APPLICATION OF BUILDING INFORMATION MODELING IN THE MODULAR BUILDING CONSTRUCTION

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Modular construction technology is a factory-based construction technique that the building's units, called modules, are fabricated in a manufacturing plant, then shipped to the construction site and are installed there to form a modular building. Modular building design is more complex than conventional ones due to the additional manufacturing process. Hence, it may be negatively affected by issues such as design complexities related to structural and mechanical, electrical and plumbing (MEP) systems, lack of proper tools, predicting and modeling product behavior characteristics until final assembly, lack of ability to understand and anticipate the impact of design change, and site management issues. Therefore, using an effective tool like Building Information Modeling (BIM) to minimize the challenges in modular construction will be useful to increase the acceptance rate of this technology in the Architectural, Engineering and Construction (AEC) industry. This paper investigates the benefits, constraints and issues associated with modular construction technology, and the feasibility of utilizing BIM in modular construction projects.

Keywords- Modular construction technology; Modular building; BIM