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EVALUATION ROAD DAMAGE USING THE PAVEMENT CONDITION INDEX (PCI) METHOD

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ABSTRACT
Roads are one of the infrastructures that play a very important role in development in a region for economic growth and public welfare, especially in Indonesia. when the construction of road pavements according to their function was introduced. In order to maintain the quality of road services, one of these efforts is to evaluate the condition of damage to the road pavement, namely by reviewing measurements of the condition of the road surface. This condition also applies to the Tambakboyo Highway section, Lamongan Regency, East Java Province, where, like other roads, every year there is traffic growth due to the increasing population, causing the road pavement construction to be damaged. In this study, a study was conducted to calculate road damage using the pavement condition index (PCI) method and to calculate the estimated cost of repairs that need to be done. The results of the analysis of the estimated cost of road repairs based on the budget plan) show that the total cost of the work, including 11% Value Added Tax, reached IDR 5,440,000.00. The largest cost component is found in STA 0+600 – 0+800, which requires quite large repair costs, in accordance with the pavement conditions that require patching.
Keywords: *road damage; pavement condition index (PCI); cost estimation*

1. Introduction

Roads are one of the infrastructures that play a very important role in development in a region for economic growth and public welfare, especially in Indonesia. In general, the development of pavement construction in Indonesia has begun to grow rapidly since 1970, when the construction of road pavements according to their function was introduced. Road pavement is a mixture of aggregates and binding materials used to serve traffic loads [1] To ensure that roads continue to be able to meet mobility needs with certain service standards, various strategic steps are needed to maintain the quality of road services, one of which is through periodic repair of road surface conditions. One of the stages in repairing road surface conditions is to assess the existing condition of the road. Choosing the right form of road management also plays a role in ensuring that the allocation of development budgets can be used effectively and efficiently [2]