

Visualizing Data

to Support Regional Policy and Economic Development



*“A good sketch is better
than a long speech”*

-Napoleon Bonaparte

*“A good sketch is better
than a long spreadsheet”*

-Napoleon Bonaparte

Background

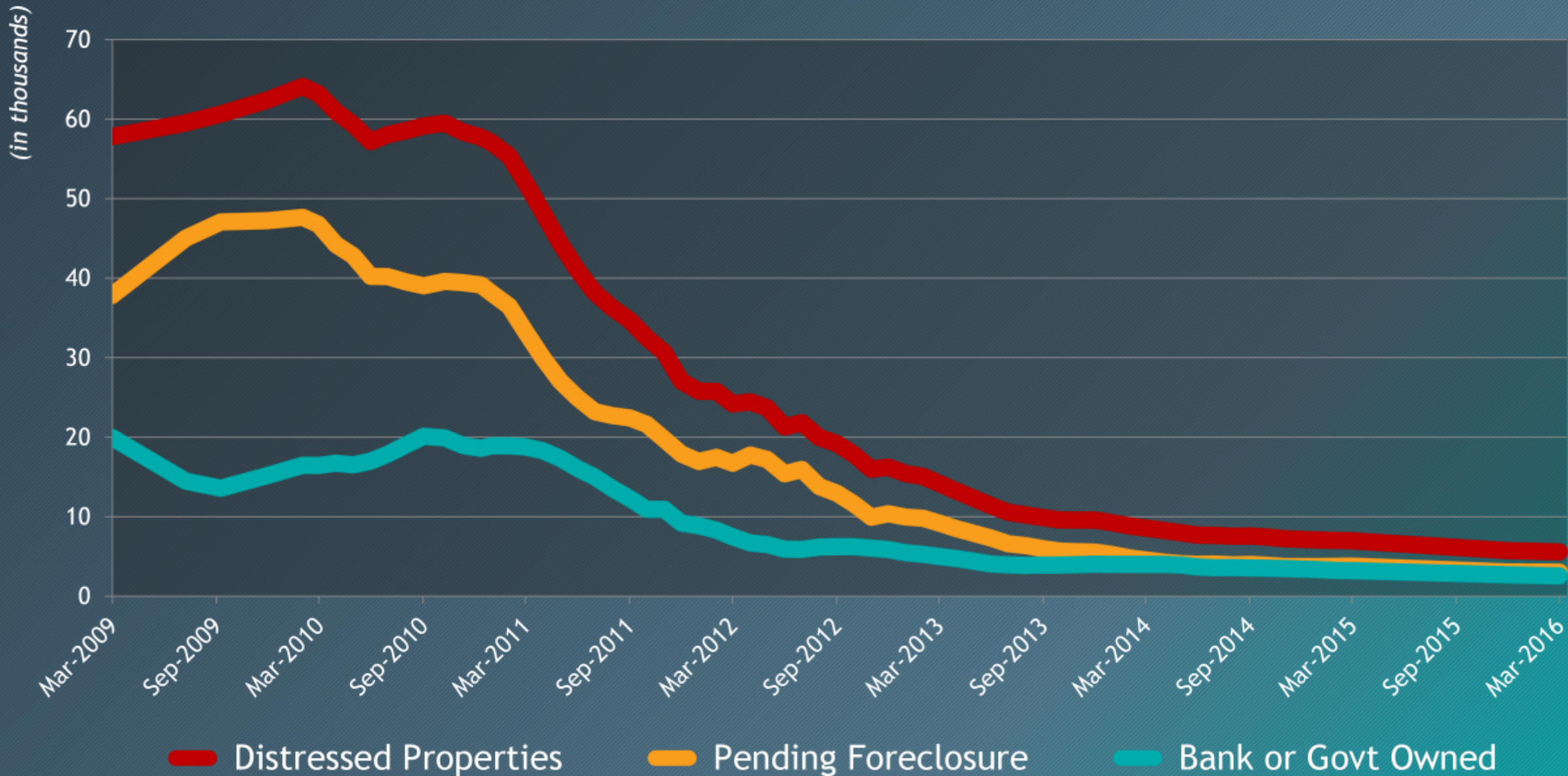


MAG Region: By the Numbers



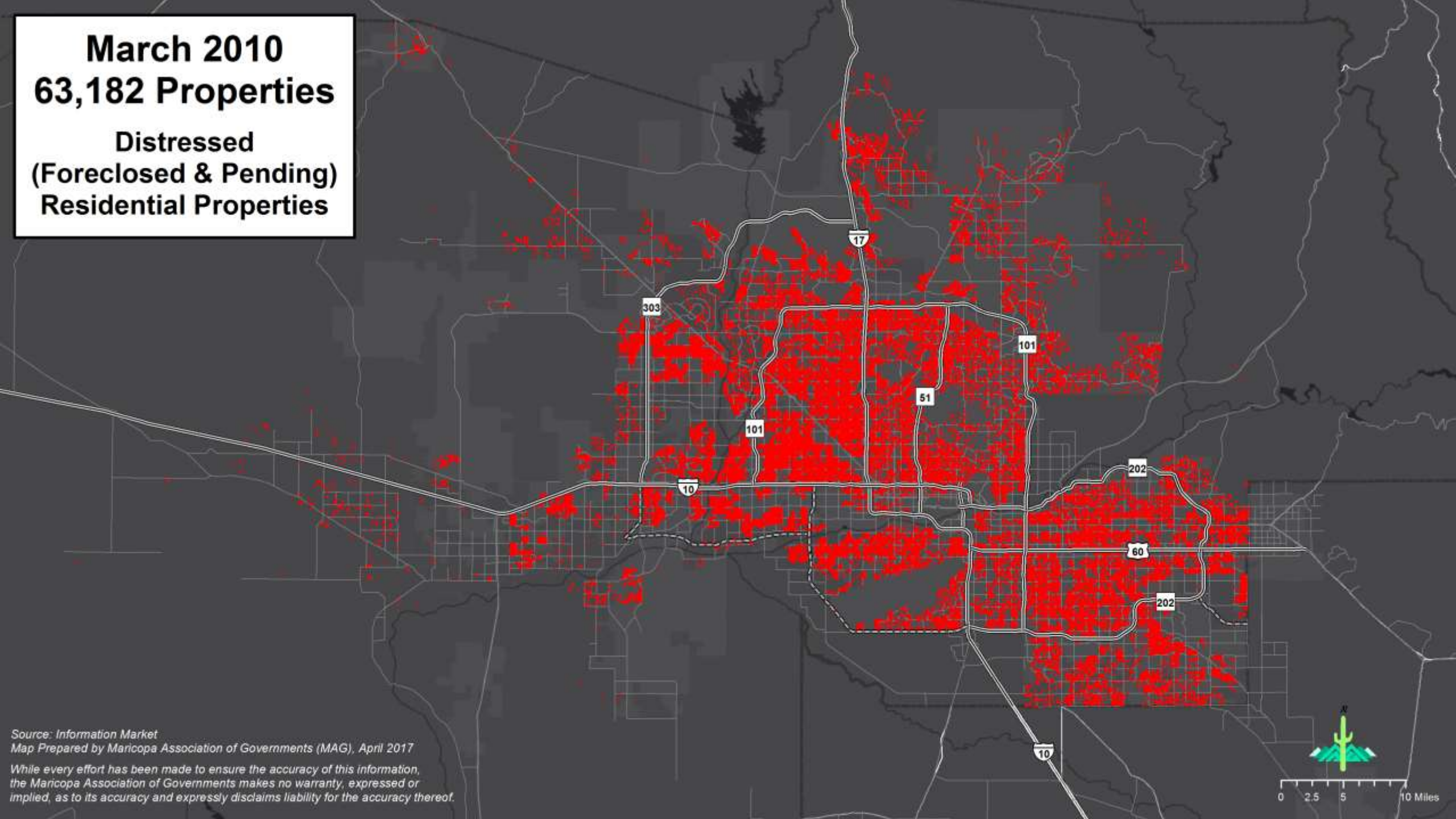
4.163 million
of people
of 14,000 businesses

