

Socioeconomic Analysis of Bicycle Infrastructure Miles in Maricopa County

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June 17, 2014

MAG Bicycle and Pedestrian Committee

Bicycle use on the rise

VMT peaked in 2007 (3.0 trillion miles)

VMT has dropped by 2.6%

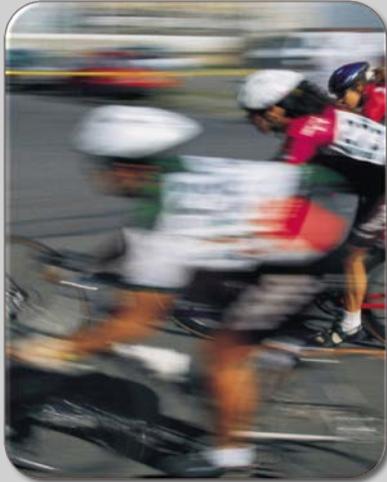
Some reasons:

- economic
- social
- environmental
- technological
- urbanization
- improvements in public transportation

Bicycling on the rise (62% since 2000)



Local efforts



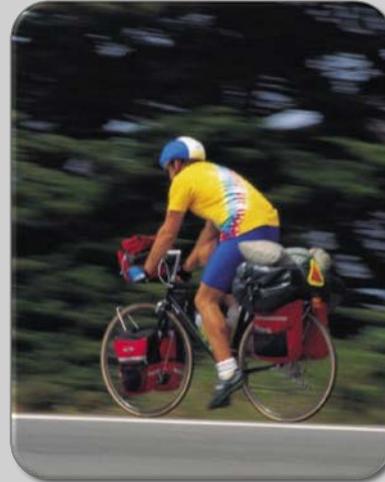
Programs

- Bikeshare



