

Bounthiengtham Noaunpaseuth 2007: Critical Success Factors Affecting Bridge Construction in Thailand. Master of Engineering (Civil Engineering), Major Field: Civil Engineering, Department of Civil Engineering. Thesis Advisor: Assistant Professor Suneerat Kusalasai, Ph.D. 96 pages.

In the past decades, many mega projects, such as bridge constructions, have been built across Thailand. Bridge construction projects are different from other types of projects in that most of them have new and modern architect design which require complex construction techniques, the uses of effective instruments, and the uses of heavy machines. There are many factors that influence the success of the projects including the uses of skilled human resources, quality materials, and effective construction techniques so that the projects finish on time, under budget, and with good quality. Moreover, some projects are performed in urban areas, the traffic jam and site limitation issues become critical concerns and more serious. In such cases, some contractors are forced to work at night.

The present study seeks to distinguish the factors affecting the success of bridge construction projects, in aspects of project duration, project cost, and project quality. Forty nine factors are considered. These factors are grouped into four categories: project participants, project characteristics, interactive process, and external factors. Questionnaires are used as tools to gather information. The finding indicated that:

The project duration was essentially affected by the density of traffic that interrupted construction activities, the level of qualification of project manager, and the management skills of manager. The project cost was significant influenced by the fluctuation of material, machine and labor costs, the experience of contractor's company, and the cash flow management of contractors. The project quality was greatly affected by the quality control system, the experience of contractor company, and the effective monitoring and feedback systems.



Student's signature



Thesis Advisor's signature

24 / 4 / 50