

## Street Preservation Techniques:

Everyone enjoys the look and drive that a brand new asphalt road surface provides. However, maintaining a city street system in a cost effective manner takes more than just a "one size fits all" repair method. The goal of the Street Preservation Program is to apply the right treatment at the right time.

As asphalt roadways age, their condition decreases very slowly at first and lower-cost preventive measures are adequate. When the pavement is older, the rate of deterioration increases and the cost to repair the pavement goes up substantially.



**Structural Patching** - Prior to constructing a Slurry Seal or Asphalt Overlay, the City's Street Crew or the contractor will dig out and patch areas of pavement that have failed. This will prevent premature failure of the new surface that will be applied.

**Crack Seal** - Cracks are cleaned and filled with a rubberized asphalt material to prevent water from infiltrating into the pavement layers and further deteriorating the roadway. The presence of water reduces the strength of the pavement base layers which results in structural damage and ultimately will lead to pavement failure.

**Chip Seal** - A cost-effective way to restore lost oil and aggregate to the roadway surface by spraying the road with hot asphalt and applying a later of "rock chips". Chip sealing is a commonly used preventive maintenance activity for many cities and counties. Note: Chip seals are **not** used in Kirkland.

**Slurry Seal** - A cost-effective maintenance treatment that prolongs the pavement life without the dust, loose rock, and rough surface that makes Chip Seals so unpopular. Slurry Seal is a thick, cold liquid mixture of asphalt and fine rock (premixed) that is applied to the existing asphalt surface. Depending on weather conditions, Slurry Seal generally requires about six hours to thoroughly cure (dry). Thus, parking and vehicular access to and from streets is restricted on the date of surface seal application. Slurry Seals typically extend the life of the pavement surface by 5-10 years.



**Asphalt Overlay** - This treatment involves placement of a new layer of pavement on the street generally between 1 1/2 and 3 inches thick. Prior to paving, a six-foot wide section of the street along the edge of the curb and gutter is ground down to allow for the new pavement to conform to the curb and gutter.

While parking and access to and from streets are restricted during both the grinding and paving operations, traffic controls are typically established by the contractor in lieu of closing streets altogether. Asphalt Overlays are used on streets that exhibit light to moderate stress related failures and like Slurry Seals, require failed pavement sections to be repaired prior to the treatment, although more costly than Surface Seal treatments. Because water is detrimental to all pavement repair treatments, it is also required that you not wash vehicles or water lawns on the date work is scheduled. Pavement overlay will generally extend the life of a street between 15-20 years.

**Reconstruction** - In cases where isolated Structural Patching alone is not adequate to repair severely failed roadways, reconstruction is necessary to remove and replace all or part of the roadway section. Street reconstruction is the lengthiest and most disruptive method of treatment. However, vehicular access to and from streets is generally maintained throughout the work. A reconstructed street is intended to produce a roadway structure that will last 30-50 years and a surface that will last between 15-20 years.

