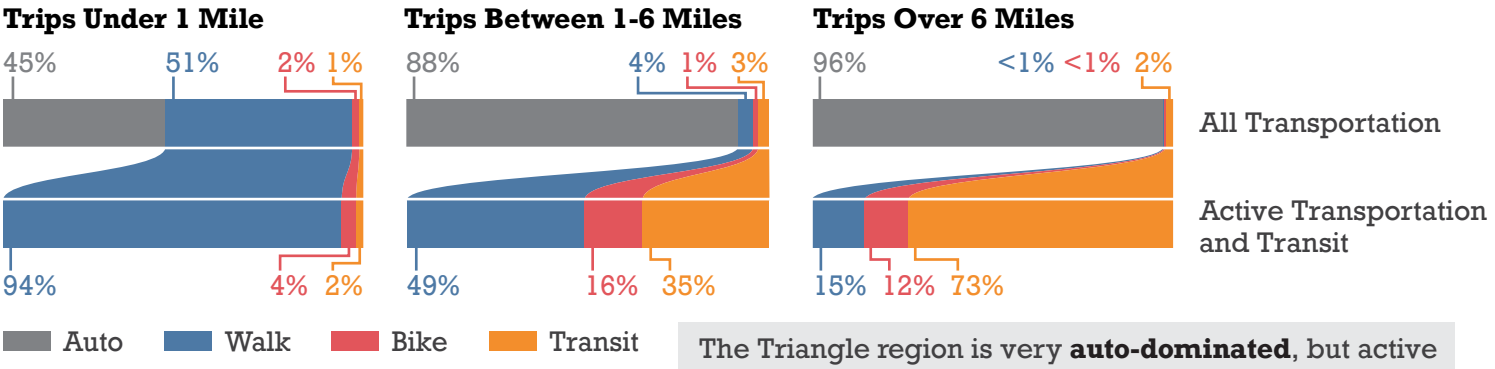
Active Transportation

IN THE RESEARCH TRIANGLE REGION

Overview

A **multimodal transportation system** that encourages walking and biking has positive benefits for **improving health, promoting equity, and reducing congestion**. Active Transportation (walking and biking) projects are an element of the region's Metropolitan Transportation Plans (MTPs).



Data sources include the 2016 Triangle Household Travel Survey and crash data from NCDOT.

The Triangle region is very **auto-dominated**, but active transportation still plays an important role in mobility, especially for shorter distance trips.

Travel Behavior

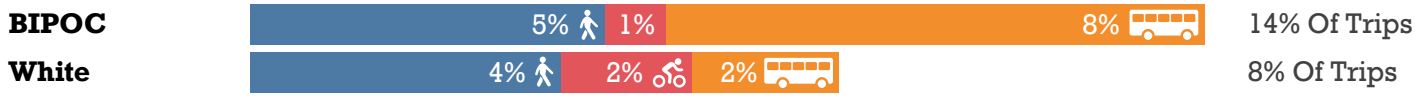
Various factors influence a person's choice to walk, bike, or take transit, including their personal or household characteristics, why they are traveling, whether the trip is made in an urban, suburban, or rural community, and the presence of sidewalks and bike lanes. **The information below focuses on trips between 1-6 miles**, as these seem most likely to benefit from planning and policy decisions, and infrastructure investments. *Note that not all of these graphs add up to 100%, and the scale is not consistent between them.*

Income

Lower income families are much more dependent on non-auto transportation, especially public transit.

Ethnicity

Non-white households rely heavily on non-auto travel modes.



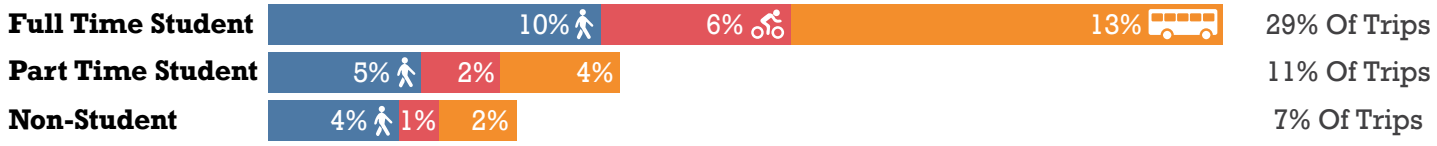
Auto Ownership

Zero car housholds rely heavily on active transportation and public transit, with around 64% of total trips made using these means.

