

Kansas Department of Transportation 2014 Chip Seal Manual

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Introduction

A chip seal is a very effective thin surface treatment process used by maintenance managers to preserve existing asphalt pavements. Two of the major asphalt pavement distresses, cracking and loss of friction are effectively addressed with the use of a chip seal. If cracks greater than $\frac{1}{4}$ inch are either sealed or filled, the chip seal binder will address the minor cracks, and the chips or aggregates provide a good friction surface. Chip seals also address oxidization, a normal hot mix asphalt (HMA) pavement aging process. Chip seals are a relatively inexpensive pavement surface treatment; however, they require a considerable amount of time and effort in planning in order to execute the work. Chip seals are often referred to as a seal coat, and the process of applying a chip seal, are often referred to as sealing.

Project Description

The Kansas Department of Transportation (KDOT) 2014 Chip Seal Manual is a guide that

provides guidelines, background and general information for the design, construction, and inspection of chip seals. The manual is intended for use by KDOT field engineers, laboratory personnel, construction inspectors, and contractor's estimators, supervisors, operators, and workers. The information, recommendations and best practices provided in this manual may refer to either:

- learning the overall chip seal operation
- learning about the workings, maintenance, calibration and proper operation of equipment used in chip sealing
- learning chip seal design procedures

The manual consists of seven chapters:

- Introduction and General Principles
- Treatment Selection
- Design and Materials for a Chip Seal
- Pre-Chip Seal Activities
- Equipment Inspection and Calibration
- Chip Seal Application Process
- Areas of Concern

Project Results

There are many factors that must be performed correctly in order to have a quality chip seal project. The use of this manual by KDOT and Contractors will significantly help to achieve a uniform quality product.

Project Information

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