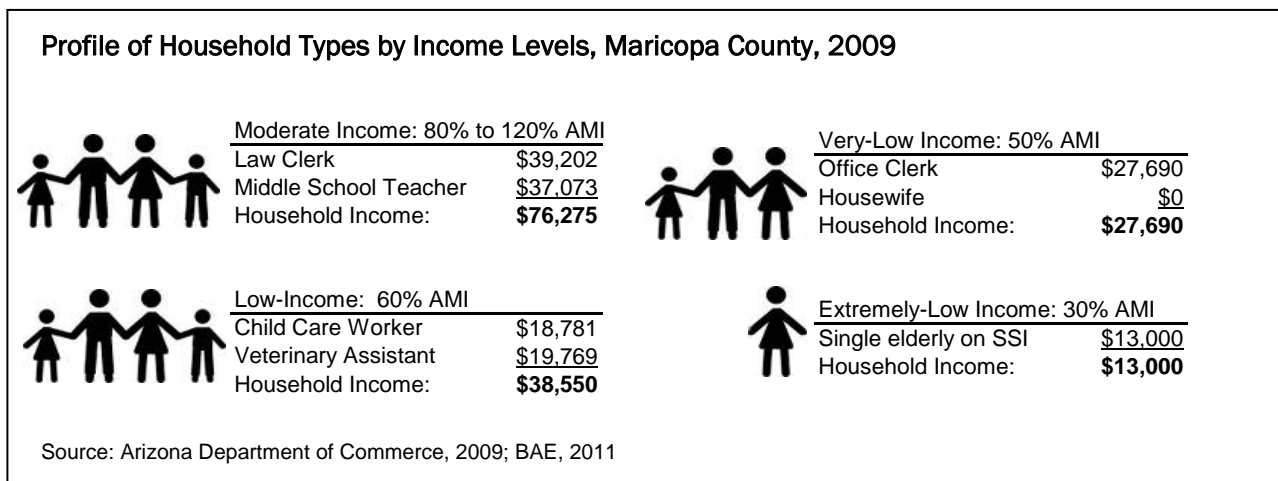
Housing Affordability

According to the U.S. Department of Housing and Urban Development (HUD) standards, households paying more than 30 percent of their gross income for housing costs are considered “cost burdened.” Households who pay more than 50 percent of their gross income for housing are considered “severely cost burdened”.

Based on the 2006-2008 ACS data, of the 713,000 households in the Study Area, 46 percent of renter households (126,000) and 32 percent of owner households (143,000) were cost burdened. This translates to a total of 269,000 households that experienced some degree of housing cost burden, including:

- 70,000 (77 percent) extremely low income households (ELI) – earning up to 30 percent AMI.
- 67,000 (76 percent) very low income households (VLI) – earning 31 to 50 percent AMI.
- 68,000 (51 percent) low income households (LI) – earning 51 to 80 percent AMI
- 64,000 (16 percent) households earning greater than 81% AMI

Generally, while the data reveals a need for housing at all income levels, the proportion of cost-burdened, renter households is higher at income levels below 50 percent AMI. In contrast, the proportion of cost-burdened owner households is higher at income levels above 50 percent AMI. A brief description of housing need by tenure and income levels is described below.



- Extremely Low Income Households

In the Study Area, there is a need for affordable rental and homeownership opportunities for extremely low income households. For incomes less than 30% AMI, 78 percent of renter households (47,000) and 75 percent of owner households (23,000) paid more than 30 percent of their gross income for housing.

- Very Low income Households

The same is true for incomes between 31 and 50 percent of AMI. 84 percent of renter households (42,000) and 66 percent of owner households (25,000) were cost burdened. Interestingly, at this

income level, owner households had a higher likelihood to be “severely cost burdened” than renter households of the same income category. This may be because owner housing costs, which include property taxes and insurance, represent a proportionately higher fraction of household incomes at the 31-50% AMI levels. Both renter and owner households are in need of affordable housing in this income category.

- Low Income Households

At incomes levels between 51 and 80 percent AMI, the percentage of cost-burdened households declines, but the aggregate number of households that are over-burdened is high. 30,000 renter households (46 percent) and 38,000 owner households (55 percent) earn between 51 and 80 percent AMI and spend more than 30 percent of their gross income on housing.

- Moderate-Income Households

For incomes greater than 80 percent AMI, cost burden falls for renter households but the aggregate numbers are high for owner households. 8,000 renter households (8 percent) and 56,000 owner households (19 percent) were cost-burdened.

In summary, for income levels below 50 percent AMI, the need for affordable rental and owner housing is significant, because a majority of households pay a significant proportion of gross income on housing. At income levels between 51 and 80 percent AMI, the incidence of cost burden decreases but the aggregate numbers are still high, particularly for owner households. Since the median household income in the Study Area translates into 80-85% of AMI, half of all households in the Study Area, or 269,000 households, could demand affordable, workforce housing.

The HUD data reveals that there is a distinct need for a diversity of housing types:

Among renters:

- 16,000 households are elderly households (defined as one or two members) whose needs could be met by single-room occupancy (SROs), studios, or one-bedroom apartments.
- 45,000 households are small related households (defined as two to four members) whose needs could be met by one- or two-bedroom apartments.
- 15,000 households are large related households (defined as five or more members) whose needs could be met by three-bedroom apartments
- 50,200 households are non-family households whose needs could be met with a variety of housing types.

Among owners:

- 29,000 households are elderly households (defined as one or two members) whose needs could be met by single-room occupancy (SROs) or one-bedroom homes.
- 56,500 households are small related households (defined as two to four members) whose needs could be met by one- or two-bedroom homes.
- 22,000 households are large related households (defined as 5 or more members) whose needs could be met by three-bedroom homes

- 34,700 households are non-family households whose needs could be met by a variety of housing types.

Figure 4: Percent of All Renters that Spend More than 30% of Income on Housing

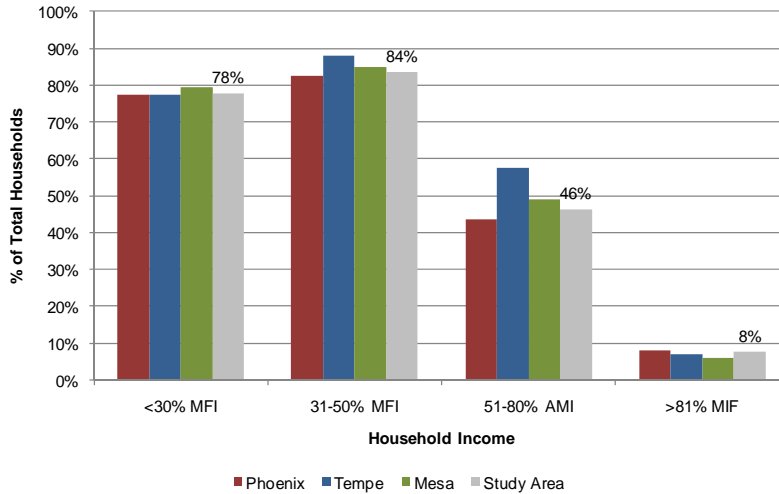
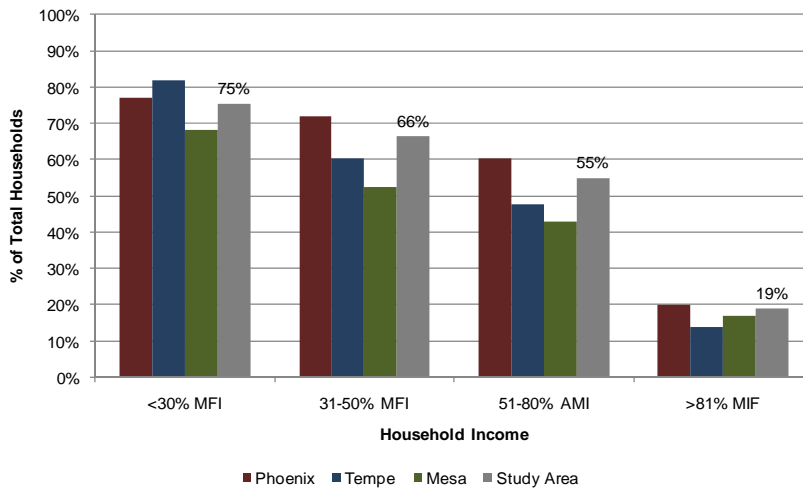


Figure 5: Percent of All Owners that Spend More than 30% of Income on Housing



Sources: HUD, State of the Cities Data System: Comprehensive Housing Affordability Strategy (CHAS) special tabulations from the American Community Survey 2006-2008; BAE, 2011.

Combined Housing and Transportation Costs

While the preceding analysis reveals that a large number of Phoenix area households experience significant cost burdens taking into account their housing costs alone, another measure of housing affordability is the combined cost of housing and transportation. As described by the Center for Neighborhood Technology, the housing plus transportation (H+T) index takes into account both the cost of housing as well as the cost of transportation associated with the location of the home. Dividing these costs by representative regional incomes illustrates the cost burden placed on a Typical Household by H+T expenses. While housing alone is traditionally deemed affordable when

consuming no more than 30% of income, CNT has defined an affordable range for H+T as the combined costs consuming no more than 45% of income. In the Phoenix Area, according to CNT more than half of all low- and moderate-income households currently pay more than 45 percent of household income on the combined costs of housing and transportation.

HOUSING MARKET TRENDS

While the previous section evaluated factors that affect housing demand in the Study Area, this chapter reviews housing supply, specifically, the existing housing stock, past housing production, and market trends in the for-sale and rental markets. Data sources for this section include the U.S. Census, American Communities Survey, Maricopa Association of Governments, and the ASU W.P. Carey School of Business. Detailed tables are available in the appendix for further reference.

The Phoenix metropolitan area was at the epicenter of the housing boom in the last decade, and is still recovering from the aftermath of the housing bust. Historically, housing in the metropolitan area was relatively affordable compared to the national average.⁵ The region benefited from in-migration, as a population boom fueled development. Developers expanded housing production rapidly, and housing prices rose, eclipsing the national average at the height of the boom in 2006. Unfortunately, the housing meltdown led to significant declines in prices, leaving the metropolitan area with a high foreclosure rate. As homeownership rates dropped, households have switched to rental housing, which have reduced rental vacancy rates. In recent years, cities have reported that the pace of development has slowed to a trickle, as developers wait for existing, foreclosed homes to be absorbed.

However, there are some bright spots in the market. Housing is not a homogeneous good, and recent market trends have shown that some types of housing have retained their value better than others during this housing downturn. New infrastructure investments along light rail have piqued interest in transit-oriented development and new place types that are transit-accessible, pedestrian-friendly, and amenity-rich. Cities in the Study Area have already implemented zoning efforts to support these types of development, but economic uncertainty, tight credit markets, and an oversupply of foreclosed homes create a challenging environment for infill development.

BAE conducted a sample survey of new developments proximate to transit and found a surprisingly strong market, with low vacancy rates and higher rents compared to the overall market. Market research revealed that existing market-rate TOD projects target households earning 70 percent AMI and above. With vacancy rates of these sample projects hovering around five percent, there may be room for additional growth of this product type. The housing demand analysis from the previous chapter suggests that there is a demand for affordable housing and TOD, which can be combined with place-making designs that support transit. As the housing market recovers, the long term success of transit-oriented development will depend on whether developers and cities can convincingly build cohesive communities around transit that satiate a market demand for households at all income levels.

⁵ NAHB, Housing Opportunity Index, 1999-2010

Housing Characteristics

Housing Type

The 2009 American Communities Survey estimates that there are approximately 880,000 residential buildings in the Study Area, and 1.7 million residential buildings in the Study Area. Single-family detached houses comprised a majority of the housing stock, (62 percent in the Study Area, 70 percent in Maricopa County), while multi-family buildings accounted for 32 percent of the Study Area, and 23 percent of the Region’s residential housing. Tempe had the highest proportion of multi-family buildings between 10 to 49 units, with 21 percent of its housing stock falling in this category.

Table 5: Housing Units by Type of Residence, 2009 Est. (a)

Type of Residence	Phoenix	Tempe	Mesa	SCWG Cities (b)	Phoenix MSA (c)
Single Family Detached	60.0%	43.8%	52.9%	57.0%	64.2%
Single Family Attached	5.0%	8.1%	5.7%	5.4%	5.6%
Multifamily 2-4 Units	5.6%	9.3%	6.8%	6.2%	4.6%
Multifamily 5-9 Units	6.3%	8.4%	5.8%	6.3%	5.2%
Multifamily 10-49 Units	14.4%	21.0%	10.4%	14.0%	9.7%
Multifamily 50+	5.3%	6.7%	3.4%	5.0%	3.8%
Mobile Home/Other	<u>3.4%</u>	<u>2.7%</u>	<u>15.0%</u>	<u>5.9%</u>	<u>6.8%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Sources: ACS, 2009; BAE, 2011.

Tenure

Owner households exceed renter households in both the Study Area and Region. 58 percent of households in the Study Area, and 65 percent of households in the Region are owner households. The Study Area had a higher percentage of renter households (42 percent) compared to the Region (35 percent). The housing market downturn has significantly reduced homeownership rates, which dropped 5 percent from 63 to 58 percent in the Study Area between 2000 and 2010. Homeownership rates also declined in the Region by 4 percent from 69 to 65 percent.

Homeownership rates varied widely among the cities in the Study Area. In Phoenix and Mesa, a majority of households owned their homes. 63 percent of Mesa households and 58 percent of Phoenix households were homeowners. However, in Tempe, 56 percent of all households were renter households. This represented a significant shift from 2000, where 55 percent of Tempe households were owner households. While homeownership rates fell in Phoenix and Mesa, only Tempe saw a complete tenure reversal from majority owner to majority renter households between 2000 and 2010.

Housing Units by Year Built

The housing stock in the Study Area is slightly older compared to the Region, but are relatively new compared to the national average. The median year built for all residential buildings in the Study Area was 1982, compared to 1988 for the Region, and 1975 for the nation. ACS data reveals a

significant proportion of the housing stock was built in the last two decades. 25 percent of the housing units in the Region, and 17 percent of the housing units in the Study Area were built between 2000 and 2009.

Overcrowding

Overcrowding refers to a household with an average of 1.01 or more persons per room, with those rooms being bedrooms, kitchens, and dining rooms but not bathrooms. Study Area households were slightly more likely to be overcrowded than the Region's households in 2009. Of all households in the Study Area, 5 percent were overcrowded versus 4 percent in the Region overall. Nonetheless, overcrowding in both the Study Area and Region appears to be a minor housing problem.