Updated 2021

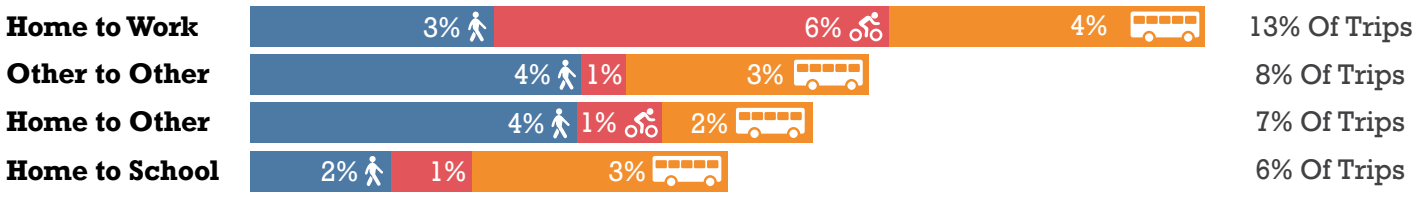
Student Status

Students rely heavily on non-auto modes for travel in the Triangle, an important metric given the region's high concentration of universities and colleges.



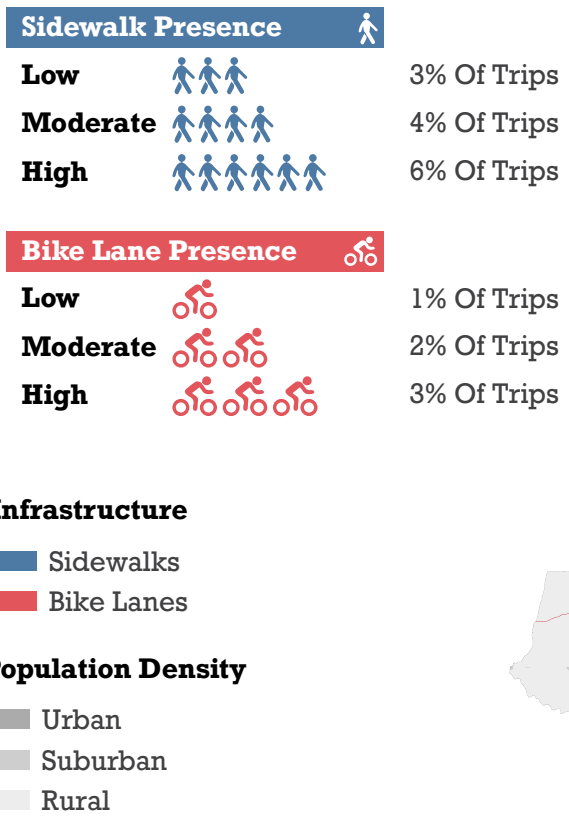
Reason For Travel

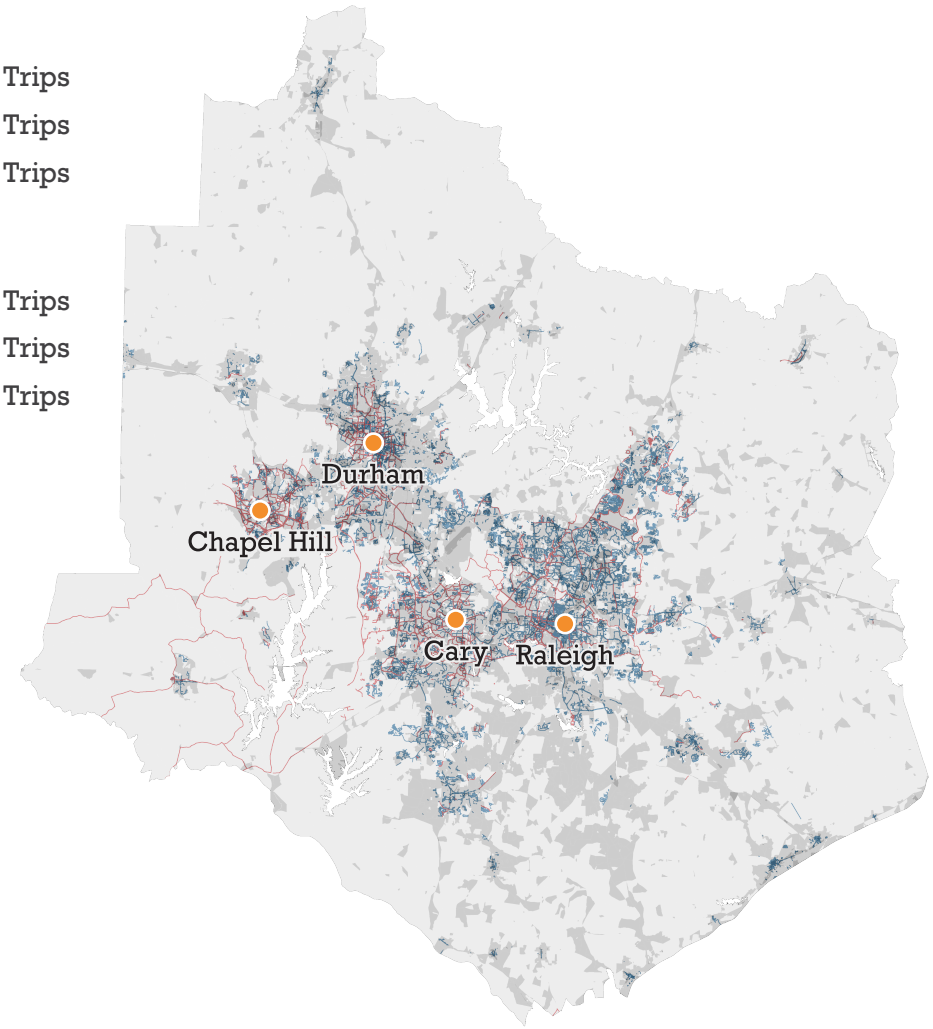
Work trips show the greatest variation in mode for trips between 1-6 miles.



Bike Lanes and Sidewalks

Mode choice is largely determined by distance to destinations. However, the presence of infrastructure that promotes active transportation has the greatest effect on intermediate distances. The presence of bike lanes and sidewalks can encourage people to walk and bike.





Safety

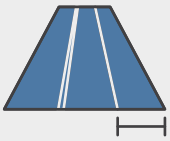
Active travelers are among the most vulnerable roadway users in a crash situation. Understanding crash patterns and statistics can help us plan for safer communities for all.

Crash data for active travelers in the Triangle region highlighted the following trends, which have been paired with proven countermeasures that can improve safety related to biking and walking.

