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University of Texas, West Pickle Research
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Terra Fog Application on SH-195

Florence, TX

October 14th 2015



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Williams Construction, a subcontractor of Ramming Companies, placed a very successful fog seal application on SH-195 South of TX-138. The road was built in 2013 and recently some color changes on the drive-lanes observed. This section of the pavement was chosen by TxDOT due to the need to maintain and correct coloring problem. So TxDOT took the initiative and applied fog seal over the drive-lanes for maintenance.

Location

The Terra Fog section begins at TX-138 on SH-195 and extends approximately 2.4 miles South. This section of pavement is two-lanes and includes raised medians throughout the section with crossovers at major drives and intersecting streets. The Terra Fog mixture was applied at ambient temperature beginning about 2:30 PM and was completed by around 3:45 PM. To ensure no restriping would be necessary, it was sprayed in one approximately 10.5' path between the edge line and the skip line striping. The ambient temperature was about 88°F and sunny.

The following pictures are in chronological order and include a description of each picture.



Picture 1: The starting point of the pavement (an asphalt emulsion based fog seal was applied previously to the left lane)



Picture 2: The shot was little less than 0.15 gal/sy. This provided good coverage without runoff.



Picture 3: Just after the application, the color is light gray and gets darker as curing occurs only by evaporation of water.



Picture 4: There was literally no runoff onto the striping and excellent coverage of the aggregate was achieved.

Fifteen minutes after the application, the surface is already dried and used by some passenger cars to pass onto intersection lanes without any tracking.

Traffic was usually held by cones but not at the intersection lanes.

5-8 minutes after application to allow the fog seal to penetrate the pavement well.

After this initial period, traffic proceeded to cross slowly at the intersections

Traffic could cross the fog seal within about 5 minutes after application. Although it had not yet cured completely, the majority of the fog had settled around the aggregate and the fog that stayed on top of the pavement did not produce tracking.



Picture 5: Surface prior to treatment with Terra Fog.



Picture 6: Surface, 20 minutes after the Terra Fog application

Summary

A total of approximately 2200 gallons of the material was placed on approximately 14,884 square yards. Average rate of application was 0.15 gal/sy.

Coverage was excellent and runoff was very minimal.

Advantages of Terra Fog

The advantages of Terra Fog are multi fold:

1. Environmentally Safe – Terra Fog includes no VOC's and evaporates only water.
2. Surface Strength – Terra Fog will do an excellent job of locking down all of the aggregate and additional aggregate loss is unlikely.
3. Curing Time – When placed with good drying conditions, Terra Fog could be crossed with no tracking in less than 10 minutes and was ready for traffic in approximately an hour. Continued curing will occur for 24-48 hours.
4. Aging –By sealing air and water out of the asphalt binder, it will substantially reduce oxidation of the asphalt and extend pavement life.

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