

Alleman D., Papajohn, D., Gransberg, D., El Asmar, M., and Molenaar, K. (2017). Exploration of Early Work Packaging in Construction Manager/General Contractor Highway Projects. *Transportation Research Record: Journal of the Transportation Research Board*, No. 2630, DOI 10.3141/2630-09.

**Abstract:**

Recently, state agencies have been successfully implementing construction manager/general contractor (CM/GC) delivery on highway projects. While early work packaging is frequently cited in the literature as a primary benefit of CM/GC, there is limited to substantiate or refute these benefits. Additionally, agencies need a better understanding of the current state-of-practice of early work packing in CM/GC to help with effective implementation. In an ongoing Federal Highway Agency research project, 12 of 34 completed CM/GC projects reported the use early work packaging, and will be the focus of this study. Research methods used within this paper include: literature review, content review of agency manuals/instructions, project surveys, agency interviews, and case studies. Triangulated findings suggest that early work packaging can contribute to expediting project completion, mitigating project risks, reducing project cost, and minimizing public impacts. To achieve these outcomes, agencies must perform detailed planning to generate severable/independent packages that take into account all potential impacts to the project. Trends in data indicate that early work packages can lead to cost savings, yet the sample size does not provide statistical significance. Future research should explore the performance of a larger data set of CM/GC projects with and without early work packaging along with a cost/benefit analysis of early work packages.