RESEARCH SUMMARY

Effective and Efficient Implementation of Alternative Project Delivery

WHAT WAS THE NEED?

Alternative project delivery (APD) methods such as Design Build (DB) and Construction Manager at Risk (CMAR), are used by state departments of transportation to improve the efficiency and effectiveness of project delivery. The Maryland Department of Transportation State Highway Administration (MDOT SHA) has proactively implemented APD methods and while they have resulted in schedule and cost improvements, the agency has not seen some of the benefits achieved in other states. As MDOT SHA adds additional project delivery methods to its toolbox, there is a need to strategically identify, develop, procure, and manage projects using these methods.

WHAT WAS THE GOAL?

The goal of this research project was to develop a strategic and integrated approach for implementing and using APD methods.

WHAT DID THE RESEARCH TEAM DO?

The study was divided into three tasks:

1. **Best Practices Review** – Identified best practices from other transportation agencies and documented them in an easy-to-review table.

2. **Employee Interviews** –Developed a questionnaire and interviewed 29 employees from across the organization about

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their experience working on APD projects. The team analyzed the data and identified correlations and causations between various issues, current practices, and project results.

3. **Project Assessment** –Collected data on APD projects and completed a comprehensive data review.

WHAT WAS THE OUTCOME?

A best practices table was created that includes a description of each practice, suggestions for how it can be implemented, and at what stage of a project the practice should be used (i.e. procurement, design, project management, etc.). The table is provided in Appendix A of the report.

Several recommendations based on the interviews were provided. For example, communication was determined to be essential to the success of a project, so the team recommended that MDOT SHA add a communication discussion to its DB manual and also set high expectations for communication throughout the organization. The interviews also found that employees with different levels of APD experience face different types of challenges on projects. The team recommended that MDOT SHA tailor its training and guidance materials to address challenges based on employee experience levels.

A six-module training curriculum was developed that incorporates feedback from the interviews and information collected in this study. The curriculum is an extension of MDOT SHA's existing training and is appropriate for employees with different levels of APD experience. Details are provided in Appendix D of the report.

HOW WILL MDOT SHA USE THE RESULTS?

This study provided a unique opportunity to identify and understand employees' experience, both positive and negative, working on APD projects. The best practices and employee feedback will be used to update and convert the existing DB Manual into an APD Manual. The manual will serve as the basis for a new comprehensive training program for employees. In doing this, MDOT SHA believes it will achieve the goal of developing a strategic and integrated approach for implementing and using APD methods.

LEARN MORE

To view the final report, click here.

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