



CITY OF FLORENCE
PUBLIC WORKS

2024 SCRUB SEAL & CHIIP SEAL PROJECTS



With summer winding down, we still have great weather to perform street maintenance activities in Florence. Typically, we perform our annual chip seals in July or early August; however, due to scheduling and trying to be as efficient as possible, including our contractor's commitments to other communities, our projects have been scheduled for September 2024. As of press time, our contractor, Sierra Santa Fe, has the City scheduled for Monday, September 16th, weather dependent, to begin scrub sealing and chip sealing two of our roadways.

Where are we scrub sealing?

Quince Street from Hwy 126 to Hwy 101

Where are we chip sealing?

Spruce Street from Hwy 126 to 18th Street. We will also be doing a seal coat in the parking lot on Bay Street next to the Interpretive Site.

When will the projects begin?

Monday, September 16th, depending on weather



What is a scrub seal?

This year we will be trying a new method of road preventative maintenance called a scrub seal. Scrub seal, while new to Florence, has been used successfully in other Oregon communities. A scrub seal is a process in which you apply an asphalt emulsion to the pavement for preservation treatment to fill cracks and minor distresses. It is a one pass application that will fill cracks up to ½-inch wide instead of a separate crack sealing operation.

With a scrub seal, the asphalt emulsion is applied to the road surface through a series of brooms placed at different angles. These brooms guide the asphalt emulsion into the pavement distresses to ensure sealing of the road. These series of brooms, known as a 'scrub broom', give the treatment its title, 'scrub seal'. The application of a scrub seal is very similar to how a chip seal is placed, except the distributor truck tows a scrub broom. The rate of asphalt emulsion application and travel speed of the distributor truck are adjusted to result in a small 'wave' of asphalt emulsion being generated in front of the forward brooms. The brooms force the wave of asphalt emulsion down into the cracks resulting in the cracks being better filled, resulting in a better seal on heavily distressed roadways, such as Quince Street between Hwy 126 and Hwy 101. The rear brooms ensure the asphalt emulsion is uniformly applied and that any excess is swept forward.

What is a chip seal and why do we use this technique?

In an effort to provide the most cost-effective pavement maintenance procedure for streets that are in "good" condition (streets not needing full depth reconstruction, overlays or grind inlays) a single shot chip seal with a fog seal has been recognized as a cost-effective solution. Chip and fog seals extend the life of existing paved streets; protects the sub-grade from water intrusion; and is an environmentally (resource) friendly solution to pavement maintenance which utilizes 60-75% less material over a 18-20 year life span of the street.



The single-shot chip seal consists of an application of emulsified asphalt and a layer of fine aggregate. The emulsified asphalt is PMCRS-2H, which is a Latex-modified, Cationic, Rapid Setting (CRS) emulsified asphalt applied at a target rate of 0.40 gallons per square yard and the aggregate is a crushed rock sized from 1/4" to No. 10 size. This is commonly referred to as "1/4-10", where the "10" represents a size of the screen used in the quarrying process. Based on our experience, the "1/4-10" rock will provide a much smoother surface and provide for a greater curb appeal than the courser "3/8-4" crushed rock on our low volume, low speed local streets. The target application rate for the rock is 21 pounds per square yard.

Once again, we will be using Onyx®, in place of the traditional 'fog seal'. The result is a road surface that has a very dark color, providing great contrast to pavement markings and give the treated roadway a "like new" surface. Onyx® is applied to protect the chip seal from harmful UV rays that deteriorate the chip seal over time; seals the chip seal from the top down virtually eliminating all loose rock that is generally associated with chip seals; and of course, adds to the overall appearance of chip seals making them look like an ultra-thin overlay.

Onyx® is a frictional mastic surface treatment engineered for pavement maintenance and durability. It is a mixture of asphalt emulsion, increased levels of angular fine aggregates, recycled materials, polymers and catalysts that improve micro texture on the pavement surface. With the increased level of high quality fine aggregate material, Onyx® offers superior adhesion, flexibility, durability and slip resistance. Onyx® is a cost-effective maintenance treatment intended to address issues like oxidation, raveling and loss of surface before they become major road distressors. It is also a cleaner asphalt technology that does not contain coal tar.

With limited road maintenance funds for actual paving, every year more agencies are turning to chip seals and scrub seals to preserve their roadways. It is an easy and effective road preservation method. The scrub seal and chip seal activities beginning on Monday, September 16th will go quickly and the contractor will work to provide a travel lane. When the fog seal takes place beginning Wednesday, September 18th, the fog seal will need to dry before driving on the surface. This may take a couple of hours depending on temperature and humidity.

Again, if you have been parking your vehicle, equipment, trailer or RV's on the street, please remove them so that the roadway can be treated. We greatly appreciate your cooperation. Residents are encouraged to call the City of Florence Public Works office with any concerns and questions at (541) 997-4106.

