

OHIO ASPHALT

THE JOURNAL OF OHIO'S ASPHALT PROFESSIONALS

SUMMER 2016

ISSUE 2 • VOLUME 13



**PROJECTS RECOGNIZED AS QUALITY
ASPHALT PAVING AWARD WINNERS**

Page 20

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ON THE COVER: THE RESURFACING OF THE CITY OF LANCASTER'S MARIETTA ROAD WAS A 2015 QUALITY ASPHALT PAVING AWARD WINNER IN THE LOCAL ROADS OR STREETS CATEGORY. IT WAS ONE OF 50 PROJECTS RECOGNIZED AT THE 2016 OHIO ASPHALT EXPO'S QUALITY ASPHALT PAVING AWARDS LUNCHEON. FOR INFORMATION AND PHOTOS OF ALL THE 2015 QUALITY ASPHALT PAVING AWARD PROJECTS, SEE PAGES 20-39.



Flexible Pavements of Ohio is an association for the development, improvement and advancement of quality asphalt pavement construction.

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Telephone: 614.791.3600;
888.446.8649

Fax: 614.791.4800
www.flexiblepavements.org

Layout & Design

TriAd Marketing & Media

Ad Sales & Editorial Preparation

TriAd Marketing & Media
371 County Line Road West
Westerville, OH 43082
fax: 614.846.8763

Advertising Sales

Mark Wolf
mwolf@triad-inc.com or 866.679.9340

Editorial Staff

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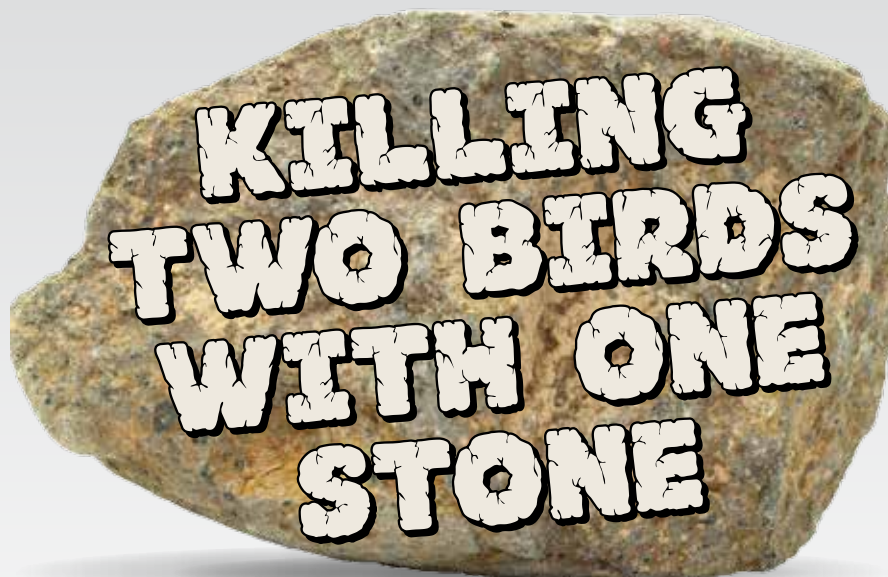
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THE PRESIDENT'S PAGE



CLIFFORD URSICH, P.E.
PRESIDENT & EXECUTIVE DIRECTOR

“Pavement engineers are primarily concerned with the strength of a pavement and the condition of the pavement surface – quite literally, where the rubber meets the road. Reasons are that heavy trucks run on our roads, and roads must carry that weight over a lifetime. Second, road surface condition needs to ensure safe travel for all types of vehicles; and smoothness is a necessary feature for safety. These are referred to, respectively, as structural performance and functional performance...”



The Spring 2016 issue of *Ohio Asphalt* announced the imminent birth of Thinlay. Indeed Thinlay has arrived just in time for the 2016 paving season. Thinlay was born into the preservation family of treatments. Already our newborn Thinlay is getting its legs, as it is now in official specification language and let to contract. We have great dreams and expectations for our Thinlay since it “kills two birds with one stone,” keeping pavements strong and ensuring motorists’ satisfaction.

Officially, the phrase “*killing two birds with one stone*” is an idiomatic expression that means to achieve two things in a single action. Growing up, my family used that expression to describe “efficiency.” That pretty much describes Thinlays. They are efficient; and in particular they are an efficient preservation treatment that provides pavement life extension and motorist satisfaction.

