ABSTRACT

Planning for the road underpass Mayjend Sungkono located in the city of Surabaya in East Java who is the link between the East-West corridor, the state of the road on the road Mayjend Sungkono-HR. Muhammad experiencing significant congestion. With the planning of the underpass is expected to minimize congestion and smoothness of the traffic occurring on the western rim.

The underpass road planning, capability and capacity of the road on the road Mayjend Sungkono-HR. Muhammad is expected to be applied to better support and comfort in traffic so that all obstacles can be optimally reduced. The steps to perform an underpass road development planning is a field condition survey, data analysis plan, and generate output images are used as a reference work for field implementation.

Based on the analysis results of the calculations on Underpass Mayjend Sungkono planning calculations showed that the structure includes a rigid pavement thickness of 240 mm with a foundation layer of aggregate class B 100 mm and longitudinal reinforcement dimensions of 13 mm diameter at a distance of 200 mm, a diameter of 13 mm rebars melintang with a distance of
300 mm. Planning rectangular drainage box culvert with materials and planning control boxes with dimensions $B = 1 \text{ m}$, $H = 1 \text{ m}$ with a volume capacity of 4 hours of rain $= 17.25 \text{ m}^3$. Reinforced soil retaining walls using D25 - 250, D25 - 150 and D25 - D12 100 vertical walls 14 and 15 foot walls used D12.

**Keywords**: Underpass Mayjend Sungkono, Planning Underpass, Rigid Pavement, Soil Retaining Walls.