

Construction Management Research, Analysis I:

Assessment of Design-Build-Operate-Maintain and Build-Operate-Transfer As Delivery Methods in Building Construction

Problem:

Currently, the latest state-of-the-art dormitory for Johns Hopkins University (JHU) is going to be late for the Fall '06 grand opening. Two years ago, Charles Commons was a schematic sketch of a facility that would house 600+ students as part of JHU's five-year plan. A fateful program change in Spring '05 permitting a dining commons to be placed on the third floor of the St. Paul building changed the complexion of the project. This addition and steel market fluctuations caused a huge increase in the cost of Charles Commons. The cost-cutting process that followed caused anxiety amongst the project team.

Very little could have been done to prevent JHU's program change. However, a different delivery method could have prepared the project team better for this change and accelerate the design processes. For instance, the construction on the building's substructure and superstructure should have occurred immediately following a finalized design than at the conclusion of the demolition.

Design-Build has been driving alternative delivery method for a few decades and has just recently begun branching into other building processes. In addition to design and construction, Design-Builders are taking on the risks of the Operations and Maintenance (O&M) and the financing of the project. Thus, Design-Build-Operate-Maintain (DBOM)

and Build-Operate-Transfer (BOT) was born. Can entities like Johns Hopkins University benefit from DBOM or BOT?

Research/Survey: The research goals for this assessment are:

1. Analyze issues in case studies in which DBOM/BOT are effective and make market comparisons and outlook.
2. Evaluate the effects from using DBOM/BOT delivery methods on Charles Commons.
3. Generate an Owner's Guide to DBOM/BOT for use in the Building Construction Industry.

Research would begin with internet resources/papers that document the effectiveness of DBOM/BOT on civil infrastructure projects, where DBOM/BOT are more frequent. In addition, research would be conducted with the construction journals to develop an interview questionnaire that would be given to Mike DiProspero, the Owner's representative for Johns Hopkins University, and other various building case studies to discuss the effectiveness of the cross-over from civil to buildings. Equipped with this input, one could begin work on an Owner's guide to delivery methods and such a document could be circulated among owner representatives and construction professionals to get feedback.

Schedule Reduction: As mentioned, an estimate to the schedule savings would be compiled. It has been studied that DBOM/BOT deliveries have been known to streamline design schedules in the face of high public scrutiny and high risk in the civil infrastructure sector.

Anticipated Results: The DBOM method of delivery could be quite useful in future university work when the delivery becomes more tested in buildings. The BOT method of delivery

JOHNS HOPKINS UNIVERSITY
CHARLES COMMONS
BALTIMORE, MARYLAND

A close-up photograph of a gold coin or seal, showing the word "HOPKINS" in a serif font. The coin is slightly tilted and has a textured, metallic surface.

would benefit large organizations with five-year expansion programs due to the overwhelming interest in urban redevelopment and investment. A less risky Design-Build delivery can still provide cost and schedule benefits for university projects, especially for JHU.

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