

Pavement Distresses

IDENTIFYING PAVEMENT DISTRESSES ASSISTS IN SELECTING THE CORRECT MAINTENANCE OPTIONS

Throughout the service life of a pavement, new distresses will continually be formed by traffic overloading and the natural enemies of asphalt (sun, air, temperature, and water). Therefore, all pavements require periodic maintenance to extend their useful life and maximize the investment. This guideline provides general information about why and how pavements deteriorate. Understanding the basics of pavement distresses is beneficial for creating a proper pavement maintenance plan, which can save money and protect your investment.

GENERAL CRACKING

General cracking can occur as a single crack or as a series of cracks in seemingly random locations. These cracks can occur for a number of reasons, including: cold temperatures, settlement of the aggregate base or subgrade material, frost heave, or reflection of previously overlaid cracks. Cracked pavement allows water to flow through the asphalt to the aggregate base and subgrade deteriorating the asphalt and weakening the subgrade.

Maintenance Option. Crack sealing will prevent water from reaching the aggregate base.

BLOCK CRACKING

Block cracking is the interconnection of several cracks that develop as the pavement ages. Block cracking is identified by the signature square-like pattern formed on the pavement from the cracks.

Maintenance Option. Crack sealing and/or sealcoating the pavement can help protect the pavement, but a mill and overlay is a good rehabilitation option before the pavement deteriorates further.





FATIGUE CRACKING

Fatigue cracking is a series of interconnected cracks typically described as resembling alligator skin. It is a structural distress, caused by overloading thin pavements or a weak aggregate base or subgrade. This distress can occur in small localized areas or can be widespread.

Maintenance Option. Full-depth patching is recommended in areas with localized fatigue cracking, however, reconstruction is required if the fatigue cracking is a widespread problem.



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DEFORMATIONS AND DEPRESSIONS

Deformations and depressions are vertical movements of the asphalt pavement caused by overloading or settlement of a weak subgrade. These depressions provide areas for water to pool, which causes the pavement to deteriorate more quickly, leading to the development of potholes.

Maintenance Option. Mill patching can be used to repair these deformations and depressions in parking lots.

RAVELING

Raveling is the progressive loss of asphalt material from the pavement surface. This typically occurs slowly over a large area, or it can occur quickly in smaller areas forming potholes. Raveling can be identified when exposed rocks can be seen on the pavement surface.

Maintenance Option. Rejuvenating sealcoats, emulsion sealcoats, or chipseals can be applied to the pavement surface to protect it from further oxidation and raveling.

POTHOLES

Potholes are the localized loss of pavement material typically caused by structural failures, poor drainage, or severe raveling. Potholes are a safety hazard and should be filled quickly.

Maintenance Option. Full-depth patching is recommended for all potholes, but fill-in patching can be used for a quick, temporary fix.

PAVEMENT ASSESSMENTS

In order to determine the best pavement maintenance option for any asphalt project, Bituminous Roadways, Inc. can perform a detailed pavement assessment. This visual assessment is performed by one of our trained staff and can help with project budgeting. Once an evaluation is complete, customers receive a detailed report, including a pavement rating, pictures of each distress type and recommendations on what type of corrective action should be performed.

Call 651-686-7001 for more details or to schedule your assessment.

Bituminous Roadways strives to be a preferred pavement partner by educating customers to help them make informed decisions about their pavement projects. Pavements are one of the largest assets a company owns. Let Bituminous Roadways help protect and preserve it long-term.

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