

**RESEARCH PROBLEM STATEMENT**

<b>DATE:</b> 09/22/2020	<b>PROJECT AREA:</b> Planning
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**TITLE:** Telecommuting and its Long-term Effect on Statewide Travel Patterns

**PROBLEM STATEMENT:**

The COVID-19 pandemic greatly affected travel patterns and volumes in late spring and summer due to travel restrictions, health concerns, and shifts to telecommuting. Although travel via personal vehicle has increased 1-2% over the last several years prior to COVID-19, passenger car travel reduced 77% from 2019 in April but only 11% by the end of July. Before COVID-19, around 10% of the US population teleworked full time. During the pandemic, surveys show that over half of all people telework five days a week. Many large companies based in Arkansas are now considering more permanent shifts to telework which could dramatically change traffic volumes and patterns across the state over the long term with the biggest impacts on peak period congestion. While short term shifts to telework resulted in dramatic decreases in traffic volumes, it remains to be seen what long term changes in travel patterns may be realized in Arkansas. The purpose of this project is to estimate the long-range impacts of shifts to telework through scenario planning in order to (re-)identify and (re-)prioritize policy and project investments.

**OBJECTIVES:**

The objectives of this project are to (1) re-estimate future transportation demand given shifts to telework over the long-term, e.g., 10-20 years, and (2) determine if planned projects, and their anticipated performance, should be reconsidered in light of shifting demand patterns. Key tasks include: (a) an establishment survey to gauge permanent shifts to telework for large employment centers, (b) evaluation of cell-phone/app. tracking data from a commercial vendor for short-term and mid-range depiction of travel pattern shifts, (c) update of statewide travel demand model with scenarios defining various telework shift predictions, and (d) evaluation of planned project against defined scenarios to (re-)estimate predicted performance.

**FORM OF RESEARCH IMPLEMENTATION AND RETURN ON INVESTMENT:**

The research will produce long-range scenarios (10-20 years) of travel demand (volume and patterns) that can be used within the existing statewide travel demand model to reevaluate planned project portfolios. The demand scenarios will reflect anticipated long-term shifts to telework induced by COVID-19 responses. The form of implementation will be a written report, an establishment survey questionnaire, a report and visualization of short and mid-range travel pattern shifts resulting from COVID-19 (based on cell phone tracking data) and updated demand scenarios for evaluation within the existing travel demand model, e.g., TransCAD database files.

**Estimated Project Duration:** 24 Months

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Standing Subcommittee Ranking  <u>2/7</u>	Advisory Council Ranking  <u>12</u>	Statement Combined with Statement Number(s)  _____
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