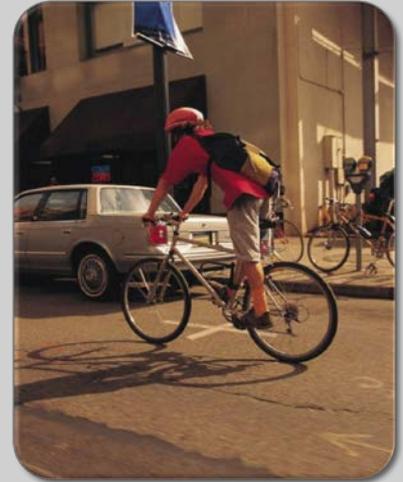
Bikeways

- Safer
- Improve
- Expand



Facilities

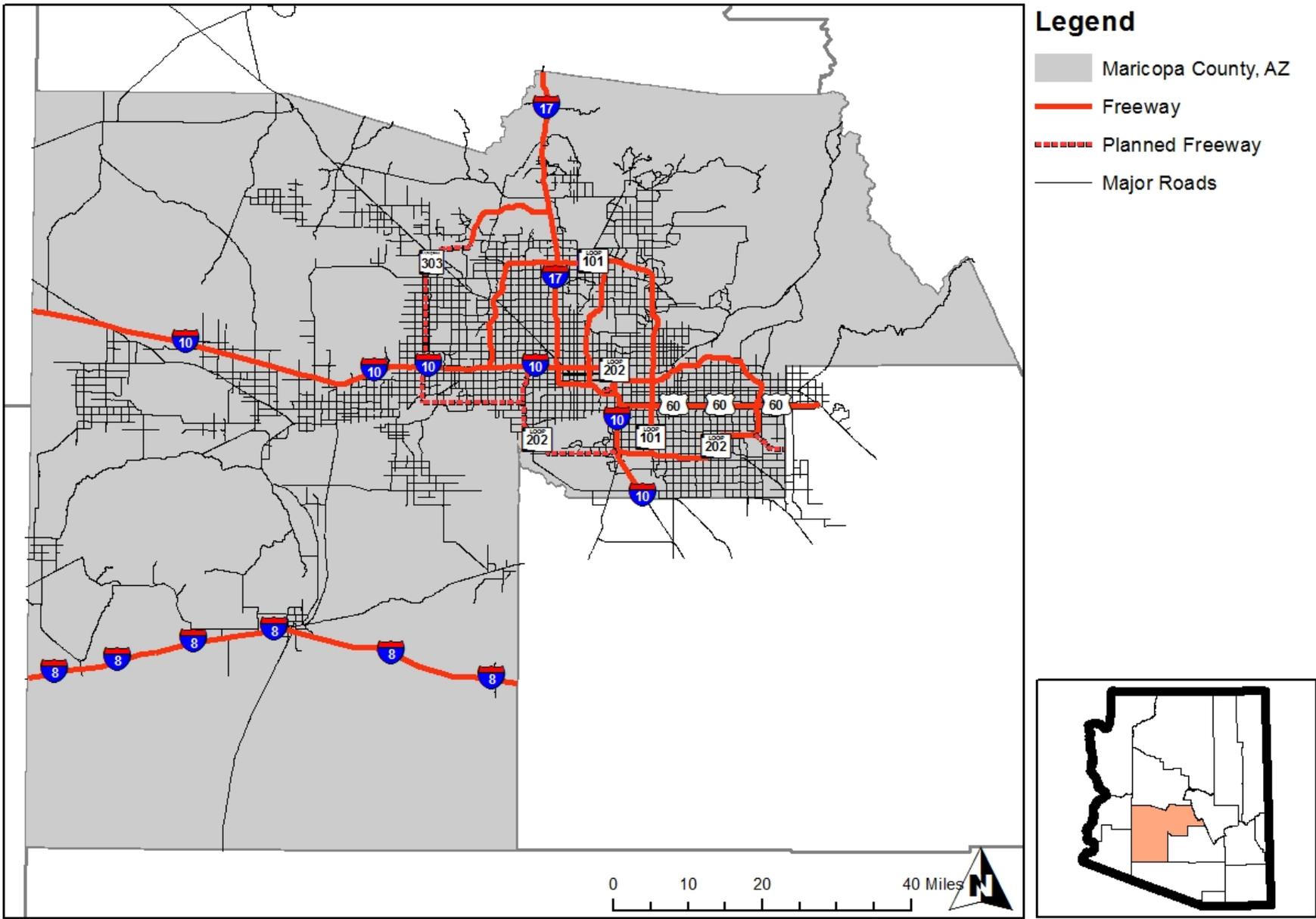
- Lockers
- Racks



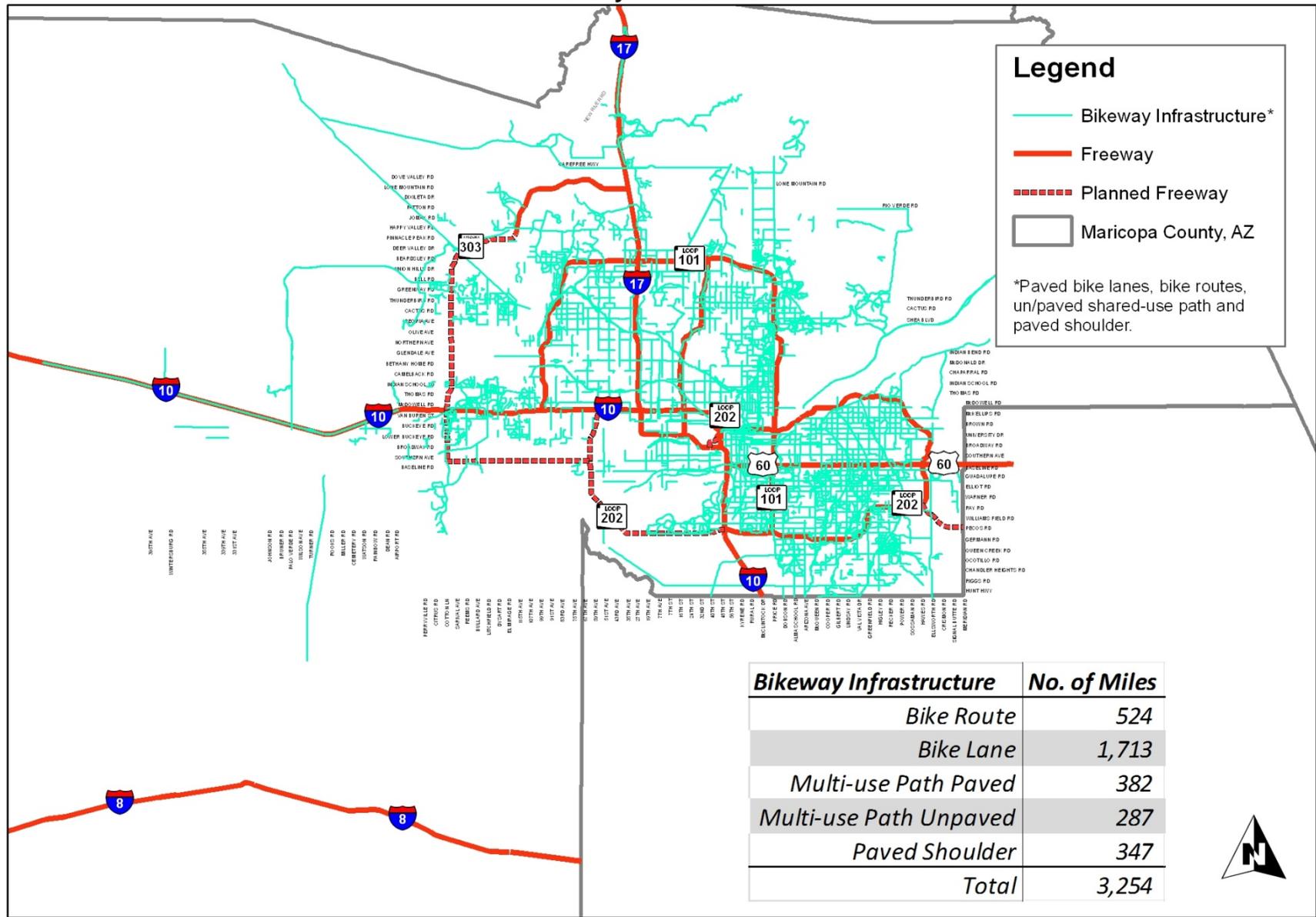
Research

- Bike Count
- Plans

Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County



Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bikeway Infrastructure



Legend

- Bikeway Infrastructure*
- Freeway
- - - Planned Freeway
- Maricopa County, AZ

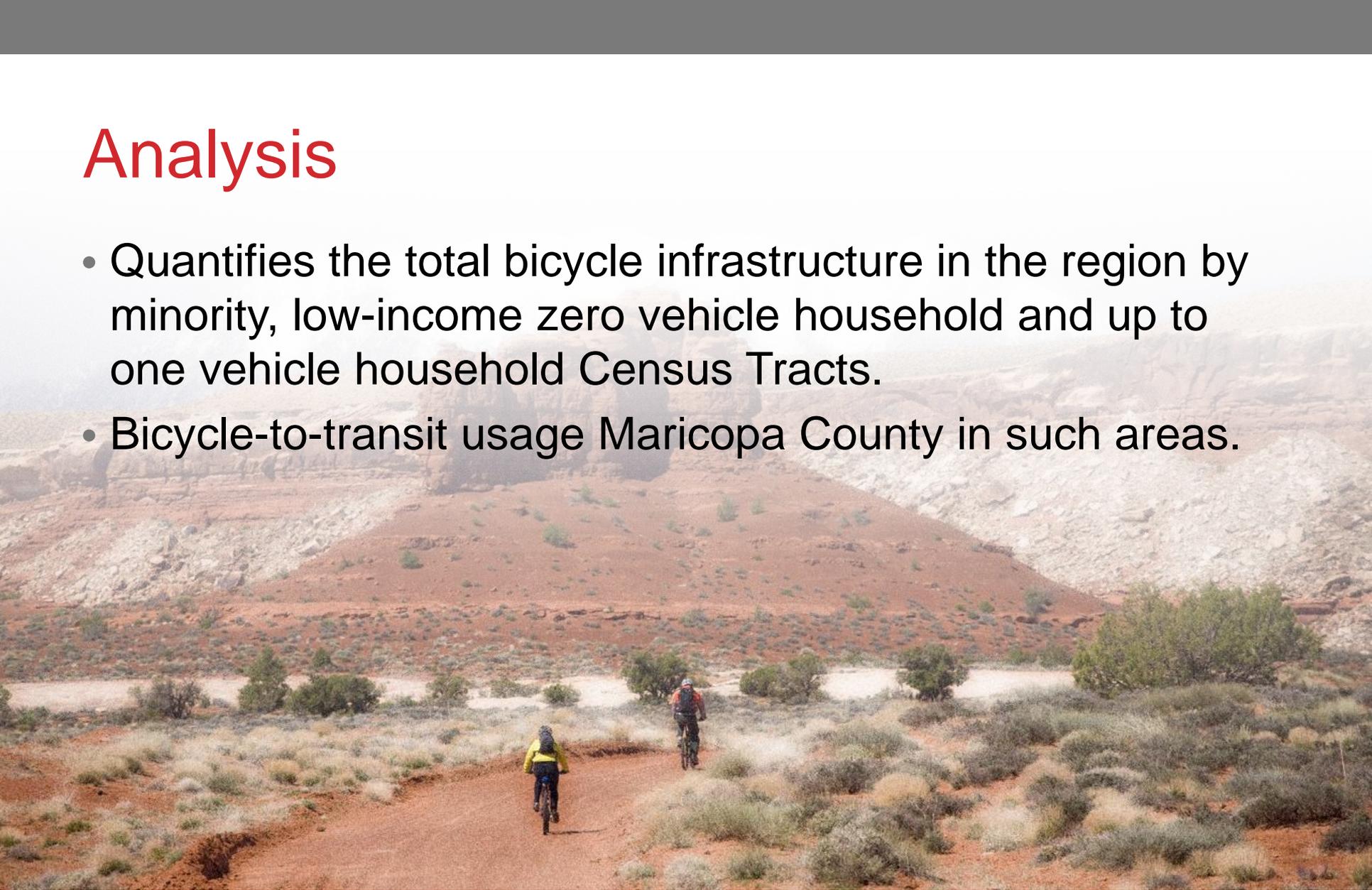
*Paved bike lanes, bike routes, un/paved shared-use path and paved shoulder.