Pavement engineers are primarily concerned with the strength of a pavement and the condition of the pavement surface – quite literally, where the rubber meets the road. Reasons are that heavy trucks run on our roads, and roads must carry that weight over a lifetime. Second, road surface condition needs to ensure safe travel for all types of vehicles; and smoothness is a necessary feature for safety. These are referred to, respectively, as structural performance and functional performance of a pavement.

Structural Preservation

The American Association of State Highway and Transportation Officials (AASHTO) describe “structural performance” and “functional performance.”

“The structural performance of a pavement relates to its physical condition; i.e., occurrence of cracking, faulting, raveling, or other conditions which would adversely affect the load-carrying capability of the pavement structure or would require maintenance.”¹

Structural preservation, therefore, consists of maintenance activities taken to mitigate loss in pavement structural strength. They strengthen load-carrying capability of a road, or in the least part slow its failure from fatigue. Take for example, asphalt overlays and cracking sealing. An asphalt overlay adds strength. Crack sealing keeps strength from being lost due to moisture getting into the pavement foundation. Both are preservation activities designed to keep a pavement strong and sound. Considering the various surface treatments available, Thinlay and Fine-Graded Polymer Asphalt Concrete are the only treatments that contribute strength to a pavement. Slurry wears off and stone chips meet their demise through erosion.

The following graph is provided courtesy of the Federal Highway Administration. It communicates the main tenet of pavement

preservation; use more frequent but less costly preservation treatments to preserve pavement condition at a high level. Historically, mastering this has been akin to searching for the Holy Grail. One thing is for sure, a preservation strategy that relies solely on treatments that coat the pavement surface is one destined to inevitable pavement structural failure. Why? Such a strategy ignores the effects of pavement fatigue caused by traffic.

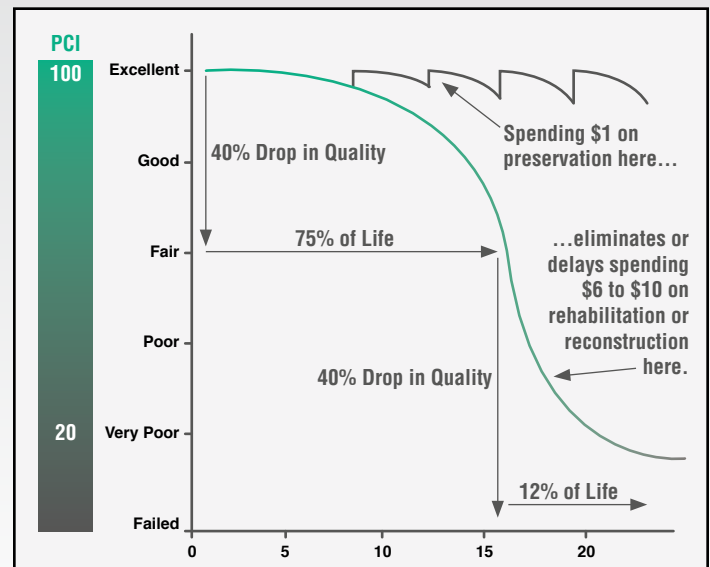
Functional Preservation

"Highways are for the comfort and convenience of the traveling public (User)"¹

This fundamental assumption, called serviceability, underpins all of AASHTO pavement thickness design. Ultimately, says AASHTO, roads are for users and user satisfaction is measured in riding comfort.

"The functional performance of a pavement concerns how well the pavement serves the user. In this context, riding comfort or ride quality is the dominant characteristic."

That fundamental understanding has been affirmed by the Ohio citizenry. Ohio residents and community leaders were surveyed in 2012 during the development of the ODOT long range strategic plan ACCESS OHIO 2040.



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The Asphalt Pavement Alliance is a partnership of the Asphalt Institute, National Asphalt Pavement Association, and the State Asphalt Pavement Associations.

The following survey question was asked of residents:

“Which one of the following do you think is more important for ODOT to address over the next 5 to 10 years?

- 58% of respondents chose resurfacing of highways to improve condition of driving surface without increasing capacity
- 39% chose increasing capacity on highways to improve traffic flow
- 3% didn't know

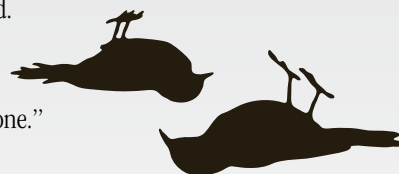
Making pavements smoother was highest among respondents for pavement characteristics that should receive the most emphasis. Fifty-five years after the famed AASHO Road Test, motorists continue to hold riding comfort as the most-desired feature of a pavement.

Functional Preservation therefore is comprised of maintenance treatments that ensure good riding comfort – the main feature of pavement functional performance.

