REINVENT PHOENIX

CURRENT STATE OF HOUSING IN THE SOLANO DISTRICT
APPENDIX

Partners:

City of Phoenix

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

St. Luke's Health Initiatives

ASU GLOBAL INSTITUTE of SUSTAINABILITY ARIZONA STATE UNIVERSITY

REINVENT PHX

Assessing the Current State of Housing
In the Solano District, Phoenix
Against Principles of Livability and Sustainability

APPENDIX

Principal Investigators
Dr. Aaron Golub, Dr. Arnim Wiek

Faculty Affiliated to the Project
Dr. Deirdre Pfeiffer

Graduate Research Assistants
Josh Schmidt, Adam Stranieri

Postdoctoral Researcher
Dr. Braden Kay

September 24, 2014

School of Sustainability
Arizona State University

Table of Contents

Appendix 1: The Current State of Housing and Population in the Solano District

This appendix contains descriptive data on housing conditions in Solano through a series of tables, charts, and maps.

Housing and Population Density

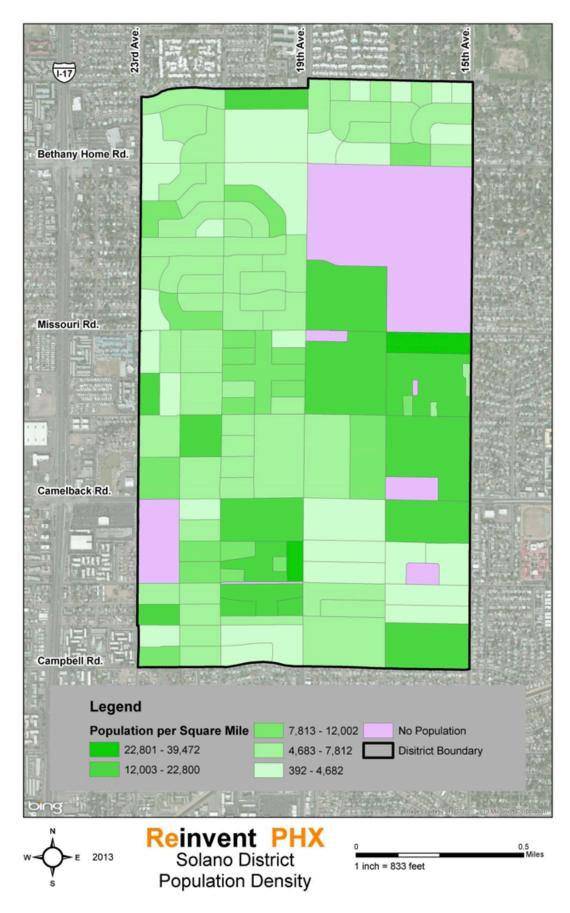Locations of high population density (Figure 1) and housing density (Figure 2) are scattered throughout the district.

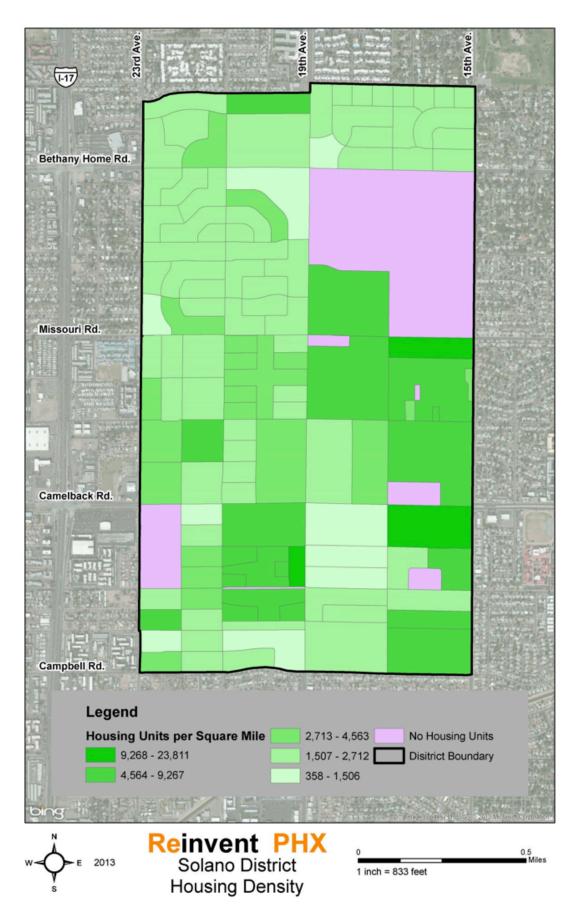Figure 1. Solano District Population Density

