

Research in Progress

Measuring Food Access to Improve Public Health - Phase II

Research Need

Inequitable access to jobs, food, healthcare, education, and recreation contribute to health disparities. Phase I of this study identified needs to account for alternative transportation modes and environmental justice populations.

Goals/Objectives

There are four objectives of this research:

- 1) To develop methods to account for new transportation services (notably microtransit) and the quality and connectivity of transportation infrastructure in metrics of access based on travel time and/or cost.
- 2) To present metrics of access and equity that account for the locations of vulnerable or disadvantaged populations and how these align with the transportation system.
- 3) To work with stakeholders to identify metrics and tools that serve needs to planning and services that provide access to critical locations associated with public health.
- 4) To recommend metrics and analyses that can be reproduced with available data to be incorporated into a data dashboard or tool that supports ongoing planning and investment decisions.

Project Information

This project is being conducted as part of the Massachusetts Department of Transportation (MassDOT) Research Program with funding from Federal Highway Administration (FHWA) State Planning and Research (SPR) funds.

Principal Investigators:

Eric Gonzales PhD, Eleni Christofa PhD

Performing Organization:

UMass Amherst

Project Champion:

Derek Krevat, Mass DOT

Project Start Date:

9/1/2023

Expected Project Completion Date:

8/31/2025

Methodology

The research method includes three parts. First, the researcher team will work with stakeholders, including MassDOT Rail and Transit Division and Regional Transit Authorities, to identify existing data sets and analysis needs. Second, methods will be developed to quantify the effect of microtransit services and pedestrian/bicycle connectivity on access to critical destinations. Third, access measures will be linked with data on Regional Environmental Justice Plus (REJ+) populations, to reflect the relationship between transportation infrastructure and access needs. The resulting methods will be used to quantify access to food, medical care, education and job training resources, and recreation in order to provide a more comprehensive view of access and public health in Massachusetts.

Research and Technology Transfer Section
MassDOT Office of Transportation Planning
Planning.Research@dot.state.ma.us