Structural Preservation & Functional Preservation – You've Got to Have Both!

Our new member of the family, Thinlay, now having been added to the asphalt pavement suite of treatments, creates an opportunity unique only to this material. Thinlays incorporated into a pavement preservation strategy brings both incremental improvements to pavement strength and riding comfort. Both structural preservation and functional preservation are accomplished.

Sounds to me a lot like
“killing two birds with one stone.”



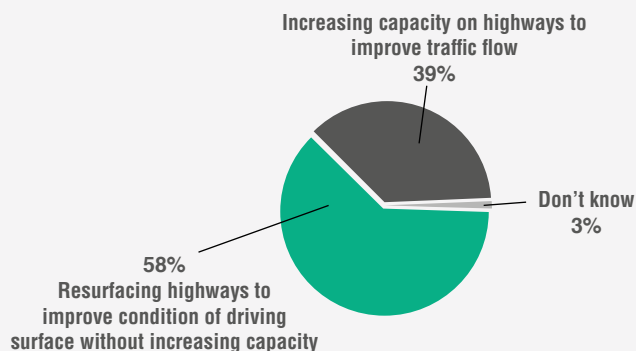
1 AASHTO Guide for Design of Pavement Structures 1993, American Association of State Highway and Transportation Officials

THINLAYS

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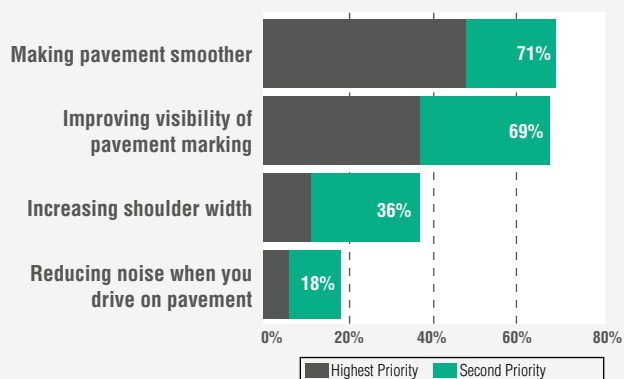
Which ONE of the following do you think is more important for ODOT to address over the next 5 to 10 years?
by percentage of respondents



Source: ETC Institute (2012)

Resident Survey Results Only

Priority Rankings Placed on the Four Pavement Characteristics That Should Receive the Most Emphasis
By percentage of respondents who selected the item as one of their top two choices



Source: ETC Institute (2012)

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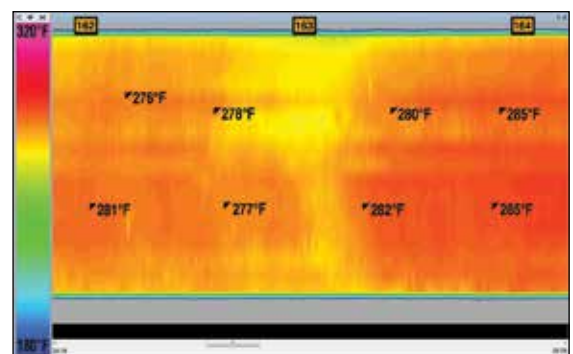
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15 FORT WASHINGTON WAY SMA AT

The reconstruction of Fort Washington Way (Interstate 71/U.S. Route 50) in downtown Cincinnati (i.e. the trench project) was completed in June 2001, with the placement of a Stone Matrix Asphalt surface by the John R. Jurgensen Company. This type of gap-graded surface course was essentially experimental at the time, but was expected to give long life under the heaviest of traffic.

A May 2016 review of the project reveals that the surface mat is still in good condition with distress starting to show at the longitudinal joints. Some sealing (spray patching) of the longitudinal joint has been done in places. Compare the accompanying photos with those in the 2011 article. ODOT indicates that the most-recent (Oct. 2015) PCR is 86 and that no preventive maintenance treatment is currently planned.

While this pavement looks pretty good for its age, it's not all that remarkable. ODOT pavement records reveal that the surface on a newly constructed asphalt-base pavement typically lasts on-average 15 or more years before the first overlay. The performance of the SMA, while successful, doesn't look as if it is enough better to justify the use of such a special mix. Item 442, Superpave, dense-graded mixes have been improved to the point that

they can be expected to give comparable performance and are commonly being used as the surface in the most demanding of applications. For example, a Cincinnati-area Superpave surface, 1.5-inch-thick mill and fill, placed on I-275 between I-74 and State Route 4 in 2000, served well until the road was rehabilitated in 2014 and 2015. Only part of this I-275 pavement was an asphalt-base pavement, much of it was composite, or rigid base, pavement. While this was not an original surface on new asphalt-base construction, which on-average have lasted longer, this minor inlay of Superpave, Type A lasted nearly 14 years.