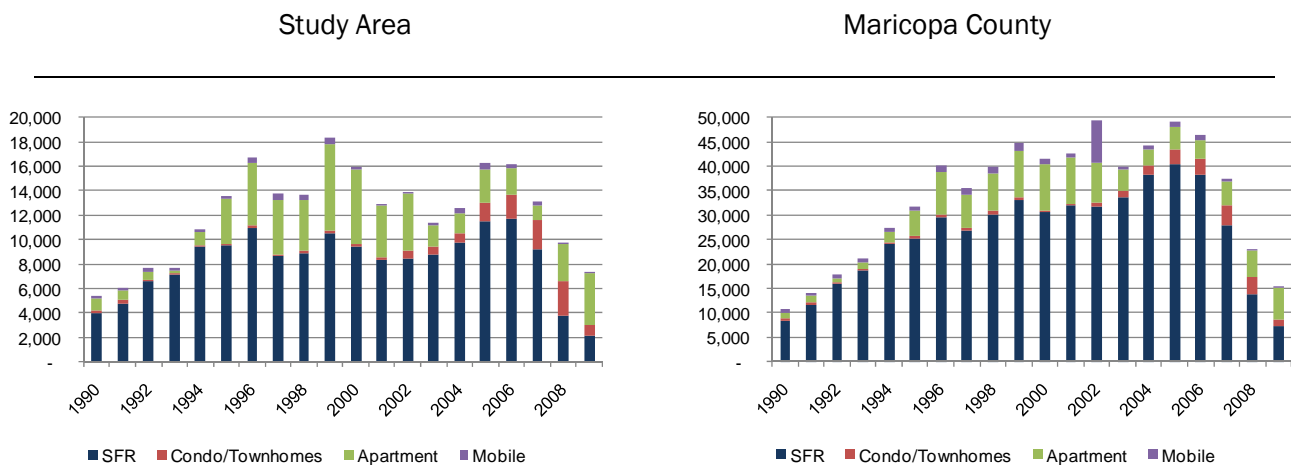
Housing Production

Unit Production Trends

Data provided by the Maricopa Association of Governments reveal that the Study Area added approximately 243,000 housing units, and Maricopa County added approximately 672,000 units between 1990 and 2009.

Figure 6 shows the total housing units built by type and by year in Maricopa County and the Study Area. The graphs show similar overall trends in the two geographies. Both the Study Area and Maricopa County produced a high volume of housing in the last two decades, which mirrors the population and household growth. Excluding mobile homes, housing production increased rapidly in the 1990s, peaked in 1999, and declined slightly until 2003 in tandem with the recession. Housing production then climbed upward again and peaked in 2005, when Maricopa County added approximately 48,000 housing units, and the Study Area added 16,000 units. Production declined by 19 percent between 2006 and 2007 in both geographies, and has dropped off considerably since. The number of housing units produced in 2009 was similar to 1991 levels.

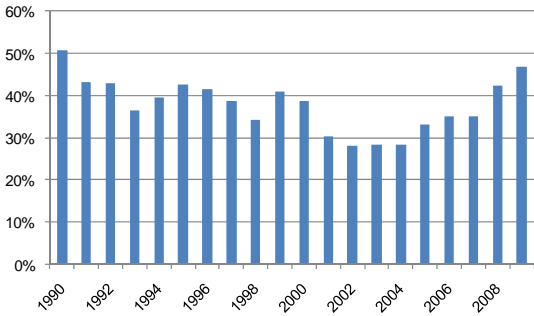
Figure 6: Total Units Built by Type and by Year



Sources: Maricopa Association of Governments; BAE, 2011

There are some notable differences between the two geographies. First, the peak housing production year was 1999 for the Study Area, compared to 2005 for the county. 42 percent of all units built in Maricopa County in the 1990s were built in the Study Area, and this proportion declined to 36 percent in the 2000s, which suggests developers shifted production to the periphery in the last decade. Since 2007, there has been a new resurgence of development in the Study Area. In 2009, 47 percent of all housing built in Maricopa County was built in the Study Area, although it should also be noted that housing production overall had decreased significantly in 2009.

Figure 7: Percent of Total Units Built in Maricopa County that were Built in the Study Area



Maricopa Association of Governments; BAE, 2011

Since 2005, the proportion of multi-family buildings has constituted a growing share of the total housing built in the Study Area. Single-family residences accounted for 71 percent of all housing produced in the Study Area in 2005, but only 29 percent in 2009. Condominiums and townhomes accounted for 12 percent, and apartments constituted 58 percent of all housing units built in the Study Area in 2009. The new focus on multi-family buildings may reflect the increase in renter households due to the recession. There may also be some longer-term trends at work. Figure 8 shows that in the past 15 years, multi-family buildings comprised a growing proportion of the new housing stock being developed in the Study Area compared to Maricopa County, which may reflect a combination of higher density entitlements and higher land costs compared to the county.

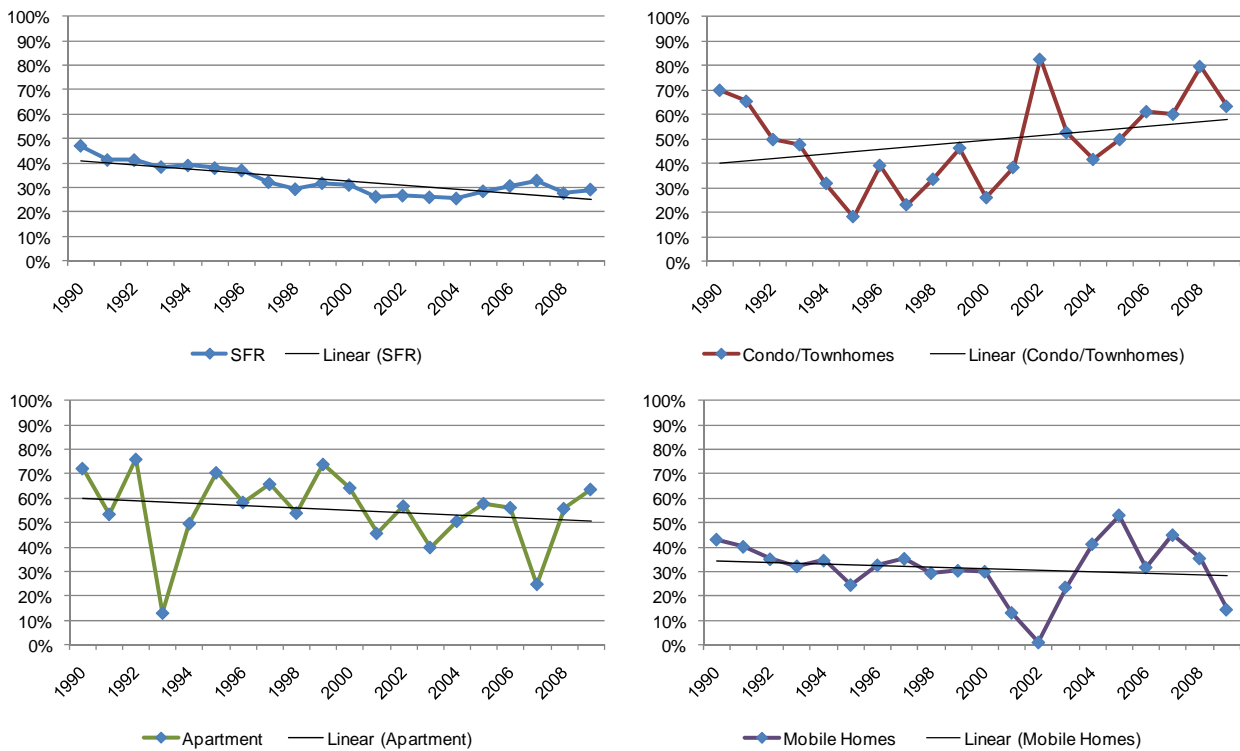
Figure 8: Housing Units Built by Type, 1990-2009



Source: Maricopa Association of Governments; BAE, 2011

Figure 9 shows a 20-year trend line of different housing types built in the Study Area. These diagrams indicate what proportion of each housing type built within Maricopa County was built in the Study Area. The data reveals that the proportion of single family homes built in the Study Area represents a declining proportion of all single family residences built in Maricopa County. Developers have been shifting development of this product type to areas outside the Study Area. In contrast, a growing proportion of condominiums and townhomes completed in Maricopa County were located in the Study Area. In addition, approximately 60 percent of all condominiums/townhomes and 50 percent of all apartment buildings built in Maricopa County in 2009 were built within the Study Area. These indicators suggest a potential trend towards land intensification within the metropolitan core. As cities zone for additional density along the transit corridor, this could lead to longer term pressures on land values, if developers perceive future market demand for infill, compact developments within the metropolitan core.

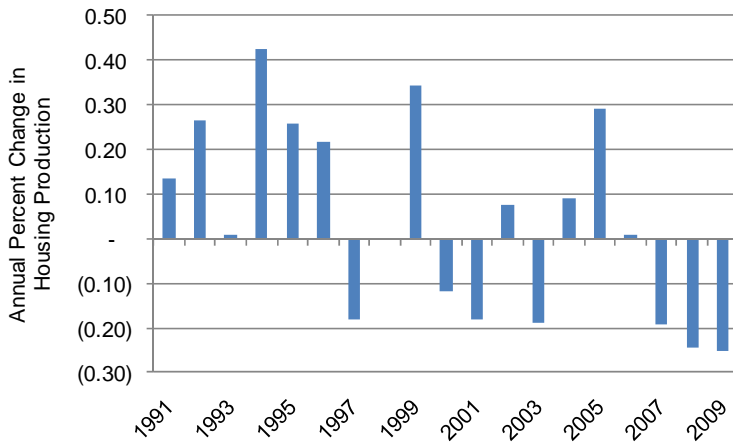
Figure 9: Percent of Total Units Built in Maricopa County Built in the Study Area



Source: Maricopa Association of Governments; BAE, 2011

Moreover, the housing supply produced in the Phoenix area has historically been characterized by extreme swings. Figure 10 shows the annual percent change in housing production from 1990 and 2009, which reveals significant production increases, followed by periods of pulling back. The increase in housing production in the 2000s has left an oversupply in the market that is still waiting to be absorbed.

Figure 10: Annual Percent Change in Housing Production, 1990-2009

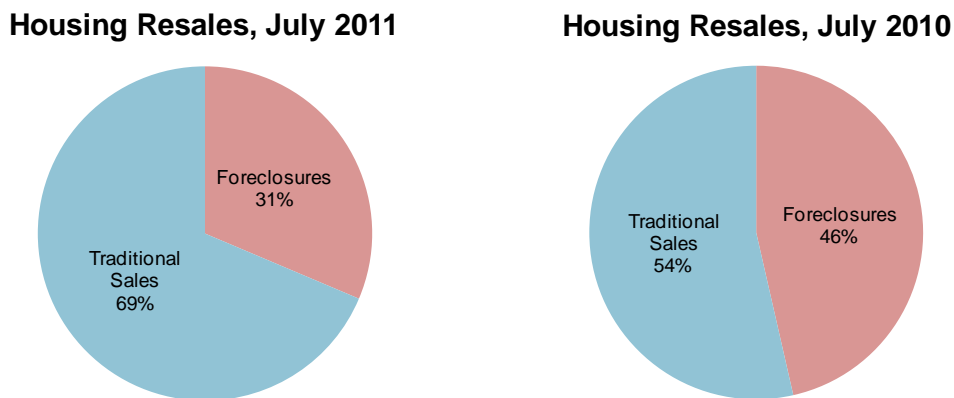


Maricopa Association of Governments; BAE, 2011

For Sale Market Trends

The Phoenix Region was hard hit by the housing bubble in the late 2000s, which continues to have lasting effects. The high foreclosure rate continues to be a significant problem that impacts the for-sale and rental markets. The Maricopa Association of Governments reported as of July 2011, there were a total of 16,053 foreclosed residential properties, and 24,906 residential properties pending foreclosure. Data from the ASU W.P. Carey School of Business have shown some recovery. Foreclosures through July 2011 are down to 31 percent of all housing resales in the Study Area, which is lower than 46 percent in July 2010. However, the long-term recovery of this market depends on an economic recovery to absorb the current inventory of distressed homes.

Figure 11: Study Area Housing Resales, 2010, July 2011

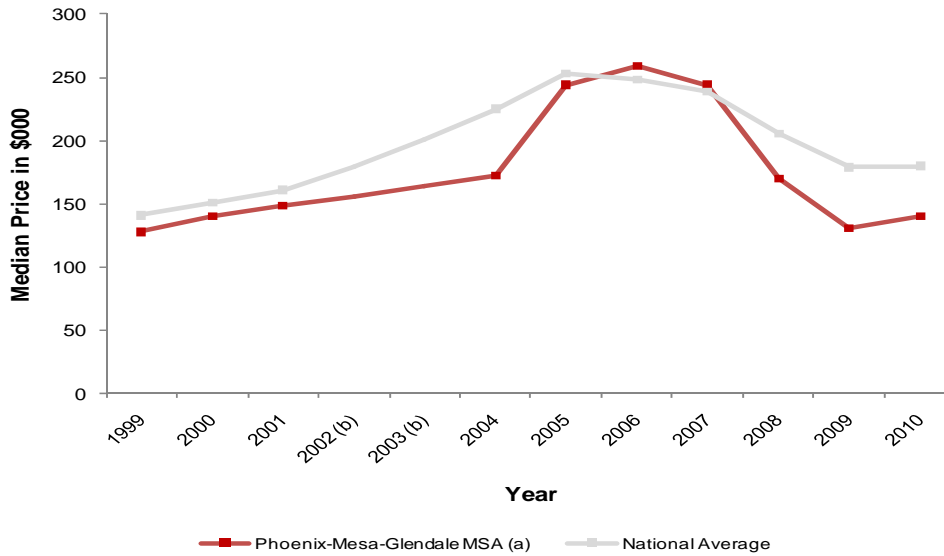


Sources: ASU W.P. Carey School of Business, 2011; BAE, 2011

Median Home Prices

Figure 12 traces the changes in median home prices in the Phoenix-Mesa-Glendale MSA compared to the national average, and shows the rapid ascent of housing prices during the housing boom. Between 1999 and 2005, the National Association for Home Builders' Housing Opportunity Index shows that housing in the Phoenix metropolitan market was more accessible than an average house in the US. By 2007, housing prices had climbed so dramatically that median prices exceeded the national average. However, this peak was short-lived, as housing prices plummeted from 2007 levels and have continued a downward decline. The latest data shows a modest recovery in 2010. A July 2011 report from DataQuick indicates that the median price for all new and resale homes in Maricopa and Pinal counties was \$120,000, which is similar to median prices pre-1999.

Figure 12: Median Housing Price, Phoenix MSA vs. National Average, 3Q 1999-2010 (a)



Notes:

(a) The Phoenix-Mesa-Glendale MSA consists of Maricopa and Pinal Counties.

(b) The National Association of Home Builders (NAHB) did not publish data on median prices for Q3 2002 and 2003.