Distressed Properties in Maricopa County: March 2009 - March 2016



March 2010 63,182 Properties

Distressed
(Foreclosed & Pending)
Residential Properties



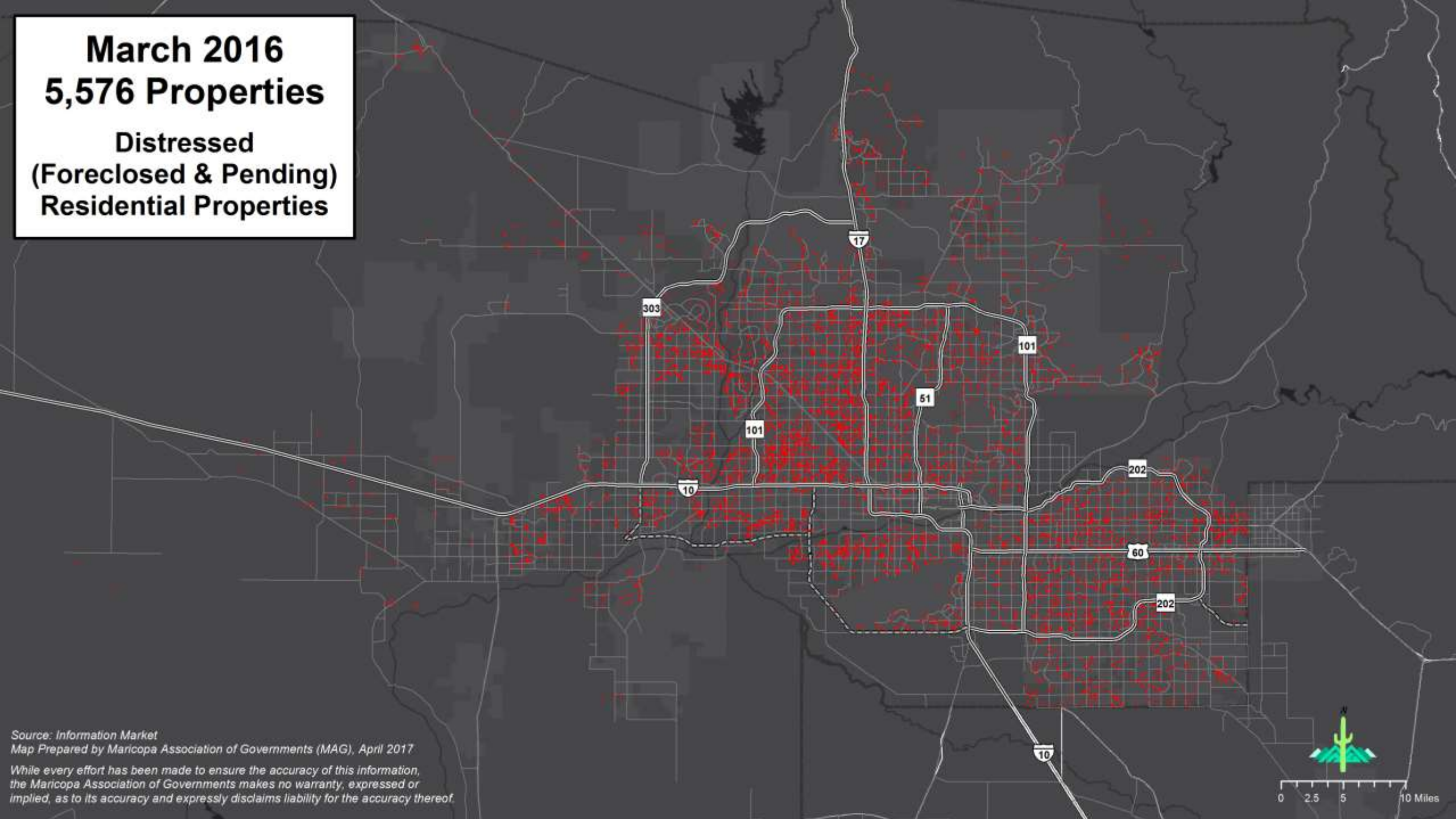
Source: Information Market

Map Prepared by Maricopa Association of Governments (MAG), April 2017

While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.

March 2016
5,576 Properties

Distressed
(Foreclosed & Pending)
Residential Properties



Source: Information Market

Map Prepared by Maricopa Association of Governments (MAG), April 2017

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Renewed Focus on Data Analytics



FILE Home Insert Page Layout Formulas Data Review View Developer INQUIRE ACROBAT XL Toolbox NG

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General

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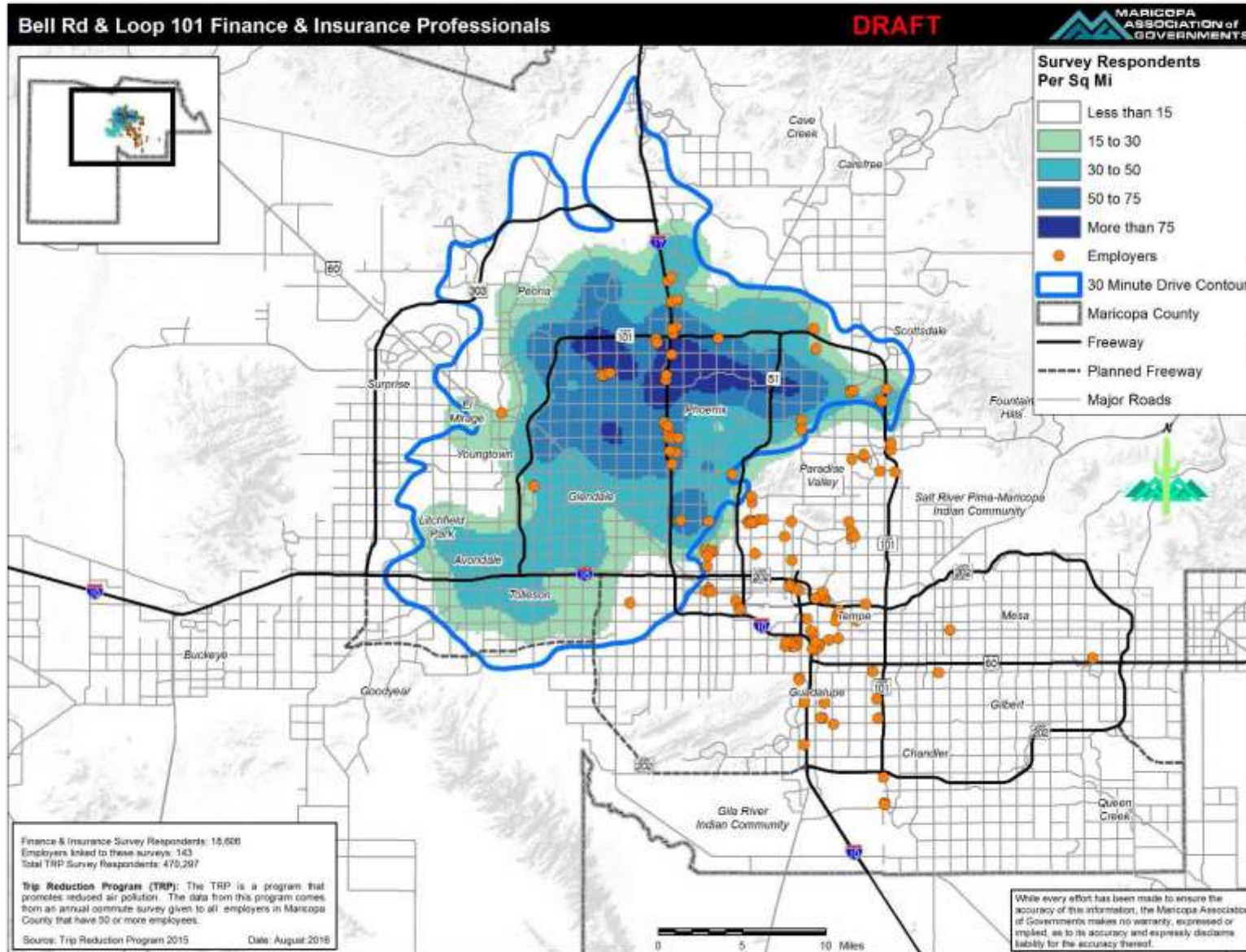
AutoSum

