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PAVING the WAY

A PUBLICATION OF THE PLANTMIX ASPHALT INDUSTRY OF KENTUCKY AND THE KENTUCKY ASPHALT PAVEMENT ALLIANCE

Lexington Resurfacing Not the Nightmare Expected

The groans were audible during rush hour as the signs went up on Nicholasville Road: "Paving project begins July 12 / Expect delays." Road construction was coming to the busiest road in Lexington.

But traffic snarls never appeared. Resurfacing progressed quickly, keeping traffic flowing normally (at least as normal as Lexington's busiest road can be).

Construction delays were avoided thanks to contractors working at night during low-traffic periods.

"For the Allen Company, this was nothing new," said Jim Morris, Allen's vice president. Allen partnered with Central Kentucky Asphalt for the project. "This is a standard overlay job that will improve high-traffic roads like Nicholasville."

After milling off 1.5" from the road that will be stockpiled for recycling, the companies put a tougher asphalt mix, Superpave, back on the road.

The Superpave mix will last longer than standard mixes. In addition, it's a high-polymer asphalt that absorbs stress. Kentucky now uses Superpave on all state projects.

The project resurfaced 1.33 miles of Nicholasville Road. Besides paving, contractors installed traffic loops, thermal plastic stripes at intersections and cat eye reflectors.

"That's the beauty of asphalt," Morris said. "We can work during low-traffic periods, and the asphalt will be ready by the morning rush hour. In fact, we can start putting traffic on it even before it finishes cooling. There's no curing delay."

VISIT OUR WEBSITE

Find out what's new with asphalt by visiting our website at www.paiky.org. Check out our new intersections specification guide. It explains how major advances in technology are helping the asphalt industry meet the intersection challenge while maintaining the added benefits of cost savings, less construction time, and smooth and safe pavements.

Also, learn more about why so many projects choose asphalt. Speed of construction. Cost-effective use of taxpayer money. Durability. Another great resource on the web is www.asphaltalliance.com.

THIS ISSUE:

Perpetual Pavement's Perpetual Perks

Having your cake and eating it too. It doesn't happen often, but with perpetual pavement, it's possible: unmatched rideability and long-term savings.

Perpetual pavement roads are designed to last longer than traditional roads, with only occasional repair to the layer that is the cheapest and easiest to pave, the street layer. Beneath the street layer lies a thick layer of asphalt rigid enough to withstand rutting. The base layer of asphalt uses elastomers or polymers-in other words, a layer of elastic material that absorbs stress.

The result: a road that lasts many years longer than traditional roads-and requires less maintenance. And that means significant savings in road-building expenses.

"Typical roads are designed to handle a certain number of loads before needing to be replaced," said Dean Blake, executive director for the Plantmix Asphalt Industry of Kentucky. "Perpetual pavement roads are designed to never exceed a critical load level — they won't fail. That means the time and expense to do major reconstruction on perpetual pavement will be few and far between."

Blake also said perpetual pavement's three layers are tailored for each road's specific climate and geography.

BRINGING IT TO KENTUCKY

States like California and Washington have used perpetual pavement for over a decade. Illinois began testing perpetual pavements seven years ago, and now Wisconsin is testing it.

Kentucky is using perpetual pavement, too. Sections of both I-64 and I-65 were designed with perpetual pavement concepts in mind.

PAIKY hired Dr. Marshall R. Thompson, a pavement expert from the University of Illinois at Urbana-Champaign, to design the sections.

"Our tests on high-traffic roads have been a success," Blake said. "Perpetual pavement is working in Kentucky — saving taxpayer money and ending road delays."

PERPETUAL BENEFITS

Perpetual pavements save taxpayer money, since their life cycle costs are less than other pavement options. At the same time, road delays are kept to a minimum because of quick and infrequent construction.

Perpetual pavements are designed to last indefinitely thereby extending repair cycles and minimizing disruptions to the public.

Maintenance on that long-lasting road is a quick and cheap process. Crews simply mill off the surface layer, recycle it and replace it with a hotmix asphalt layer.

"Since crews will just reapply the surface layer instead of reworking lower levels of the road, delays are kept to a minimum," Blake said.

The hotmix surface repairs much quicker than conventional roads and yet only need to be performed every 15 to 20 years. No major rehabilitation is required for perpetual pavements. Instead, only a simple mill and resurfacing of the top layer to maintain a smooth ride is needed.