Bikeway Infrastructure	No. of Miles
<i>Bike Route</i>	524
<i>Bike Lane</i>	1,713
<i>Multi-use Path Paved</i>	382
<i>Multi-use Path Unpaved</i>	287
<i>Paved Shoulder</i>	347
Total	3,254



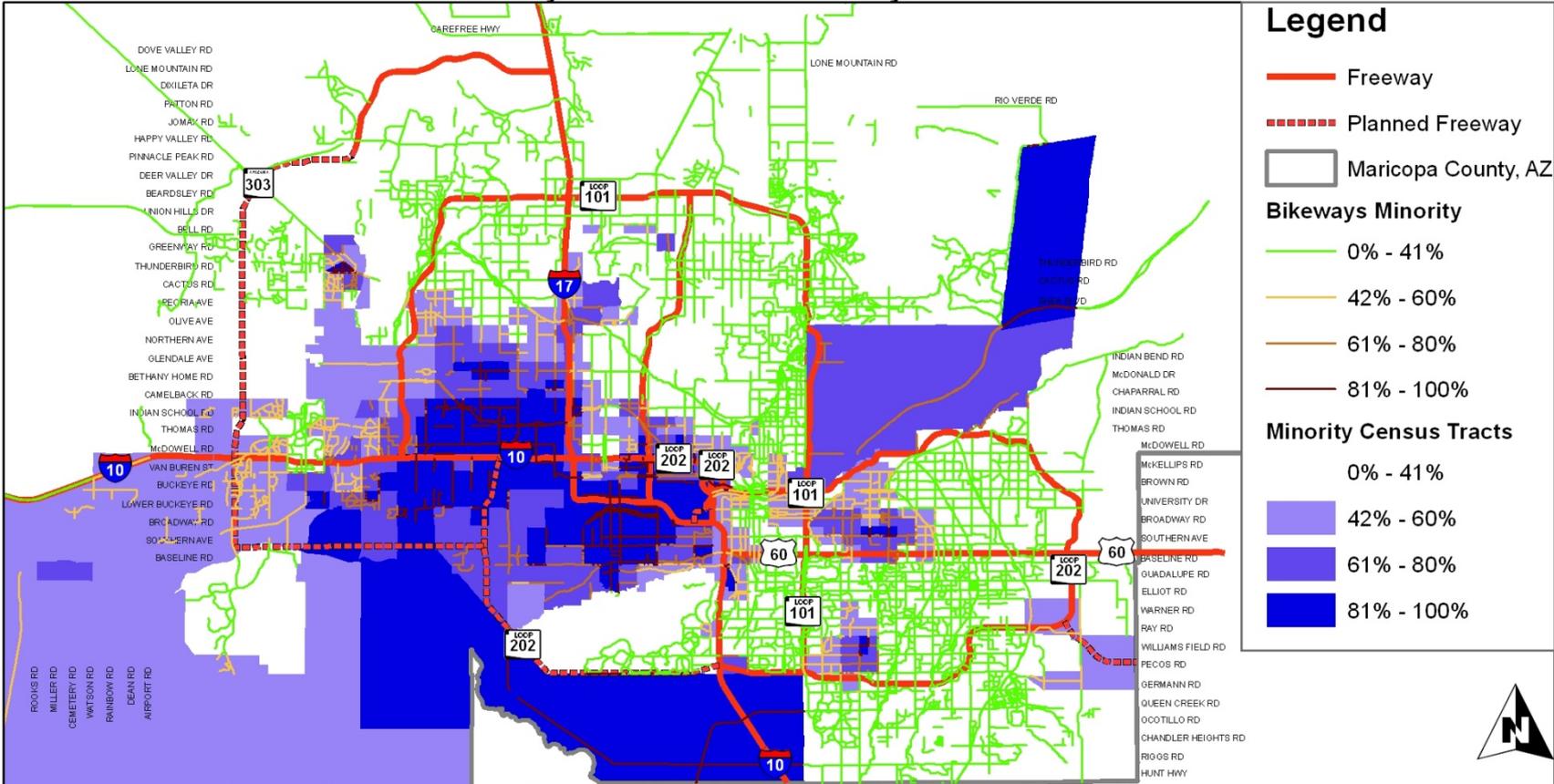
Analysis

- Quantifies the total bicycle infrastructure in the region by minority, low-income zero vehicle household and up to one vehicle household Census Tracts.
- Bicycle-to-transit usage Maricopa County in such areas.



Minority Census Tracts

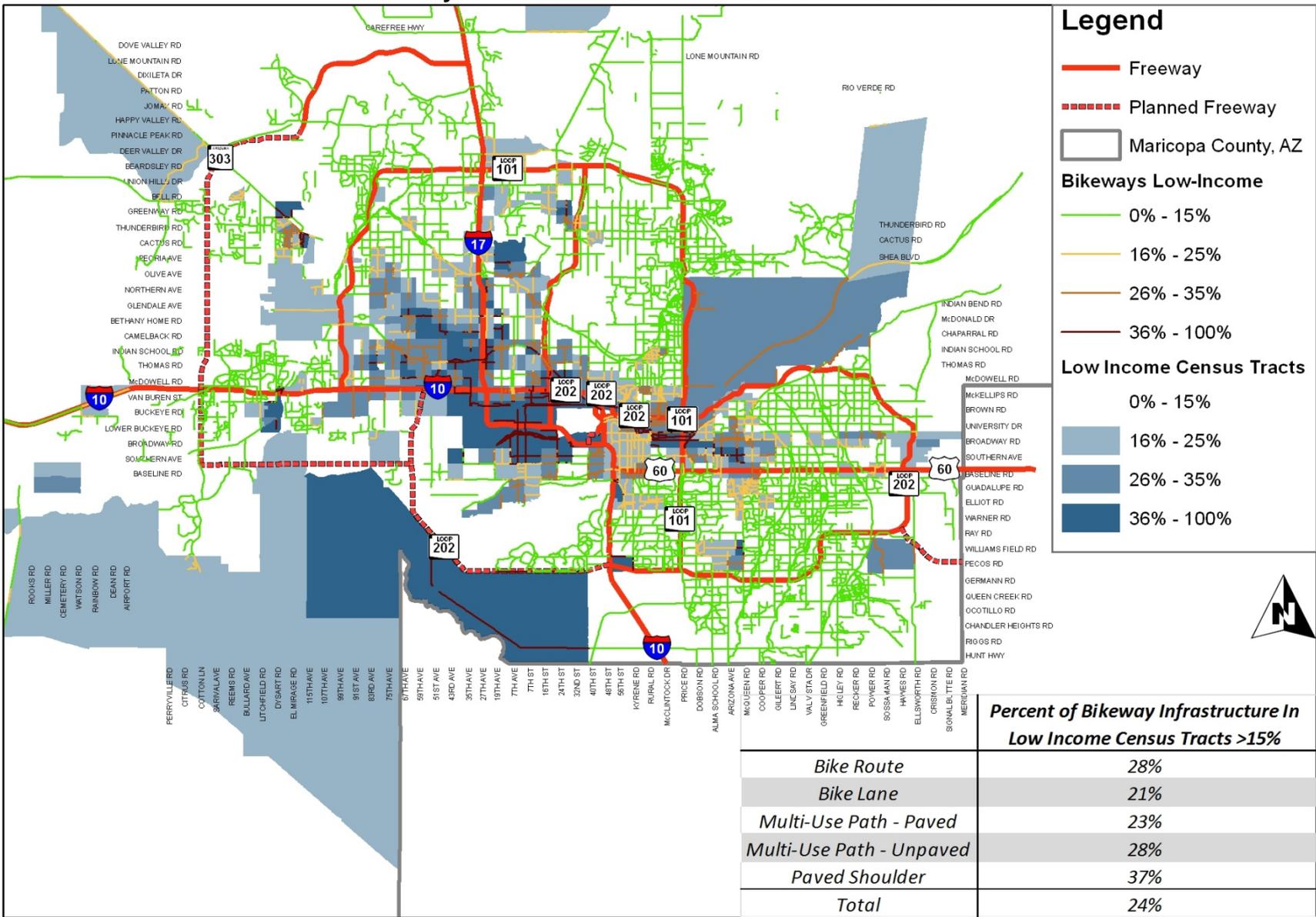
Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bikeway Infrastructure in Minority Census Tracts