MagId	EmpName	AltName	Address	Jurisdiction	State	Zip	County	Employees	Latitude	Longitude	Cluster	SubCluster	Naics2	NAICS2_DES	Naics3	NAICS3
35686	Arizona State University	Asu Main Emp	400 E Orange	TEMPE	AZ	85287	MARICOPA	8811	879786.29882	694786.20557	Education	Education	61	Educational Se	611	Educa
35801	Intel Corporation	Chandler Camp	5000 W Chandl	CHANDLER	AZ	85226	MARICOPA	6335	839621.45724	695418.54715	High Tech Man	Semi-Conducto	33	Manufacturing	334	Comp
88733	Intel Corporation	Ocotillo Camp	4500 S Dobson	CHANDLER	AZ	85248	MARICOPA	4933	815293.39402	710233.64187	High Tech Man	Semi-Conducto	33	Manufacturing	334	Comp
69921	Banner Health	Banner Desert	1400 S Dobson	MESA	AZ	85202	MARICOPA	4866	869732.49216	712037.67435	Health Care	Health Care	62	Health Care an	621	Amb
36323	United States Department Of The Air Force	Luke Afb 56th	13970 W Lightn	GLENDALE	AZ	85309	MARICOPA	4467	925802.69235	562720.31091	Government, S	Government	92	Public Adminis	928	Natio
36295	U Haul	Uhaul Internat	2727 N Central	PHOENIX	AZ	85004	MARICOPA	3964	901714.30024	652246.90478	Business Svcs	Advanced Busi	55	Management c	551	Mana
76963	Banner Health	Banner Corpor	1441 N 12th St	PHOENIX	AZ	85006	MARICOPA	3913	896400.15109	657720.44866	Health Care	Health Care	62	Health Care an	621	Amb
212351	Banner Health	Banner Good S	1111 E Mcdowe	PHOENIX	AZ	85006	MARICOPA	3800	896489.91371	656655.3924	Health Care	Health Care	62	Health Care an	621	Amb
182769	St Josephs Hospital	St Josephs Hos	350 W Thomas	PHOENIX	AZ	85013	MARICOPA	3757	902980.71897	650029.81378	Health Care	Health Care	62	Health Care an	622	Hosp
35889	Boeing Co	E Mcdowell	5000 E Mcdowe	MESA	AZ	85215	MARICOPA	3717	899255.7799	758547.40219	High Tech Man	Aerospace	33	Manufacturing	336	Tran
60001	Mayo Clinic	Mayo Hospital	5777 E Mayo Bl	PHOENIX	AZ	85054	MARICOPA	3621	967287.22159	687767.67958	Health Care	Health Care	62	Health Care an	622	Hosp
36570	Bank Of America	Phoenix Camp	1825 E Buckeye	PHOENIX	AZ	85034	MARICOPA	3360	885462.41542	662099.81851	Finance, Insura	Financial	52	Finance and In	522	Cred
35699	Carl T Hayden Va Medical Center	Carl T Hayden	650 E Indian Sc	PHOENIX	AZ	85012	MARICOPA	3124	908374.1465	640695.22451	Health Care	Health Care	62	Health Care an	622	Hosp
38268	Honeywell	Deer Valley	21111 N 19th A	PHOENIX	AZ	85027	MARICOPA	3000	974786.02713	645124.66316	High Tech Man	Aerospace	33	Manufacturing	336	Tran
92988	Usaa Phoenix Office	Usaa	1 N Norterra Pl	PHOENIX	AZ	85085	MARICOPA	3000	989626.30257	640695.22451	Finance, Insura	Financial	52	Finance and In	522	Cred
72265	General Dynamics C4 Systems Inc	Scottsdale	8201 E Mcdowe	SCOTTSDALE	AZ	85257	MARICOPA	3000	895577.36173	703769.7588	Business Svcs	Advanced Busi	54	Professional, S	541	Prof
92770	Banner Health	Banner Thunde	5555 W Thunde	GLENDALE	AZ	85304	MARICOPA	2856	949317.28677	619983.32228	Health Care	Health Care	62	Health Care an	622	Hosp
62974	Discover Financial Services	Discover Finan	2402 W Beardsl	PHOENIX	AZ	85027	MARICOPA	2818	971895.66743	641061.83073	Finance, Insura	Financial	52	Finance and In	522	Cred
36001	Cvs Pharmacy Inc	Cvs Caremark C	9501 E Shea Blv	SCOTTSDALE	AZ	85258	MARICOPA	2800	938756.21139	712302.04193	Business Svcs	Advanced Busi	55	Management c	551	Mana
35674	Us Airways Inc	Sky Harbor Airp	3400 E Sky Har	PHOENIX	AZ	85034	MARICOPA	2585	885711.93853	672611.11737	Transportation	Transportation	48	Transportation	481	Air Tr
92660	Salt River Pima Maricopa Indian Community	Talking Stick C	9800 E Indian B	SALT RIVER PIN	AZ	85256	MARICOPA	2500	924075.896640457	714276.854116701	Hospitality, To	Hospitality, To	71	Arts, Entertain	713	Amus
36114	Honorhealth	Osborn Campu	7400 E Osborn	SCOTTSDALE	AZ	85251	MARICOPA	2500	905258.55234	698092.11858	Health Care	Health Care	62	Health Care an	622	Hosp
84040	American Express	Amex Service C	20022 N 31st Av	PHOENIX	AZ	85027	MARICOPA	2500	970254.63167	635635.15064	Finance, Insura	Financial	52	Finance and In	522	Cred
182573	Vanguard	Vanguard Grp f	14321 N Norths	SCOTTSDALE	AZ	85260	MARICOPA	2500	951202.6094	706177.49381	Finance, Insura	Financial	52	Finance and In	525	Fur
270247	Bank Of America		2565 W Chandl	CHANDLER	AZ	85224	MARICOPA	2494	838554.81567	708984.83793	Business Svcs	Business Supp	56	Administrative	561	Admin
299107	Amazoncom	Amazoncom P	5050 W Mohav	PHOENIX	AZ	85043	MARICOPA	2494	884956.27962	623924.18325	Retail	Retail	45	Retail Trade - F	454	Nons
35684	Pinnacle West Capital Corporation	Aps Palo Verde	5801 S Winters	MARICOPA CO	AZ	85354	MARICOPA	2330	871075.70377	409707.89042	Resource-Dep	Utilities	22	Utilities	221	Util
429995	State Of Arizona	Corrections De	1305 E Butte Av	FLORENCE	AZ	85132	PINAL	2300	739168.200852245	867199.047155119	Government, S	Government	92	Public Adminis	922	Just
65782	Charles Schwab Co Inc	Phoenix Peak E	2423 E Lincoln	PHOENIX	AZ	85016	MARICOPA	2292	920598.82776	665744.74659	Business Svcs	Advanced Busi	55	Management c	551	Man
36042	Phoenix Childrens Hospital	Pch E Thomas	1919 E Thomas	PHOENIX	AZ	85006	MARICOPA	2262	901789.07404	662262.2985	Health Care	Health Care	62	Health Care an	622	Hosp
38281	Banner Health	Banner Baywo	6644 E Baywoo	MESA	AZ	85206	MARICOPA	2170	877241.82064	769420.0061	Health Care	Health Care	62	Health Care an	621	Amb
38262	Honeywell	Enginesms 401	111 S 34th St	PHOENIX	AZ	85034	MARICOPA	2166	890108.58428	672838.60904	High Tech Man	Aerospace	33	Manufacturing	336	Trans
35871	Maricopa Integrated Health Systems	Maricopa Integ	2601 E Rooseve	PHOENIX	AZ	85008	MARICOPA	2133	894023.28118	666578.58252	Health Care	Health Care	62	Health Care an	622	Hosp
64333	American Express	American Expr	18850 N 56th St	PHOENIX	AZ	85054	MARICOPA	2100	967026.99344	686033.05739	Finance, Insura	Financial	52	Finance and In	522	Cred
88741	Apollo Group Inc	Online Campu	3157 E Elwood	PHOENIX	AZ	85034	MARICOPA	2000	879295.97402	670247.52761	Education	Education	61	Educational Se	611	Educa
226517	Abm Industries Inc		2631 S Rooseve	TEMPE	AZ	85282	MARICOPA	2000	873393.3483	690669.473153	Business Svcs	Business Supp	56	Administrative	561	Admin
36115	Honorhealth	Shea Campus	9003 E Shea Blv	SCOTTSDALE	AZ	85258	MARICOPA	1975	938368.19347	709520.02387	Health Care	Health Care	62	Health Care an	622	Hosp
35665	Arizona State University	Downtown Em	502 E Monroe S	PHOENIX	AZ	85004	MARICOPA	1938	891605.37197	654349.61387	Education	Education	61	Educational Se	611	Educa
35888	Mayo Clinic	Mayo Clinic Sc	13400 E Shea Bl	SCOTTSDALE	AZ	85259	MARICOPA	1884	940708.51228	737396.10887	Health Care	Health Care	62	Health Care an	621	Amb
37321	Jpmorgan Chase Bank National Association	Headquartersb	241 N Central A	PHOENIX	AZ	85004	MARICOPA	1800	891613.22957	652254.76898	Finance, Insura	Financial	52	Finance and In	522	Cred

