

Roadway Maintenance and Construction Types:

Routine Maintenance:

Crack Seal: During the crack seal process, compressed air is used to clean out any dirt, debris or water from cracks. Then a heated asphalt compound is applied to the crack, filling the void within the pavement. Crack seal is a cost effective method to treat all types of cracks greater than 1/8”.

Fog Seal: Fog seal is a single application of light emulsified asphalt to an existing asphalt surface. It protects the pavement structure from moisture intrusion and oxidation. It addresses minor surface cracks and oxidation. Fog Seal is typically applied a few years after the road surface is installed.

Prevention Maintenance:

Micro surfacing: Micro surfacing is an application of a mixture of water, asphalt emulsion, aggregate (very small crushed rock), and chemical additives to an existing asphalt pavement surface. Polymer is commonly added to the asphalt emulsion to provide better mixture properties. It can apply in a single or double layers double on the pavement distress conditions.

Rubber Chip Seal (otherwise known as Asphalt-Rubber Stress Absorbing Membrane or Asphalt-Rubber SAM) is a hot spray application of 20% asphalt-rubber followed by a layer of cover heated and treated cover aggregate. The road surface is able to be swept immediately following rolling to pick up any loose aggregate. The application provides a flexible, waterproof wearing surface that seals the existing pavement and is highly resistant to cracking. The treatment can also be used as an interlayer (SAMI) before a hot mix overly to help decelerate reflective cracking.

Thin-asphalt Overlay: An ultra-thin (0.75” to 1”) of paving mix is place and compacted on the existing pavement. This application addressed low-severity cracking (<1/4”), raveling, friction loss and oxidation.

Minor Rehabilitation:

Mill and Overlay: Milling the top 1.5” – 2” of existing pavement from a road then install an overlay layer. This application is used on roads which have moderate cracking within the surface course of the road and the binder course and gravel subbase are still in good conditions.

Major Rehabilitation

Full Depth Reclamation: Full depth reclamation is a process which the deteriorated street is pulverized for a depth of 9-12 inches including the entire existing pavement thickness plus a portion of the underlying gravel sub-base. This pulverized material is blended together and recycle into a new homogeneous sub-base. New pavement will be installed on the upgraded subbase. This application is typically use on roads that have moderate to severe pavement distress and underlying base issue.

Reconstruction: Reconstruction is to include remove of the existing pavement and subbase, new roadbed base material is imported and compacted. New pavement will be installed on the new subbase. This application typically use on the road have moderate to severe pavement distress and underlying base issue, where existing subbase is non-suitable that require it to be removed and replaced.