
The University of California, Berkeley and PATH are leading an effort for Caltrans to investigate and prioritize innovative near-term strategies for improving traffic conditions on the US-101 corridor between San Francisco and San Jose.

US-101 Corridor Assessment – Project Summary

A Growing Problem

Traffic congestion on the US-101 corridor between San Francisco and San Jose has increased significantly in recent years with the rapid growth of technology companies in San Francisco and the Silicon Valley area. Many of the private sector employers along the corridor have expressed concern that this issue is affecting the quality of life of their employees and may make it difficult for them to attract and retain quality employees in the future. A group representing these private sector companies recently approached the California Transportation Agency to look for innovative solutions that could be deployed in the near-term to help alleviate the congestion problem.

Near-term Solutions

Traditional capacity expansion solutions such as adding more travel lanes on US-101 are likely to have environmental and right-of-way impacts and take a number of years to implement. In the meantime, there are a number of innovative transportation management concepts such as active traffic management (ATM) and transportation demand management (TDM) that can be deployed much sooner to help solve the problem. ATM and TDM offer an opportunity to better manage peak period demand, stabilize speeds, reduce collisions, and improve travel time reliability on the US-101 corridor, which would improve the quality of life of everybody who travels on the corridor.

One of the ATM-related solutions that is under consideration is the “Managed Motorways” concept. Managed Motorways is a strategy that was developed and implemented in Melbourne, Australia for managing freeway traffic flows to minimize congestion. The concept involves continuously monitoring traffic flows and controlling access to the freeway with advanced ramp metering and signal technologies. Other strategies from Managed Motorways include lane use control, dynamic speed limits and advanced traveler information systems (ATIS). The main goal of Managed Motorways is to prevent severe breakdown conditions during high demand peak periods so that travel time reliability is more predictable and collisions are less likely due to more stable and uniform travel speeds.

In addition to Managed Motorways, there are other transportation management strategies that have the potential to alleviate congestion on the US-101 corridor. These include more traditional ATM strategies that have been promoted and tested by FHWA (e.g. incident management, hard shoulder running) as well as TDM strategies such as incentivizing travelers to change travel habits, alternate work schedules, bus-only lanes, dynamic managed lanes, dynamic congestion pricing (Express Lanes), dynamic transit fare reduction, and dynamic ridesharing. Finally, there are broader system wide strategies such as realignment of employment centers or integrated corridor management (ICM) that might not be deployable in the near-term but should be considered as part of a longer term solution.

Project Approach

The proposed project will be the first step of a three-phase process. The initial phase (Phase 1) that is described here will focus on conducting an assessment of current traffic conditions, existing transportation management assets and the most promising transportation management strategies (including Managed Motorways) for use on the US-101 corridor. If approved by Caltrans, Phase 2 of this project will involve a more detailed analysis of US-101 using more sophisticated transportation modeling tools including impact analysis of the Managed Motorway concept and other selected ATM and TDM strategies. Phase 3 will include implementation and evaluation of selected strategies.

Stakeholder Engagement

A critical aspect of the US-101 Corridor Assessment project will be to ensure that input is received from the necessary stakeholders. The PATH team will assemble and convene an expert panel of stakeholders consisting of representatives from the following entities:

- Caltrans design, traffic operations, and traffic safety representatives including District 4 and headquarters staff and possibly additional experts from other districts.
- Regional and local agencies involved with freeway, interchange, and arterial design, traffic operations, and traffic safety on US-101.
- Academic specialists from UC Berkeley in the areas of traffic operations, ITS, regional planning, business and other related departments.
- Representatives from the private sector including major technology companies that are impacted by traffic on US-101.

Project Outputs and Outcomes

The results of the US-101 assessment, stakeholder meetings, follow-up investigations and recommendations will be summarized in a Final Report. The most promising ATM and TDM strategies will be included and prioritized in the Final Report along with specific recommendations for conducting a Phase 2 project. The phase 1 project is expected to be completed within six months from its start date and it is possible that some of its near-term recommendations could be deployed shortly after its completion.

For more information about this initiative, please contact:
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