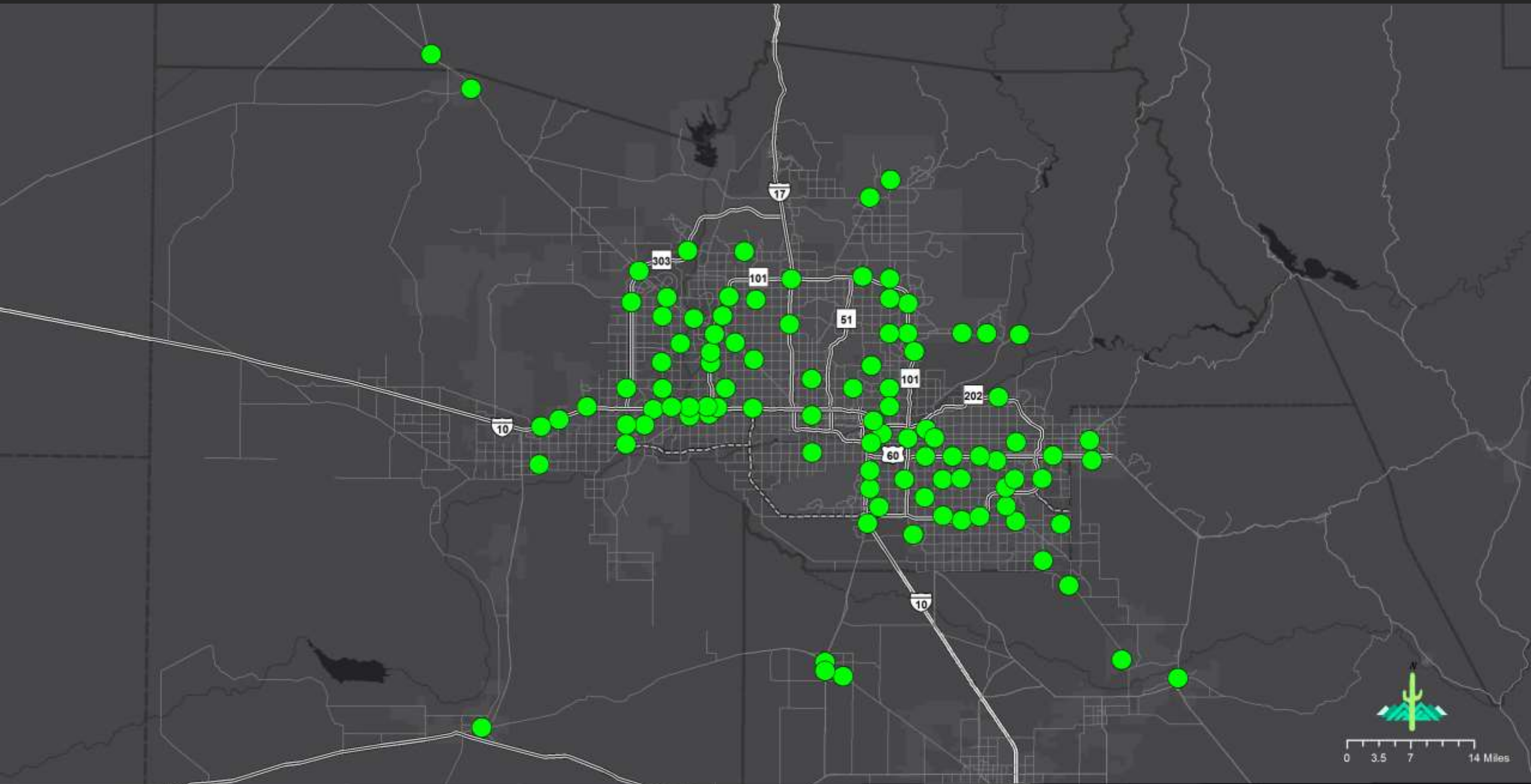
“Data just don’t leap off the page and convert themselves into high-quality, useful information.”

-Slotnick & Orland

Travel Time within 30 Minutes to Bell Road and Loop 101 Finance and Insurance



Commute Shed Intersections



Graphic Design

S2101: VETERAN STATUS
2015 American Community Survey 1-Year
 Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.
 Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

Subject	Arizona							
	Veterans		Percent		Nonveterans		Percent	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Civilian population 18 years and over	488,758	+/-9,342	9.4%	+/-0.2	4,700,162	+/-9,646	90.6%	+/-0.2
SEX								
Male	448,524	+/-8,692	91.8%	+/-0.6	2,097,828	+/-8,881	44.6%	+/-0.1
Female	40,234	+/-3,112	8.2%	+/-0.6	2,602,334	+/-3,530	55.4%	+/-0.1
AGE								
18 to 34 years	40,974	+/-3,791	8.4%	+/-0.7	1,530,837	+/-4,753	32.6%	+/-0.1
35 to 54 years	106,596	+/-5,870	21.8%	+/-0.9	1,576,712	+/-5,910	33.5%	+/-0.1
55 to 64 years	82,568	+/-3,570	16.9%	+/-0.7	731,229	+/-3,902	15.6%	+/-0.1
65 to 74 years	132,954	+/-3,664	27.2%	+/-0.7	519,894	+/-4,044	11.1%	+/-0.1
75 years and over	125,656	+/-3,766	25.7%	+/-0.7	341,490	+/-3,678	7.3%	+/-0.1
65 and over	258,620		52.9%		861,384		18.4%	
MEDIAN INCOME IN THE PAST 12 MONTHS (IN 2015)								
Civilian population 18 years and over with income	36,837	+/-623	(X)	(X)	26,071	+/-216	(X)	(X)
Male	37,248	+/-707	(X)	(X)	31,048	+/-337	(X)	(X)
Female	31,467	+/-1,456	(X)	(X)	22,253	+/-246	(X)	(X)
EDUCATIONAL ATTAINMENT								
Civilian population 25 years and over	480,885	+/-9,116	(X)	(X)	4,044,440	+/-9,697	(X)	(X)
Less than high school graduate	24,095	+/-2,391	5.0%	+/-0.5	606,844	+/-14,460	15.0%	+/-0.4
High school graduate (includes equivalency)	114,076	+/-4,755	23.7%	+/-1.0	995,651	+/-15,130	24.6%	+/-0.4
Some college or associate's degree	203,000	+/-7,162	42.2%	+/-1.1	1,328,776	+/-17,236	32.9%	+/-0.4
Bachelor's degree or higher	139,714	+/-4,990	29.1%	+/-0.9	1,113,169	+/-14,562	27.5%	+/-0.4
EMPLOYMENT STATUS								
Civilian population 18 to 64 years	230,138	+/-7,744	(X)	(X)	3,838,778	+/-8,122	(X)	(X)
Labor force participation rate	(X)	(X)	74.1%	+/-1.5	(X)	(X)	72.5%	+/-0.4
Civilian labor force 18 to 64 years	170,427	+/-7,045	(X)	(X)	2,783,594	+/-16,501	(X)	(X)
Unemployment rate	(X)	(X)	5.0%	+/-0.9	(X)	(X)	6.8%	+/-0.3
POVERTY STATUS IN THE PAST 12 MONTHS								
Civilian population 18 years and over for whom	482,054	+/-9,284	(X)	(X)	4,580,688	+/-9,479	(X)	(X)
Income in the past 12 months below poverty	34,231	+/-3,069	7.1%	+/-0.6	730,309	+/-18,722	15.9%	+/-0.4
Income in the past 12 months at or above poverty	447,823	+/-8,428	92.9%	+/-0.6	3,850,379	+/-20,756	84.1%	+/-0.4
DISABILITY STATUS								
Civilian population 18 years and over for whom	482,054	+/-9,284	(X)	(X)	4,580,688	+/-9,479	(X)	(X)
With any disability	143,119	+/-5,029	29.7%	+/-0.9	658,311	+/-12,971	14.4%	+/-0.2
Without any disability	338,935	+/-8,255	70.3%	+/-0.9	3,922,377	+/-15,557	85.6%	+/-0.2



STATE OF ARIZONA - 2015 VETERAN QUICK FACTS

Veterans

53%
65 Years or Older

42%
Some college or Associate's

29%
Bachelor's Degree or higher

74%
In the labor force

5.0%
Unemployed

7.1%
Income Below Poverty

30%
With Any Disability

Nonveterans

18%
65 Years or Older

33%
Some college or Associate's

28%
Bachelor's Degree or higher

73%
In the labor force

6.8%
Unemployed

15.9%
Income Below Poverty

14%
With Any Disability

Sources: U.S. Census Bureau, 2015 American Community Survey (ACS) 1-Year Estimates. Prepared by Maricopa Association of Governments, www.azmag.gov
 Notes: Age percentages are for the population 18 years and older. Educational Attainment percentages are for the population 25 years and older. Labor Force percentages are for civilian population ages 18 to 64. Poverty is derived using the Federal Poverty Guidelines. Poverty based on reported income of the civilian population ages 18 years and older for whom poverty status is determined. Disability status is for the civilian non-institutionalized population ages 18 and older. Data are estimates based on sample surveys and subject to error. Refer to www.census.gov/acs for more details.

