

# MORE HOUSING, FEWER CARS

## Reducing commute-related emissions on the South Coast

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Spring 2016



### Introduction

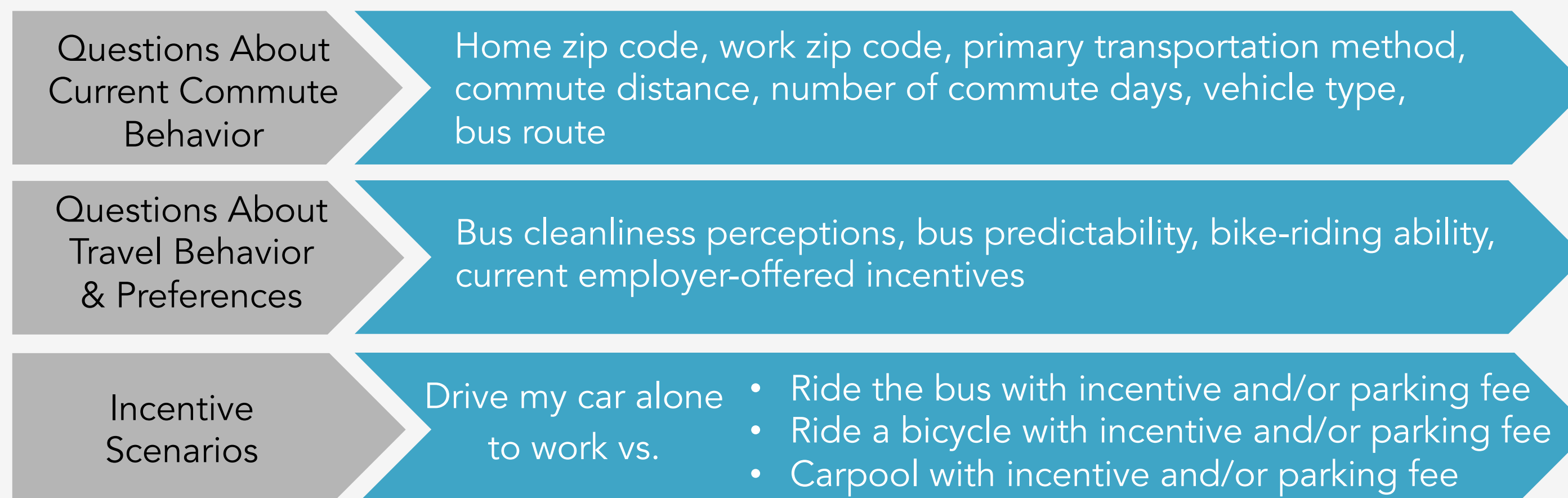
The City of Santa Barbara is a beautiful region, but geographic growth constraints have led to high housing costs in the South Coast. These high costs force employees to live in bedroom communities, leading to a jobs-housing imbalance. This imbalance increases commute times and associated climate and air pollutants; over 1/3 of county-wide greenhouse gas (GHG) emissions are due to on-road vehicles.<sup>1</sup> To ameliorate these problems, the City of Santa Barbara established the Average Unit-Size Density Incentive (AUD) Program, which aims to increase affordable, high-density workforce housing through development incentives. To understand the potential of the AUD Program, officials need better knowledge of South Coast residents' commute behaviors and preferences. Planners also need to know whether certain factors may encourage a switch to alternative modes of transportation. To explore these questions, this project identified the following objectives:

