

Asphalt Pavement Treatments

Fog Seal – “A light application of slow setting asphalt emulsion diluted with water and without the addition of any aggregate applied to the surface of a bituminous pavement. Fog seals are used to renew aged asphalt surfaces, seal small cracks and surface voids, or adjust the quality of binder in newly applied chip seals (FP2, 2001).” (FHWA, Chapter 3)



(Main Street Materials)

Slurry Seal – “A mixture of slow setting emulsified asphalt, well graded fine aggregate, mineral filler, and water. It is used to fill cracks and seal areas of old pavements, to restore a uniform surface texture, to seal the surface to prevent moisture and air intrusion into the pavement, and to improve skid resistance (FP2, 2001).” (FHWA, Chapter 3)



(Scotth)

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Microsurface – “A mixture of polymer modified asphalt emulsion, mineral aggregate, mineral filler, water, and other additives, properly proportioned, mixed, and spread on a paved surface. Microsurfacing differs from slurry seal in that it can be used on high volume roadways to correct wheel path rutting and provide a skid resistant pavement surface (FP2, 2001).” (FHWA, Chapter 3)



(California Pavement Maintenance Co, Inc.)

Chip Seal – “A surface treatment in which the pavement is sprayed with asphalt (generally emulsified) and then immediately covered with aggregate and rolled. Chip seals are used primarily to seal the surface of a pavement with non load-associated cracks and to improve surface friction, although they also are commonly used as a wearing course on low volume roads (FP2, 2001).” (FHWA, Chapter 3)



(National Center for Pavement Preservation)

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Cape Seal – “A Cape seal is a thin surface treatment constructed by applying a slurry seal or microsurfacing to a newly constructed chip seal. It is designed to be an integrated system where the primary purpose of the slurry is to fill voids in the chip seal.” (Central Federal Lands Highway Division, Chapter 1: Part A)



(Central Federal Lands Highway Division, Chapter 1: Part A)

Structural Overlay (>1.5") – Structural overlays use hot-mix-asphalt of thickness greater than 1.5 inches to increase the structural capacity of the pavement. “It is the most common surfacing for paved roads in the U.S., accounting for more than 90% of paved roads.” (Central Federal Lands Highway Division, Chapter 2: Part A)



(Central Federal Lands Highway Division, Chapter 2: Part A)

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Mill and Overlay – “The old oxidized surface of HMA is removed and replaced with new material. Generally, the old surface has become brittle and cracked and the replacement surface provides improved protection to the underlying layers (Von Quintus, Simpson, & Eltahan, July 2006).” (FHWA, Chapter 3)



(Idaho Transportation Department)

Reconstruction – Complete design and replacement of an existing roadway.



(RTA)

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References

- California Pavement Maintenance Co, Inc. *Micro-Surfacing*. 2007. Web. 25 Jul 2012.
<<http://www.cpmamerica.com/microsurfacing.htm>>.
- Central Federal Lands Highway Division. "Chapter 1: Part A. Asphalt Surfacing –Surface Treatments or Layers (non-structural)." *Roadway Surfacing Options Photo Album Section*. 2012. Web. 25 Jul 2012. <<http://www.cflhd.gov/programs/techDevelopment/pavement/context-roadway-surfacing/documents/roadway-surfacing-photos/ch1-a-asphalt.pdf>>.
- Central Federal Lands Highway Division. "Chapter 2: Part A. Asphalt Surfacing –Surface Layers (structural)." *Roadway Surfacing Options Photo Album Section*. 2012. Web. 25 Jul 2012. <<http://www.cflhd.gov/programs/techDevelopment/pavement/context-roadway-surfacing/documents/roadway-surfacing-photos/ch2-a-asphalt.pdf>>.
- FHWA. "Chapter 3. Treatment Performance." *Performance Evaluation of Various Rehabilitation and Preservation Treatments*. 18 July 2010. Web. 24 Jul 2012.
<<http://www.fhwa.dot.gov/pavement/preservation/pubs/perfeval/chap03.cfm>>.
- Idaho Transportation Department. *2012 Road Maintenance*. March 20, 2012. Web. 24 Jul 2012.
<<http://itd.idaho.gov/projects/d4/2012RoadMaintenance.htm>>.
- Main Street Materials. *Pavement Preservation*. 2012. Web. 25 Jul 2012.
<<http://mainstreetmaterials.com/products/pavement-preservation/pass-qb-texture-seal/>>.
- National Center for Pavement Preservation. *Preservation Treatment Gallery*. Web. 25 Jul 2012.
<[http://www.pavementpreservation.org/spgm/index.php?spgmGal=Chip Seal Construction CA&spgmPic=10&spgmFilters=#pic](http://www.pavementpreservation.org/spgm/index.php?spgmGal=Chip%20Seal%20Construction%20CA&spgmPic=10&spgmFilters=#pic)>.
- RTA. *Houghton Road: Old Vail Road/Mary Ann Cleveland Way*. 2012. Web. 25 Jul 2012.
<<http://www.rtamobility.com/documents/maryannclevelandathoughton100sm.jpg>>.
- Scotth. *Slurry 1*. 2010. The Barnhardt Group Pavement Management Experts. Web. 24 Jul 2012.
<<http://thebarnhardtgroup.com/pavement-preservation/slurry-seal/slurry-residential/>>.