Legend

Housing Units per Square Mile

9,268 - 23,811	2,713 - 4,563
4,564 - 9,267	1,507 - 2,712
	358 - 1,506

No Housing Units

Disitrict Boundary

Reinvent PHX
Solano District
Housing Density

N
W — E   2013
S

0 — 0.5 Miles
1 inch = 833 feet

Figure 2. Solano District Housing Density

Housing Types

Solano has a variety of housing types and sizes. There are around 5600 homes in the district. Based on census track data, single-family detached homes are the predominant housing type (Figure 3). The majority of the homes have two or three bedrooms (Figure 4). Map 2 compares the housing type distribution between the five Reinvent Phoenix planning districts.
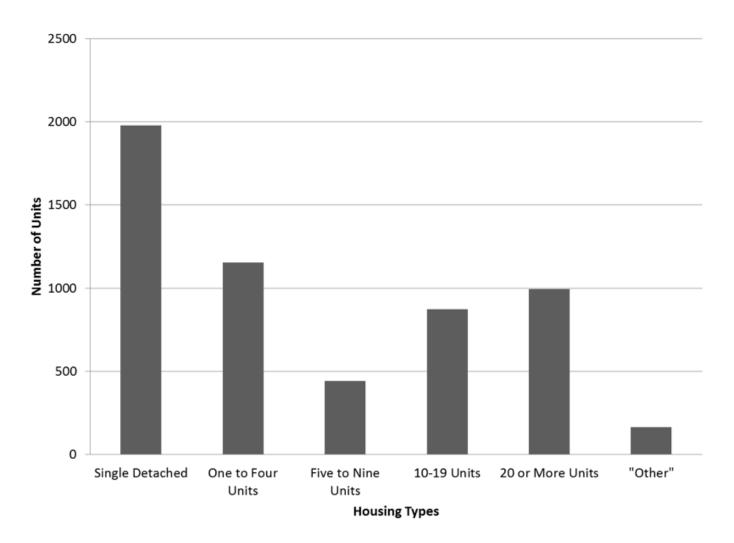
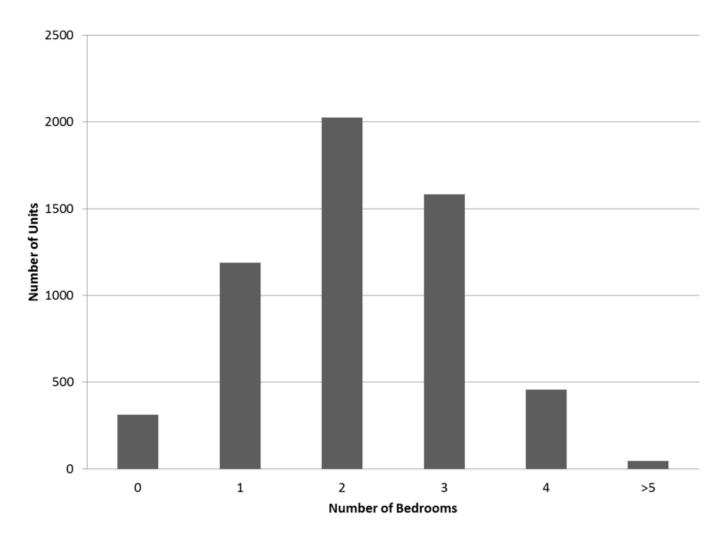Figure 3. Solano District Housing Types ("Other" includes mobile homes and boat, etc.).

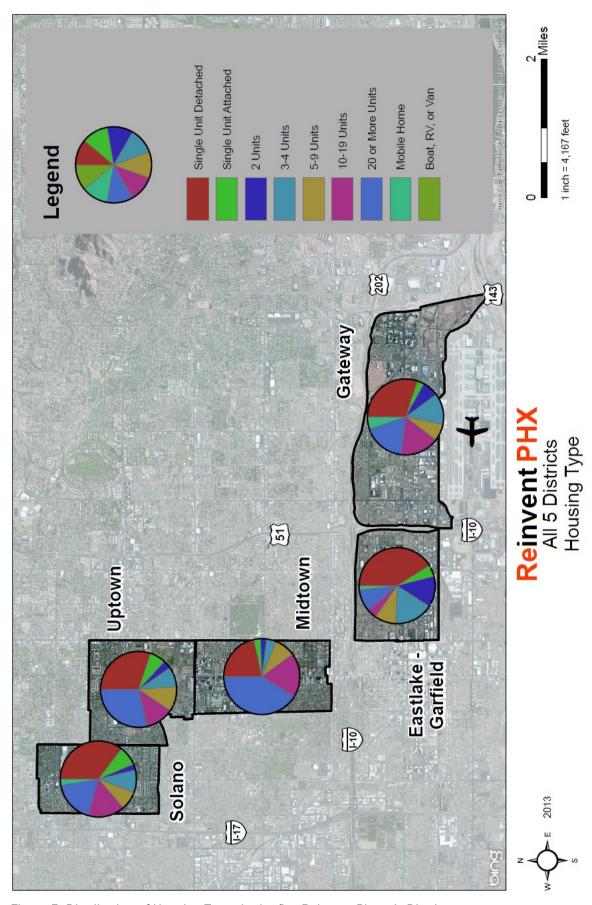Figure 4. Solano District Housing Sizes by Number of Bedrooms

Figure 5. Distribution of Housing Types in the five Reinvent Phoenix Districts.

Housing Age

More than half of Solano's homes were built before 1980, but less than 10% before 1950 (Figure 6). This is both an asset and a liability. Solano also has experienced recent new housing construction, with just over one-third of its homes built in the 2000s.
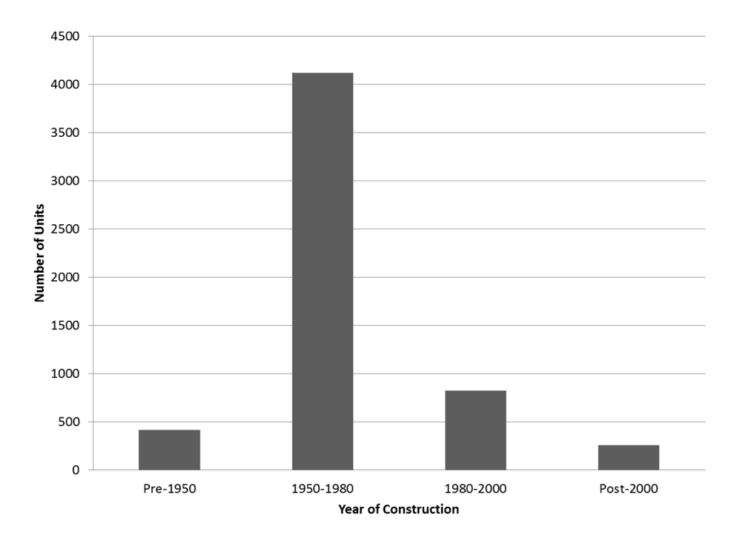
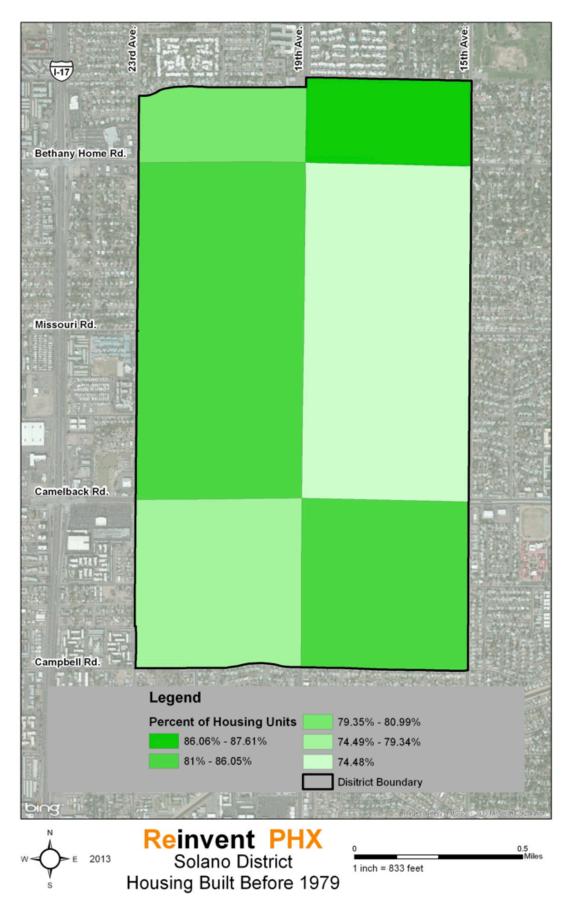

