

Calendar of Events

- MPRA—Kansas City, MO
March 9—13
- TEAM—Branson, MO
March 17—19
- MoDot Maintenance Meeting
Springfield, MO
March 31—April 2
- APWA SP '09—Springfield, MO
April 22—24

Inside this issue:

- Skid Resistance and Public Safety* 2
- New and Innovative Options to Porous Pavements* 2
- Meet the Staff Debbie DuBois* 2
- Troubleshooting Asphalt Pavement Deficiencies* 3

Skid Resistance and Public Safety

The safety of the motor-ing public is an ongoing concern of infrastructure managers. Today, those managers have several choices regarding surface treatments. Selecting a system that provides a maximum level of service-ability is critical to the pavement management process. It is also impor-tant to consider the safety ramifications when se-lecting a surface treat-ment.

Although several safety factors affect the motor-ing public, one of the most critical is the skid resistance of pavements. Skid resistance dictates the stopping distance of a vehicle and contributes to the potential for wet pavement accidents.



This street had a skid number of 25 after a pavement rejuvenator application. The mini-mum safety threshold value for low volume roads is 30.

Some surface treatments such as driveway sealers and pavement rejevenerators actually reduce the friction properties of the pavement for up to 1 year (U.S. Army and Airforce studies). These products should only be used on parking lots and other

“low volume” facilities. The use of friction reduc-ing surface treatments on roads, streets and high-ways may increase the liability of a highway agency if accident rates increase as a result of the treatment. (cont. on page 2)

Fabric Reinforced Cape Seal

As the price of liquid asphalt soared this summer, many agencies were forced to reduce their planned construction activity. When the cost of asphalt overlays became prohibitive, Chuck Anderson, Assistant to the Public Works Director of the

City of Hannibal, tried to find alternate low cost solutions to paving. Missouri Petroleum suggested a fabric reinforced cape seal.

(cont. on page 3)



The paving fabric is applied in the first phase of the operation.

Skid Resistance and Public Safety (cont)

Missouri Petroleum recently hired a consultant to conduct skid test on some of the pavement surfaces in the St. Louis area. A “lock wheel skid tester” (ASTM E 274) was used to determine skid numbers. A ribbed tire (ASTM 501) was used in the skid tester assembly. The International Cybernetics Corporation, Largo, Florida, a company that per-

forms testing for departments of transportation in the United States, conducted this study. Safety threshold values* for skid resistance of pavements establishes skid numbers at no lower than “30” for low volume roads and no lower than “35” for high volume facilities. The results are shown below:

<u>Pavement Type</u>	<u>Skid Number</u>
New Asphalt Overlay	45
Aged Asphalt Overlay	41
New Microsurface	53
Two Year Old Microsurface	57
New Trap Rock Chip Seal	49
Three Year Old Trap Rock Chip Seal	51
Pavement Rejuvenator (on New Asphalt)	25
Pavement Rejuvenator (on Aged Asphalt)	31

Highway and street managers should cautiously consider the risks and liability associated with the use of surface treatments that reduce the skid resistance of pavement.

Please contact Pat Palmer at 314-330-8633 or at ppalmer@lionmark.com if you would like a complete copy of this report.

* WSDOT and Utah DOT skid indices

New and Innovative Options to Porous Pavements

Are you considering using porous pavement in your project? GrassPave² and/or GravelPave² by Invisible Structures Inc. may be the answer. Grids constructed of recycled High Density Polyethylene are used in conjunction with grass or gravel to offer a natural and aesthetically balanced alternative to traditional asphalt and concrete surface treatments.



A GravelPave² project nearing completion. Once the grids are full, service driveway will be constructed.

Highly porous paving grids provide better runoff coefficients and better percolation rates which allow you to retain most of a development’s storm water on site. These systems are therefore recognized as Best Management Practices (BMPs) by the Environmental Protection Agency, the U.S. Army Corps of Engineers and other federal, state and local authorities.

These systems greatly enhance a development’s storm water management capabili-

ties. GrassPave² and GravelPave² will exceed

(continued on page 3)

Meet the Staff

My name is Debbie DuBois and I joined the Missouri Petroleum sales team 3 years ago as an Administrative Assistant and was recently promoted to Sales Assistant

I have over 20 years of administrative/customer service/sales experience with such companies as Western Auto and most recently May Company in their corporate office in downtown St. Louis.

In my current position, I assist the sales team, Henry Schmitt, Mike Hartman, Pat Palmer and Andy Carrigan

with office management, conference planning and inside sales.

I live in the Hazelwood area with my boyfriend of 22 years, Jim, our son, Kyle, and dog, Mindy.



Fabric Reinforced Cape Seal (Cont.)

Good pavement management guidelines dictate that surface treatments be placed on streets in "fair to good" condition. Two streets that the City of Hannibal wanted to repair were in poor condition. The introduction of a paving fabric underlayment with the cape seal would allow the system to be installed on the degraded surface with positive performance results.

The System

An application of asphalt cement (.28 gallons per square yard) was applied to the street's surface. A 4.1 ounce per square yard fabric was immediately rolled into the as-



Microsurfacing is placed on a chip sealed surface.



The completed project.

phalt. An application of CRS2-P (.35 gallons per square yard) was sprayed on the fabric and 3/8 inch trap rock was placed at 30 pounds per square yard and rolled into the fabric. The chip sealed surface was left to cure for approximately three weeks. The street was then swept and a 20 pound application of microsurfacing was applied to the surface.

The Result

The treated streets have the appearance of an asphalt overlay with a skid resistant surface. The streets were rehabilitated at approximately 80% of the cost for a mill and overlay project.

New and Innovative Options to Porous Pavements (cont.)

all loading criteria established for public highway transportation. When installed correctly, these systems can handle compressive strengths up to 5700 psi which can easily accommodate the loads exerted by the outriggers of an 85,000 lb fire truck! GravelPave² constructed to proper specifications also allows for an ADA compliant surface.

If you are considering a green construction alternative to a driveway, a parking lot, a pedestrian walkway, a horse trail or a bicycle path, GrassPave² or GravelPave² reinforced systems may be the solution. Please contact our Geo Products Sales Manager, Andy Carrigan, at 314-378-3906, if you would like additional information about these products.



A Grasspave² system forms an extension to the paved parking adjacent to an apartment complex.

Troubleshooting Asphalt Pavement Deficiencies

The identification of pavement distresses is a critical element in the pavement preservation process. We have provided four pictures of pavement deficiencies on the back page of our newsletter. We would like to challenge you to:

1. Identify the type of distress
2. Note the cause
3. Make a recommendation regarding the action taken to correct the problem

Entries will be judged in the order they are received. Please e-mail your responses to ddubois@lionmark.com.

1st correct entry will receive a \$100.00 gift card from Bass Pro Shops.

2nd correct entry will receive a \$75.00 gift card from Bass Pro Shops.



3rd correct entry, 4th and 5th correct entries will receive a \$50.00 gift card from Bass Pro Shops.

Good Luck!



1620 Woodson Rd.
St. Louis, MO 63114

Phone: 314-991-2180 x205
Fax: 314-991-9624

Henry Schmitt—Vice President
Mike Hartman—Territory Manager
Andy Carrigan—Geo Products Sales Manager
Pat Palmer—Government Services Representative
Debbie DuBois—Sales Assistant

Mailing Address Line 1
Mailing Address Line 2
Mailing Address Line 3
Mailing Address Line 4
Mailing Address Line 5

*Superior Road Solutions For
Over 75 Years*

We're on the web:

www.missouripetroleum.com

Troubleshooting Asphalt Pavement Deficiencies (cont.)

1



2



3



4