#### Project Objectives:

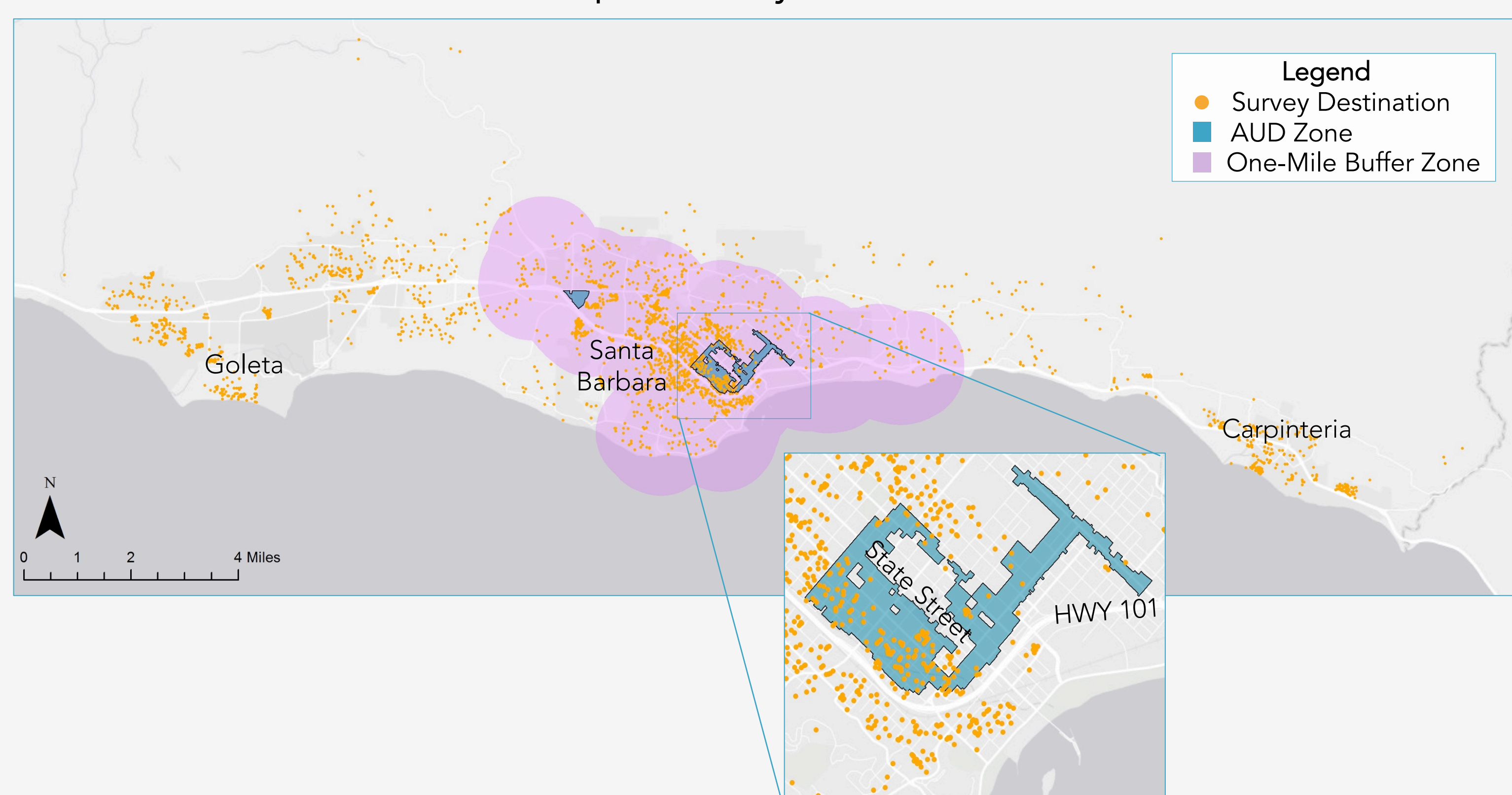
- 1) Establish a baseline for commuter behavior, examining differences among housing types and locations.
- 2) Determine what demographic and behavioral factors affect people's transportation preferences.
- 3) Analyze the influence of employer incentives and parking fees on a commuter's preferred mode of transportation.