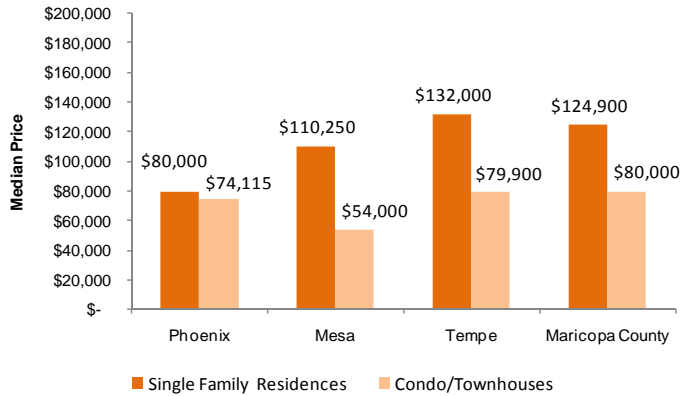
Sources: NAHB, Housing Opportunity Index, 1999-2010; BAE, 2011

Comparing Median Prices for Single Family and Condominiums/Townhomes

Single family residences commanded higher resale prices compared to condominiums and townhouses. However, when foreclosures are taken out of the analysis, condominiums and townhomes retain their value better than single family homes.

Figure 13 shows median home prices by housing type for the Study Area cities and Maricopa County. In July 2011, the median price for a single family home in Maricopa County was approximately \$125,000, and the median price for a condominium/townhouse was \$80,000. Among the cities in the Study Area, Tempe commanded the highest median price for both single family houses (\$132,000) and condominiums (\$79,900).

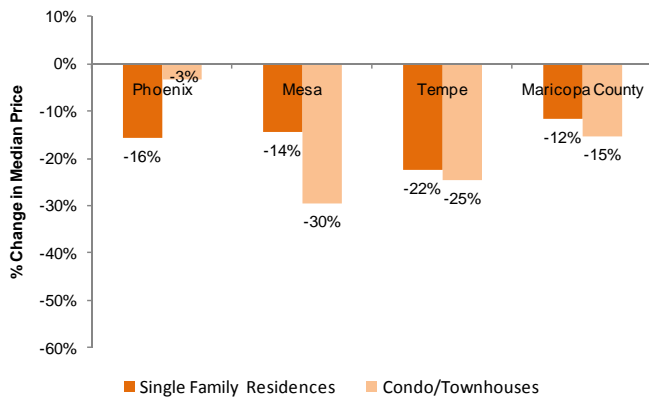
Figure 13: Median Housing Price by Type, July 2011



Sources: ASU W.P. Carey School of Business, 2011; BAE, 2011

Since July 2010, prices for condominiums and townhouses have generally fallen faster than prices for single-family homes, although the data conflates traditional sales and foreclosures. Figure 14 shows percent change in median home prices by housing type between July 2010 and July 2011.

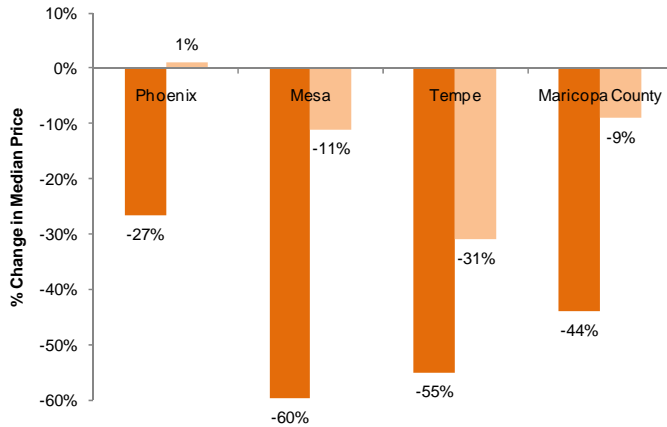
Figure 14: Percent Change in Median Home Prices, All Sales, July 2010-July 2011



Sources: ASU W.P. Carey School of Business, 2011; BAE, 2011

However, if foreclosures are taken out of the analysis, and only traditional market sales are considered, the value of single family homes has eroded faster than other housing types. While the median price fell by 44 percent for single-family homes in Maricopa County, the median price for condominiums has only decreased by 9 percent between July 2010 and July 2011 (see Figure 15). This reveals that condominiums and townhouses have actually retained their value better than single family homes. In fact, in Phoenix, the median price for condominiums increased by 1 percent, and the median price of a condo (\$74,115) is almost equivalent to the median price of a single family home (\$80,000). One limitation with this analysis is that there are fewer condominium resales than single family residences, so the sample size of condominium resales is relatively small.

Figure 15: Percent Change in Median Home Prices, Traditional Sales, July 2010-July 2011 (a)



Notes:

(a) Traditional sales consist of all non-foreclosure related sales, which include market transactions, short sales, and REOs.

Sources: ASU W.P. Carey School of Business, 2011; BAE, 2011

Planned and Proposed Unit Production

Although development has slowed, there are some developments that are moving forward in the three cities. Planners in Phoenix, Tempe, and Mesa provided data on new projects that they expect will be completed in the foreseeable future. These include mid- to larger-scale projects for which developers have submitted drawings or pulled permits. However, staff from all three cities reported that the rate of development has slowed considerably since 2005.

Rental Housing Market Trends

Since the downturn in the housing market, the decline in homeownership has produced a new market for renters. Figure 16 compares homeownership rates and rental vacancy rates in the Study Area, and shows an inverse relationship. As homeownership rates fell between 2008 and 2010, the demand for rental housing increased, reducing rental vacancy rates for buildings with fifty units or more.

It is important to note that the rental housing market is not homogenous, and there are different rental housing types within the market. A July 2011 report by DataQuick indicates that absentee buyers, defined as either investors or second-home purchasers, bought 45 percent of all Phoenix-area homes sold in June 2011, which suggests that there may be a market for single-family rentals, especially in light of the economic downturn. A recent Wall Street Journal article discussed a growing trend among institutional investors who are buying foreclosed properties in Nevada, Arizona, and California, and renting them out.⁶

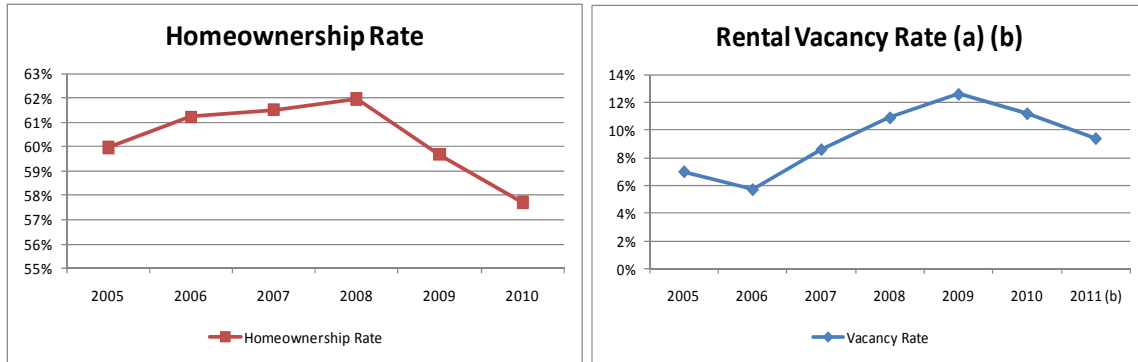
For the purposes of this study, BAE primarily focused on multi-family rental buildings within the Study Area to gauge current market demand for this product type, and to assess affordability levels. BAE reviewed data provided by RealFacts, which tracked rental housing complexes with more than fifty units in the Study Area between 2005 and the second quarter of 2011.

Vacancy Rates

Figure 16 shows an inverse relationship between homeownership and rental vacancy rates in the Study Area. As homeownership rates fell between 2008 and 2010, the demand for rental housing increased, reducing rental vacancy rates. However, as of the second quarter in 2011, vacancy rates were still high, hovering at 9.7 percent in Phoenix, 9.6 percent in Mesa, and 7.7 percent in Tempe.

⁶ "Big Money Gets Into Landlord Game", *Wall Street Journal*, August 4, 2011

Figure 16: Comparing Homeownership and Rental Vacancy Rates in the Study Area



Notes:

(a) Data captures rental housing complexes with more than 50 units in the cities of Phoenix, Tempe, and Mesa.

(b) Occupancy rates as of 2Q 2011

Sources: ACS 2005, 2006, 2007, 2008, 2009; Census 2010; RealFacts, 2011; BAE, 2011.

Even as rental vacancy rates declined, rents have continued to fall, which suggests that the rental market is soft even as demand increases. Between 2008 and 2010, average rents decreased by 11 percent in Phoenix, 13 percent in Tempe, and 11 percent in Mesa. Table 6 shows the average rents in 2010 by unit type in all three cities in the Study Area. The average rent was highest in Tempe, at \$782, followed by Phoenix at \$679, and Mesa at \$654.

Table 6: Average Rents, 2010 (a)

Unit Type	SCWG			
	Phoenix	Tempe	Mesa	Cities (b)
Studio	\$470	\$608	\$444	\$485
1BR/1BA	\$596	\$662	\$585	\$602
2BR/1BA	\$627	\$707	\$645	\$644
2BR/2BA	\$781	\$824	\$737	\$778
2BR TH	\$859	\$899	\$747	\$838
3BR/2BA	\$1,015	\$1,243	\$999	\$1,072
3BR TH	\$1,124	\$1,298	N/A	\$1,199
Average	\$679	\$782	\$654	\$689

Notes:

(a) Data captures rental housing complexes with more than 50 units.

(b) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

Sources: RealFacts; BAE, 2011.

Translating these market rents to HUD 2011 rental affordability levels reveals that the current average asking rents are affordable to low income levels. Within the Study Area, the average rents for studio apartments are affordable to households earning 45 to 80 percent of AMI, depending on the unit type. Low market rents create a challenging environment for new, affordable rental housing production because the market is already offering affordable housing without subsidies. In fact, vacancy rates are at 9 percent, which indicates that there may be further room for absorption in the existing rental market.

Table 7: Average Rents Translated into HUD Affordability Levels, 2010 (a)

Unit Type	Phoenix	Tempe	Mesa	SCWG Cities (b)
Studio	45%	55%	40%	45%
1BR/1BA	50%	55%	50%	50%
2BR/1BA	45%	50%	45%	45%
2BR/2BA	55%	55%	50%	55%
2BR TH	60%	60%	50%	60%
3BR/2BA	65%	80%	65%	70%
3BR TH	75%	85%	N/A	80%

Notes:

(a) AMI levels taken from HUD 2010 Income Limits, assuming 1.5 persons per bedroom.

(b) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

Sources: HUD, 2010; RealFacts; BAE, 2011.

Rental Housing by Transit

Although the RealFacts data provides an overview of rental housing trends, it does not control for differences in building age, proximity to transit, or other amenities. Since the light rail system began operations in December 2008, there have been some transit-oriented developments built adjacent to light rail stops. BAE conducted a sample survey of six properties built within the last ten years proximate to the light rail station to gauge market rents, affordability, occupancy rates, and amenities offered. Four of the six properties are located within a ¼-mile from a light rail stop, and two are located within one-mile. Four developments are market-rate, and two are affordable developments. This list is not exhaustive, and should not be construed as a reflection of all transit-oriented development. However, it does provide a glimpse of how developers have strategically targeted new housing by transit (see Table 8).

The four market-rate properties surveyed were Roosevelt Square (Phoenix), Alta Phoenix Lofts (Phoenix), Grigio Metro (Tempe), and 44 Monroe (Phoenix). In total, these properties account for 1,327 rental units. All of the projects, except for Alta Phoenix Lofts, are located within a ¼-mile from transit, and all, except for Roosevelt Square, were built after light rail operations began. The projects have a rich set of amenities, which include 24-hour gyms, pools, clubhouses, city views, and convenient access to nearby amenities. The Grigio Metro and 44 Monroe offer higher-end services, like dry cleaning pickup and delivery, housekeeping services for a fee, and on-site business center rentals (44 Monroe only). The parking ratios varied from one to two parking spaces per unit.

The market-rate vacancy rates within the sample were much lower than the Study Area rental vacancy rate of 9 percent. The September, 2011 vacancy rate was 2% for Roosevelt Square, 4% for Alta Phoenix Lofts, and 6% for Grigio Metro. 44 Monroe was converted from a condominium to a rental project and began leasing in February 2011. As of February, 2012 it was leased at 100 percent. Although the sample size is small, the survey reveals that these developments are performing better the average rental property in the market.





The sample data also reveals that market-rate developments are providing apartments available to households earning a minimum of 70 percent of AMI and above, based on rents provided by the

management companies.⁷ Both Roosevelt Square and Grigio Metro were positioned at more moderate income levels and affordable to households earning 70 to 130 percent of AMI. Alta Phoenix Lofts and 44 Monroe capture a higher end market and are affordable to households earning between 70 and 175 percent of AMI. The sample properties reveal a diversity of unit types, and very few 3-bedroom options. Lofts are a common unit type within these buildings, and rents for lofts command a rent premium.

Rents for studios range from \$768 to \$1013; one-bedroom apartments range from \$853 to \$1521; two-bedroom apartments range from \$1241 to \$3,300, and three-bedroom townhomes start at \$1,700. Unfortunately, the survey does not show vacancy rates by unit types or affordability levels, so it is difficult to ascertain whether there is a greater need for more housing at more moderate income levels. However, three of the four properties are offering rental concessions, which suggest property owners are still willing to reduce rents to capture a larger target market. Moreover, 44 Monroe was originally intended as a high-end condominium project, so the higher rents may reflect the need to recoup increased development costs associated with nicer finishes and appliances, rather than an initial intent to develop rental housing for higher income households. The project is leasing well, at an average rate of 22 apartments per month. This sample of properties close to transit suggest that developers are building rental housing for households earning 70 percent or more of area median income.

⁷ This minimum income threshold assumes a household pays 30 percent of its income towards housing.