Figure 6. Solano Housing Age Distribution

Figure 7. Map of share of housing built before 1979.

Overcrowding

Solano district has high rates of overcrowding, with 7% of units overcrowded (1 to 1.5 persons per room) and 6.2% severely overcrowded (greater than 1.5 persons per room).
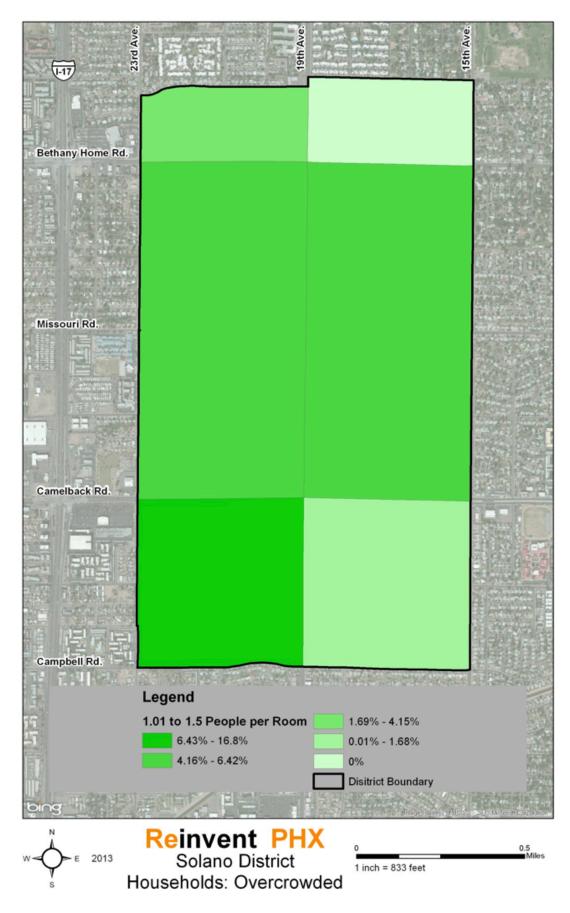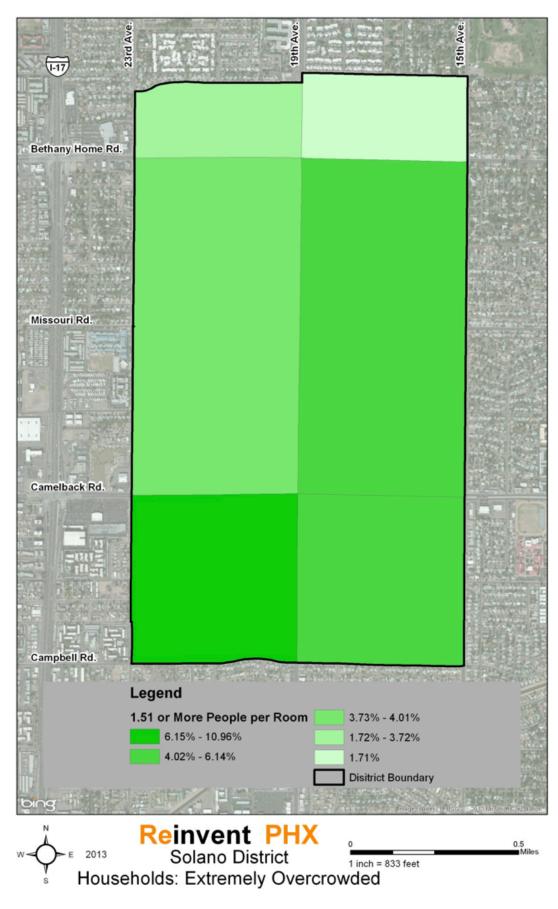
Figure 8. Map of overcrowding rates

Figure 9. Map of severe overcrowding rates

Housing and Transportation Costs

Figures 11, 12 and 13 show the median housing costs for the five districts for renters, owners and owners without a mortgage, respectively. Solano generally shows lower costs of housing compared to other districts, and in some blocks, costs are very low. Combined with income constraints however, many households are housing cost burdened throughout the district, as shown in Figure 14.

