

## **ABSTRACT**

### **EFFECT OF VARIATION EQUIVALENT SINGLE AXLE LOADINGS WITH STAGE CONSTRUCTION CASE STUDY AT ROAD TEGINENENG – GUNUNG SUGIH.**

**By**

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Traffic growth of the road is difficult to predicted. Traffic growth factor that difficult to predicted cause unefficient design (under design or over design). Stage Construction method expect can be alternative solution of that problem. The purpose of this research is to know Future Worth (FW) Step I and Step II that optimum than design Full Depth looked from construction cost..

The case of this reseach located at Tegineneng – Gunung Sugih road, wih road tipe 2/2 UD, because that road already have existing road. The method of this research is Manual Desain Perkerasan Jalan 2012 Bina Marga. Age of plan that used is 20 years, with assumption I (5+15); assumption II (6+14); assumption III (7+113); assumption IV (8+12); assumption V (9+11); and assumption VI (10+10). CBR of land is 6%, Deviation Standard is 0,5, and Reability value is 90%. Sub Base layer with CBR is 60%. Base with CBR is 90%, and Laston used for Surface layer. Modulus Elasticity value is 2500 Mpa, IP0 value is 4,2, whereas IPt is 2,5..

The research result that assumption I (5+15) more economical than other assumptions, even more cheaper than Full Depth if looked at last value of Future Worth.

**Key words :** Construction cost, Equivalent Single Axle Loadings, Stage Contruction, Age of Plan.