Graphic Design

PROJECT INSURE
West Valley Pro: Labor Analytics - Financial Services
Glendale, Arizona

West Valley PRO
Professional Resources
for Occupational Data

West Valley Population Quick Hits

Population	1.5 Million
Working Age Population	960,000
Median Worker Age	39.0
Some College or Associate's Degree	330,000
Bachelor's Degree or Higher	198,000
Professional Workers Commuting Out of West Valley	69%
New Employer Opportunity Gap in Finance/ Insurance Hiring	280%

30 Minute Commute Shed Quick Hits: Loop 101 & Bell Road

Population	1.5 Million
Working Age Population	1 Million
Total Management, Business & Financial Occupations	102,993
Management Occupations	65,840
Business & Financial Operations Occupations	37,153
Total Arizona State University Business Alumni	10,370
Business Graduates (Accountancy, Business, Finance, Marketing) 1980-1994	3,156
Business Graduates (Accountancy, Business, Finance, Marketing) 1995-2004	3,207
Business Graduates (Accountancy, Business, Finance, Marketing) 2005-2014	4,007

3 Hour AM Peak 30 Minute Travel Time Contours To Loop 101 & Bell Rd

West Valley Pro



MARICOPA ASSOCIATION of GOVERNMENTS

West Valley Worker Profile

1.5 Million People Live in the West Valley

- 960,000 Working Age Population
- 330,000 Some College or Associate's Degree
- 198,000 Bachelor's Degree or Higher

- 39 Median Age of Workers Living in the West Valley
- 69% Workers Commuting Out of the West Valley

By The Numbers: 30 Minute Commute Shed

- 1.5 Million Resident Population in this Commute Shed
- 1.1 Million Working Age Population (16 to 64)
- 13.6% Workers Commuting more than 45 Minutes

Worker Occupations

Management, Business, and Financial Occupations	102,993
Management	65,840
Business and Financial Operations	37,153

College Alumni

Arizona State University Business Alumni	10,370
Business Graduates: 2005 to 2014	4,007
Business Graduates: 1995 to 2004	3,207
Business Graduates: 1980 to 1994	3,156

Source: U.S. Census Bureau, 2014 American Community Survey 5-year Estimates, Maricopa County Top Redaction Program
Prepared by Maricopa Association of Governments 2016

Graphic Design

Demographic Profile: 2010 Navajo Nation Reservation and Off-Reservation Trust Land (Arizona part)

Subject	Number	Percent	Subject	Number	Percent
Total Population	101,835	100.0	HISPANIC OR LATINO ORIGIN AND RACE	101,835	100.0
SEX AND AGE			Total Population	101,835	100.0
Male	50,071	49.3	Hispanic or Latino (of any race)	2,003	2.0
Female	51,764	50.8	Mexican	1,419	1.4
Under 5 Years	9,008	8.8	Puerto Rican	97	0.1
5 to 9 Years	9,164	9.0	Cuban	13	0.0
10 to 14 Years	8,811	8.6	Other Hispanic or Latino [4]	474	0.5
15 to 19 Years	10,664	10.5	Not Hispanic or Latino	99,832	98.0
20 to 24 Years	7,676	7.5	White alone	2,109	2.1
25 to 34 Years	11,704	11.5			
35 to 44 Years	11,549	11.4	RELATIONSHIP		
45 to 54 Years	13,027	12.8	Total Population	101,835	100.0
55 to 59 Years	4,562	4.5	In household	101,299	99.5
60 to 64 Years	4,129	4.1	Householder	29,232	28.7
65 to 74 Years	5,673	5.6	Spouse [1]	11,562	11.4
75 to 84 Years	3,110	3.1	Child	38,797	38.1
85 Years and over	1,009	1.0	Own child under 18 years	23,689	23.3
Median Age (years)	28.8	(X)	Other relatives	18,146	17.8
18 Years and over	67,252	66.0	Under 18 years	10,536	10.3
Male	32,500	32.0	Nonrelatives	3,567	3.5
Female	34,654	34.0	Unmarried partner	2,601	2.6
21 Years and over	61,271	60.3	In group quarters	636	0.6
62 Years and over	12,018	11.8	Institutionalized population	82	0.1
65 Years and over	9,797	9.6	Noninstitutionalized population	454	0.4
Male	4,151	4.1			
Female	5,646	5.5	HOUSEHOLD BY TYPE	29,232	100.0
RACE			Total households (families) [2]	21,829	75.0
One race	100,231	98.4	Family households (families) [2]	10,444	35.7
White	2,305	2.3	With own children under 18 years	11,562	39.6
Black or African American	137	0.1	With own children under 18 years	5,738	19.0
American Indian or Alaska Native	97,348	95.8	Female householder, no husband present	7,700	26.0
Asian	241	0.2	With own children under 18 years	3,558	12.2
Asian Indian	34	0.0	Nonfamily households [3]	7,297	25.0
Chinese	17	0.0	Householder living alone	6,523	22.3
Japanese	138	0.1	Householder 65 years and over	1,967	6.7
Korean	9	0.0	Households with individuals under 18 years	14,322	49.0
Malay	4	0.0	Households with individuals 65 years and over	7,621	26.1
Other Asian [1]	23	0.0	Average household size	3.47	(X)
Native Hawaiian and Other Pacific Islander	25	0.0	Average family size [3]	4.12	(X)
Native Hawaiian	10	0.0			
Guamanian or Chamorro	6	0.0	HOUSING OCCUPANCY		
Samoan	7	0.0	Total housing units	38,272	100.0
Other Pacific Islander [2]	2	0.0	Occupied housing units	29,232	76.4
Some other race	180	0.2	Vacant housing units	9,040	23.6
Two or more races	1,568	1.5	For seasonal, recreational or occasional use	4,251	11.2
Race alone or in combination with one or more other races: [3]			Homeowner vacancy rate (percent) [7]	0.0	(X)
White	3,348	3.3	Rental vacancy rate (percent) [8]	8.4	(X)
Black or African American	402	0.4			
American Indian or Alaskan Native	98,651	97.1	HOUSING TENURE		
Asian	352	0.3	Occupied housing units	29,232	100.0
Native Hawaiian and Other Pacific Islander	75	0.1	Owner-occupied housing units	21,774	74.5
Some other race	370	0.4	Renter-occupied housing units	7,458	25.5
			Average household size of owner-occupied units	3.47	(X)
			Average household size of renter-occupied units	3.46	(X)

Notes:

(1) Not applicable. (2) Other Asian alone, or two or more Asian categories; (3) Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories; (4) In combination with one or more of the other races listed. The six categories may add to more than 100 percent because individuals may report more than one race; (5) This category is composed of people whose origins are from the Dominican Republic, Spain, and Spanish-speaking Central or South American countries. It also includes general origin responses such as "Latino" or "Hispanic." [6] "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were added during processing to "unmarried partner." [7] "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples. Same-sex couple households are included in the family households category if there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no members of the household present are tabulated as "unfamily households." "Nonfamily households" consist of people living alone and households where the householder is not related to any other member of the household. [8] The homeowner vacancy rate is the proportion of the homeowner inventory that is vacant "for sale." It is computed by dividing the total number of vacant units "for sale only" by the sum of owner-occupied units, vacant units that are "for sale only," and vacant units that have been sold but not yet occupied, and then multiplying by 100. [9] The rental vacancy rate is the proportion of the rental inventory that is vacant "for rent." It is computed by dividing the total number of vacant units "for rent" by the sum of the renter-occupied units, vacant units that are "for rent," and vacant units that have been rented but not yet occupied, and then multiplying by 100.

Navajo Nation Demographic Profile

Land Area

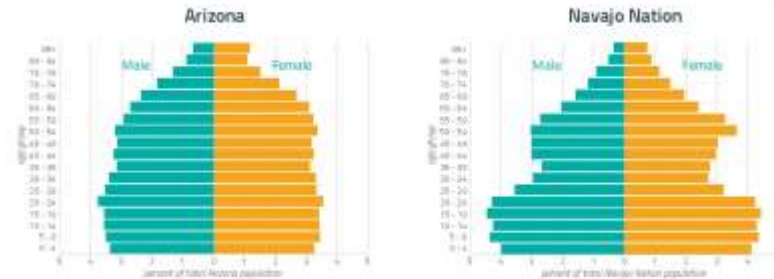
Arizona has a land area of about 114,000 square miles. Just over 27 percent of that area, or about 31,000 square miles, is Tribal Lands. The Navajo Nation is the largest in Arizona with almost 16,000 square miles of land in the state. The Nation also crosses into Utah and New Mexico, for a total land area of about 24,000 square miles.



