

ABSTRAK

Judul: Analisis Kondisi Perkerasan Jalan Menggunakan Metode Pavement Condition Index (PCI) dan Surface Distress Index (SDI) Pada Jalan Lintas Selatan Jawa Barat (Studi Kasus: Jalan Raya Cijulang Pangandaran), Nama: Rita Septiani, NIM: 41118320065, Dosen Pembimbing: Ir. Muhammad Isradi, ST., MT., IPM., PhD 2022.

Kerusakan jalan akan menimbulkan banyak kerugian bagi pengguna jalan, karena akan sangat memperlambat laju kenyamanan sarana transportasi. Drainase mempunyai peran penting pada bagian jalan. Struktur lapisan badan jalan dan dibawah permukaan akan mudah rusak jika drainase tidak berfungsi dengan baik, sehingga dapat menyebabkan air limpasan menjadi genangan air pada badan jalan. Tujuan penelitian ini adalah untuk mengetahui jenis-jenis dan tingkat kerusakan yang ada, Mengetahui nilai kondisi perkerasan berdasarkan Metode Pavement Condition Index (PCI) dan Surface Distress Index (SDI), dan Memberikan rekomendasi penanganan kerusakan pada Ruas Jalan Cijulang-Pangandaran. Metode analisis yang digunakan adalah Metode Pavement Condition Index (PCI) dan Surface Distress Index (SDI). Dengan dilakukan analisis diperoleh data jenis-jenis kerusakan, yaitu: Retak Kulit Buaya, Retak Blok, Jembul, Ambias, Retak Tepi, Retak Memanjang, Tambalan, Lubang, Gumpal Susut, dan Pelepasan Butir. Selanjutnya analisis menggunakan metode PCI didapat nilai PCI: Sempurna 14%, Sangat Baik 20%, Baik 28%, Sedang 28%, Buruk 7%, Sangat Buruk 3%, Gagal 0%. Pada metode SDI didapat nilai SDI: Baik 93%, Sedang 3%, dan 0% yang lainnya. Kedua metode ini memiliki kondisi rata-rata, yaitu Baik. Rekomendasi perbaikan yang disarankan adalah (P2) Pengaspalan, (P5) Penambalan Lubang, dan (P6) Perataan.

Kata Kunci: Perkerasan Jalan Lentur, Kerusakan Jalan, Pavement Condition Index (PCI), Surface Distress Index (SDI)

ABSTRACT

Title: Analysis Conditions of Pavement Damage Using the Pavement Condition Index (PCI) and Surface Distress Index (SDI) Methods on the South Cross Road of West Java (Case Study: Jalan Cijulang Pangandaran), Name: Rita Septiani, NIM: 41118320065, Advisor: Ir. Muhammad Isradi, ST., MT., IPM., PhD 2022.

Road damage will cause a lot of losses to road users, because it will greatly slow down the pace of comfort of transportation facilities. Drainage has an important role on the road. The structure of the road body layer and below the surface will be easily damaged if the drainage does not function properly, which can cause runoff water to become puddles on the road body. The purpose of this study is to determine the types and levels of damage that exist, determine the value of pavement conditions based on the Pavement Condition Index (PCI) and Surface Distress Index (SDI) Methods, and provide handling recommendations damage to Cijulang-Pangandaran Road. The analysis methods used are the Pavement Condition Index (PCI) Method and the Surface Distress Index (SDI). With the analysis, data on the types of damage were obtained, namely: Alligator Cracks, Block Cracks, Bump and Sags, Depression, Edge Cracks, Long and Trans Cracks, Patching and Until Cut Patching, Potholes, Swelling, and Weathering/Ravelling. Furthermore, analysis using the PCI method obtained PCI values: Excellent 14%, Very Good 20%, Good 28%, Fair 28%, Poor 7%, Very Poor 3%, Failed 0%. In the SDI method, the SDI value is obtained: Good 93%, Fair 3%, and 0% others. Both of these methods have an average condition, which is Good. The recommended improvements are (P2) Local Sanding, (P5) Patching, and (P6) Leveling.

Keywords: Flexible Pavement, Road Damage, Pavement Condition Index (PCI), Surface Distress Index (SDI)