

Project Information

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Research Administration

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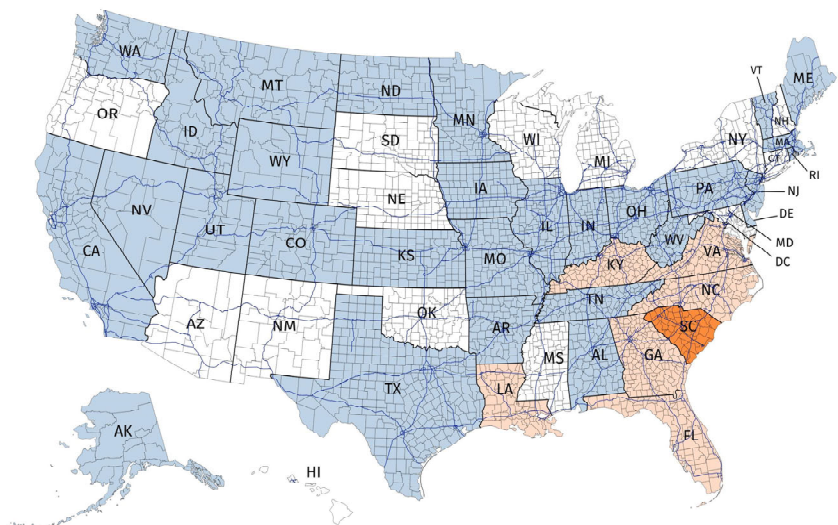
SCDOT Research Website:
<http://www.scdot.scltap.org/>

This final report is available online at:

<http://www.scdot.scltap.org/projects/completed/>

SCDOT PROJECT DEVELOPMENT PROCESS: UPDATE AND BEST PRACTICES

Similar to most State Department of Transportation (State DOTs), the South Carolina Department of Transportation (SCDOT) is responsible for owning, operating, and maintaining a large transportation system for the state. SCDOT is under growing pressure for efficient and effective transportation project delivery to address the need and continued expansion. The pressure is due to high demand, limited funding sources, stakeholders' concerns, federal and state policies, and intense public involvement. Due to increasing demand and pressure to meet its key strategic goals, SCDOT is taking initiatives to deliver projects as efficiently and expeditiously as possible. One of the efforts undertaken by SCDOT is streamlining its preconstruction Project Development Process (PDP).



States Department of Transportation (State DOTs) Participated in this Research Study



Problem

The South Carolina Department of Transportation's (SCDOT) Project Development Process (PDP) serves as the agency's guideline for delivering the spectrum of transportation projects and programs assigned to the Preconstruction Division. SCDOT delivers projects based upon numerous programmatic guidelines. The agency's current PDP was last updated in 2011 and contains guidelines that are outdated, changed, and/or incomplete. In addition, the current guidelines were developed for one 'standard' project development

process that applies to all programs and projects. This all-inclusive process does not identify the steps that must be added, or eliminated, to accommodate the varying program and project types.



Research

The SCDOT has commissioned Clemson University to accomplish two primary research Goals:

Goal I: Update and streamline the agency's current Preconstruction Project Development Process.

Goal II: Identify state DOT Project Development Process Best Practices.

To support these Research Goals the following research objectives were established:

- ➔ Engage with SCDOT SMEs to document the agency's current PDP
- ➔ Strategically engage other state DOTs to identify PDP best practices.
- ➔ Develop a streamlined and updated all-inclusive PDP and flowchart(s).
- ➔ Develop an interactive program and interface for PDP flowcharts.
- ➔ Develop recommendations for enhancement of SCDOT's PDP.

The research methodology utilized to achieve the research goals and supporting objectives was developed, and executed, in four (4) phases comprising ten (10) tasks. These four phases are:

- ➔ Investigate studies, publications, and SCDOT's current PDP
- ➔ Develop PDP flowcharts based on funding sources and NEPA impacts
- ➔ Collect state DOT's process data and practices
- ➔ Identify and develop PDP Best Practices and Recommendations
- ➔ Prepare/finalize deliverables



Results

SCDOT PDP flowcharts were developed to reflect the SCDOT's current tasks and sequence (flow) for the PDP using projects classified as EA-FONSI as baseline. With the EA-FONSI flowchart serving as the baseline, each major program, project type, and funding source was evaluated to determine what, if any, flowchart tasks or sequences needed to be added, changed, or eliminated. These modification yielded the following different types of PDP flowcharts.