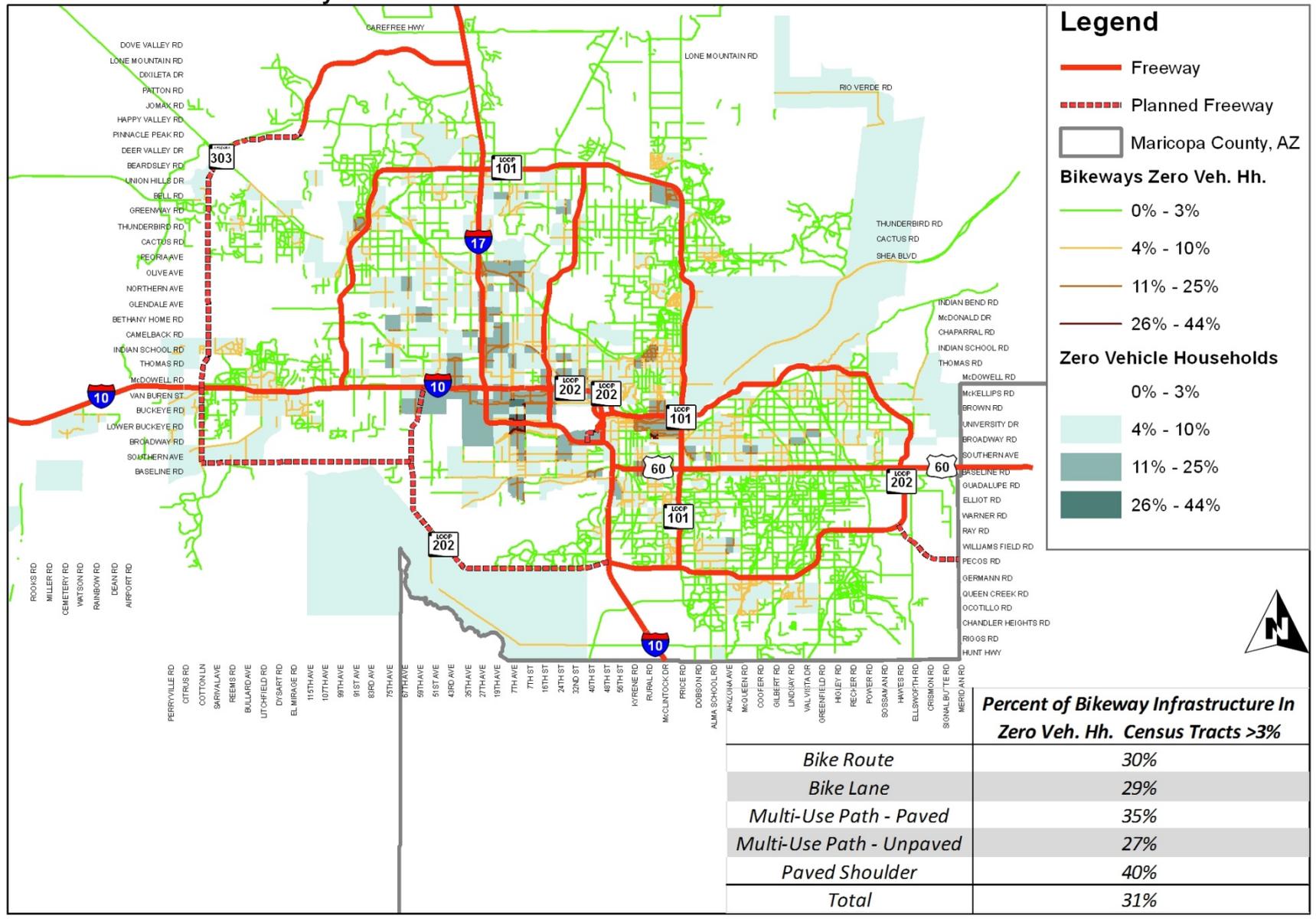
Percent of Bikeway Infrastructure In Minority Census Tracts >41%

Bike Route	23%
Bike Lane	25%
Multi-Use Path - Paved	23%
Multi-Use Path - Unpaved	28%
Paved Shoulder	44%
Total	27%

Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bikeway Infrastructure in Low Income Census Tracts



Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bikeway Infrastructure in Households in Census tracts with Zero Vehicles



Legend

- Freeway
- - - Planned Freeway
- Maricopa County, AZ

Bikeways Zero Veh. Hh.

- 0% - 3%
- 4% - 10%
- 11% - 25%
- 26% - 44%

Zero Vehicle Households

- 0% - 3%
- 4% - 10%
- 11% - 25%
- 26% - 44%

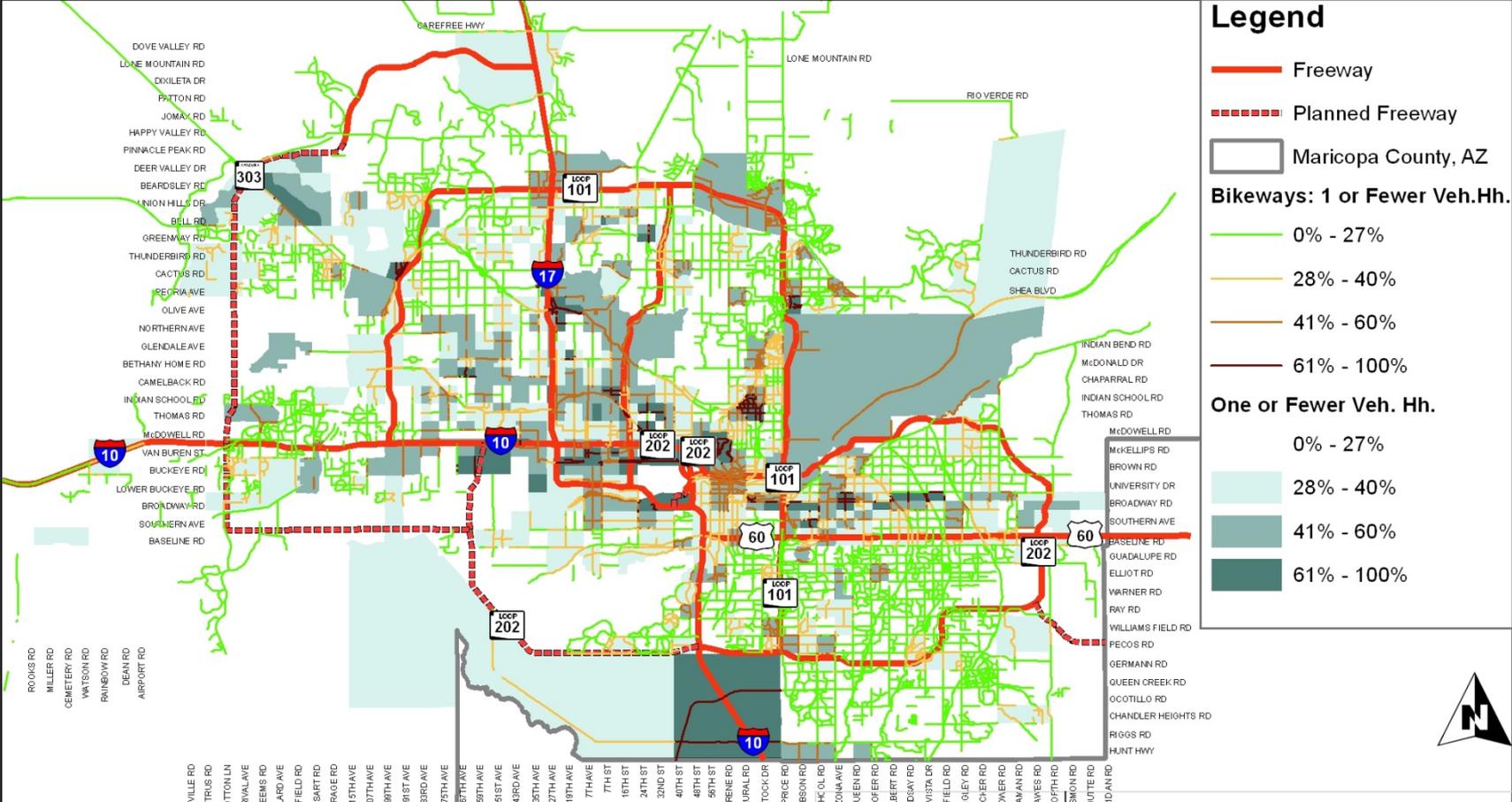


Percent of Bikeway Infrastructure In Zero Veh. Hh. Census Tracts >3%

<i>Bike Route</i>	30%
<i>Bike Lane</i>	29%
<i>Multi-Use Path - Paved</i>	35%
<i>Multi-Use Path - Unpaved</i>	27%
<i>Paved Shoulder</i>	40%
Total	31%

