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Implementation Building Information Modeling (Bim) 5D In Development Project of The Dakwah Building Campus 2 UIN Antasari Banjarbaru

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Citation:

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Abstract:

In the world of construction, the calculation of cost estimates by planning consultants plays an important role in implementing tenders. The cost estimate calculated by the planning consultant after being reviewed by the authorities will be determined as the owner estimate (OE) as a reference for assessing the fairness of the price to determine the upper limit for legal bids. This inaccuracy in calculating the volume of work will impact cost overruns if the calculated quantity is too large and a decrease in building quality if the calculated quantity is too small. However, with the development of technology, the calculation of work quantity can be done quickly and efficiently with Building Information Modeling (BIM). This study will discuss the comparison of the estimated cost of BIM-based cost estimation with the calculation of the cost estimate manually on the building structure of the Dakwah Building Campus 2 UIN AntasariBanjarbaru.Building structure modelling includes modelling of reinforced concrete, formwork, piles, and steel. Modelling is done using software Tekla Structures with a South-East Asia environment that refers to the plan drawing. The output of this modelling is direct cost estimation for structural work, while manual cost estimation is calculated using Microsoft Excel. The price of the work unit used in calculating the estimated cost refers to the AHSP / HSPK of Banjarbaru City in 2020. From the analysis of the two cost estimates, a very small cost difference comparison is produced. The difference between manual cost estimation and BIM-based cost estimation is 1.4%. Based on these results, it can be said that the use of BIM-based cost estimation is reliable because it produces a more efficient cost estimate and is not far from manual calculations.

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Key Words:

BIM-Based Cost Estimation, Tekla Structures, Building Structures