- ➔ EA/FONSI
- ➔ Categorical Exclusions
- ➔ Non-Fed Funded & USACE Permit
- ➔ Non-Fed Funded & non-USACE Permit

The PDP Best Practices were assembled based on the data, analysis, and findings of the preceding Phases, supported by the five different data sources:

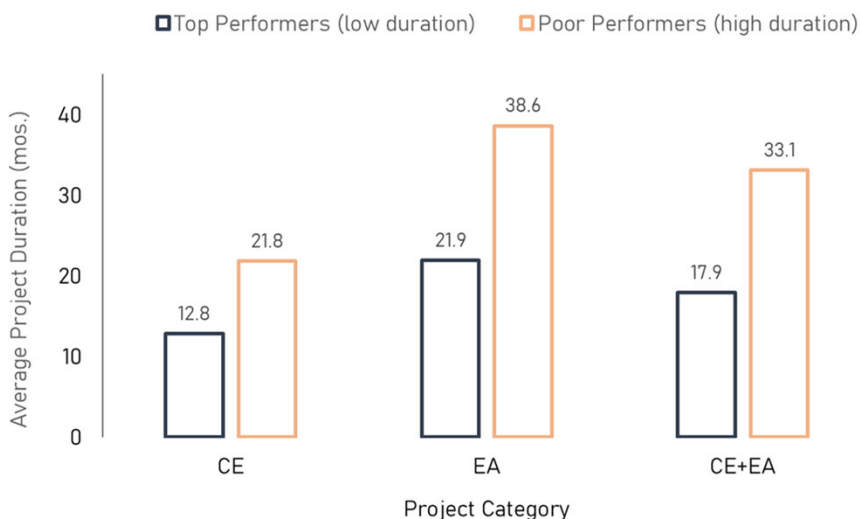
- National State DOTs PDP Survey
- Comparable State DOTs Interviews
- Secondary documentation acquired during the interview process and/or the state DOT's website
- SCDOT's Consultants Survey
- SCDOT SMEs Structured Interviews

- ⊕ Project Development Process (PDP)
- ⊕ Project Development Process Training.

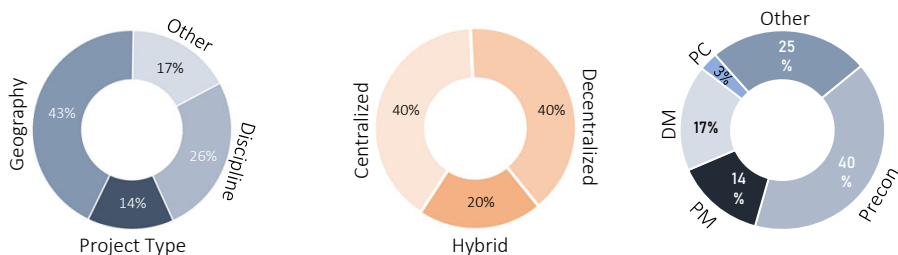


Value and Benefits

This research provided SCDOT and other state DOTs the methodology and needed insight regarding best practices to help the agency streamline their PDP leading to an increase in efficiency of critical task execution and coordination.



State DOTs PDP Duration based on Project Category and Environmental Impact



State DOTs Preconstruction Department and Management Organization

The analysis of all data sources was used to assemble PDP Best Practices and recommendations.

- ⊕ Project Prioritization and Scope Definition Process
- ⊕ Performance Measurement and Accountability
- ⊕ Consultant Procurement and Management

Identification, development, and implementation of best practices will help state DOTs develop and deliver projects faster and improve project delivery effectiveness and efficiency. This study also provided a 'Model,' the methodology, for state DOTs to systematically assess their current practices and obtain input/suggestions for process improvement from the agency's own SMEs, other comparable state DOTs.

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