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UK Enters American Solar Challenge

It started two years ago when a University of Kentucky (UK) student approached an engineering professor about the program participating in solar car racing. Students in the college began generating ideas and securing funds for the project. Now, for the first time, UK is entering a team in the American Solar Challenge, the longest solar car race in the world. And the Plantmix Asphalt Industry of Kentucky (PAIKY) helped.

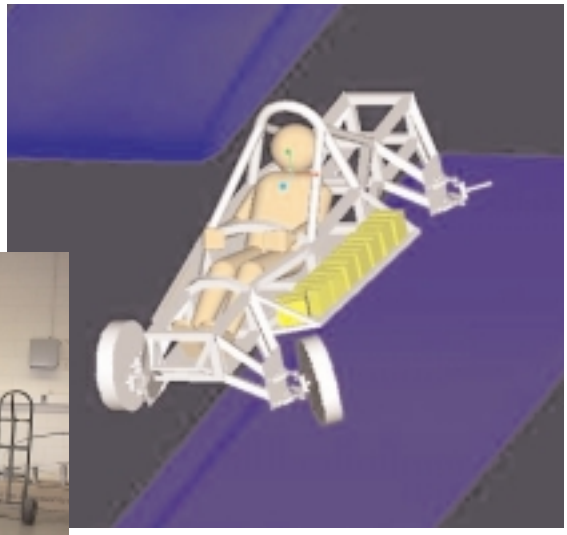
"We were excited to hear about this endeavor and to help in any way that we could," said Dean Blake, executive director of PAIKY. "One of the focuses of our organization is to continue educating people about the asphalt industry. The more we know about what our future holds for transportation, the more we know about what the future holds for asphalt. In addition, we get to help the college students who will be a part of that future."

PAIKY donated to UK's team to help prepare a vehicle for the July 2003 race. To date, the team has purchased a motor and established a design for the chassis and shell of the car. The main focus for the team now is to find solar cells to power the vehicle.

The team will run for about 10 days from Chicago to Los Angeles in a car powered completely by the sun.

Only one person on the team races the vehicle at a time, though the driver must be changed every six hours to avoid fatigue. There are checkpoints along the way to fix any problems with the car, switch drivers or to simply rest.

"The driver compartment is just large enough for a six foot person to enter, exit and drive the car," said Bianca McCartt, a member of UK's team. "Since there is no air conditioning,



changing the driver every 3 to 4 hours minimizes the amount of strain put on them. It will be challenging for the whole team, which makes for an exciting competition."

There are 20 members on UK's team and they are hoping to recruit more members from the incoming freshman. The team also will race at the Formula Sun Grand Prix, a track race in Topeka, Kansas, in May 2003.

"We appreciate the support that our local sponsors have given us. We are still working really hard to find money to purchase solar cells for our car. There is link on our Web site where people can donate $20 to buy a cell. We need all the support we can get," added McCartt.

For more information about the project or to donate money toward go to www.engr.uky.edu/solarcar. Donations can be made by clicking on the "Adopt-A-Cell" link.

"The more we know about what our future holds for transportation, the more we know about what the future holds for asphalt."

PAVINGtheWAY

Asphalt, We Knew Ya When

Asphalt makes for a smoother, quieter ride for cars. And for horses.

The following is from an 1893 pamphlet on the obvious advantages of asphalt. Some of the advantages aren't so obvious to those of us in the 21st century.

1. MORE DURABLE

2. SMOOTHER - In comparison with Belgian block, cobble and wood block. Asphalt does not disintegrate under impact and consequently produces neither mud nor dust.

3. MORE HEALTHFUL - Joints in block and cobblestone pavements are receptacles for horse urine and manure. Asphalt pavements are easily cleaned by flushing with water.

4. LESS NOISE - Physicians claim that noise from horses hooves on block or cobblestone is a leading cause of nervous disorders for residents of large cities.

5. SAFER - In an 1885 survey in 10 cities, 800,000 horses were observed over a period of 192 days. The results showed a horse can travel 585 miles before falling on asphalt pavement and 413 miles before falling on a block or stone roadway. Brick was observed to be the most slippery.

6. LOWER COSTS - An 1885 report published by the city of Philadelphia, Pennsylvania, showed that repairs to carriages and other vehicles in that city could be reduced by one million dollars annually by using asphalt pavements instead of the rough type of surfaces. Also, asphalt's initial cost was cheaper than block and wood block.

It's nice to know asphalt has always been a good choice for road construction. And for that matter, it's good to know we don't still measure road safety by how far horses travel before falling.

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