Problem: Higher concentration of crashes involving a pedestrian or bike in urban areas

Solution: Sidewalks

65-89% Reduction in crashes involving pedestrians walking along roadways



Solution: Paved Shoulders

71% Reduction in crashes involving pedestrians walking along roadways

https://safety.fhwa.dot.gov/provencountermeasures/walkways/

Problem: Greater severity of crashes on higher speed facilities

Solution: Raised Median

46% Reduction in pedestrian crashes

Solution: Pedestrian Crossing Island

56% Reduction in pedestrian crashes

https://safety.fhwa.dot.gov/provencountermeasures/ped_medians/

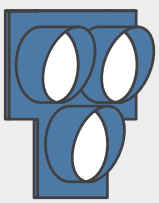
Problem: A higher concentration of crashes at signalized intersections

Solution: Leading Pedestrian Intervals

60% Reduction in the number of people hit by cars at intersections

https://safety.fhwa.dot.gov/provencountermeasures/lead_ped_int/

Problem: A higher concentration of mid-block crashes



Solution: Pedestrian Hybrid Beacons

55% Reduction in pedestrian crashes

29% Reduction in total crashes

15% Reduction in serious injury and fatal crashes

https://safety.fhwa.dot.gov/provencountermeasures/ped_hybrid_beacon/