Estimates of housing and transportation costs are shown in Figure 15. Figure 16 shows that few households in the district can live without an automobile, which raises transportation costs. Figure 17 shows the home zip codes of workers who work in the Solano District, while Figure 18 shows the work location of Solano District residents. It is evident that many of these commutes are difficult to do by public transit, thus explaining the high car ownership in the district.
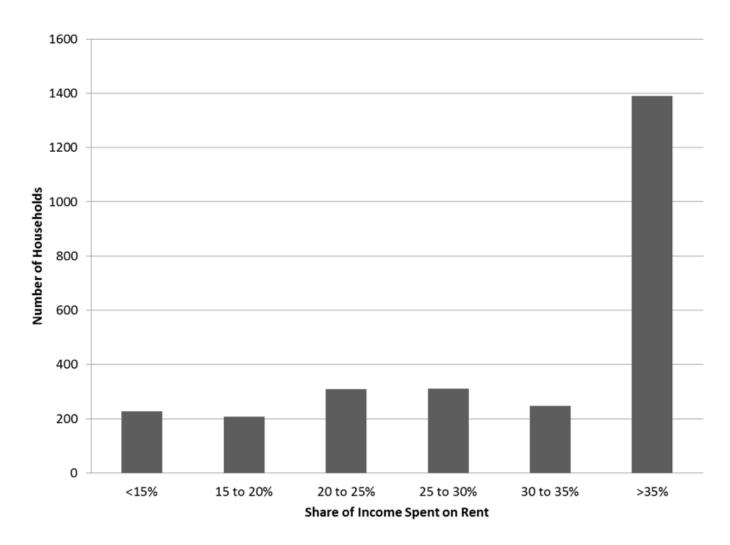

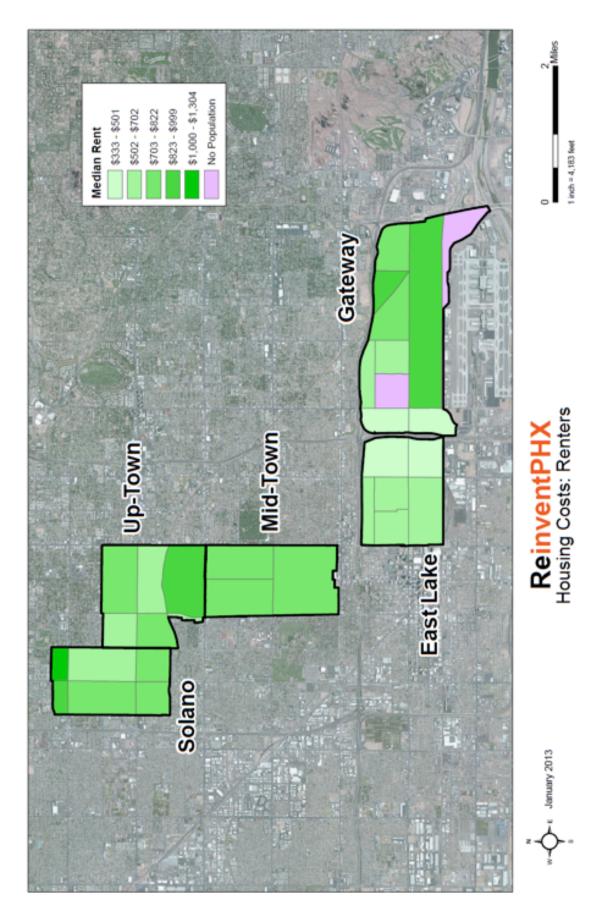Figure 10. Share of households with different housing burdens.

Figure 11. Housing costs for renters in the Reinvent Phoenix districts.

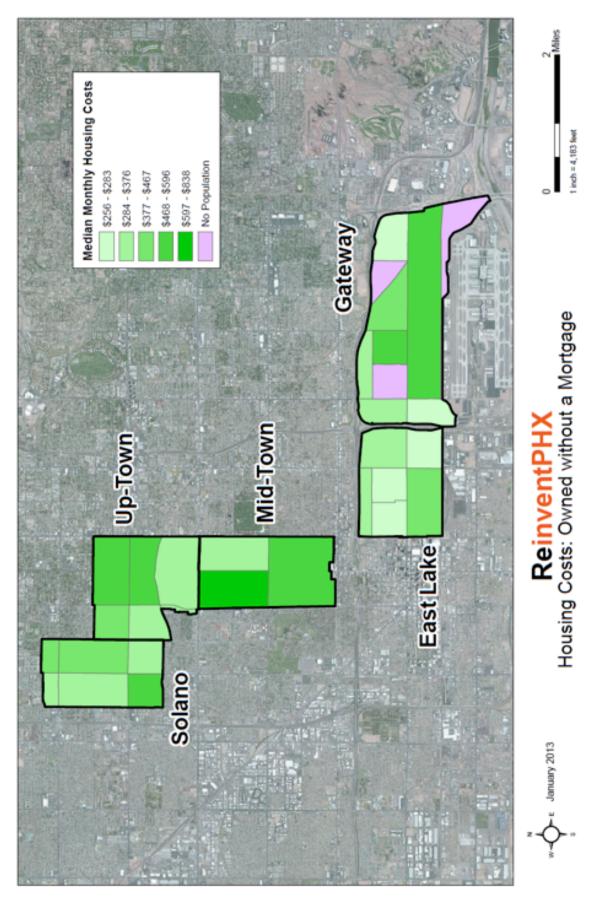Figure 12. Housing Costs for Owners in the Reinvent Phoenix districts.