Largest Land Area Among All Arizona Tribal Lands



Age Distribution



Educational Attainment



Commute Shed Analytics Central Avenue and Van Buren Street for the population age 15 years and older



ASU and UofA Graduates by Degree

Category	ASU	UofA
Ph.D.	1,200	1,200
Master's	2,500	2,500
Doctorate	3,500	3,500
Professional	4,500	4,500
Other	5,500	5,500



Commute Shed Analytics Central Avenue and Van Buren Street Top Employers

Employer	Jobs
Target	1,200
Wal-Mart	1,000
City of Phoenix	800
Phoenix Fire Department	700
Phoenix Police Department	600
Phoenix Public Schools	500
Phoenix Health Care	400
Phoenix Community College	300
Phoenix Convention Center	200
Phoenix Convention Center	100



Top 10 Industry Clusters by Jobs

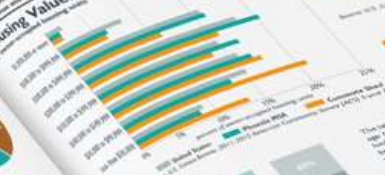
Industry Cluster	Jobs
Business Services	1,200
Administrative Support	1,000
Health Care	800
Education	700
Retail	600
Food Service	500
Construction	400
Manufacturing	300
Transportation	200
Other	100



Contact Information
City of Phoenix
150 North Central Avenue
Phoenix, AZ 85004
313-333-3366

About the Data Source
The data for this report was derived from the 2013 Census of Business, which provides information on the location, size, and type of businesses in the United States. The data was processed by the U.S. Census Bureau and is available on their website.

Commute Shed Analytics Central Avenue and Van Buren Street Housing Values



Commute Shed Analytics 10 Minutes A.M. Inbound Travel Time to Central Ave and Van Buren St, Phoenix

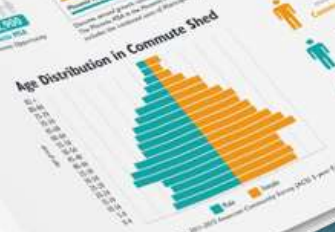


The Phoenix-Mesa Metropolitan Statistical Area (MSA) is one of the fastest-growing in the United States. The Phoenix PMA is a sub-area of the MSA, and this report provides information on the labor force and housing values in the area. The data is derived from the 2013 Census of Business and the 2013 Census of Population and Housing.



Projected Population Growth

Year	Phoenix PMA	Commute Shed
2015 to 2020	1.5%	1.5%
2020 to 2025	1.5%	1.5%
2025 to 2030	1.5%	1.5%



Source: U.S. Census Bureau, 2013 Census of Business, Employment, Hours, and Wages; 2013 Census of Population and Housing.



Commute Shed Analytics

30 Minute A.M. Inbound Travel Time to Glendale Ave and State Route 101, Glendale



The Phoenix-Mesa-Scottsdale Metropolitan Statistical Area (MSA) is made up of Maricopa County and Pinal County. For this document, the MSA is referred to as the Phoenix MSA. Within the Phoenix MSA, the average commute time is about 26 minutes, which is slightly less than the US average. Rounding to a 30 minute commute time provides a useful picture of the residents, workers, and employers near a given location. Note: for some rural communities, a 45 minute commute shed was used because a wider area of analysis was necessary.

The map to the right shows the area from which a worker can commute in 30 minutes or less to a location near Glendale Avenue and State Route 101, Glendale. The analysis in this document compares data from within this 30 minute commute shed to similar data for the MSA and the nation.

This analysis provides a brief overview of available data for the commute shed. To inquire about a more detailed analysis refer to the contact information on page 4.



2015 Population



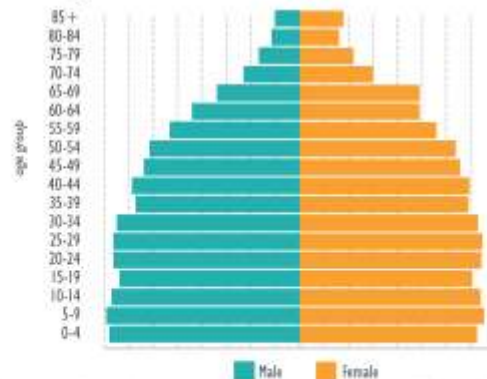
Source: Arizona Office of Economic Opportunity
2015 Population Estimates

Projected Population

2020 Projection	2030 Projection	2040 Projection	2050 Projection
Commute Shed 2,068,823	Commute Shed 2,356,661	Commute Shed 2,544,045	Commute Shed 2,652,606
Phoenix MSA 4,944,400	Phoenix MSA 5,884,900	Phoenix MSA 6,831,700	Phoenix MSA 7,733,900

Source: Maricopa Association of Governments (MAG), 2016 Population Projections. The Phoenix MSA is the Phoenix-Mesa-Scottsdale Metropolitan Statistical Area (MSA). Its geographic boundary includes the combined area of Maricopa and Pinal counties.

Age Distribution in Commute Shed



Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates

Educational Attainment

for the population age 25 years and older



Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates

ASU and UofA Graduates by Degree

Thanks to a partnership with Arizona State University and University of Arizona, MAG has collected degree data on graduates by place of residence. While not a complete picture of graduates, this table is a representation of college degrees earned by residents from 1980 to 2016.

Degree Category	Phoenix MSA	Commute Shed	Degree Category	Phoenix MSA	Commute Shed
Aerospace	1,290	332	Law	4,852	1,728
Agriculture	1,595	461	Mathematics	1,571	489
Art	6,156	2,539	Medical	40,483	11,054
Business	47,243	13,996	Multiple	9,126	2,096
Criminal Justice	2,609	2,001	Political	6,090	1,949
Design & Construction	7,078	1,857	Science	11,575	3,200
Education	35,924	13,523	Social	21,281	7,518
Engineering	18,937	3,280	Technology	11,061	2,628
Information	23,285	7,415	Tourism	1,782	587

Source: Arizona State University (ASU); University of Arizona (UofA)

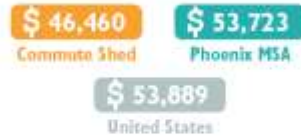
Household Income



Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates



Median Household Income



Housing Values

for owner-occupied housing units



Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates



Median Home Value



\$178,600

United States

Source: U.S. Census Bureau, 2011-2015 ACS 5-year Estimates

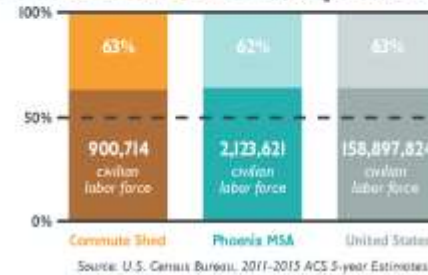
Median Sales Price



Jan 1, 2015 to Dec 31, 2015

Source: Information Market

Labor Force Participation Rate



Source: U.S. Census Bureau, 2011-2015 ACS 5-year Estimates

The labor force participation rate is the percentage of the population age 16 and over who are either employed or are unemployed but looking for a job. In the United States the participation rate hovered between 66 and 67 percent until the Great Recession. Since then the rate declined to around 63 percent and has remained at that level since 2014.

The chart to the left shows the relative labor force participation rates and total civilian labor force for the commute shed, Phoenix MSA, and the U.S. The chart below shows the top ten occupations for the commute shed, their percentage of the commute shed's workforce, and where those ten occupations rank in the U.S. and Phoenix MSA.

Major Occupations of Residents for the civilian employed population 16 years and over	Commute Shed Percentage	Phoenix MSA Percentage	United States Percentage
Office and administrative support	18.3	14.9	13
Management, business, and financial	10.7	16.4	15.1
Sales and related	16.4	11.1	10.6
Healthcare practitioners, technical, and support	7	7.4	8.2
Construction and extraction	8.3	4.5	5.1
Food preparation and serving related	6.2	5.9	5.9
Building and grounds cleaning and maintenance	3.8	4.4	3.9
Production	11	6.2	6
Education, training, and library	4.6	5.1	6
Computer, engineering, and science	6.1	5.7	5.5

Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates
Note: not all occupations are listed; percentages may not add up to 100 percent

Top Employers

The map to the right shows the locations of each of the employers with five or more employees within the commute shed. The size of the dots indicates the size of the employer based on its total number of employees. Below is a list of the top ten employers, based on total number of employees, within the commute shed.

The table at the bottom left groups similar employers together in Industry Clusters, and ranks the top ten Industry Clusters within the commute shed by the total number of employees in the cluster.