One or Fewer Vehicle Household Census Tracts

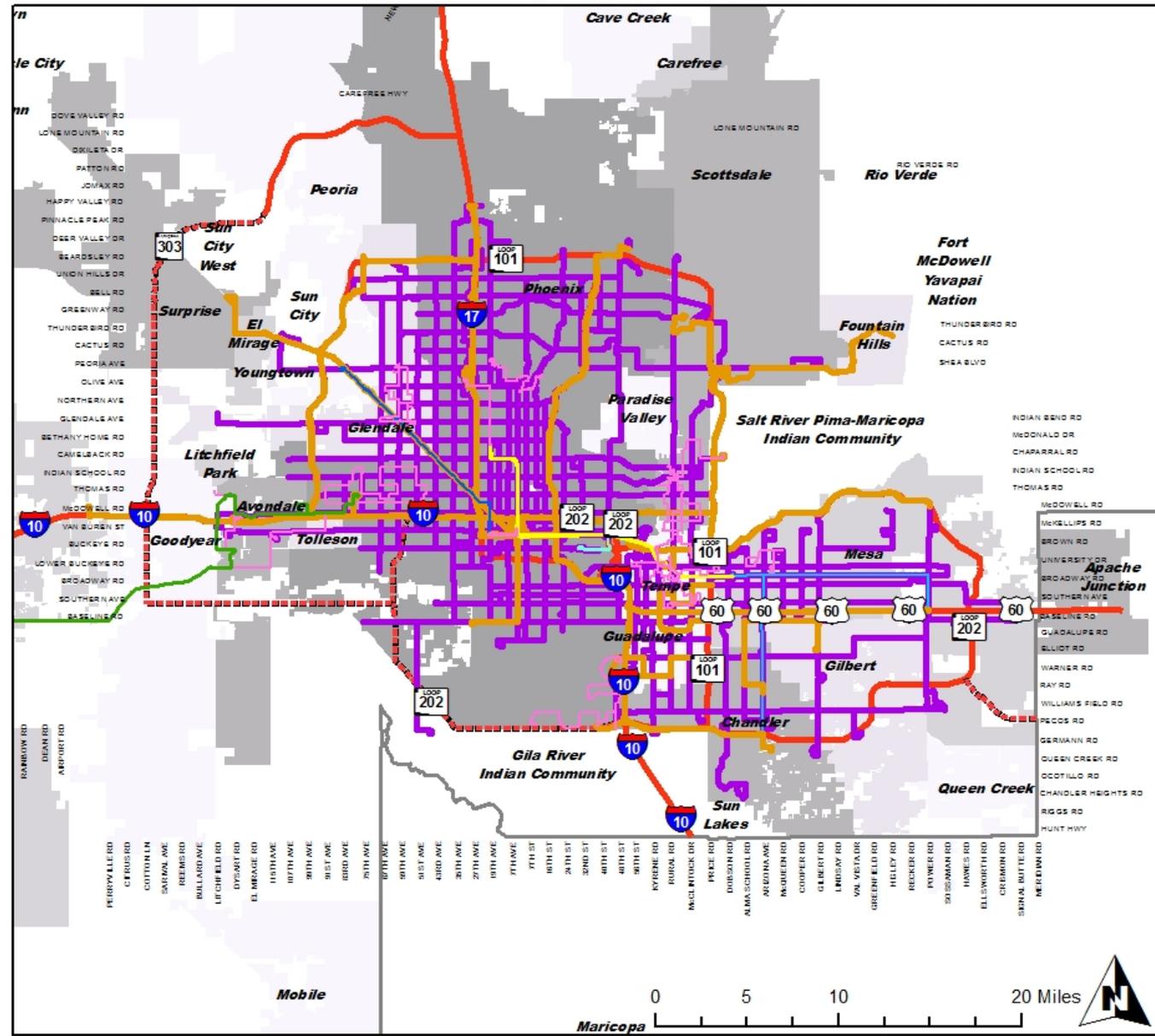
Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bikeway Infrastructure in Households in Census tracts with One or Fewer Vehicles



Percent Bikeway Infrastructure Miles in Hh. With One or Fewer Vehicles in Census Tracts >27%

Bike Route	36%
Bike Lane	33%
Multi-Use Path - Paved	40%
Multi-Use Path - Unpaved	35%
Paved Shoulder	31%
Total	34%

Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Regional Transit System - January 2013