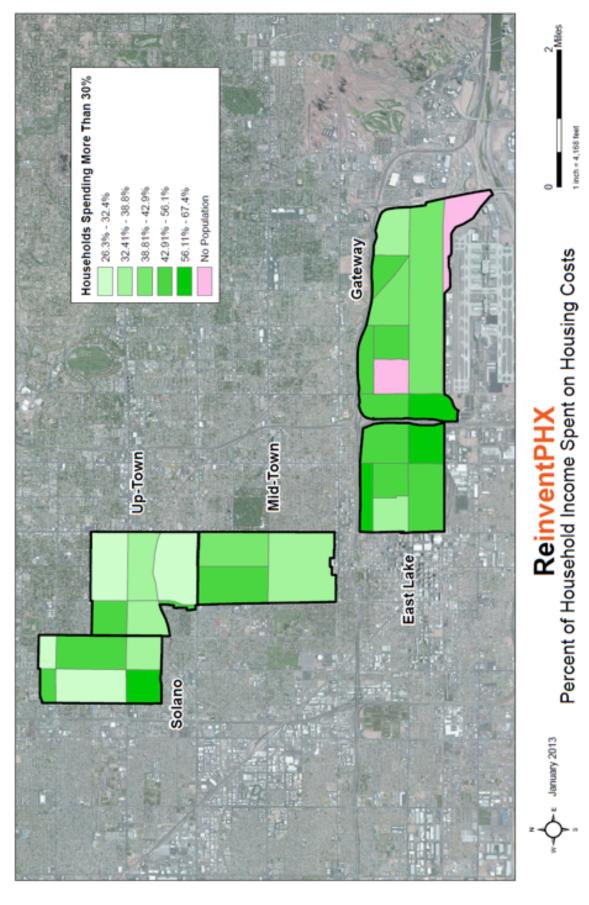Figure 13. Housing costs for owners without mortgages in the reinvent phoenix districts.

Figure 14. Housing costs-burdened households in the reinvent phoenix districts.

Figure 15. Housing and transportation cost burdens

Legend
5 Districts
CNT Aggregation Units
- 25.76% - 30.02%
- 30.03% - 38.03%
- 38.04% - 41.96%
- 41.97% - 47.23%
- 47.24% - 54.37%

Reinvent PHX
5 Districts
Housing and Transportation Costs as a Percent of Income

1 inch = 4,167 feet

0   2 Miles
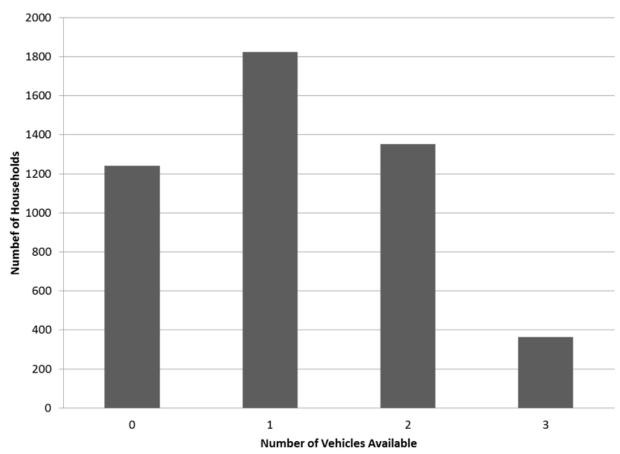
2013

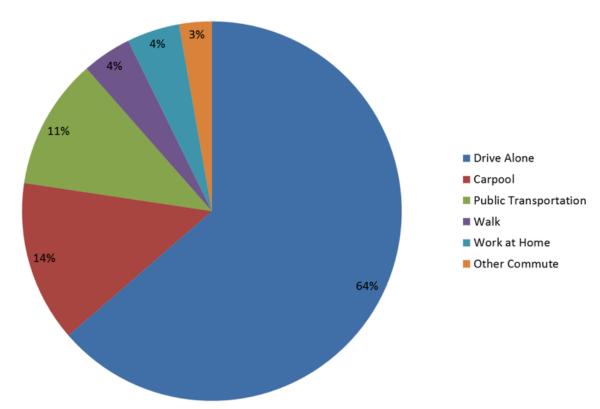Figure 16. Vehicle ownership in Solano District

Figure 17. Transportation mode to work for workers in the Solano District
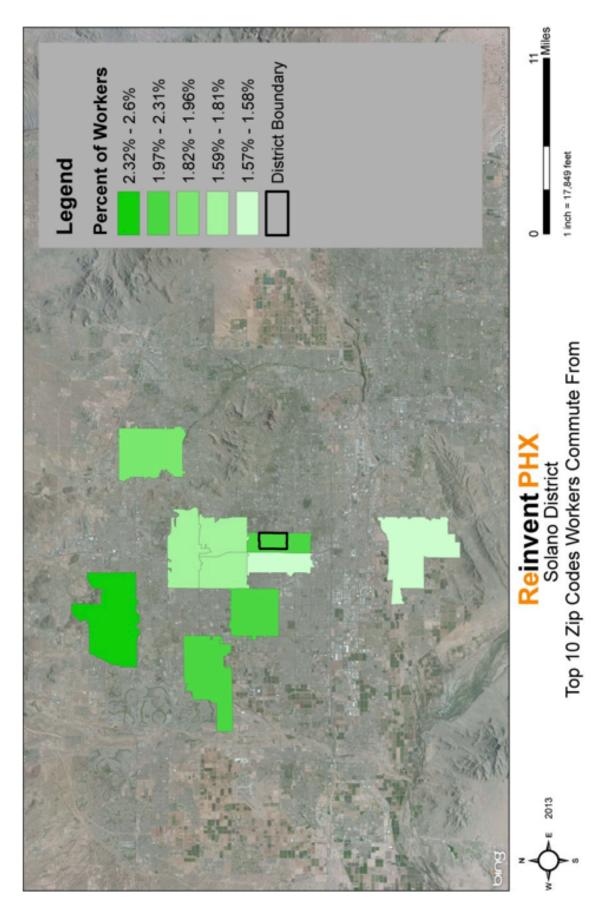
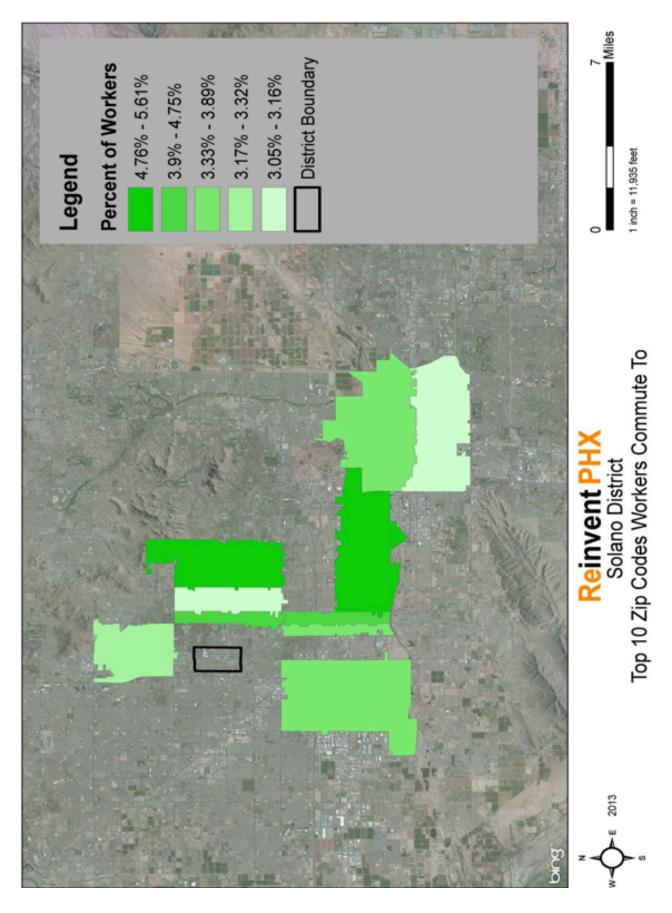Figure 18. Top ten zip codes for workers who work within the Solano District