Top 10 Employers	Jobs
State Of Arizona	18,600
Banner Health	11,600
County Of Maricopa	11,100
City Of Phoenix	10,400
Honeywell	7,800
Walmart	7,000
Frys Food Stores	5,600
American Express	5,500
United States Department Of The Air Force	5,400
Wells Fargo	5,000

Source: 2015 MAG Employer Database; numbers rounded



Worker Commute Flows



Source: U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program (LEHD) Origin-Destination Employment Statistics (LODES)

Top 10 Industry Clusters by Jobs

Industry Cluster	Businesses	Jobs
Health Care	1,753	76,200
Business Svcs	2,268	74,100
Government, Social, & Advocacy Svcs	1,589	73,500
Retail	2,275	69,600
Consumer Svcs	2,797	60,500
Education	782	56,900
Finance, Insurance, & Real Estate (FIRE)	1,273	56,600
Construction	2,020	55,600
Transportation & Distribution	1,406	55,100
Hospitality, Tourism, & Recreation	454	14,700

Source: 2015 MAG Employer Database; jobs numbers rounded to nearest 100

Contact Information

City of Glendale
business@glendaleaz.com
623-930-2983

About the Data Sources

Commute shed boundaries are derived from the MAG travel demand forecasting models which incorporate the HERE speed database. Data can be found online here: mag.ma2cloud.com/dms/ui/tds/dashboard/index?loc=Mag

U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates. ACS data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate is represented through the use of a margin of error (MOE). In addition to sampling variability, the ACS estimates are subject to nonsampling error. The MOE and effect of nonsampling error is not represented in these tables. Documentation can be found on the ACS website (www.census.gov/acs). The MOE can be found on the American FactFinder website (<http://factfinder2.census.gov/>).

Methodology for the Arizona Office of Economic Opportunity population estimates is available at: <https://population.az.gov/population-estimates>

Methodology for MAG Population Projections is available at: <http://datacenter.azmag.gov>

Documentation for the LEHD Origin-Destination Employment Statistics (LODES) is available at: <https://lehd.ces.census.gov/>

2015 MAG Employer Database: includes only employers with 5 or more employees.

Created by
Maricopa Association of Governments (MAG)
602-254-6300 or mag@azmag.gov

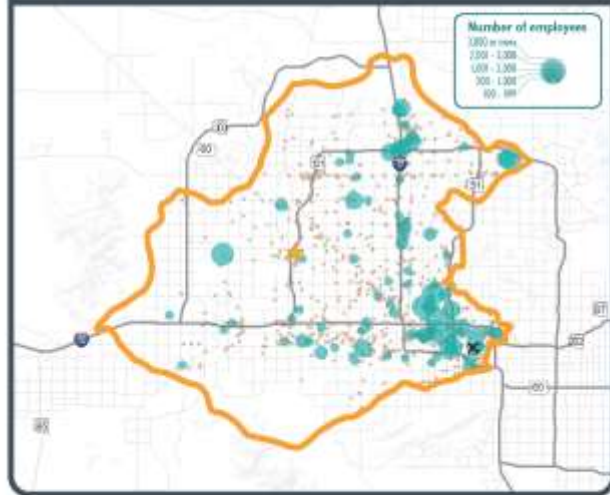
Commute Shed Analytics

30 Minute A.M. Inbound Travel Time to Glendale Avenue and State Route 101, Glendale



This report shows information for the area from which a worker can normally commute in 30 minutes or less to a location near Glendale Avenue and State Route 101, Glendale on a weekday morning. The boundary is referred to as a commute shed.

Employer Locations in the Commute Shed



Top Employers in the Commute Shed

The map to the left shows the locations of each employer with five or more employees within the commute shed. The size of the dot indicates the size of the employer based on its total number of employees.

18,100 Total Employers
659,100 Total Jobs
For employers with five or more employees

Top 10 Employers	Jobs
State Of Arizona	18,600
Banner Health	13,600
County Of Maricopa	11,100
City Of Phoenix	10,400
Honeywell	7,800
Walmart	7,000
Fry's Food Stores	5,600
American Express	5,500
United States Department Of The Air Force	5,400
Wells Fargo	5,000

Source: 2015 MAG Employer Database, numbers rounded

Top 10 Industry Clusters

Industry Clusters group employers by their main industry. Listed below are the top ten industry clusters for businesses located within the commute shed. Ranking is based on total jobs for each cluster within the commute shed.

Industry Cluster	Businesses	Jobs
Health Care	1,750	76,200
Business Svcs	2,270	74,100
Government, Social, & Advocacy Svcs	1,590	73,500
Retail	2,280	69,600
Consumer Svcs	2,800	60,500
Education	780	56,900
Finance, Insurance, & Real Estate (FIRE)	1,170	56,600
Construction	2,020	55,600
Transportation & Distribution	1,410	55,100
Hospitality, Tourism, & Recreation	450	14,700

Source: 2015 MAG Employer Database, job numbers rounded to nearest 100

Worker Commute Flows

for workers living and/or working in the commute shed



Source: U.S. Census Bureau, Longitudinal Employer Household Dynamics Program (LEHD) Origin-Destination Employment Statistics (LODES)

Major Occupations of Residents in the Commute Shed for the civilian employed population (workers) 16 years and over

Occupation Category	Workers	Occupation Category	Workers
Arts, design, entertainment, sports, and media	11,000	Installation, maintenance, and repair	31,900
Building and grounds cleaning and maintenance	47,700	Management, business, and financial	64,300
Community, legal, and social service	21,300	Material moving	34,300
Computer, engineering, and science	33,800	Office and administrative support	137,300
Construction and extraction	31,400	Personal care and service	72,300
Education, training, and library	37,300	Production	43,300
Farming, fishing, and forestry	1,800	Protective service	19,500
Food preparation and serving related	50,700	Sales and related	50,900
Healthcare practitioners, technical, and support	37,600	Transportation	31,300

Source: U.S. Census Bureau, 2011-2015 American Community Survey (ACS) 5-year Estimates

Population and Housing Demographics for the Commute Shed



Highest Level of Education for the population age 25 years and older

Year	Population
2015	1,889,000
2020	2,069,000
2030	2,359,000
2040	2,544,000
2050	2,663,000

Sources: Arizona Office of Economic Opportunity, Maricopa Association of Governments (MAG)



- No High School Diploma
- High School Grad or Equivalent
- Some College or Associate Degree
- Bachelor Degree or Higher

Source: U.S. Census Bureau, 2015 American Community Survey (ACS) 5-year Estimates

Year	Jobs
2015	863,000
2020	984,000
2030	1,107,000
2040	1,258,000
2050	1,403,000

Source: Maricopa Association of Governments

Median Age of Residents



33 years

Source: 2015 ACS 5-year Estimates

Median Household Income



\$ 46,500

Source: 2015 ACS 5-year Estimates

Contact Information

City of Glendale
business@glendaleaz.com
623-930-2983

Commute shed boundaries are derived from the MAG travel demand forecasting models which incorporate the HERE speed database. Boundaries are created using three hour morning peak drive times (6AM to 9AM). Data can be found online here: <http://mag.m2cloud.com/toms.ui/todo/dashboard/index?oc=Mag>

2015 MAG Employer Database includes only employers with 5 or more employees.

Created by Maricopa Association of Governments (MAG)
602-254-6300 or mag@azmag.gov