Table 8: Comparable Rental Housing Properties, Market Rate TOD, September 2011

Market Rate TOD In Study Area										
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
Roosevelt Square 121 W. Portland St., Phx 3 bldgs, 4 stories, Built 2001 	Studio		729	\$768	\$875	70%	75%	2 parking garages	Water sewer, electricity, and trash	24 hour fitness, convenient access to retail, pool, sky terrace with city views. Ground floor retail includes coffee house, 2 restaurants
	Studio Loft		966	\$1,000	\$1,000	90%	90%	Ground floor parking for retail customers.		
	1BR/1BA		866	\$901	\$1,230	75%	100%	Gated parking for residents: 3/parking spaces/DU		
	1BR/1BA - Loft		966	\$1,072	\$1,072	90%	90%			
	2BR/2BA		1,237	\$1,241	\$1,500	85%	105%			
	2BR/2BA - Loft		1,392	\$1,447	\$1,447	100%	100%			
Total/Avg.		394		\$768	\$1,500					
Occupancy rate:		95%						Distance to light rail:	0.07 miles	Concessions: none
Leased rate:		98%								
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
Alta Phoenix Lofts 600 N. Fourth Street, Phx 3 bldgs, 8 stories Built 2009 	Studio		862	\$899	\$1,120	80%	100%	Each apt has 1 parking spot in the garage.	Water sewer, electricity, trash, cable, internet	24 hour fitness center, pool, clubhouse with pool + poker table library, DVD checkout
	1BR/1BA		938	\$999	\$1,540	80%	125%	\$30 for each add'l space.		
	1BR/2BA - Loft		1529	\$1,995	\$1,995	160%	160%			
	2BR/2BA		1,152	\$1,399	\$3,300	95%	175%			
	2BR/2.5BA		2,492	\$2,500	\$3,300	170%	175%			
	Total/Avg.		328		\$899	\$3,300				
Occupancy rate:		92%						Distance to light rail:	0.7 miles	Concessions: \$50-\$100/off rent depending on unit type
Leased rate:		96%								
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
Grigio Metro 1811 E. Apache, Tempe 4 stories Built 2009 	Studio			\$799	\$865	70%	75%	2 parking spaces/unit.	Water sewer, electricity, trash	24-hour fitness center and pool, rooftop basketball, billiards, dry cleaning pickup and delivery, housekeeping, beer and wine selection, rental items (laptops, drills, etc.), movie selection, and business center
	Studio Loft			\$937	\$1,013	85%	90%	Additional separated park and ride spaces for transit users		
	1BR/1BA			\$853	\$1,117	70%	90%			
	1BR/1BA - Loft			\$1,065	\$1,369	90%	110%			
	2BR/2BA			\$1,260	\$1,621	85%	110%			
	2BR/2BA - Loft			\$1,932	\$1,932	130%	130%			
3BR Townhouse			\$1,700	1700	110%	110%				
Total/Avg.		409		\$799	\$1,932					
Occupancy rate:		94%						Distance to light rail:	200 feet	Concessions: \$55-300 off monthly rent
Leased rate:		94%								
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
44 Monroe 44 W. Monroe Street, Phx 34 stories, built in 2008 Leasing started 02/2011 	1BR/1BA		743	\$900	\$1,100	75%	90%	Each apt has 1 parking spot in the garage. A select few of the 2BR/2BA get 2 spaces. 7 guest parking spaces on the first floor.	Water sewer, electricity, trash, cable, internet	Panoramic views, high-grade appliances and fixtures, private balconies, fitness center, pool, spa, clubroom, business center with firepits and grill.
	1BR/1BA		1310	\$1,422	\$1,647	115%	135%			
	1BR/1.5 BA		1083	\$1,200	\$1,521	100%	125%			
	2BR/2BA		1394	\$1,680	\$2,175	115%	145%			
	2BR/2.5BA		2,013	\$2,597	\$2,830	175%	175%			
	Total/Avg.		196		\$900	\$2,830				
Occupancy rate:		61%						Distance to light rail:	0.1 miles	Concessions: \$500 move-in allowance
Leased rate:		77%								

Note:
 (a) AMI stands for Area Median Income. Minimum incomes are calculated based on HUD income limits, assuming 1.5 persons per bedroom. It also assumes that each household pays 30 percent of its income on housing costs.
 Source: BAE, 2011

For the affordable developments, BAE reviewed two affordable projects, Devine Legacy and Roosevelt Commons. Devine Legacy recently opened and is currently 85 percent leased. Roosevelt Commons was renovated in 2004 before light rail operations began, and is outside of the ¼-mile light rail catchment area. These two properties show that the targeted affordability levels for affordable developments are households earning between 35 percent and 60 percent of AMI (Table 9).

Table 9: Comparable Rental Housing Properties, Affordable TOD, September 2011

Affordable TOD In Study Area										
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
Roosevelt Commons 825 N. 6th Avenue, Phx 13 bldgs, 1-2 stories Renovated 2004	1BR/1BA	11	586	\$490	\$675	45%	60%	Off-street permit parking available	Electricity	2 laundry rooms, open 24 hours, gazebo areas with picnic bench seating, bbq, children's playground
	2BR/1BA	23	850	\$650	\$650	45%	45%			
	2BR/2BA	14	1000	\$750	\$750	55%	55%			
	Total/Avg.	48	833	\$490	\$750					
	Occupancy rate:	94%						Distance to light rail:	1.0 miles (b)	Concessions: none
	Leased rate:	96%								
Name/Address Stories/Year Built	Unit Type	Num.	Size (sf)	Rent		Min AMI to afford (a)		Parking	Tenant-Paid Utilities	Amenities
				Low	High	Low	High			
Devine Legacy 4570 N. Central Ave, Phx x stories Under construction	Studio	6	550	\$406	\$650	35%	60%	54 structured parking spaces	Electricity	Free gated parking A/V room, shared community courtyard, laundry in some units
	1BR/1BA	17	770	\$438	\$700	35%	60%			
	2BR/2BA	18	880	\$531	\$850	35%	60%			
	3BR/2BA	24	1,180	\$616	\$1,000	40%	60%			
Total/Avg.	65	932	\$406	\$1,000						
	Occupancy rate:	0%						Distance to light rail:	.09 miles	Concessions: none
	Leased rate:	0%								

Note:

(a) AMI stands for Area Median Income. Minimum incomes are calculated based on HUD income limits, assuming 1.5 persons per bedroom. It also assumes that each household pays 30 percent of its income on housing costs.

(b) Roosevelt Commons was built before the light rail line opened. There is a bus stop 0.2 miles away from the development.

Source: BAE, 2011

Conclusions

BAE's sample survey shows a sample of recent market-rate developments built close to transit target a mix of income levels starting at 70 percent of AMI. Affordable housing developments target households earning between 35 and 60 percent of AMI.

MIXED-INCOME HOUSING DEMAND ESTIMATE

Building on the demand and supply trends described above, this section quantifies demand for housing near transit in the three Study Area cities distributed by household type, income and tenure.

Methodology

BAE has generated its estimate of demand for housing near transit for a typology of households as found in the “CHAS” tables used for the HUD Consolidated Plan process. This source provides a grid of household types by AMI income level, e.g., small family households at 31 to 50 percent of Area Median Income. Using the CHAS categories, this typology provides a basis for clearer picture of the types of households by income level likely to seek housing near transit.

The baseline dataset used for this estimate is the 2005-2009 Public Use Microdata Sample (PUMS), from the American Community Survey (ACS), based on a five percent sample of individual responses over the 2005-2009 period.

As a first step, BAE generated a cross-tabulation approximating the CHAS data typology of household types by tenure and by AMI for all of Maricopa County. The household types include small elderly households, small related family households, large related family households, and all other households. One difference between the official CHAS categorization and the BAE estimate is that due to the available data points within the PUMS data, elderly households are based on the presence of a resident age 65 and older rather than 62 or older. Because of this and statistical sampling error, there are some differences between the counts in the BAE-derived CHAS tables and the published versions. These differences, however, should not affect the overall magnitude of the estimates of households that might demand housing near transit.

Once this typology was generated for the 2005-2009 PUMS data set, BAE estimated transit housing demand based on a household having one or more of the following characteristics:

- Household has no car
- Household has someone who reports riding transit to work
- Household has more workers than vehicles available

Any household meeting one or more of these criteria was considered as a household that would be more likely to seek housing near transit. The total households by CHAS type as shown in the PUMS analysis are then filtered to only include those households meeting these criteria. Note that this demand estimate could be considered conservative in that it does not take into account other households that might seek to live near transit for use in getting to school or for other non-work trips, nor does it take into account potential increases in demand for housing near transit due to increasing costs for car ownership or other factors. Because of the time period considered, the data set covers a period both before and after the opening of the initial phase of the Metro Light Rail

system in late 2008; as a result, it only shows limited effects of any resulting increase in transit usage; this is another way in which the demand estimate results may be somewhat conservative.

Next, a subset of Public Use Microdata Areas (PUMAs) which approximates the three cities was used to further limit the demand pool to households residing within Phoenix, Mesa, or Tempe. This provides a baseline estimate of households within the three cities which would be likely to seek housing near transit.

Following this step, the PUMS data for households likely to locate near transit for the three cities is used to separate out those with a housing cost burden of 30 percent or more of household income. This step provides a base estimate of those current households which might seek different housing, near transit, if there were more affordable options available.

The previous steps provide an estimate for the 2005-2009 time period; the next step in the analysis is to create estimates for 2010 and later years. For the purposes of this analysis, it is assumed that the proportion of households in certain CHAS categories will as discussed above will hold constant over time; for example, the proportion of elderly households by income level and potential demand for housing near transit will remain constant over time, and the three cities' proportions will also remain constant. One adjustment made as the 2000 data are "brought forward" is to adjust the ratio of elderly to non-elderly households over time. The 2010 and later estimates of total households and the elderly proportion of households are derived from county-level estimates generated by Woods & Poole, a private vendor of long-range demographic and population estimates. Woods & Poole provides overall estimates of county population through 2040, and estimates of the total number of elderly 65 or older. BAE has assumed that the elderly household size will remain constant over time in order to generate an estimate of the proportion of elderly households through the 2010 through 2040 period.

The proportional grid based on the 2005-2009 data is then applied to the Woods & Poole household estimates, adjusting for shifts in the number of elderly households, for 2010 through 2040 in five-year increments. This provides an estimate of potential demand for housing near transit for the 30-year period.

Demand Estimate Outputs

Based on the methodology described above, the following detailed demand estimate by income level integrates the connection between household occupational/employment characteristics, transit usage and potential demand for housing near TOD. This relatively conservative estimate of existing pent-up and future demand equals 131,000 new housing units near transit in the three cities through 2040. This results in an average demand for over 2,000 new housing units per station area, net of existing residential TOD, but not including planned or entitled projects. This average housing demand per station metric assumes that each station will be developed equally, which may not be realistic. Station areas zoned for higher densities, places with rich amenities, and areas further along in the planning process may be more likely to attract demand. The following table summarizes the complete demand estimate outputs which are provided as Appendix D.

Table 10: Demand for Mixed-Income TOD Housing, 2010-2040, Phoenix, Mesa, and Tempe

Year	0-30% AMI	30-50% AMI	50-80% AMI	80-100% AMI	100-120% AMI	120%+ AMI	TOD Demand (a)	Average Demand by Station (b)
2010	26,435	17,393	11,443	2,480	1,564	2,133	61,448	2,195
2015	3,528	2,350	2,555	1,171	956	2,439	12,999	464
2020	3,548	2,356	2,449	1,110	902	2,299	12,664	258
2025	3,492	2,306	2,215	984	790	2,012	11,799	193
2030	3,346	2,206	2,056	906	724	1,844	11,083	176
2035	3,140	2,077	2,051	918	740	1,886	10,813	172
2040	2,909	1,923	1,864	830	667	1,701	9,894	157
Demand by AMI	46,399	30,611	24,634	8,398	6,343	14,314	130,699	

Notes:

(a) TOD demand reflects the additional demand generated within each five-year period.

(b) Average demand by station incorporates planned light rail and streetcar expansions in Phoenix, Mesa, and Tempe. Demand by station may change if light rail extends into Glendale and Paradise Valley.

Source: BAE, based on data from the 2000 U.S. Census Public Use Microdata Sample (PUMS), and Woods & Poole Economics.

CONCLUSION

The downturn in the housing market has simultaneously created challenges for real estate development and a unique opportunity to rethink the future trajectory of Arizona cities. The Phoenix metropolitan region was hit hard by the foreclosure crisis, and many credit-challenged households are in need of options for rental housing. Economic uncertainty related to the persistent economic slump may be driving a shift in demand away from homeownership, as households are reluctant to commit to long-term mortgages due to a lack of job security. The net effect is an increased demand for rental housing in the short- and medium-term. These factors have created a strong market for rental housing.

Light rail presents a unique opportunity to capture this growing market, and could serve as a catalyst for local economic development. There is an emerging market of renters, who, due to economic circumstances, may be willing to try a new lifestyle, which can include pedestrian-friendly, amenity-rich, and transit-accessible housing arrangements. The key is to provide a mix of affordability levels that make transit-accessible places affordable to multiple income groups.

The creation of a Sustainable Communities Fund is appropriately timed to capitalize on these emerging trends. Construction costs are low, land values have declined in certain areas, and rents are rising. The confluence of these factors provides a window of opportunity to invest in infill development and to demonstrate that a new paradigm of living is possible. This market study underscores that market-rate developers are already creating rental housing for households at 70 percent AMI and above. As the local economy improves, the recovery may drive up development costs, which could lower market-rate affordability levels, and create a greater need for housing affordable at 70 to 100 percent AMI. Market research also shows a distinct need for households earning 60 percent AMI and below.

The METRO light rail line is still new, and there is a need for increased density around station areas for employment, civic amenities, and housing of all types – both affordable and market-rate. When fully deployed, the Sustainable Communities Fund will be a critical tool for expanding underserved markets to create attractive, affordable living options and economic opportunities for working individuals and families.

APPENDIX A: EXISTING AND PLANNED LIGHT RAIL STATIONS

City	Existing Stations	Planned Stations	Date Open	
Phoenix	Montebello/19th Ave	<i>Phoenix West</i>	City/Regional Government	2021
	19th Ave/Camelback	<i>LRT Extension</i>	7th Ave and Jefferson	2021
	7th Ave/Camelback		State Capitol Complex	2021
	Central Ave/Camelback		St. Matthew	2021
	Campbell/Central Ave		35th Ave	2021
	Indian School/Central Ave		51st Ave	2021
	Osborn/Central Ave		59th Ave	2021
	Thomas/Central Ave		67th Ave	2021
	Encanto/Central Ave		79th Ave	2021
	McDowell/Central Ave	<i>Phoenix Northwest</i>	Dunlap/19th Ave	2023
	Roosevelt/Central Ave	<i>Extension Phase 1</i>	Northern/19th Ave	2023
	Van Buren/Central Ave		Glendale/19th Ave	2023
	Washington/Central Ave	<i>Phoenix Northwest</i>	Mountain View/25th Ave	2026
	3rd St/Washington	<i>Extension Phase 2</i>	Dunlap/25th Ave	2026
	12th St/Washington			
	24th St/Washington			
	38th St/Washington			
	44th St/Washington			
	Total Current Stations: 18	Total Planned Stations: 14		
Tempe	Priest Dr/Washington	<i>Tempe Streetcar</i>	Rio Salado	2016
	Center Pkwy/Washington	<i>Extension</i>	3rd and Ash	2016
	Mill Ave/Third St		3rd and Mill	2016
	Veterans Way/College Ave		5th and Ash	2016
	University Dr/Rural		6th and Mill	2016
	Dorsey/Apache Blvd		University and Ash	2016
	McClintock/Apache Blvd		9th and Mill	2016
	Smith-Martin/Apache Blvd		11th and Mill	2016
	Price-101 Fwy/Apache Blvd		Parkway Blvd and Mill	2016
			Broadway and Mill	2016
			Broadmoor and Mill	2016
			Del Rio and Mill	2016
			Southern and Mill	2016
	Total Current Stations: 9	Total Planned Stations: 17		
Mesa	Sycamore/Main St	<i>Mesa Light Rail</i>	Alma School	2016
		<i>Extension</i>	Country Club	2016
			Center Street	2016
			Mesa Drive	2016
			Stapley Drive	Unfunded
		Gilbert Road	Unfunded	
	Total Current Stations: 1	Total Planned Stations: 4		
	Total Stations in System: 28	Total Planned Stations: 35		

Note: Stations highlighted in blue are undergoing station area land use and community planning.