Figure 19. Top ten zip codes to which residents of Solano District commute

Household Demographics

American Community Survey data (2007 to 2011 series) was used to create a profile of district demographic characteristics relevant to current housing consumption. Table 1 summarizes key demographic and housing cost information.

Table 1. Summary table of household demographics in the Solano district.

Valuables	Totals	Share of Total or Subtotals
Total Population	13,204	
Total Housing Units	5,608	
Occupied Housing Units	4,780	
Vacant Housing Units	828	14.8%
Owner Vacancy Rate	4%	
Rental Vacancy Rate	14%	
Owner Occupied	1,841	38.5%
Renter Occupied	2,939	61.5%
Average Owner Household Size	3	
Average Renter Household Size	3	
1 Person or Less Per Room (Not Overcrowded)	4,149	86.8%
1.01 to 1.5 People Per Room (Overcrowded)	335	7.0%
1.51 People or More Per Room (Extremely Overcrowded)	296	6.2%
Median Value of an Owner Occupied Housing Unit	159,920	
Median Selected Monthly Owned With Mortgage Costs	1,245	
Median Selected Monthly Owned Without Mortgage Costs	370	
Median Rent	768	
Population 16 and Older	9,450	
Workers 16 and Older	5,210	
Civilian Labor Force	6,194	
In Armed Forces	-	0.0%
Employed Civilians	5,293	85.4%
Unemployed Civilians	902	14.6%
Median Household Income	33,136	
Median Household Income Owner	55,394	
Median Household Income Renter	22,343	
Per Capita Income	16,420	
Median Monthly Housing Costs	820	
Median Monthly Housing Costs Owner	1,090	
Median Monthly Housing Costs Renter	768	
Population for whom Poverty Status is Determined	13,174	
Below 100% of Poverty Level	4,400	33.4%
Below 50% of Poverty Level	2,343	17.8%
Below 20% of Poverty Level	8,88	63.7%
Population 25 Years and Older	7,646	
Less than High School Graduate	2,027	26.5%
High School Graduate	1,964	25.7%
Some College or Associates Degree	2,375	31.1%
Bachelors Degree or Higher	1,280	16.7%

Table 2 compares the household diversities among the different districts.

Table 2. Diversity indices for race and ethnicity, household type, household incomes and housing types [A].

	Solano	Uptown	Midtown	Eastlake -Garfield	Gateway
Race/Ethnicity Diversity	0.40	0.26	0.27	0.39	0.40
Household Type Diversity	0.51	0.43	0.39	0.49	0.52
Household Income Diversity	0.85	0.86	0.86	0.74	0.86
Housing Type Diversity	0.73	0.72	0.63	0.54	0.80

A. Indices range from zero to 1, with one being perfectly diverse (all groups or types equally represented)

The age distribution of the district shows a profile heavy weighted towards children and youth.
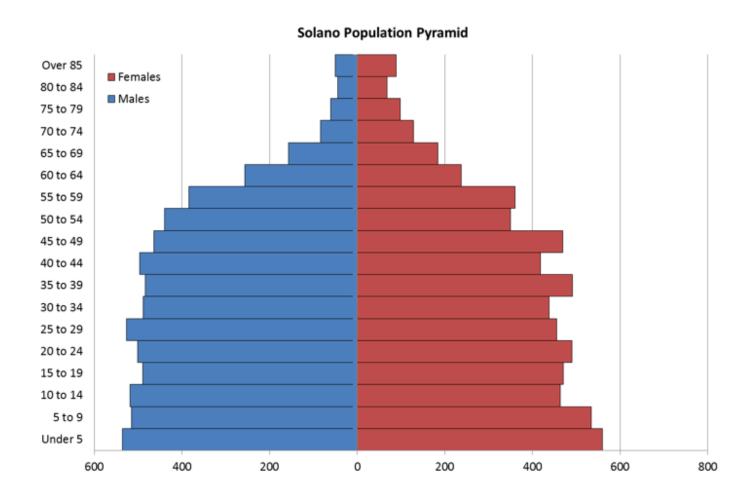

Figure 20. Population Pyramid for the Solano District.

Figure 21 shows the distribution of income within the district and the five other districts in the Reinvent Phoenix planning area. Figure 22 shows the income breakdown within Solano District.