### Approach

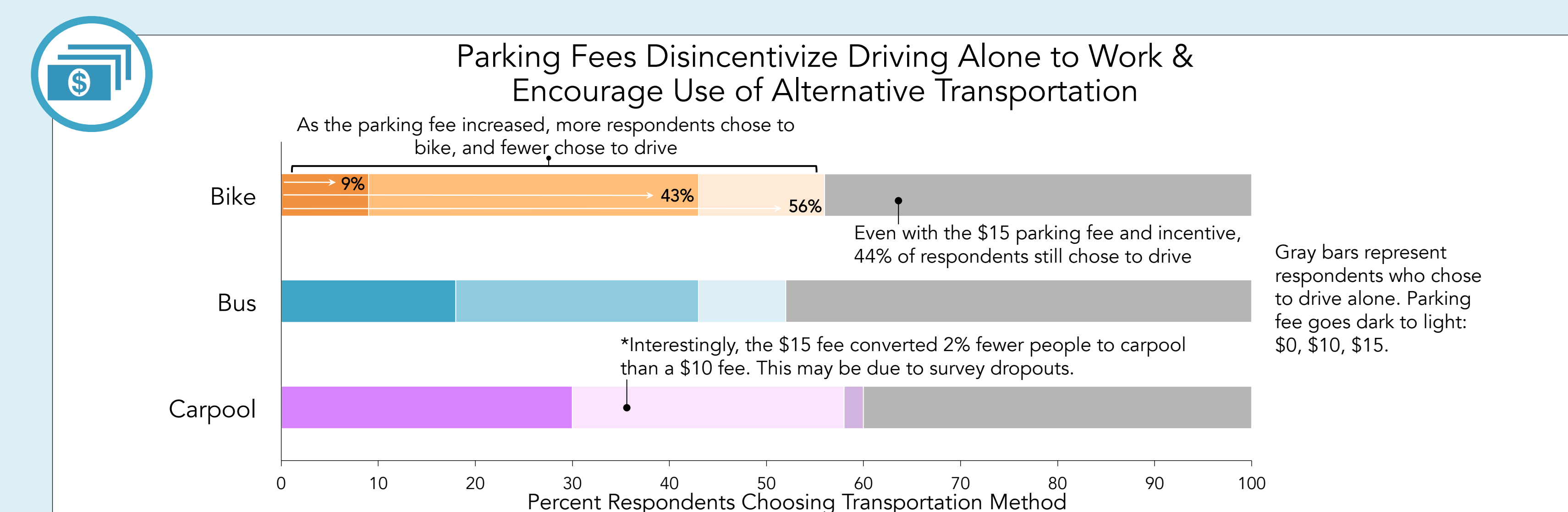
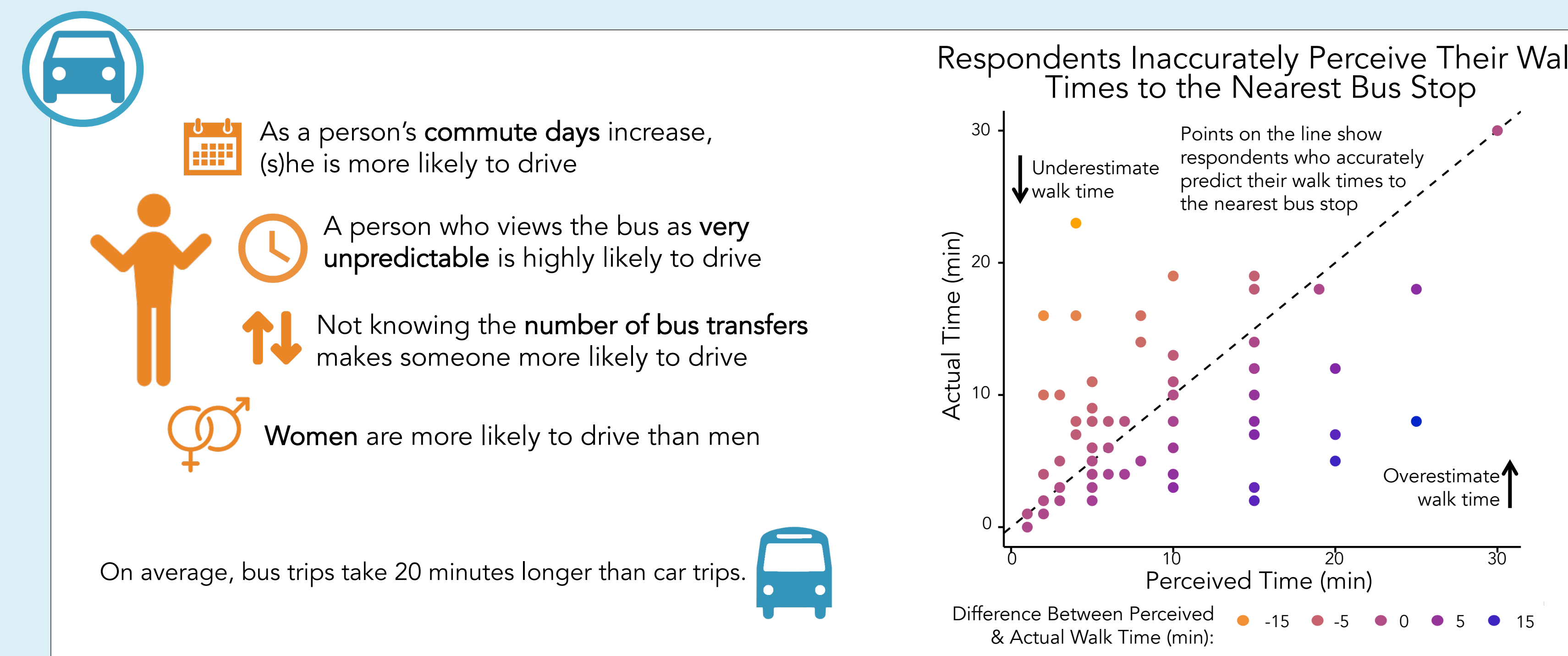