APPENDIX B: POPULATION AND HOUSEHOLD DATA

Table B1: Population and Household Trends, 2000-2010

SCWG Cities (a)	2000	2010	% Change	Phoenix-Mesa-Glendale MSA (c)	2000	2010	% Change
Population	1,876,045	2,046,392	9.1%	Population	3,251,876	4,192,887	28.9%
Households	676,079	746,180	10.4%	Households	1,194,250	1,537,173	28.7%
Average Household Size	2.73	2.69		Average Household Size	2.67	2.68	
Household Type (b)				Household Type (b)			
Families	65.2%	63.1%		Families	67.7%	66.7%	
Non-Families	34.8%	36.9%		Non-Families	32.3%	33.3%	
Tenure				Tenure			
Owner	63.3%	57.7%		Owner	69.4%	65.4%	4.0%
Renter	36.7%	42.3%		Renter	30.6%	34.6%	
Phoenix				Maricopa County			
Population	1,321,045	1,445,632	9.4%	Population	3,072,149	3,817,117	24.2%
Households	465,834	514,806	10.5%	Households	1,132,886	1,411,583	24.6%
Average Household Size	2.79	2.77		Average Household Size	2.67	2.67	
Household Type (b)				Household Type (b)			
Families	66.0%	64.2%		Families	67.4%	66.1%	
Non-Families	34.0%	35.8%		Non-Families	32.6%	33.9%	
Tenure				Tenure			
Owner	62.9%	57.6%		Owner	69.1%	64.5%	
Renter	37.1%	42.4%		Renter	30.9%	35.5%	
Tempe				Pinal County			
Population	158,625	161,719	2.0%	Population	179,727	375,770	109.1%
Households	63,602	66,000	3.8%	Households	61,364	125,590	104.7%
Average Household Size	2.41	2.30		Average Household Size	2.68	2.78	
Household Type (b)				Household Type (b)			
Families	52.9%	47.8%		Families	73.7%	73.4%	
Non-Families	47.1%	52.2%		Non-Families	26.3%	26.6%	
Tenure				Tenure			
Owner	54.9%	44.5%		Owner	75.3%	76.1%	
Renter	45.1%	55.5%		Renter	24.7%	23.9%	
Mesa							
Population	396,375	439,041	10.8%				
Households	146,643	165,374	12.8%				
Average Household Size	2.68	2.63					
Household Type (b)							
Families	68.1%	65.8%					
Non-Families	31.9%	34.2%					
Tenure							
Owner	68.1%	63.2%					
Renter	31.9%	36.8%					

Notes:

- (a) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.
 - (b) A family is a group of two people or more related by birth, marriage, or adoption and residing together.
 - (c) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.
- Sources: US Census, 2000, 2010; BAE, 2011.

Table B2: Age Distribution, 2010

Age Cohort	Phoenix	Tempe	Mesa	SCWG Cities (a)	Phoenix MSA (b)
Under 20	31.3%	24.1%	29.1%	30.2%	29.3%
20-24	7.4%	18.6%	7.2%	8.2%	6.9%
25-34	15.5%	18.1%	14.2%	15.4%	14.3%
35-44	14.3%	10.6%	12.6%	13.6%	13.7%
45-54	13.5%	11.1%	12.6%	13.1%	13.1%
55-64	9.6%	9.1%	10.3%	9.7%	10.5%
65-84	7.4%	7.3%	12.1%	8.4%	10.8%
85 and over	<u>1.0%</u>	<u>1.2%</u>	<u>2.0%</u>	<u>1.2%</u>	<u>1.5%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Median Age	32.2	28.1	34.6	32.3	34.7
Median Age (2000)	30.7	28.8	32.0	30.8	33.2

Notes:

(a) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(b) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: US Census, 2010; BAE, 2011.

Table B3: Age Distribution, 2000

Age Cohort	Phoenix	Tempe	Mesa	SCWG Cities (a)	Phoenix MSA (b)
Under 20	32.0%	25.7%	30.4%	31.1%	29.7%
20-24	7.9%	15.5%	8.2%	8.6%	7.2%
25-34	17.2%	19.4%	15.5%	17.0%	15.7%
35-44	16.0%	13.8%	14.2%	15.4%	15.4%
45-54	11.9%	11.8%	11.1%	11.7%	11.9%
55-64	6.9%	6.7%	7.3%	7.0%	8.0%
65-84	7.2%	6.3%	11.8%	8.1%	10.6%
85 and over	<u>0.9%</u>	<u>0.9%</u>	<u>1.5%</u>	<u>1.0%</u>	<u>1.3%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Median Age	30.7	28.8	32.0	30.8	33.2

Notes:

(a) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(b) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: US Census, 2000; BAE, 2011.

Table B4: Race and Ethnicity, 2010

Race/Ethnicity	Phoenix	Tempe	Mesa	SCWG Cities (a)	Phoenix MSA (b)
Non-Hispanic/Latino					
White	46.5%	62.3%	64.3%	51.6%	58.7%
Black/African American	6.0%	5.6%	3.2%	5.4%	4.6%
Native American & Alaskan Native	1.6%	2.4%	1.9%	1.7%	1.8%
Asian	3.0%	5.6%	1.9%	3.0%	3.2%
Native Hawaiian & Pacific Islander	0.1%	0.4%	0.3%	0.2%	0.2%
Other	0.2%	0.2%	0.1%	0.2%	0.1%
Two or More Races	1.7%	2.5%	1.8%	1.8%	1.9%
Hispanic/Latino - All Races	<u>40.8%</u>	<u>21.1%</u>	<u>26.4%</u>	<u>36.1%</u>	<u>29.5%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

(a) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(b) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: US Census, 2010; BAE, 2011.

Table B5: Household Composition, 2010

Household Type	Phoenix	Tempe	Mesa	SCWG Cities (a)	Phoenix MSA (b)
Single Person	27.1%	32.3%	26.6%	27.5%	25.4%
Two or More Persons					
Married Couple	42.3%	31.4%	47.4%	42.5%	48.5%
Other Family	21.9%	16.4%	18.4%	20.7%	18.2%
Non-Family	8.6%	19.9%	7.6%	9.4%	7.9%
Family Households	64.2%	47.8%	65.8%	63.1%	66.7%
Average Household Size	2.77	2.30	2.63	2.69	2.68

Notes:

(a) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(b) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: US Census, 2010; BAE, 2011.

Table B6: Household Income Distribution, 2009 Est. (a)

<u>Income Category</u>	<u>Phoenix</u>	<u>Tempe</u>	<u>Mesa</u>	<u>SCWG Cities (b)</u>	<u>Phoenix MSA (c)</u>
Less than \$15,000	14.2%	16.0%	10.3%	13.5%	11.3%
\$15,000-\$24,999	12.0%	10.2%	12.5%	11.9%	10.5%
\$25,000-\$34,999	11.0%	8.7%	12.4%	11.1%	10.4%
\$35,000-\$49,999	15.7%	16.5%	15.3%	15.7%	15.1%
\$50,000-\$74,999	18.4%	17.7%	21.0%	18.9%	19.7%
\$75,000-\$99,999	11.2%	12.5%	12.5%	11.6%	12.9%
\$100,000-\$149,999	11.0%	12.0%	10.6%	11.0%	12.5%
\$150,000-\$199,999	3.7%	3.8%	3.2%	3.6%	4.0%
\$200,000 or more	<u>2.9%</u>	<u>2.7%</u>	<u>2.2%</u>	<u>2.7%</u>	<u>3.6%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Median HH Income	\$47,085	\$48,585	\$49,446	\$47,766	\$52,796

Notes:

(a) The American Communities Survey (ACS) publishes demographic estimates based on statistical sampling conducted continuously over the course of 2009.

(b) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(c) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: ACS, 2009; BAE, 2011.

Table B7: Overcrowding, 2009 Est. (a)

<u>All Occupied Housing Units</u>	<u>Phoenix</u>	<u>Tempe</u>	<u>Mesa</u>	<u>SCWG Cities (b)</u>	<u>Phoenix MSA (c)</u>
1.00 or less	93.8%	97.9%	95.5%	94.6%	96.1%
1.01-1.50	4.3%	1.4%	3.6%	3.9%	2.8%
1.51-2.00	1.5%	0.7%	0.7%	1.3%	0.9%
2.01 or more	<u>0.4%</u>	<u>0.0%</u>	<u>0.2%</u>	<u>0.3%</u>	<u>0.2%</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

(a) The American Communities Survey (ACS) publishes demographic estimates based on statistical sampling conducted continuously over the course of 2009.

(b) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(c) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: ACS, 2009; BAE, 2011.

Table B8: Phoenix Housing Overpayment (a) (b)

	Renters					Owners				
	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Renters	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Owners
1. Household Income <=50% MFI	11,045	28,865	12,930	26,820	79,660	16,320	13,345	8,455	9,365	47,485
2. Household Income <=30% MFI	7,070	14,535	6,910	16,015	44,530	7,320	5,345	2,865	5,510	21,040
3. % Cost Burdened	72%	82%	86%	72%	78%	77%	83%	88%	67%	77%
4. % Cost Burden >30%	14%	12%	18%	6%	11%	21%	7%	11%	7%	12%
5. % Cost Burden >50%	59%	70%	68%	67%	67%	56%	75%	77%	60%	65%
6. Household Income >30% to <=50% MFI	3,975	14,330	6,020	10,805	35,130	9,000	8,000	5,590	3,855	26,445
7. % Cost Burdened	76%	83%	76%	88%	83%	49%	82%	87%	82%	72%
8. % Cost Burden >30%	41%	54%	59%	54%	53%	22%	23%	33%	16%	24%
9. % Cost Burden >50%	35%	30%	17%	34%	29%	27%	58%	54%	65%	48%
10. Household Income >50 to <=80% MFI	3,090	16,530	4,895	16,855	41,370	12,260	17,785	8,645	8,270	46,960
11. % Cost Burdened	50%	42%	33%	47%	44%	38%	68%	67%	70%	60%
12. % Cost Burden >30%	37%	37%	31%	42%	38%	23%	39%	52%	36%	37%
13. % Cost Burden >50%	13%	5%	1%	6%	5%	16%	29%	15%	34%	24%
14. Household Income >80% MFI	3,460	26,885	5,130	31,255	66,730	32,050	105,955	21,425	43,170	202,600
15. % Cost Burdened	19%	6%	6%	9%	8%	15%	18%	17%	29%	20%
16. % Cost Burden >30%	16%	6%	6%	9%	8%	13%	15%	14%	24%	17%
17. % Cost Burden >50%	3%	0%	0%	0%	0%	2%	3%	3%	6%	3%
18. Total Households	17,595	72,280	22,955	74,930	187,760	60,630	137,085	38,525	60,805	297,045
19. % Cost Burdened	59%	45%	54%	43%	46%	32%	31%	44%	42%	35%
20. % Cost Burden >30	24%	23%	29%	22%	24%	17%	19%	25%	23%	20%
21. % Cost Burden >50	34%	21%	25%	20%	23%	15%	12%	18%	18%	15%

Notes:

(a) Definitions: households that spend greater than 30% of their total gross income on housing costs are considered cost burdened.

(b) Due to rounding, detail may not add to total. 2006-2008 ACS data subject to sampling error.

Sources: HUD, State of the Cities Data System: Comprehensive Housing Affordability Strategy (CHAS) special tabulations from the American Community Survey 2006-2008; BAE, 2011.

Table B9: Tempe Housing Overpayment (a) (b)

	Renters					Owners					Total Households
	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Renters	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Owners	
1. Household Income <=50% MFI	1,100	2,630	790	6,400	10,920	1,540	740	395	1,120	3,795	14,715
2. Household Income <=30% MFI	620	1,340	300	4,090	6,350	695	400	80	600	1,775	8,125
3. % Cost Burdened	6%	65%	100%	82%	77%	78%	88%	106%	79%	82%	78%
4. % Cost Burden >30%	0%	8%	18%	3%	4%	24%	34%	81%	0%	21%	8%
5. % Cost Burden >50%	5%	57%	82%	79%	73%	55%	54%	25%	79%	61%	70%
6. Household Income >30% to <=50% MFI	480	1,290	490	2,310	4,570	845	340	315	520	2,020	6,590
7. % Cost Burdened	79%	88%	77%	92%	88%	41%	65%	73%	80%	60%	80%
8. % Cost Burden >30%	51%	63%	71%	45%	53%	18%	28%	5%	12%	16%	42%
9. % Cost Burden >50%	28%	25%	5%	48%	35%	23%	37%	68%	68%	44%	38%
10. Household Income >50 to <=80% MFI	380	2,195	430	3,780	6,785	1,375	1,070	330	665	3,440	10,225
11. % Cost Burdened	63%	46%	64%	63%	58%	29%	72%	24%	59%	48%	54%
12. % Cost Burden >30%	39%	43%	64%	49%	48%	18%	25%	15%	38%	24%	40%
13. % Cost Burden >50%	24%	3%	0%	13%	10%	11%	47%	9%	20%	24%	15%
14. Household Income >80% MFI	425	3,675	670	7,160	11,930	4,130	11,315	1,570	4,850	21,865	33,795
15. % Cost Burdened	31%	5%	0%	7%	7%	5%	11%	16%	27%	14%	11%
16. % Cost Burden >30%	19%	5%	0%	7%	6%	4%	9%	12%	20%	11%	9%
17. % Cost Burden >50%	12%	0%	0%	0%	1%	1%	2%	4%	6%	3%	2%
18. Total Households	1,905	8,500	1,890	17,340	29,635	7,045	13,125	2,295	6,635	29,100	58,735
19. % Cost Burdened	60%	38%	50%	48%	46%	21%	20%	28%	39%	25%	36%
20. % Cost Burden >30	26%	24%	36%	20%	23%	11%	12%	14%	20%	14%	18%
21. % Cost Burden >50	35%	14%	14%	28%	24%	11%	8%	14%	19%	12%	18%

Notes:

(a) Definitions: households that spend greater than 30% of their total gross income on housing costs are considered cost burdened.

(b) Due to rounding, detail may not add to total. 2006-2008 ACS data subject to sampling error.

Sources: HUD, State of the Cities Data System: Comprehensive Housing Affordability Strategy (CHAS) special tabulations from the American Community Survey 2006-2008; BAE, 2011.

