BIM BASED ROAD GEOMETIC PLANNING
Case Study : Street Poros Sungai Alam – Selat Baru Sta 01+500-02+000, Bengkalis District, Bengkalis Regency, Riau

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Abstract

BIM (Building Information Modeling) is a digital methodology that utilizes data into a model. By utilizing digital data as well as actual physical conditions, the project can identify risks optimally. BIM and data management involved in the evolution of the design, development (construct), the operation of the project to be more reliable, faster and more efficient. The advantages of implementing BIM are to increase efficiency and accuracy through coordination between construction stakeholders , the design and construction process becomes leaner and more transparent; accuracy in calculations; avoid mistakes during planning to implementation; and faster execution time. The purpose of this thesis is to apply BIM-based software to road geometric planning, explain the stages of BIM-based road geometric planning, display the concept of 3d visualization and the results of BIM-based road geometric planning. The case study is located on Street Poros Sungai Alam – Selat Baru, Bengkalis District, Bengkalis Regency, Riau. The procedure for working on this thesis includes the preparation stage, the data collection stage (survey), and the implementation stage starting from making a geometric planning concept in Autodesk Infraworks and then exporting it to Autocad Civil 3d to make detailed planning drawings and calculations. The conclusion obtained from working on this thesis is that the application of BIM technology makes it very easy to make geometric road plans that can be done using software Autodesk Infraworks and Autocad Civil 3d , also to overcome the problems that will be faced in the construction world, one of which is the demands of visualization (project design and post-implementation).

***Keywords** : Building Information Modeling, Geometric Planning of Roads, Autodesk Infraworks, Autocad Civil 3d.*