

**INTEGRATION OF GEOGRAPHIC INFORMATION
SYSTEMS IN ANALYSING THE CONDITION OF
FLEXIBLE PAVEMENT ON THE SEPOTONG
(KAB.SIAK BORDER)-TELUK MASJID ROAD SECTION
OF SIAK DISTRICT**

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Abstract

Road Section Sepotong (Siak District Boundary)-Teluk Masjid is a cross-provincial road that connects Bengkalis Regency and Siak Regency even to the city of Pekanbaru, on the Road Section Sepotong (Batas Kab.Sak)-Teluk Masjid there has been damage to the road surface layer at Km 00+000 to Km 06+900 right in Siak District Sabak Auh District. In the context of increasingly sophisticated road management, the use of technology such as Geographic Information Systems (GIS) is still very little to be used in minimizing road damage conditions so that the use of geographic information systems (GIS) is a step that can be used in providing in-depth information about road pavement conditions. In assessing road conditions, this study uses an assessment based on the Road Condition Index, International Roughness Index, Surface Condition Index. Based on the RCI assessment of IRI correlation with LHRT and SDI, the average RCI value is 6.03, the IRI value is 5.46, and the SDI value is 19, indicating the road condition at Sta 00+000-06+900 is in moderate condition. And from this value, the percentage of handling programs based on Ministerial Regulation No. 33 of 2016 is 97.10% Routine Maintenance program and 2.90. From the assessment of pavement conditions and integrated into ArcGis, a map distribution of several types of damage is obtained such as: Potholes 40 damage points, Grain Release 8 points, Alligator Cracks 44 points, Longitudinal Cracks 1 point, Random Cracks 1 point, and Patches 10 points with a total of 104 damage points.

Keywords: GIS, Road Condition, RCI, IRI, RCS and SDI