Table B10: Mesa Housing Overpayment (a) (b)

	Renters					Owners					Total Households
	Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Renters	Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Owners	
1. Household Income <=50% MFI	3,685	7,855	1,440	6,520	19,500	9,655	2,400	1,500	2,815	16,370	35,870
2. Household Income <=30% MFI	1,665	3,765	705	3,555	9,690	3,765	1,015	490	1,725	6,995	16,685
3. % Cost Burdened	17%	80%	95%	79%	80%	59%	76%	96%	75%	68%	75%
4. % Cost Burden >30%	1%	6%	29%	3%	6%	17%	12%	15%	6%	13%	9%
5. % Cost Burden >50%	16%	74%	66%	76%	73%	42%	64%	81%	69%	55%	65%
6. Household Income >30% to <=50% MFI	2,020	4,090	735	2,965	9,810	5,890	1,385	1,010	1,090	9,375	19,185
7. % Cost Burdened	83%	89%	54%	89%	85%	38%	75%	76%	79%	52%	69%
8. % Cost Burden >30%	39%	61%	39%	47%	51%	25%	12%	30%	28%	24%	38%
9. % Cost Burden >50%	44%	28%	15%	42%	34%	13%	64%	46%	51%	28%	31%
10. Household Income >50 to <=80% MFI	2,010	5,605	1,280	6,935	15,830	8,985	4,910	2,810	2,635	19,340	35,170
11. % Cost Burdened	52%	45%	30%	55%	49%	21%	63%	64%	57%	43%	46%
12. % Cost Burden >30%	26%	42%	30%	50%	42%	14%	38%	45%	31%	27%	34%
13. % Cost Burden >50%	26%	3%	0%	5%	7%	7%	25%	19%	26%	16%	12%
14. Household Income >80% MFI	2,265	8,690	1,820	7,940	20,715	18,660	37,500	9,035	12,080	77,275	97,990
15. % Cost Burdened	15%	3%	2%	7%	6%	10%	17%	19%	26%	17%	15%
16. % Cost Burden >30%	14%	3%	2%	7%	6%	9%	16%	16%	21%	15%	13%
17. % Cost Burden >50%	1%	0%	0%	0%	0%	1%	1%	3%	5%	2%	2%
18. Total Households	7,960	22,150	4,540	21,395	56,045	37,300	44,810	13,345	17,530	112,985	169,030
19. % Cost Burdened	54%	43%	33%	46%	45%	22%	25%	35%	39%	27%	33%
20. % Cost Burden >30	21%	24%	20%	26%	24%	13%	18%	23%	22%	18%	20%
21. % Cost Burden >50	32%	18%	13%	20%	21%	8%	7%	12%	17%	10%	13%

Notes:

(a) Definitions: households that spend greater than 30% of their total gross income on housing costs are considered cost burdened.

(b) Due to rounding, detail may not add to total. 2006-2008 ACS data subject to sampling error.

Sources: HUD, State of the Cities Data System: Comprehensive Housing Affordability Strategy (CHAS) special tabulations from the American Community Survey 2006-2008; BAE, 2011.

Table B11: Study Area Housing Overpayment (a) (b)

	Renters					Owners					Total Households
	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Renters	Elderly Households	Small Related (2 to 4 members)	Large Related (5 or more members)	All Other Households	Total Owners	
1. Household Income <=50% MFI	15,830	39,350	15,160	39,740	110,080	27,515	16,485	10,350	13,300	67,650	177,730
2. Household Income <=30% MFI	9,355	19,640	7,915	23,660	60,570	11,780	6,760	3,435	7,835	29,810	90,380
3. % Cost Burdened	95%	80%	87%	75%	78%	71%	82%	89%	70%	75%	77%
4. % Cost Burden >30%	15%	10%	19%	5%	10%	20%	10%	13%	6%	13%	11%
5. % Cost Burden >50%	80%	70%	68%	70%	68%	52%	72%	76%	63%	62%	66%
6. Household Income >30% to <=50% MFI	6,475	19,710	7,245	16,080	49,510	15,735	9,725	6,915	5,465	37,840	87,350
7. % Cost Burdened	78%	85%	74%	89%	84%	45%	80%	85%	81%	66%	76%
8. % Cost Burden >30%	41%	56%	58%	51%	53%	23%	22%	31%	18%	24%	40%
9. % Cost Burden >50%	37%	29%	16%	37%	31%	22%	58%	53%	63%	43%	36%
10. Household Income >50 to <=80% MFI	5,480	24,330	6,605	27,570	63,985	22,620	23,765	11,785	11,570	69,740	133,725
11. % Cost Burdened	52%	43%	34%	51%	46%	31%	67%	65%	66%	55%	51%
12. % Cost Burden >30%	33%	38%	33%	45%	40%	19%	38%	49%	35%	33%	37%
13. % Cost Burden >50%	19%	4%	1%	7%	6%	12%	29%	16%	31%	22%	14%
14. Household Income >80% MFI	6,150	39,250	7,620	46,355	99,375	54,840	154,770	32,030	60,100	301,740	401,115
15. % Cost Burdened	18%	5%	5%	9%	8%	13%	18%	17%	29%	19%	16%
16. % Cost Burden >30%	16%	5%	5%	8%	7%	11%	15%	15%	23%	16%	14%
17. % Cost Burden >50%	3%	0%	0%	0%	0%	2%	3%	3%	6%	3%	2%
18. Total Households	27,460	102,930	29,385	113,665	273,440	104,975	195,020	54,165	84,970	439,130	712,570
19. % Cost Burdened	57%	44%	51%	44%	46%	28%	29%	41%	41%	32%	38%
20. % Cost Burden >30	24%	24%	28%	23%	24%	15%	18%	24%	23%	19%	21%
21. % Cost Burden >50	34%	20%	23%	22%	22%	12%	11%	17%	18%	13%	17%

Notes:

(a) Definitions: households that spend greater than 30% of their total gross income on housing costs are considered cost burdened.

(b) Due to rounding, detail may not add to total. 2006-2008 ACS data subject to sampling error.

Sources: HUD, State of the Cities Data System: Comprehensive Housing Affordability Strategy (CHAS) special tabulations from the American Community Survey 2006-2008; BAE, 2011.

APPENDIX C: HOUSING SUPPLY DATA

Table C1: Housing Units By Type of Residence, 2009 Est. (a)

Type of Residence	Phoenix	Tempe	Mesa	SCWG Cities (b)	Phoenix MSA (c)
Single Family Detached	60.0%	43.8%	52.9%	57.0%	64.2%
Single Family Attached	5.0%	8.1%	5.7%	5.4%	5.6%
Multifamily 2-4 Units	5.6%	9.3%	6.8%	6.2%	4.6%
Multifamily 5-9 Units	6.3%	8.4%	5.8%	6.3%	5.2%
Multifamily 10-49 Units	14.4%	21.0%	10.4%	14.0%	9.7%
Multifamily 50+	5.3%	6.7%	3.4%	5.0%	3.8%
Mobile Home	3.4%	2.7%	15.0%	5.9%	6.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Notes:

Sources: ACS, 2009; BAE, 2011.

Table C2: Housing Units By Type of Residence, 2000

Type of Residence	Phoenix	Tempe	Mesa	SCWG Cities (b)	Phoenix MSA (c)
Single Family Detached	57.6%	45.5%	48.4%	54.3%	58.4%
Single Family Attached	5.2%	9.2%	5.9%	5.8%	6.3%
Multifamily 2-4 Units	6.1%	6.9%	5.7%	6.1%	5.0%
Multifamily 5-9 Units	5.0%	7.5%	5.0%	5.2%	4.5%
Multifamily 10-49 Units	9.4%	12.2%	7.9%	9.3%	7.3%
Multifamily 50+	12.3%	14.6%	8.3%	11.5%	8.8%
Mobile Home	4.4%	4.1%	18.8%	7.8%	9.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Sources: US Census, 2000; BAE, 2011.

Table C3: Housing Units By Year Built, 2009 Est. (a)

Year Built	Phoenix	Tempe	Mesa	SCWG Cities (b)	Phoenix MSA (c)
1939 or earlier	2.0%	0.2%	0.4%	1.5%	1.0%
1940 to 1949	3.1%	1.5%	1.0%	2.5%	1.6%
1950 to 1959	11.1%	5.4%	4.1%	9.0%	6.0%
1960 to 1969	11.3%	14.7%	6.6%	10.5%	7.6%
1970 to 1979	21.1%	32.5%	21.0%	22.0%	17.6%
1980 to 1989	18.4%	24.7%	29.5%	21.4%	19.6%
1990 to 1999	15.9%	11.4%	20.7%	16.6%	21.5%
2000 or later	17.3%	9.5%	16.7%	16.5%	25.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Median Year Built	1981	1979	1986	1982	1988

Notes:

(a) The American Communities Survey (ACS) publishes demographic estimates based on statistical sampling conducted continuously over the course of 2009.

(b) The Sustainable Communities Working Group Cities consist of Phoenix, Tempe, and Mesa.

(c) The Phoenix-Mesa-Glendale Metropolitan Area consists of Maricopa and Pinal Counties.

Sources: ACS, 2009; BAE, 2011.

Table C4: Rental Housing Market Overview, Phoenix, Second Quarter 2011 (a)

Phoenix Current Market Overview, 2Q 2011				
Unit Type	Number of Units	Avg. Size (sf)	Avg. Rent	Avg. Rent/sf
Urban Loft	123	795	\$826	\$1.04
Studio	4,925	435	\$472	\$1.09
JR 1 BR	40	501	\$453	\$0.90
1BR/1BA	34,904	672	\$604	\$0.90
1BR/1.5BA	218	1,179	\$1,556	\$1.32
1BR TH	315	810	\$882	\$1.09
2BR/1BA	8,085	821	\$628	\$0.76
2BR/1.5BA	494	852	\$689	\$0.81
2BR/2BA	25,320	993	\$791	\$0.80
2BR/2.5BA	72	2,426	\$2,670	\$1.10
2BR TH	1,056	1,163	\$911	\$0.78
3BR/1.5BA	56	925	\$700	\$0.76
3BR/2BA	3,314	1,251	\$1,039	\$0.83
3 BR TH	355	1,293	\$1,211	\$0.94
4BR	119	1,192	\$1,166	\$0.98
Total	79,396	814	\$690	\$0.85

Average Rent History, 2005-2010					
Unit Type	2005	2008	2005-2008 % Change	2010	2008-2010 % Change
Studio	\$512	\$535	4.5%	\$470	-12.1%
1BR/1BA	\$633	\$679	7.3%	\$596	-12.2%
2BR/1BA	\$653	\$726	11.2%	\$627	-13.6%
2BR/2BA	\$810	\$862	6.4%	\$781	-9.4%
2BR TH	\$853	\$961	12.7%	\$859	-10.6%
3BR/2BA	\$1,054	\$1,088	3.2%	\$1,015	-6.7%
3BR TH	\$1,069	\$1,237	15.7%	\$1,124	-9.1%
Total	\$715	\$760	6.3%	\$679	-10.7%

Average Occupancy and Vacancy Rates (b)		
Year	Avg. Occupancy	Avg. Vacancy
2005	92.7%	7.3%
2006	93.7%	6.3%
2007	91.3%	8.7%
2008	89.3%	10.7%
2009	86.9%	13.1%
2010	88.2%	11.8%
2011 (b)	90.3%	9.7%

Notes:

(a) Data captures rental housing complexes with more than 50 units in the City of Phoenix.

(b) Occupancy rates as of 2Q 2011.

Sources: RealFacts; BAE, 2011.

Table C5: Rental Housing Market Overview, Tempe, Second Quarter 2011 (a)

Tempe Current Market Overview (2Q 2011)				
Unit Type	Number of Units	Avg. Size (sf)	Avg. Rent	Avg. Rent/sf
Urban Loft	50	1,284	\$2,050	\$1.60
Studio	953	504	\$645	\$1.28
1BR/1BA	6,954	700	\$679	\$0.97
2BR/1BA	2,149	852	\$732	\$0.86
2BR/1.5BA	36	914	\$759	\$0.83
2BR/2BA	6,099	988	\$847	\$0.86
2BR TH	266	1,100	\$968	\$0.88
3BR/2BA	1,379	1,293	\$1,273	\$0.98
3BR/3BA	2	1,454	\$1,248	\$0.86
3BR TH	262	1,282	\$1,317	\$1.03
4BR	<u>92</u>	<u>1,201</u>	<u>\$590</u>	<u>\$0.49</u>
Total	18,242	868	\$801	\$0.92

Average Rent History					
Unit Type	2005	2008	2005-2008 % Change	2010	2008-2010 % Change
Studio	\$535	\$741	38.5%	\$608	-17.9%
1BR/1BA	\$656	\$755	15.1%	\$662	-12.3%
2BR/1BA	\$715	\$830	16.1%	\$707	-14.8%
2BR/2BA	\$837	\$959	14.6%	\$824	-14.1%
2BR TH	\$793	\$995	25.5%	\$899	-9.6%
3BR/2BA	\$1,172	\$1,401	19.5%	\$1,243	-11.3%
3BR TH	\$1,051	\$1,193	13.5%	\$1,298	8.8%
Total	\$757	\$897	18.5%	\$782	-12.8%

Average Occupancy and Vacancy Rates (b)		
Year	Avg. Occupancy	Avg. Vacancy
2005	94.5%	5.5%
2006	96.0%	4.0%
2007	92.7%	7.3%
2008	89.9%	10.1%
2009	90.3%	9.7%
2010	92.8%	7.2%
2011 (b)	92.3%	7.7%

Notes:

(a) Data captures rental housing complexes with more than 50 units in the City of Tempe.

(b) Occupancy rates as of 2Q 2011

Sources: RealFacts; BAE, 2011.

Table C6: Rental Housing Market Overview, Mesa, Second Quarter 2011 (a)

Mesa Current Market Overview (2Q 2011)				
Unit Type	Number of Units	Avg. Size (sf)	Avg. Rent	Avg. Rent/sf
Studio	1,033	444	\$459	\$1.03
JR 1 BR	312	527	\$448	\$0.85
1BR/1BA	10,516	676	\$580	\$0.86
1BR TH	36	1,000	\$685	\$0.69
2BR/1BA	2,405	805	\$627	\$0.78
2BR/1.5BA	230	830	\$668	\$0.80
2BR/2BA	9,064	985	\$739	\$0.75
2BR TH	410	1,034	\$681	\$0.66
3BR/2BA	<u>680</u>	<u>1,223</u>	<u>\$1,000</u>	<u>\$0.82</u>
Total	24,686	814	\$650	\$0.80

Average Rent History					
Unit Type	2005	2008	2005-2008 % Change	2010	2008-2010 % Change
Studio	\$472	\$537	13.8%	\$444	-17.3%
1BR/1BA	\$596	\$670	12.4%	\$585	-12.7%
2BR/1BA	\$646	\$728	12.7%	\$645	-11.4%
2BR/2BA	\$743	\$819	10.2%	\$737	-10.0%
2BR TH	\$704	\$793	12.6%	\$747	-5.8%
3BR/2BA	\$992	\$1,082	9.1%	\$999	-7.7%
Total	\$666	\$737	10.7%	\$654	-11.3%

Average Occupancy and Vacancy Rates (b)		
Year	Avg. Occupancy	Avg. Vacancy
2005	93.1%	6.9%
2006	95.1%	4.9%
2007	90.8%	9.2%
2008	88.1%	11.9%
2009	86.9%	13.1%
2010	87.8%	12.2%
2011 (b)	90.4%	9.6%

Notes:

(a) Data captures rental housing complexes with more than 50 units in the City of Mesa.

