

Executive**May 2026****Project Title:**

Advanced Measurement of
Transportation Accessibility for
Multimodal Decision Making

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Advanced Measurement of Transportation Accessibility for Multimodal Decision Making

Researcher will develop methods and metrics for applying accessibility measures to area-, corridor-, and project-level decisions.

WHAT IS THE NEED?

More research is needed to develop a valid and consistent way to measure transportation accessibility in alignment with and support of Caltrans' Strategic Management Plan (SMP). The SMP calls for the department to "improve transportation accessibility and quality of life for people in all communities." Caltrans' Department of Transportation Planning (DOTP) and the Sustainability Program are moving forward on the purchase of software and data to measure accessibility. The tool will address accessibility across vehicle, transit, bicycle and pedestrian modes, allowing for better multimodal decision-making. As with any such tools, the outputs will require interpretation and consistent application, which will be the focus of this research.

WHAT ARE WE DOING?

The research team will develop methods for applying accessibility metrics to area-, corridor-, and project-level decisions. This research will complement related Caltrans' efforts to help provide more guidance for measuring accessibility and applying the findings to decisions other than VMT. For instance, this research will help provide guidance about what and where to build infrastructure to best serve needs of the public, especially in service of equity goals and the needs of disadvantaged communities. One role of the researcher will be to help facilitate that conversation by identifying key performance indicators or accessibility-assessment best practices.



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WHAT IS OUR GOAL?

The goal of this research is to provide consistent, reliable and streamlined means for evaluating accessibility, in order to meet the Strategic Management Plan aspiration around improving transportation accessibility. As well, accessibility metrics fill an important gap around active transportation in particular. While demand models can help evaluate various highway and transit projects, they are of little use on active transportation, leaving little in the way of evaluation for those modes. Accessibility metrics can help Caltrans design and select the most impactful active transportation projects.

WHAT IS THE BENEFIT?

Caltrans is currently revising its investment strategy to focus on multiple modes and to rely less on highway expansion. As part of that effort, Caltrans is reviewing 200 prospective projects. Many of these projects need to rethink highway capacity expansions and consider multimodal improvements more thoughtfully. Currently, the department does not have the tools or standards to do so. This project would help provide these tools and will assist Caltrans with building and operating projects that better meet the public's needs, at a lower cost with less environmental harm.

WHAT IS THE PROGRESS TO DATE?

Progress continues as University of Wisconsin researchers have built out pedestrian networks using surrogate values to reflect network data gaps and have run accessibility models with different parameters to see if non-auto travel can be projected consistently. The research team is working in close collaboration with Data and Digital Services to ensure that methods can be applied directly to CSIS analysis.