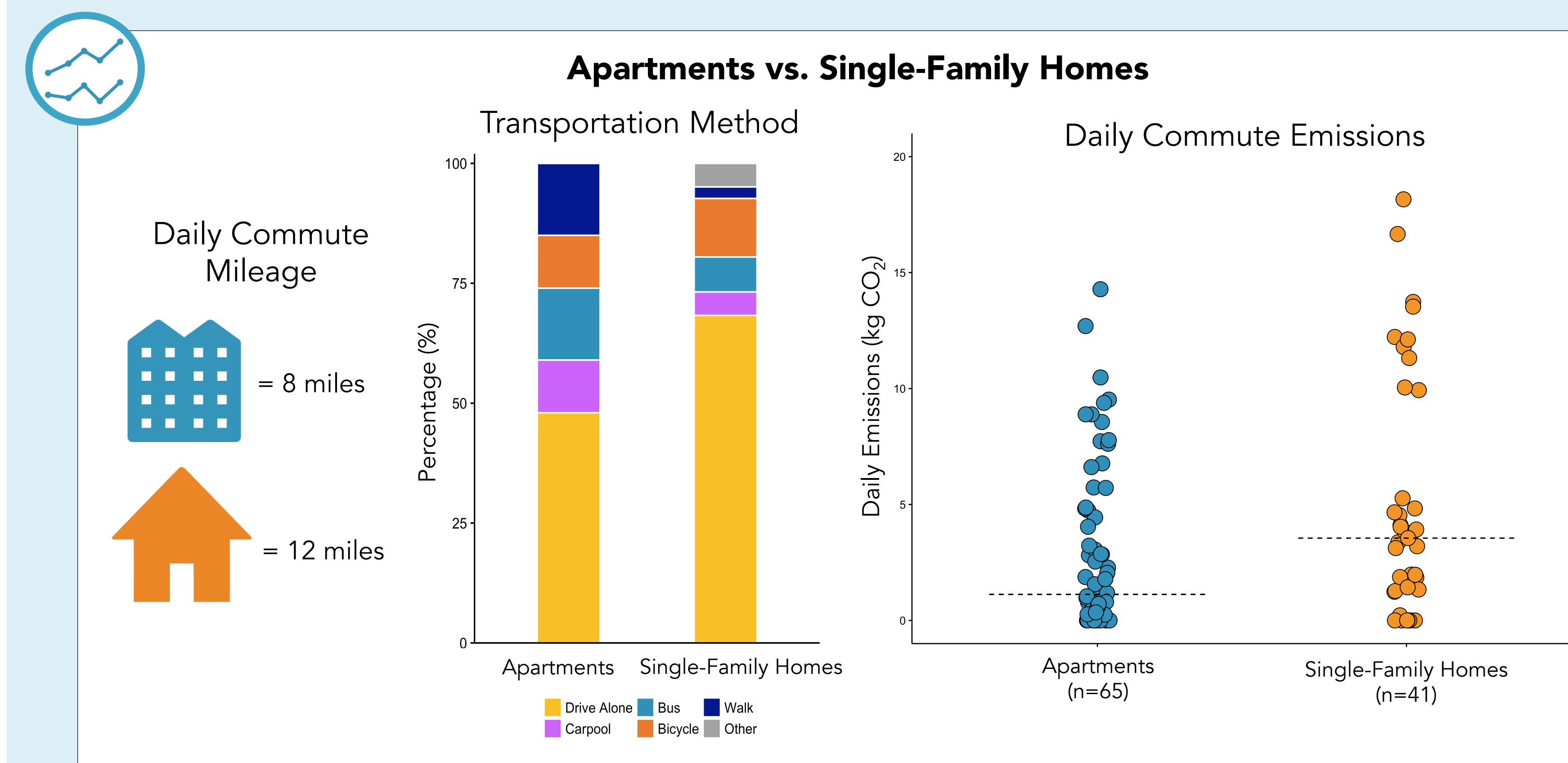
Design and distribute a survey to South Coast residents, divided into three sections:



Map of Survey Distribution<sup>2</sup>:



### Results



### Contact

Website: [www.SBDevelopment.wix.com/SBDevelopment](http://www.SBDevelopment.wix.com/SBDevelopment)  
Email: [SBDevelopment@lists.bren.ucsb.edu](mailto:SBDevelopment@lists.bren.ucsb.edu)

### Conclusions

The results of this project establish a baseline of commuter behavior that will be beneficial for future transportation and housing assessments in the South Coast.

Greenhouse gas emissions do vary by housing type.

Apartment residents commute fewer miles and emit fewer GHG emissions than residents of single-family homes. Residents of the AUD zone do not emit significantly fewer GHG emissions or commute by alternative forms of transportation significantly more than residents of the one-mile buffer zone.

Gender, commute days, and bus characteristics drive commute choices; commute distance and incentives do not.

The likelihood that a respondent drives alone to work increases if he/she is a woman, has a negative perception of bus cleanliness, commutes multiple days per week, and is unaware of how many transfers would be required on his/her bus route. Incentives are not currently a significant factor in a resident's decision. And, surprisingly, a person does not become less likely to drive alone to work as their commute shortens.

Parking fees are effective at reducing driving alone, as are employer incentives.

Respondents were more likely to choose an alternative method of transportation with a parking fee paired with an incentive. This likelihood increased as fee levels increased. Carpooling was the most appealing alternative method of transportation shown.

### Recommendations

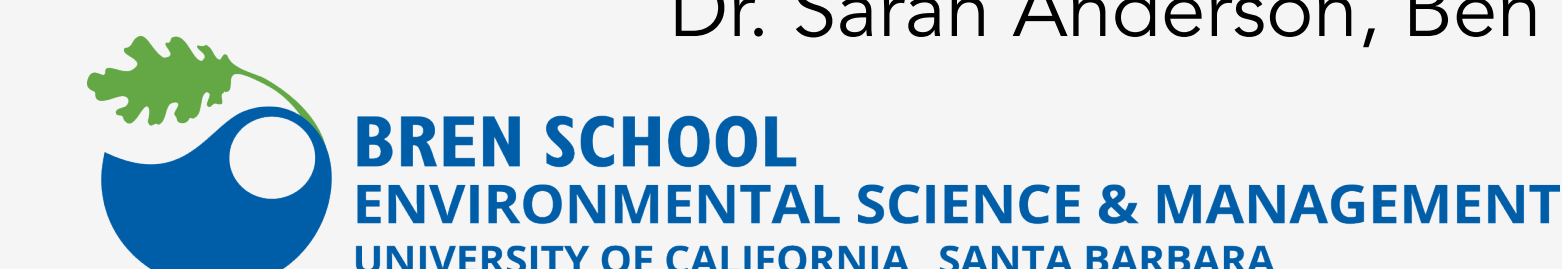
Our findings suggest that high-density residences are likely to be an important tactic in decreasing commute emissions while simultaneously increasing housing. It is important to note that no actual AUD Program developments have been built yet. Our project points to the need for future studies upon their construction.

We suggest that the City of Santa Barbara:

- Continue with the AUD Program and monitor the success of built projects. If...
  - The program has a positive effect on emissions, incorporate it into the City's Climate Action Plan
  - The program does not reduce commute emissions, maintain the AUD Program purely as an employee housing strategy
- Work with employers to create alternative transportation incentive programs and/or implement a parking fee
- Incorporate gender and other demographics into planning strategies
- Continue with region-wide investments in alternative transportation & information campaigns

### Acknowledgements

External Advisors: Peter Imhof & Rob Dayton  
Dr. Sarah Anderson, Ben Best, Dr. Lisa Leombruni



<sup>1</sup> Santa Barbara County Association of Governments' Regional Transportation Plan and Sustainable Communities Strategy (2013)  
<sup>2</sup> Basemap provided by ESRI, HERE DeLorme, MapmyIndia, OpenStreetMap contributors, and the GIS user community