(b) Occupancy rates as of 2Q 2011

Sources: RealFacts; BAE, 2011.

Table C7: Rental Housing Market Overview, Study Area, Second Quarter 2011 (a)

Study Area Current Market Overview (2Q 2011)				
Unit Type	Number of Units	Avg. Size (sf)	Avg. Rent	Avg. Rent/sf
Urban Loft	173	936	\$1,179	\$1.26
Studio	6,911	446	\$494	\$1.11
JR 1 BR	352	524	\$448	\$0.85
1BR/1BA	52,374	677	\$609	\$0.90
1BR/1.5BA	218	1,179	\$1,556	\$1.32
1BR TH	351	830	\$862	\$1.04
2BR/1BA	12,639	823	\$646	\$0.78
2BR/1.5BA	760	848	\$686	\$0.81
2BR/2BA	40,483	991	\$788	\$0.80
2BR/2.5BA	72	2,426	\$2,670	\$1.10
2BR TH	1,732	1,123	\$865	\$0.77
3BR/1.5BA	56	925	\$700	\$0.76
3BR/2BA	5,373	1,258	\$1,094	\$0.87
3BR/3BA	2	1,454	1248	\$0.86
3 BR TH	617	1,288	\$1,256	\$0.98
4BR	211	1,196	\$915	\$0.77
Total	122,324	822	\$699	\$0.85

Average Rent History					
Unit Type	2005	2008	2005-2008 % Change	2010	2008-2010 % Change
Studio	\$510	\$565	10.8%	\$485	-14.2%
1BR/1BA	\$629	\$687	9.2%	\$602	-12.4%
2BR/1BA	\$662	\$744	12.4%	\$644	-13.4%
2BR/2BA	\$800	\$867	8.4%	\$778	-10.3%
2BR TH	\$811	\$925	14.1%	\$838	-9.4%
3BR/2BA	\$1,068	\$1,167	9.3%	\$1,072	-8.1%
3BR TH	\$1,069	\$1,227	14.8%	\$1,199	-2.3%
Total	\$712	\$776	9.0%	\$689	-11.2%

Average Occupancy and Vacancy Rates (b)		
Year	Avg. Occupancy	Avg. Vacancy
2005	93.0%	7.0%
2006	94.3%	5.7%
2007	91.4%	8.6%
2008	89.1%	10.9%
2009	87.4%	12.6%
2010	88.8%	11.2%
2011 (b)	90.6%	9.4%

Notes:

(a) Data captures rental housing complexes with more than 50 units in the cities of Phoenix, Tempe, and Mesa.

(b) Occupancy rates as of 2Q 2011

Sources: RealFacts; BAE, 2011.

APPENDIX D: DEMAND ESTIMATE DATA

Maricopa County Households by Household Type and Income Level, 2010

Total County Households	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household by Type and Income											
Household Income <=30% MFI	13,890	36,379	12,464	39,824	102,557	23,228	15,783	6,452	16,765	62,227	164,785
Household Income >30 to <=50% MFI	11,527	37,302	10,831	27,916	87,576	34,828	21,945	11,037	13,094	80,903	168,479
Household Income >50 to <=80% MFI	9,376	45,573	12,546	47,175	114,670	48,854	53,683	21,081	28,280	151,898	266,567
Household Income >80% MFI to <=100% MFI	3,539	23,513	5,277	25,632	57,961	26,646	41,733	13,018	22,389	103,787	161,747
Household Income >100% MFI to <=120% MFI	2,110	17,792	3,498	19,079	42,480	20,143	50,391	13,083	22,407	106,024	148,504
Household Income >120% MFI	5,631	43,072	5,803	42,205	96,711	69,487	313,896	47,001	88,998	519,382	616,092
Total Households	46,072	203,631	50,420	201,831	501,954	223,185	497,431	111,673	191,932	1,024,221	1,526,175

Transit Demand Households - Countywide	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household by Type and Income											
Household Income <=30% MFI	8,021	12,985	4,135	15,082	40,222	3,372	1,813	1,040	2,000	8,225	48,448
Household Income >30 to <=50% MFI	4,666	10,164	2,900	7,316	25,047	3,335	2,325	1,393	1,066	8,119	33,166
Household Income >50 to <=80% MFI	2,667	13,237	4,263	10,766	30,934	1,981	6,577	3,694	1,504	13,756	44,690
Household Income >80% MFI to <=100% MFI	687	6,688	1,824	3,900	13,099	932	4,377	2,119	867	8,294	21,394
Household Income >100% MFI to <=120% MFI	477	4,487	1,119	3,073	9,155	881	5,329	2,322	738	9,270	18,425
Household Income >120% MFI	871	9,253	1,737	4,506	16,367	2,176	23,664	6,636	3,302	35,778	52,145
Total Households	17,389	56,814	15,979	44,644	134,825	12,676	44,086	17,204	9,477	83,443	218,268

Transit Demand Households - Three Cities	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household by Type and Income											
Household Income <=30% MFI	5,085	9,491	2,766	11,602	28,944	1,950	1,086	643	1,353	5,032	33,976
Household Income >30 to <=50% MFI	2,720	7,807	1,786	5,368	17,681	1,798	1,700	869	832	5,200	22,880
Household Income >50 to <=80% MFI	1,355	8,536	2,563	7,608	20,063	1,044	4,148	2,460	948	8,600	28,662
Household Income >80% MFI to <=100% MFI	277	4,366	1,241	3,061	8,945	556	2,384	1,206	441	4,587	13,532
Household Income >100% MFI to <=120% MFI	167	2,832	675	1,813	5,487	393	3,471	1,369	516	5,749	11,236
Household Income >120% MFI	491	5,197	899	2,962	9,549	927	11,990	3,746	2,456	19,119	28,668
Total Households	10,096	38,230	9,930	32,413	90,669	6,669	24,778	10,294	6,546	48,286	138,955

Transit Demand Households - Three Cities Housing Cost Burden > 30%	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household by Type and Income											
Household Income <=30% MFI	3,498	8,216	2,259	8,882	22,855	1,296	934	546	804	3,580	26,435
Household Income >30 to <=50% MFI	2,162	6,295	1,132	4,622	14,211	736	1,211	764	472	3,183	17,393
Household Income >50 to <=80% MFI	829	2,613	512	2,717	6,671	249	2,624	1,338	562	4,773	11,443
Household Income >80% MFI to <=100% MFI	76	381	208	139	804	143	1,073	257	203	1,676	2,480
Household Income >100% MFI to <=120% MFI	97	102	-	30	229	-	849	211	275	1,336	1,564
Household Income >120% MFI	63	47	28	95	233	92	1,338	163	307	1,900	2,133
Total Households	6,724	17,653	4,138	16,486	45,001	2,516	8,028	3,279	2,624	16,446	61,448

Maricopa County Households by Household Type and Income Level, 2015

Total County Households

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
16,644	39,260	13,451	42,977	112,332	27,833	17,033	6,963	18,092	69,920	182,252
13,812	40,256	11,689	30,127	95,883	41,732	23,682	11,911	14,130	91,456	187,339
11,235	49,182	13,540	50,910	124,866	58,538	57,934	22,751	30,519	169,742	294,608
4,241	25,375	5,695	27,661	62,972	31,929	45,038	14,049	24,162	115,177	178,149
2,528	19,201	3,776	20,590	46,095	24,136	54,381	14,119	24,182	116,818	162,912
6,747	46,483	6,262	45,547	105,039	83,262	338,751	50,723	96,045	568,781	673,820

Total Households

55,206 219,755 54,412 217,812 547,186 267,430 536,819 120,515 207,130 1,131,894 1,679,080

Transit Demand Households - Countywide

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
9,611	14,013	4,462	16,276	44,362	4,040	1,957	1,123	2,158	9,278	53,640
5,591	10,969	3,130	7,896	27,586	3,996	2,509	1,504	1,150	9,159	36,745
3,196	14,285	4,601	11,619	33,701	2,373	7,098	3,987	1,624	15,081	48,782
824	7,218	1,968	4,209	14,218	1,116	4,723	2,287	935	9,062	23,281
571	4,842	1,208	3,316	9,937	1,055	5,751	2,505	797	10,109	20,046
1,044	9,985	1,875	4,863	17,767	2,608	25,538	7,161	3,563	38,870	56,637

Total Households

20,836 61,312 17,244 48,179 147,571 15,189 47,577 18,567 10,227 91,560 239,131

Transit Demand Households - Three Cities

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
6,094	10,242	2,985	12,521	31,841	2,337	1,171	694	1,460	5,663	37,504
3,260	8,425	1,927	5,793	19,404	2,155	1,835	938	898	5,825	25,230
1,624	9,212	2,766	8,210	21,813	1,250	4,476	2,655	1,023	9,405	31,218
332	4,712	1,339	3,303	9,686	666	2,573	1,301	476	5,016	14,703
200	3,056	728	1,957	5,942	471	3,746	1,477	557	6,251	12,193
588	5,609	970	3,196	10,364	1,111	12,939	4,043	2,650	20,743	31,107

Total Households

12,097 41,257 10,716 34,980 99,050 7,991 26,740 11,109 7,064 52,903 151,954

Transit Demand Households - Three Cities

Housing Cost Burden > 30%

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
4,191	8,866	2,438	9,586	25,081	1,552	1,008	589	868	4,018	29,098
2,591	6,793	1,221	4,988	15,593	882	1,306	824	510	3,522	19,116
993	2,820	552	2,932	7,297	298	2,831	1,444	607	5,180	12,477
91	411	225	150	877	172	1,158	277	219	1,825	2,702
116	110	-	32	258	-	917	227	297	1,441	1,699
75	51	30	102	259	111	1,444	176	331	2,061	2,320

Total Households

8,057 19,051 4,466 17,791 49,365 3,015 8,664 3,538 2,831 18,048 67,414

Maricopa County Households by Household Type and Income Level, 2020

Total County Households

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
19,788	41,901	14,356	45,867	121,911	33,091	18,178	7,431	19,309	78,009	199,920
16,422	42,963	12,475	32,153	104,012	49,616	25,275	12,712	15,081	102,684	206,696
13,357	52,489	14,450	54,334	134,631	69,597	61,830	24,281	32,571	188,279	322,910
5,042	27,081	6,078	29,522	67,723	37,961	48,067	14,994	25,787	126,808	194,531
3,006	20,492	4,029	21,975	49,502	28,696	58,038	15,069	25,808	127,611	177,113
8,021	49,609	6,683	48,611	112,924	98,992	361,534	54,134	102,505	617,164	730,088

Total Households

65,635 234,535 58,072 232,461 590,703 317,951 572,923 128,621 221,061 1,240,555 1,831,258

Transit Demand Households - Countywide

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
11,426	14,955	4,763	17,371	48,515	4,803	2,089	1,198	2,303	10,394	58,909
6,648	11,707	3,340	8,427	30,122	4,751	2,678	1,605	1,228	10,261	40,383
3,799	15,246	4,911	12,400	36,356	2,822	7,575	4,255	1,733	16,384	52,740
979	7,703	2,101	4,492	15,275	1,327	5,041	2,441	998	9,807	25,082
679	5,168	1,289	3,539	10,675	1,255	6,138	2,674	850	10,917	21,592
1,241	10,657	2,001	5,190	19,089	3,100	27,256	7,643	3,803	41,802	60,890

Total Households

24,772 65,436 18,404 51,419 160,031 18,058 50,777 19,815 10,915 99,565 259,596

Transit Demand Households - Three Cities

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
7,245	10,931	3,186	13,363	34,724	2,778	1,250	741	1,558	6,328	41,052
3,875	8,992	2,057	6,182	21,106	2,562	1,958	1,001	958	6,479	27,585
1,931	9,832	2,952	8,763	23,477	1,487	4,777	2,834	1,092	10,189	33,667
394	5,029	1,429	3,526	10,378	792	2,746	1,389	508	5,435	15,813
238	3,262	777	2,089	6,366	560	3,997	1,577	594	6,729	13,095
699	5,986	1,036	3,411	11,132	1,321	13,809	4,315	2,828	22,273	33,405

Total Households

14,383 44,032 11,437 37,333 107,184 9,500 28,538 11,856 7,539 57,434 164,617

Transit Demand Households - Three Cities

Housing Cost Burden > 30%

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

Renter					Owner					Total Households
Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
4,983	9,462	2,602	10,230	27,277	1,846	1,076	629	926	4,477	31,754
3,080	7,250	1,304	5,324	16,957	1,049	1,394	880	544	3,867	20,824
1,180	3,010	589	3,130	7,909	354	3,022	1,541	648	5,565	13,474
108	439	240	160	947	204	1,236	296	233	1,969	2,916
138	117	-	35	290	-	978	243	317	1,538	1,828
90	55	32	109	286	131	1,541	188	353	2,214	2,499

Total Households

9,579 20,332 4,767 18,988 53,666 3,584 9,247 3,776 3,022 19,629 73,295

Maricopa County Households by Household Type and Income Level, 2025

Total County Households

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	23,494	44,082	15,103	48,255	130,933	39,288	19,125	7,818	20,314	86,544	217,477
Household Income >30 to <=50% MFI	19,497	45,199	13,124	33,827	111,647	58,907	26,591	13,374	15,866	114,738	226,385
Household Income >50 to <=80% MFI	15,858	55,222	15,202	57,163	143,445	82,630	65,049	25,545	34,267	207,491	350,936
Household Income >80% MFI to <=100% MFI	5,986	28,491	6,395	31,058	71,930	45,070	50,569	15,775	27,129	138,542	210,472
Household Income >100% MFI to <=120% MFI	3,569	21,559	4,239	23,119	52,486	34,069	61,060	15,853	27,152	138,134	190,619
Household Income >120% MFI	9,523	52,191	7,031	51,141	119,887	117,530	380,354	56,952	107,841	662,677	782,564

Total Households

77,927 246,744 61,095 244,562 630,328 377,494 602,747 135,316 232,568 1,348,126 1,978,454