Figure 23 shows the occupation of Solano residents, showing a highly diverse set of occupations. Figure 24 shows the distribution of move-in year for Solano households, and Figure 25 shows the average household size in the five districts.
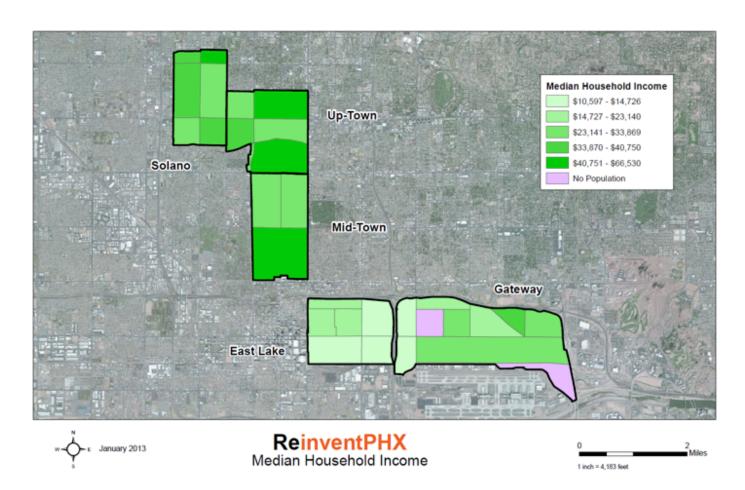

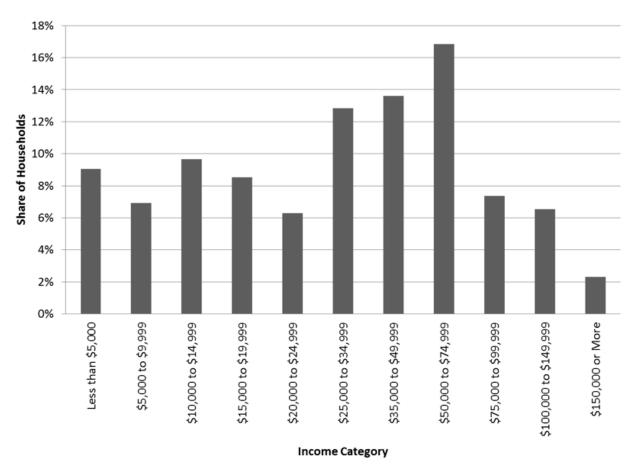Figure 21. Median Income in the Reinvent Phoenix districts.

Figure 22. Income distribution in the Solano districts.

- Natural, Resources, Construction, Maintenance
- Production, Transportation, Material Moving
- Service
- Sales, Office
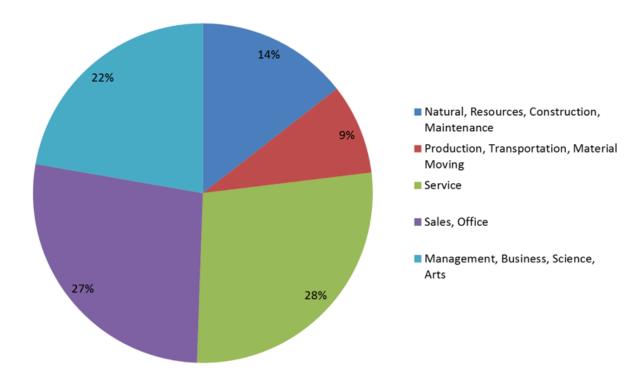- Management, Business, Science, Arts

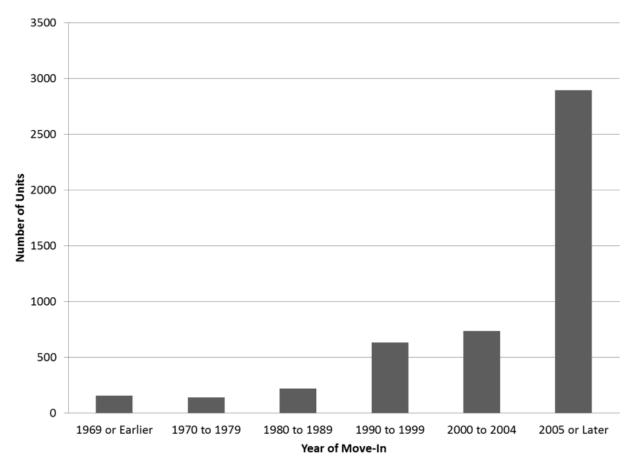Figure 23. Solano district residents' occupation types

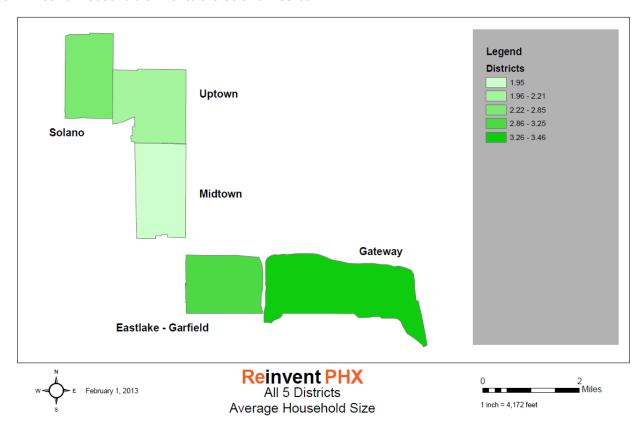Figure 24. Year of household arrival to the Solano District