Median Home Sales Price



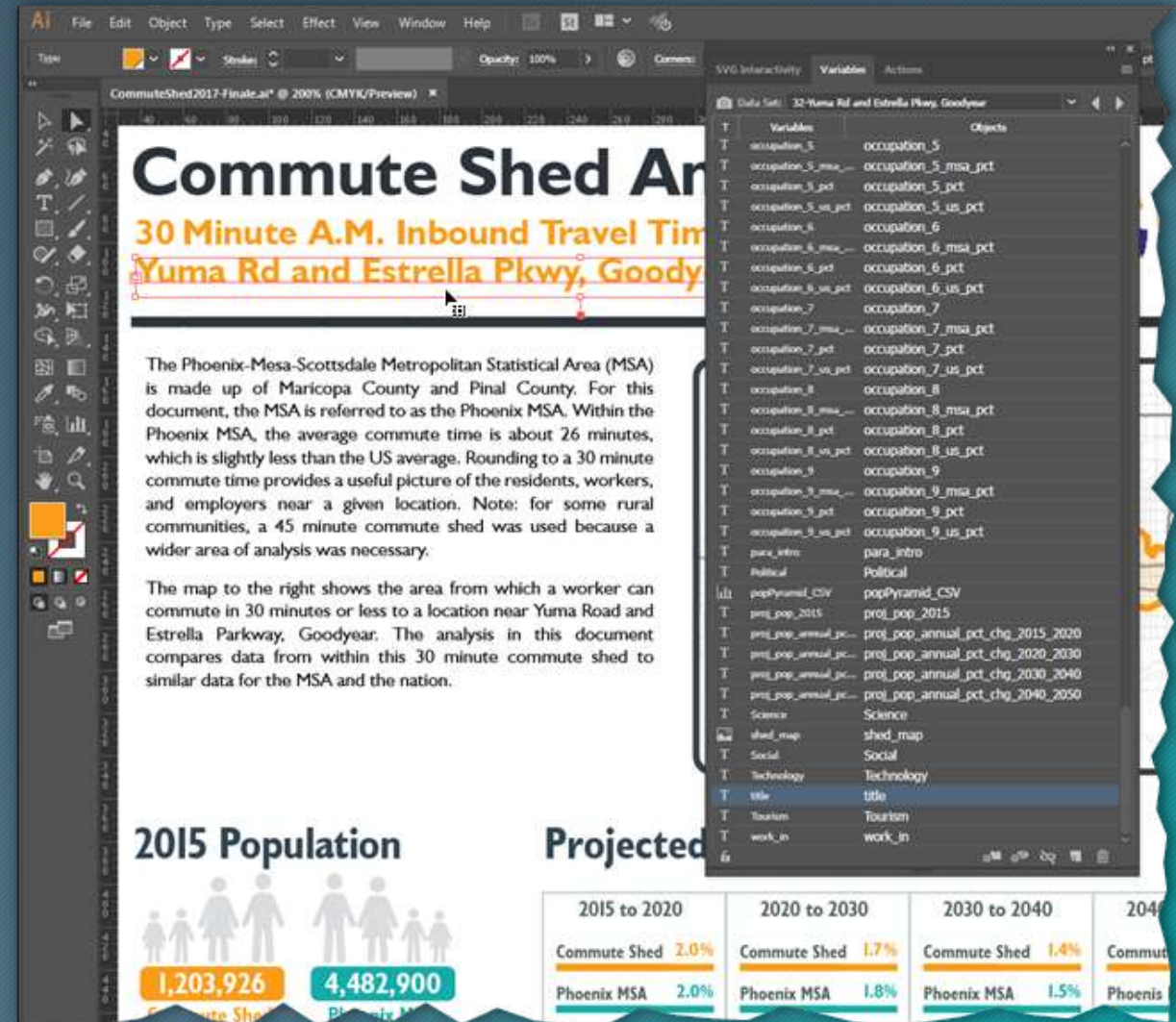
Jan 1, 2015 to Dec 31, 2015

\$ 190,000

Source: Information Market

Automating the Process

- ✓ Set up Illustrator Objects
- ✓ Modify design as needed
- ✓ Develop scripts to:
 1. Query and compile the data
 2. Create map graphics
 3. Import data into Illustrator
 4. Adjust design “work arounds”
 5. Export final documents



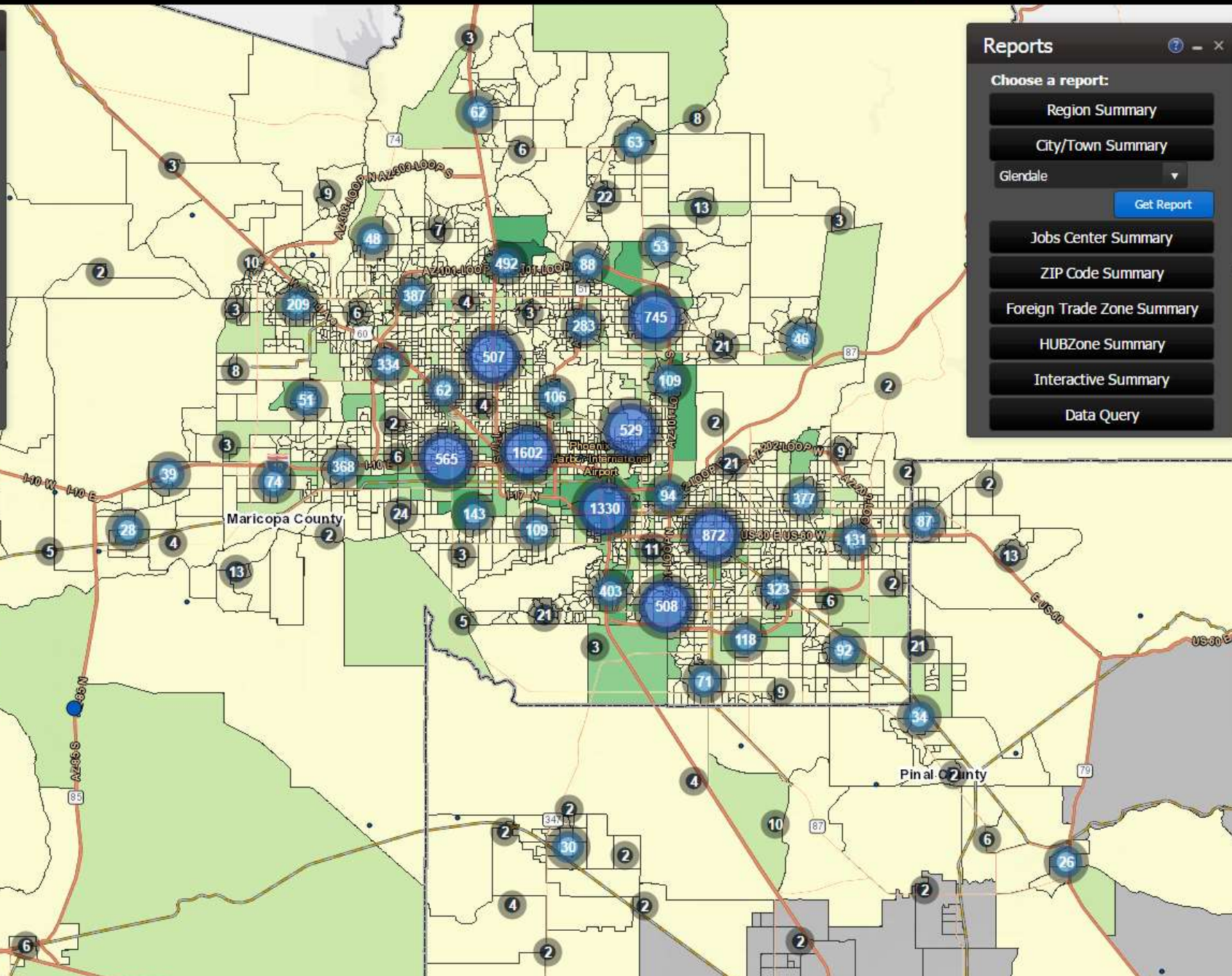
Maps

Choose a Map:

[Employment Cluster Definitions](#)

- All Industry Clusters**
- Business Services
- Construction
- Consumer Goods Manufacturing
- Consumer Services
- Education
- Finance, Insurance & Real Estate
- Government, Social & Advocacy Services
- Health Care
- High Tech Manufacturing & Development
- Hospitality, Tourism & Recreation

Advanced Map Options



Reports

Choose a report:

Region Summary

City/Town Summary

Glendale

Get Report

Jobs Center Summary

ZIP Code Summary

Foreign Trade Zone Summary

HUBZone Summary

Interactive Summary

Data Query

Legend

All Industry Clusters

(5+ employees)

Transparency Slider

Employers (25+ employees)

Enable Clustering

- 25 - 150 Employees
- 150 - 500 Employees
- 500 - 1,500 Employees
- 1,500 - 3,500 Employees
- 3500 - 8,811 Employees

Data Source: 2015 MAG Employer Database

Layers Options

- Employers
- Census Tracts
- ZIP Codes
- HUBZones
- MAG Region Boundary
- Job Centers 2014
- Municipal Planning Areas
- Foreign Trade Zones
- Streets
- Aerial Imagery



Keys to Success



Know Your Audience



Stakeholder Buy-in



The Right Team



Collaboration



QA/QC Checks



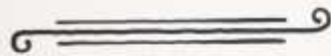
Professional Design

DESIGN TIPS

for turning good into great

"good is the mortal enemy of great"

-Jim Collins



1. Keep it Simple
2. Color Matters
3. Limit Fonts
4. Learn Good Design From Bad
5. Remember the Audience
6. Know your limitations
7. Understand the Data
8. Be Open to Change



Resources



- Adobe Illustrator Variables
 - <https://helpx.adobe.com/illustrator/using/data-driven-graphics-templates-variables.html>
- Variable Importer Script Tutorials
 - <http://hypertransitory.com/blog/2015/04/26/illustrator-variable-data>
 - <http://prepression.blogspot.com.au/2015/03/illustrator-variableimporter-script-tutorial-1.html>
- ACS 5-year Summary Files in MS Access databases (by State)
 - <http://gisdiva.com/downloads/acs2015-5yr/>
- Infographic and Data Display Tips
 - <https://blog.kissmetrics.com/12-infographic-tips/>
 - <http://www.infobrandz.com/great-big-list-of-infographic-ideas/>
 - [\(Book\) The Wall Street Journal Guide to Information Graphics: The Dos and Don'ts of Presenting Data, Facts, and Figures by Dona M. Wong \(available on Amazon\)](#)
 - <http://flowingdata.com/>
 - [\(Book\) The Visual Display of Quantitative Information by Edward R. Tufte \(available on Amazon\)](#)
 - <http://colorschemer.com> and <http://colorbrewer2.org>



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