Transit Demand Households - Countywide

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	13,566	15,734	5,010	18,275	52,585	5,703	2,197	1,261	2,423	11,584	64,170
Household Income >30 to <=50% MFI	7,892	12,317	3,514	8,865	32,589	5,641	2,817	1,688	1,292	11,438	44,026
Household Income >50 to <=80% MFI	4,511	16,040	5,166	13,046	38,763	3,350	7,969	4,476	1,823	17,619	56,381
Household Income >80% MFI to <=100% MFI	1,163	8,104	2,210	4,726	16,202	1,576	5,304	2,568	1,050	10,497	26,700
Household Income >100% MFI to <=120% MFI	806	5,437	1,356	3,723	11,322	1,490	6,458	2,813	895	11,655	22,977
Household Income >120% MFI	1,473	11,212	2,105	5,461	20,250	3,681	28,675	8,041	4,001	44,397	64,647

Total Households

29,411 68,842 19,362 54,096 171,711 21,440 53,420 20,847 11,484 107,190 278,902

Transit Demand Households - Three Cities

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	8,601	11,500	3,352	14,058	37,511	3,299	1,315	780	1,639	7,033	44,545
Household Income >30 to <=50% MFI	4,601	9,460	2,164	6,504	22,729	3,042	2,060	1,053	1,008	7,163	29,892
Household Income >50 to <=80% MFI	2,292	10,343	3,106	9,219	24,961	1,765	5,026	2,981	1,148	10,921	35,881
Household Income >80% MFI to <=100% MFI	468	5,291	1,503	3,709	10,972	940	2,889	1,461	534	5,825	16,796
Household Income >100% MFI to <=120% MFI	283	3,431	818	2,197	6,729	665	4,206	1,659	625	7,155	13,884
Household Income >120% MFI	830	6,298	1,090	3,589	11,806	1,569	14,528	4,539	2,976	23,612	35,418

Total Households

17,076 46,324 12,032 39,276 114,708 11,279 30,024 12,474 7,931 61,708 176,416

Transit Demand Households - Three Cities

Housing Cost Burden > 30%

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	5,916	9,955	2,737	10,763	29,371	2,191	1,132	662	975	4,959	34,331
Household Income >30 to <=50% MFI	3,657	7,627	1,371	5,601	18,256	1,245	1,467	926	572	4,210	22,466
Household Income >50 to <=80% MFI	1,401	3,166	620	3,293	8,480	421	3,179	1,621	682	5,902	14,383
Household Income >80% MFI to <=100% MFI	129	461	252	168	1,011	242	1,300	311	245	2,099	3,110
Household Income >100% MFI to <=120% MFI	163	123	-	36	323	-	1,029	255	334	1,618	1,942
Household Income >120% MFI	107	57	34	115	313	156	1,621	198	372	2,347	2,659

Total Households

11,373 21,391 5,015 19,976 57,755 4,256 9,728 3,973 3,179 21,135 78,890

Maricopa County Households by Household Type and Income Level, 2030

Total County Households

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	27,249	46,032	15,771	50,390	139,442	45,567	19,971	8,164	21,213	94,914	234,356
Household Income >30 to <=50% MFI	22,613	47,199	13,705	35,323	118,840	68,323	27,767	13,966	16,568	126,623	245,464
Household Income >50 to <=80% MFI	18,393	57,665	15,875	59,692	151,625	95,838	67,927	26,675	35,783	226,223	377,847
Household Income >80% MFI to <=100% MFI	6,943	29,751	6,677	32,433	75,804	52,273	52,806	16,473	28,329	149,881	225,685
Household Income >100% MFI to <=120% MFI	4,139	22,513	4,427	24,141	55,220	39,515	63,761	16,555	28,353	148,183	203,404
Household Income >120% MFI	11,046	54,500	7,342	53,404	126,292	136,316	397,182	59,472	112,612	705,581	831,873
Total Households	90,382	257,661	63,798	255,382	667,223	437,832	629,414	141,303	242,858	1,451,407	2,118,630

Transit Demand Households - Countywide

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	15,734	16,430	5,232	19,083	56,480	6,615	2,295	1,316	2,530	12,756	69,236
Household Income >30 to <=50% MFI	9,154	12,861	3,670	9,258	34,943	6,542	2,942	1,763	1,349	12,596	47,538
Household Income >50 to <=80% MFI	5,232	16,749	5,395	13,623	40,999	3,886	8,322	4,674	1,904	18,785	59,784
Household Income >80% MFI to <=100% MFI	1,348	8,463	2,308	4,935	17,054	1,828	5,538	2,681	1,097	11,144	28,198
Household Income >100% MFI to <=120% MFI	935	5,677	1,416	3,888	11,916	1,728	6,743	2,937	934	12,343	24,259
Household Income >120% MFI	1,709	11,708	2,198	5,702	21,316	4,269	29,943	8,397	4,178	46,787	68,103
Total Households	34,113	71,888	20,218	56,489	182,708	24,867	55,783	21,769	11,992	114,411	297,119

Transit Demand Households - Three Cities

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	9,976	12,009	3,500	14,680	40,165	3,826	1,374	814	1,712	7,726	47,891
Household Income >30 to <=50% MFI	5,336	9,879	2,260	6,792	24,266	3,528	2,151	1,100	1,053	7,832	32,098
Household Income >50 to <=80% MFI	2,659	10,801	3,244	9,627	26,330	2,047	5,248	3,113	1,199	11,608	37,938
Household Income >80% MFI to <=100% MFI	543	5,525	1,570	3,873	11,511	1,091	3,017	1,526	558	6,191	17,702
Household Income >100% MFI to <=120% MFI	328	3,583	854	2,295	7,060	771	4,392	1,732	653	7,548	14,608
Household Income >120% MFI	963	6,576	1,138	3,747	12,424	1,819	15,171	4,740	3,107	24,837	37,262
Total Households	19,805	48,374	12,564	41,014	121,757	13,082	31,352	13,025	8,282	65,742	187,499

Transit Demand Households - Three Cities

Housing Cost Burden > 30%

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	6,862	10,395	2,858	11,239	31,355	2,541	1,182	691	1,018	5,432	36,787
Household Income >30 to <=50% MFI	4,241	7,965	1,432	5,849	19,487	1,444	1,532	966	597	4,540	24,027
Household Income >50 to <=80% MFI	1,625	3,307	647	3,438	9,017	488	3,320	1,693	712	6,212	15,229
Household Income >80% MFI to <=100% MFI	149	482	264	176	1,070	281	1,357	325	256	2,220	3,290
Household Income >100% MFI to <=120% MFI	190	129	-	38	357	-	1,075	267	349	1,690	2,046
Household Income >120% MFI	124	60	35	120	339	181	1,693	206	388	2,468	2,807
Total Households	13,191	22,337	5,237	20,860	61,624	4,936	10,158	4,149	3,320	22,562	84,187

Maricopa County Households by Household Type and Income Level, 2035

Total County Households

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	30,393	48,121	16,487	52,677	147,678	50,825	20,877	8,534	22,176	102,412	250,091
Household Income >30 to <=50% MFI	25,222	49,342	14,327	36,927	125,817	76,207	29,028	14,599	17,320	137,153	262,971
Household Income >50 to <=80% MFI	20,515	60,282	16,596	62,401	159,794	106,896	71,010	27,886	37,407	243,199	402,994
Household Income >80% MFI to <=100% MFI	7,744	31,102	6,981	33,905	79,731	58,305	55,203	17,220	29,615	160,344	240,074
Household Income >100% MFI to <=120% MFI	4,617	23,535	4,628	25,237	58,017	44,074	66,655	17,306	29,640	157,675	215,692
Household Income >120% MFI	12,320	56,974	7,676	55,828	132,798	152,045	415,210	62,171	117,723	747,150	879,947
Total Households	100,811	269,356	66,693	266,974	703,835	488,352	657,984	147,717	253,881	1,547,934	2,251,769

Transit Demand Households - Countywide

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	17,550	17,176	5,470	19,950	60,145	7,378	2,399	1,376	2,645	13,798	73,943
Household Income >30 to <=50% MFI	10,210	13,445	3,836	9,678	37,169	7,297	3,075	1,843	1,410	13,625	50,795
Household Income >50 to <=80% MFI	5,836	17,510	5,640	14,241	43,226	4,334	8,700	4,886	1,990	19,910	63,136
Household Income >80% MFI to <=100% MFI	1,504	8,847	2,413	5,159	17,922	2,039	5,790	2,803	1,147	11,778	29,700
Household Income >100% MFI to <=120% MFI	1,043	5,935	1,480	4,064	12,523	1,927	7,049	3,071	977	13,024	25,547
Household Income >120% MFI	1,906	12,239	2,298	5,961	22,403	4,762	31,302	8,778	4,367	49,209	71,613
Total Households	38,049	75,151	21,136	59,053	193,389	27,736	58,315	22,757	12,536	121,345	314,734

Transit Demand Households - Three Cities

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	11,127	12,554	3,659	15,347	42,687	4,267	1,436	851	1,790	8,344	51,031
Household Income >30 to <=50% MFI	5,952	10,327	2,362	7,100	25,741	3,935	2,249	1,150	1,101	8,434	34,175
Household Income >50 to <=80% MFI	2,965	11,291	3,391	10,064	27,711	2,283	5,486	3,255	1,254	12,278	39,989
Household Income >80% MFI to <=100% MFI	606	5,776	1,641	4,049	12,072	1,217	3,153	1,595	583	6,548	18,620
Household Income >100% MFI to <=120% MFI	366	3,746	892	2,399	7,403	860	4,591	1,811	683	7,945	15,348
Household Income >120% MFI	1,074	6,875	1,189	3,917	13,056	2,029	15,859	4,955	3,248	26,092	39,148
Total Households	22,091	50,569	13,134	42,875	128,670	14,592	32,775	13,617	8,658	69,642	198,311

Transit Demand Households - Three Cities

Housing Cost Burden > 30%

Household by Type and Income	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	7,653	10,867	2,988	11,749	33,258	2,835	1,235	723	1,064	5,857	39,115
Household Income >30 to <=50% MFI	4,731	8,326	1,497	6,114	20,668	1,611	1,601	1,010	625	4,847	25,515
Household Income >50 to <=80% MFI	1,813	3,457	677	3,594	9,541	544	3,470	1,770	744	6,528	16,069
Household Income >80% MFI to <=100% MFI	166	504	276	184	1,129	314	1,419	340	268	2,340	3,470
Household Income >100% MFI to <=120% MFI	211	135	-	40	386	-	1,124	279	364	1,767	2,153
Household Income >120% MFI	138	63	37	126	363	202	1,770	216	406	2,593	2,956
Total Households	14,713	23,351	5,474	21,807	65,345	5,505	10,619	4,337	3,470	23,932	89,277

Maricopa County Households by Household Type and Income Level, 2040

Total County Households

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	33,420	49,979	17,123	54,711	155,234	55,888	21,683	8,864	23,032	109,467	264,701
Household Income >30 to <=50% MFI	27,735	51,246	14,880	38,352	132,214	83,798	30,148	15,163	17,988	147,098	279,311
Household Income >50 to <=80% MFI	22,559	62,610	17,236	64,810	167,215	117,545	73,752	28,962	38,851	259,110	426,325
Household Income >80% MFI to <=100% MFI	8,515	32,302	7,250	35,214	83,281	64,113	57,334	17,885	30,759	170,091	253,372
Household Income >100% MFI to <=120% MFI	5,077	24,443	4,806	26,211	60,538	48,465	69,228	17,974	30,784	166,452	226,990
Household Income >120% MFI	13,547	59,174	7,972	57,983	138,676	167,191	431,240	64,572	122,268	785,271	923,947

Total Households

110,854 279,755 69,268 277,281 737,158 537,000 683,386 153,420 263,683 1,637,489 2,374,647

Transit Demand Households - Countywide

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	19,298	17,839	5,681	20,720	63,538	8,113	2,491	1,429	2,747	14,781	78,319
Household Income >30 to <=50% MFI	11,227	13,964	3,984	10,052	39,227	8,024	3,194	1,914	1,464	14,597	53,824
Household Income >50 to <=80% MFI	6,417	18,186	5,857	14,791	45,251	4,766	9,036	5,075	2,067	20,943	66,194
Household Income >80% MFI to <=100% MFI	1,654	9,188	2,506	5,358	18,706	2,242	6,013	2,911	1,191	12,357	31,063
Household Income >100% MFI to <=120% MFI	1,147	6,164	1,537	4,221	13,070	2,119	7,322	3,189	1,014	13,644	26,714
Household Income >120% MFI	2,095	12,711	2,386	6,191	23,385	5,236	32,511	9,117	4,536	51,400	74,784

Total Households

41,839 78,053 21,952 61,333 203,176 30,499 60,567 23,636 13,020 127,722 330,898

Transit Demand Households - Three Cities

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	12,236	13,039	3,800	15,939	45,014	4,693	1,491	884	1,859	8,927	53,940
Household Income >30 to <=50% MFI	6,545	10,726	2,453	7,374	27,098	4,327	2,336	1,194	1,143	9,000	36,098
Household Income >50 to <=80% MFI	3,261	11,727	3,522	10,452	28,962	2,511	5,698	3,380	1,302	12,892	41,853
Household Income >80% MFI to <=100% MFI	666	5,999	1,704	4,205	12,575	1,338	3,275	1,657	606	6,875	19,450
Household Income >100% MFI to <=120% MFI	402	3,891	927	2,491	7,711	946	4,768	1,881	709	8,304	16,015
Household Income >120% MFI	1,181	7,140	1,235	4,069	13,625	2,231	16,472	5,147	3,374	27,223	40,849

Total Households

24,291 52,522 13,642 44,531 134,985 16,045 34,040 14,142 8,993 73,221 208,206

**Transit Demand Households - Three Cities
 Housing Cost Burden > 30%**

Household by Type and Income

Household Income <=30% MFI
 Household Income >30 to <=50% MFI
 Household Income >50 to <=80% MFI
 Household Income >80% MFI to <=100% MFI
 Household Income >100% MFI to <=120% MFI
 Household Income >120% MFI

	Renter					Owner					Total Households
	Elderly	Small Related	Large Related	All Other	Total Renters	Elderly	Small Related	Large Related	All Other	Total Owners	
Household Income <=30% MFI	8,416	11,287	3,104	12,203	35,009	3,117	1,283	750	1,105	6,256	41,265
Household Income >30 to <=50% MFI	5,202	8,648	1,555	6,350	21,755	1,771	1,663	1,049	649	5,133	26,887
Household Income >50 to <=80% MFI	1,994	3,590	703	3,733	10,020	598	3,604	1,838	773	6,813	16,833
Household Income >80% MFI to <=100% MFI	183	523	286	191	1,183	345	1,474	353	278	2,450	3,633
Household Income >100% MFI to <=120% MFI	233	140	-	41	414	-	1,167	289	378	1,835	2,249
Household Income >120% MFI	152	65	38	130	385	222	1,838	224	421	2,706	3,091

Total Households

16,179 24,253 5,686 22,648 68,765 6,054 11,029 4,504 3,604 25,192 93,957