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Highway "Playbook" to Guide Managing the Design Phase of Design-Build Projects

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Abstract

The orientation to use the design-build (DB) as the common alternative delivery method has rapidly increased. The design-build method has proven its success in both horizontal and vertical projects. Many research affirmed the significance of DB in reducing the overall duration and cost of the projects and maintaining the level of the required quality. Consequently, the Charles Pankow Foundation decided to initiate a significant milestone and achieve greater success on DB projects within the construction industry by expanding their current guideline book, "Professional's Guide to Managing the Design Phase of a Design-Build Project." The current guideline focuses only on the building sector, and through developing a team of experts, researchers, and academics with the contribution of sponsors and different sectors in the industry, the guideline will be expanded to include new "playbooks" to guide managing the DB projects within the Federal, Highway, Aviation, and Water and Wastewater sectors. Our research will focus on developing the Highway playbook, which will cover fundamental topics in DB in the highway sector that will include but are not limited to the following:

- Design-phase roles and responsibilities
- Selecting and contracting with a design-builder
- Sustaining a functional and successful DB team
- Developing design-assist and target value design

The research methodology includes collaboration with the highway construction industry through surveys, brainstorming techniques, and focus groups on obtaining the best practices within the industry and lessons learned. The significance of this work will improve profitability, reduce the likelihood of claims, and prepare owners, designers, and builders to be leaders of innovation in DB projects, including highway projects in a world where DB will be at the forefront in the future.