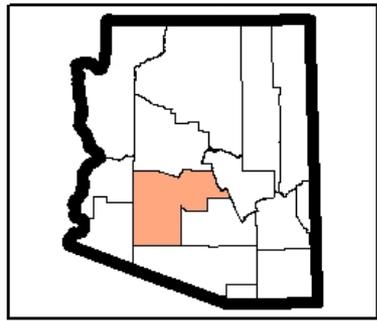
Legend

- Freeway
- - - Planned Freeway
- Maricopa County, AZ

Transit Routes

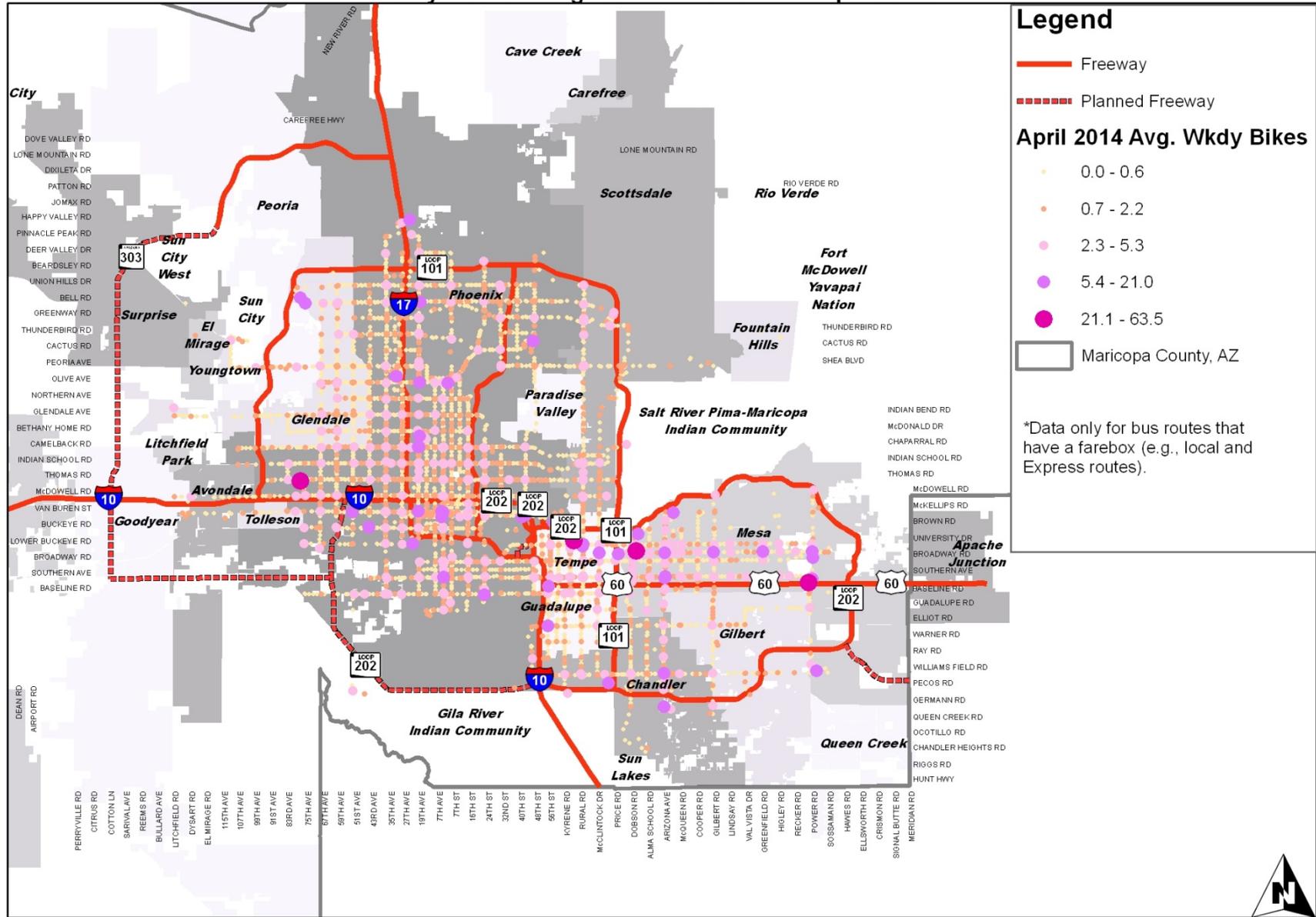
- SHUTTLE
- RURAL
- CIRCULATOR
- LIGHT RAIL
- LIMITED
- EXPRESS
- LINK
- LOCAL
- RAPID

