Generally, high profile roadway projects, such as rebuilds and overlays, are seen as being the most effective, yet costly, ways to obtain smoothness, friction and aesthetics, or even to add structural support to a paved roadway.

However, any preservation treatment can provide similar effectiveness at a much lower cost. Crack sealing, is not the most aesthetically pleasing application, but can be considered the single most important type of pavement maintenance activity.

Black, dark lines across a roadway, like driving on shattered glass, could anything be any less appealing? Yet, without it even the best-constructed roadways will have a reduced useful life. Cracks are going to happen in asphalt pavement, and its important to have the funding and resources to stop water from getting through the pavement and impacting the structural integrity of the roadways base. Crack sealing is not about the beautiful look of a fresh new asphalt road, but about preserving the pavement life for another 2-5 years, maintain pavement smoothness, and protect its foundation.

Currently, District staff is working on crack sealing over 10 miles of roadways. By providing this crack seal application, it adds to an essential pretreatment to the upcoming chip seal projects. Proper pretreatment can provide 100% less cracking in the first couple years after the chip seal, than without it. The investment of crack sealing can yield high returns on extending the life of a chip seal project, along with other roadways that could benefit from a few long, black, ugly lines.

***What* is crack sealing?** Crack sealing is the inserting hot liquid rubberized asphalt into a pavement crack to create a flexible seal to prevent water from penetrating the surface.

***Why* should crack sealing be done?** Pavement cracking is a common and unavoidable type of damage, yet the single most important maintenance activity. Water passing below a pavement surface can destroy a pavement from beneath, by erosion of the pavement itself, by freeze-thaw actions, and by breaking down the base layers below the pavement.

***Which* cracks should be sealed?** Sealing the shoulder-to-centerline or shoulder-to-shoulder cracks (known as transverse cracks) that normally occur on pavements that are two to three years old provides the greatest return for the cost, by extending the pavement life two years or more. Crack sealing also can reduce potholes and secondary cracking. However, crack sealing should not be done if the pavement has significant failures.

***When* should cracks be sealed?** Typically, when pavements are dry, and the pavement is structurally sound. The best times to prepare cracks and apply the sealant is in warmer temperatures when the crack has expanded, making it easier to fill. Crack sealing utilized as a pre-treatment will improve surface treatments, such as chip seals.

***Who* should do crack sealing?** Annually, the District also performs crack sealing in advance of the annual chip seal projects. If funding allows, the District also utilizes its own equipment and staff for routine preventative maintenance projects. In 2018, the District has hired private contractors to perform sealing on larger projects, such as McCulloch.