Figure 25. Average household size in the five districts

Zoning and Land Use

Figure 26 shows Solano's current zoning. Figure 27 shows
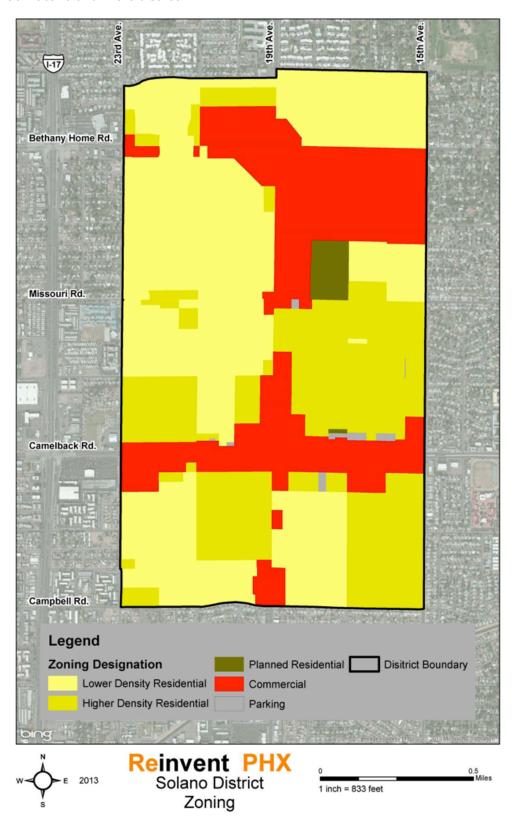the small amount of vacant land in the district.
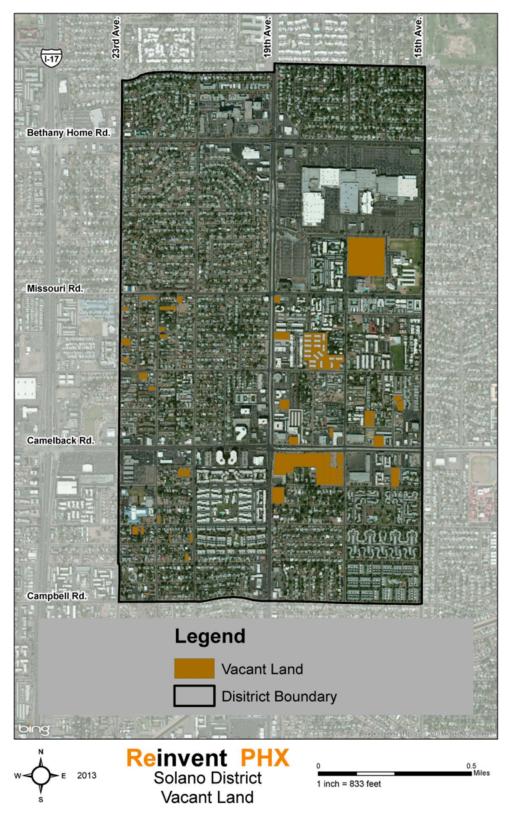

Figure 26: Solano existing zoning

Figure 27: Vacant land in the Solano District

Historical Parcels

Figure 28 displays the location of historic parcels in Solano.

Figure 28: Solano Historic Areas

Affordable Housing Projects

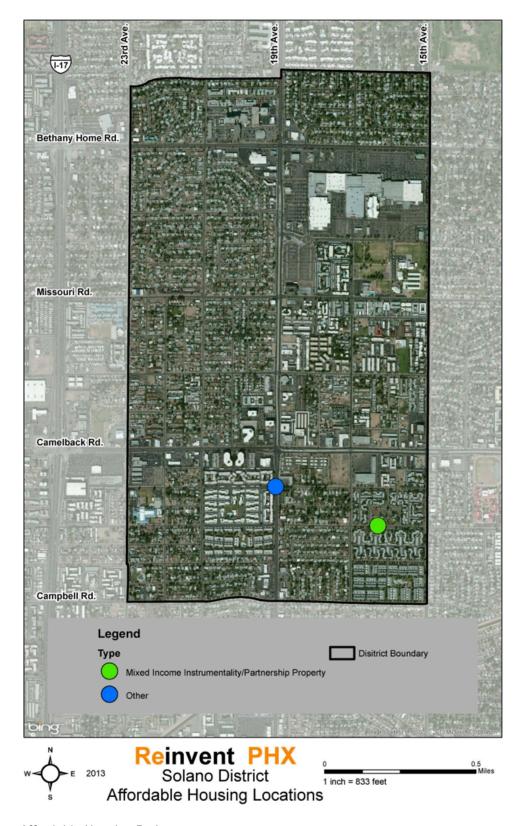Figures 29 and 30 display the location of affordable housing projects and Section 8 vouchers in Solano.
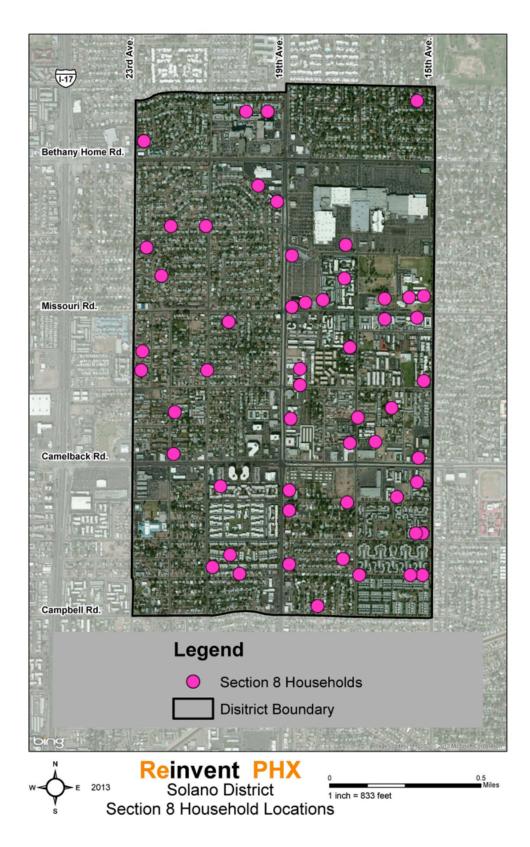

Figure 29: Solano Affordable Housing Projects

Figure 30: Solano Section 8 Vouchers

Arnim Wiek

Principal Investigator

Arizona State University
School of Sustainability

Email: arnim.wiek@asu.edu

Aaron Golub

Principal Investigator

Arizona State University
School of Sustainability
School of Geographical Sciences and Urban Planning

Email: aaron.golub@asu.edu

Partners:

City of Phoenix · U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT · St. Luke's Health Initiatives · ASU GLOBAL INSTITUTE of SUSTAINABILITY · REINVENT PHX