ASU - PAF 571
GIS Project
December 5, 2013

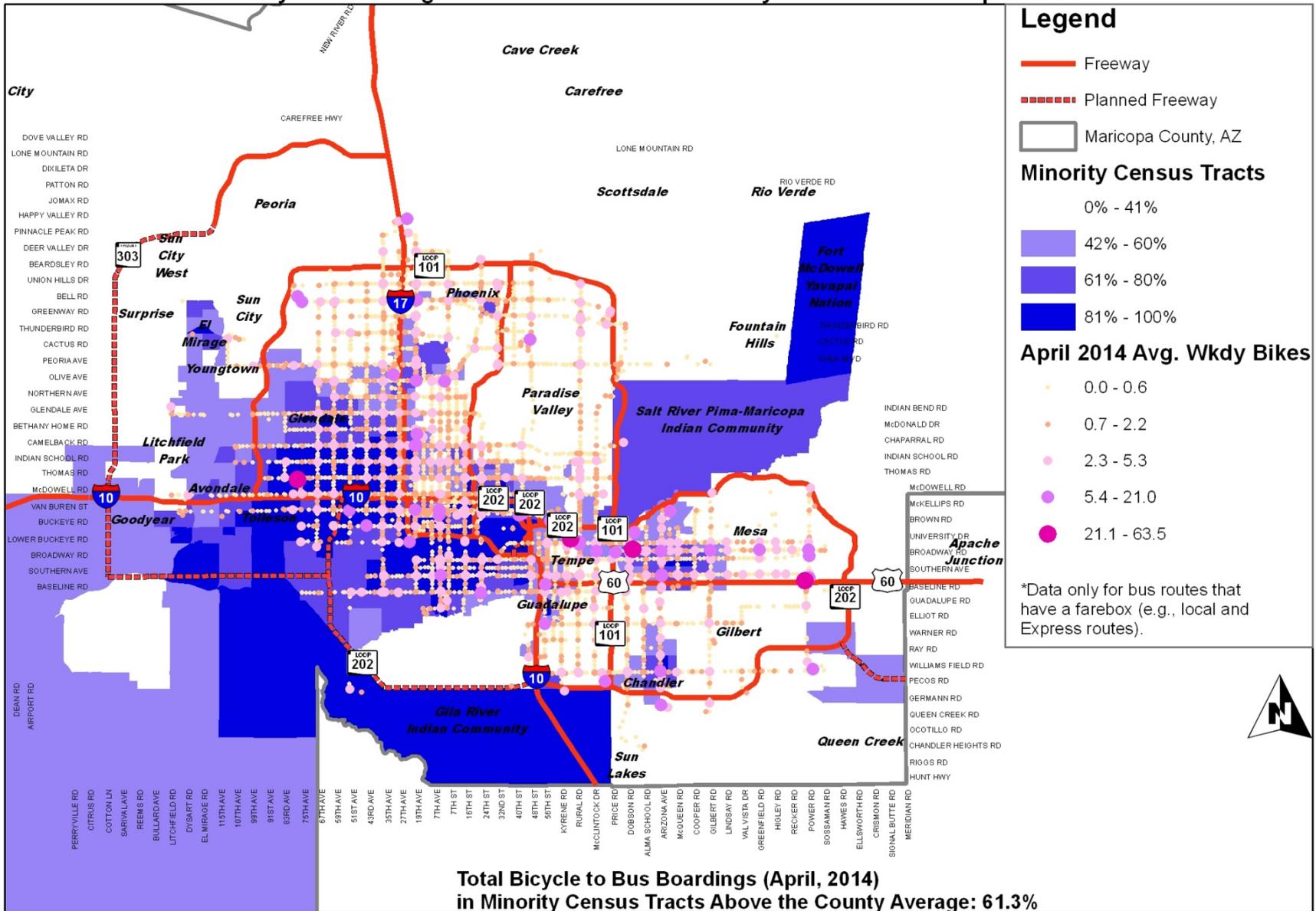


Average Daily Bike to Bus Boarding in the Region

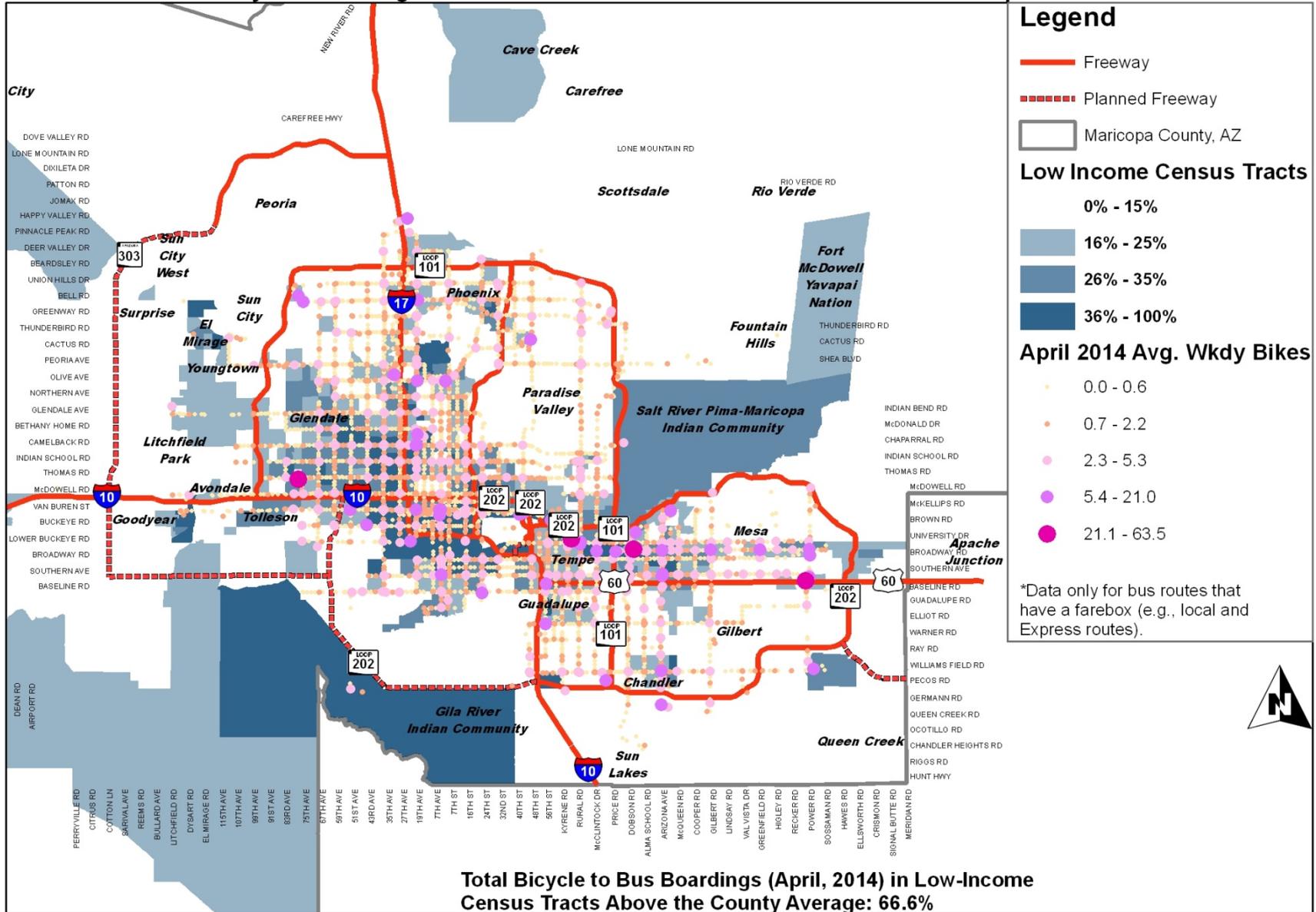
Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bicycle Boardings on Public Transit - April 2014



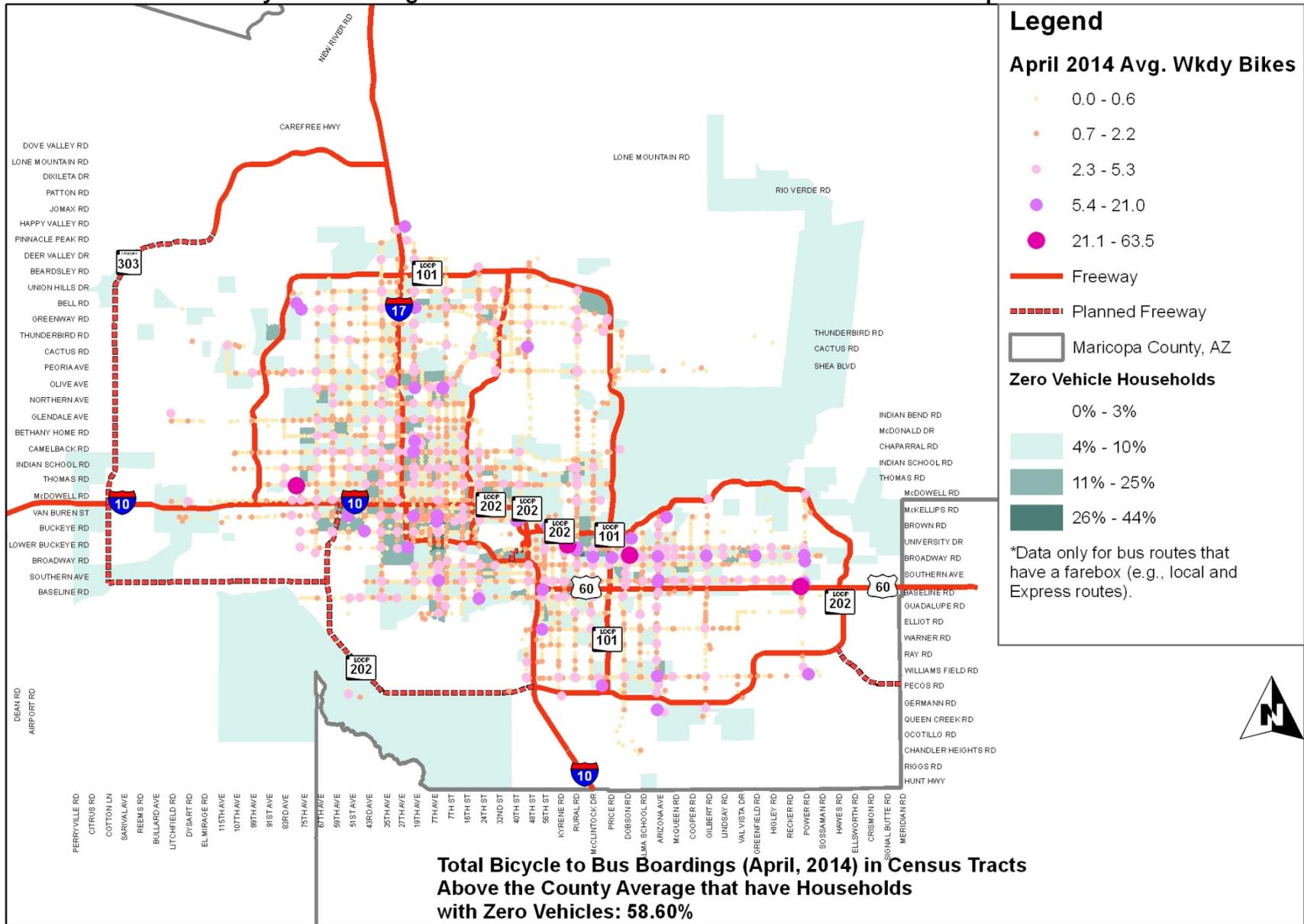
Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bicycle Boardings on Public Transit in Minority Census Tracts - April 2014



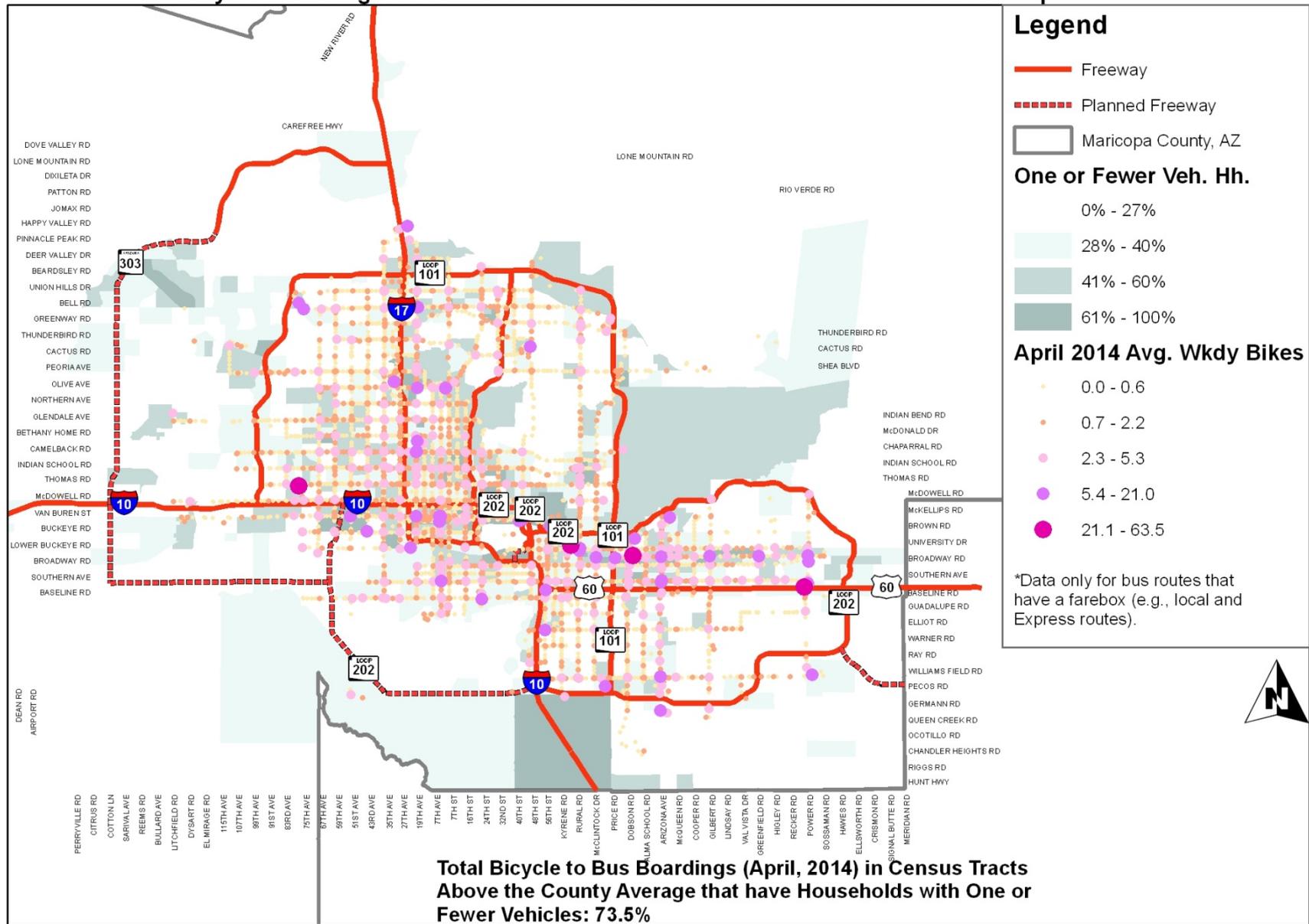
Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bicycle Boardings on Public Transit in Low-Income Census Tracts - April 2014



Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bicycle Boardings on Public Transit in Zero Vehicle Households - April 2014

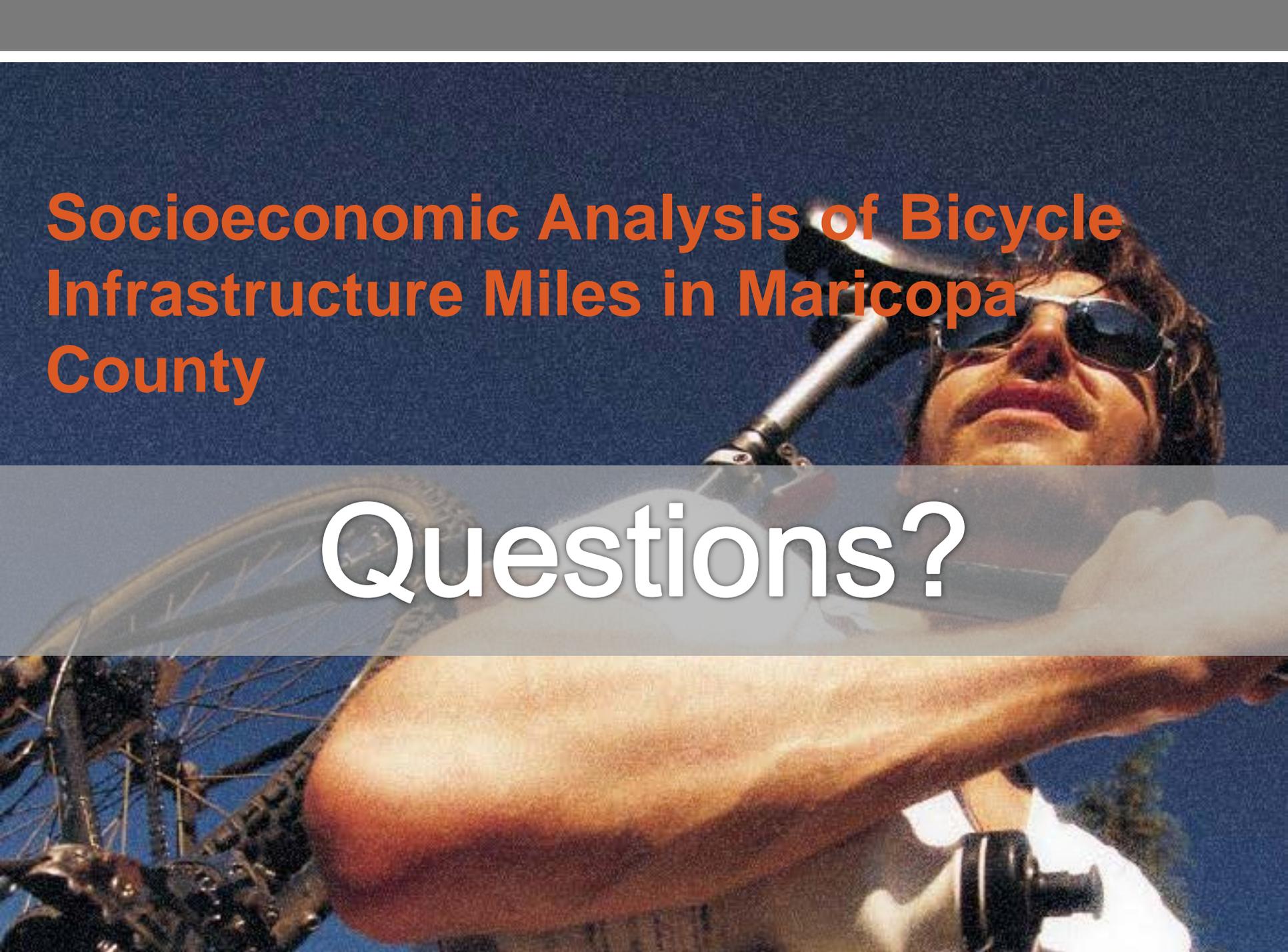


Socioeconomic Analysis of Bicycle Infrastructure in Maricopa County Bicycle Boardings on Public Transit in One or Fewer Vehicle Households - April 2014



Conclusion

- Transit dependent neighborhoods show utilization of bike facilities
- Transit dependent neighborhoods would benefit from additional bike facilities
- Observations:
 - Missing bike-to-bus boardings on several modes (circulators, light rail and rural routes)
 - It is only a snapshot in time, it will require on-going updates

A low-angle, close-up photograph of a man with long brown hair and sunglasses riding a bicycle. He is looking upwards and to the right. The background is a clear, bright blue sky. The bicycle's handlebars and front wheel are visible in the foreground.

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Questions?