All of this reinforces the experience that for best pavement performance, start with an asphalt-base pavement — better yet a Perpetual Pavement — surface it with a high-performance, polymer-modified surface mix, like Item 442, Type A, and enjoy long life and easy maintenance indefinitely.

(Editor's note: For a complete history of the Fort Washington Way {Interstate 71/U.S. Route 50} project see the Ohio Asphalt article in the Fall-Winter 2011 issue at http://www.flexiblepavements.org/sites/www.flexiblepavements.org/files/ohio-asphalt-pdf/ohio_asphalt_fall-winter_2011.pdf and the earlier articles in Ohio HMA Current News, December 1999 and June 2001, which are archived at <http://www.flexiblepavements.org/ohio-asphalt/Ohio-HMA-Newsletters>.)





**Ohio's Premier Asphalt Event Provides
'Bumper Crop' of Educational Sessions,
Speakers, Awards & More**





With record attendance, new educational sessions and speakers, and more Quality Asphalt Paving Awards – in addition to the regular highlights one expects at Ohio's Premier Asphalt Event – the 2016 Ohio Asphalt Expo definitely was a "bumper crop" year.

Whether it was the 70-degree weather, the start of the state's construction season, the recent signing of a new long-term federal surface transportation bill, or the added excitement of a new flexible asphalt pavement being introduced, the 2016 Ohio Asphalt Expo, held March 30-31 at the Columbus Polaris Hilton, attracted a modern-record attendance with more than 500 attendees.

In all, the abundance of information, technology, quality workmanship, appreciation and camaraderie yielded an unusually productive two days.

The 2016 Ohio Asphalt Expo began Wednesday morning with the Flexible Pavements of Ohio (FPO) Member Breakfast & Business Meeting, Public Agency Forum and the start of five education sessions – including new Asphalt Plant and Paving Operations tracks. While the Asphalt Plant Track provided information on "20 Common Production Mistakes – 20 Best Practices of Production," and the Paving Operations Track put attendees on the right track when it comes to the "Fundamentals of Paving" and more, the rest of the morning's more than seven hours of educational sessions expanded knowledge about construction financial management, pavement milling practices, health and safety updates and more.

Quality Asphalt Paving Awards Luncheon

Traditionally the most, well-attended event of the Ohio Asphalt Expo, the noontime Quality Asphalt Pavement Paving Awards honored 50 projects from 2015.

FPO Chairman Tim Bell, of M&B Asphalt Co. Inc., welcomed the packed Polaris Ballroom that was made more crowded thanks to the addition of companies recently joining as association members (see listing on page 49). Bell also introduced a familiar face to the Quality Asphalt Pavement Paving Awards podium, ODOT Chief Engineer & Assistant Director of Transportation Policy Jim Barna.



Jim Barna

Barna said his appearance at the Ohio Asphalt Expo was continuing a good week for him. Not only was the previous day, March 29, the kickoff of the 2016 ODOT construction program, but the award luncheon was also a highlight. "This is one that I put on my calendar," Barna said. "There are a couple of these events that I attend every year, and this is one of my favorite."

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He said his bias toward the awards event is because it helps fulfill what ODOT strives for: Quality. “The reason is because it’s about quality,” Barna said. “Flexible Pavements (of Ohio) is very critical to ODOT’s mission, which is the easy conveyance of people and goods from one place to the other. I’m excited about participating in the awards, as they celebrate this very important product to our mission.”

Before helping honor the ODOT pavements winning Quality Asphalt Pavement Awards, Barna delivered an update on the current happenings at the department.

After listing some of the larger construction projects around the state, Barna reminded the audience that the majority of ODOT’s annual

funding, 97 percent, goes toward preservation of the current system. He applauded FPO and the flexible pavements industry for remaining current with the department’s renewed preservation approach by developing and introducing Thinlay as a competitive surface treatment. In 2016, the state will be paving 6,500 miles of roadway across the state. The abundance of work – which Barna said since Gov. Kasich took office in 2011, Ohio has invested \$12.4 billion in highway work – has unfortunately led to safety issues. In 2015, there were more than 6,000 work zone crashes in Ohio, which resulted in a 10-year-high 30 fatalities. These crash statistics has ODOT working toward safety solutions.

In closing, Barna once again thanked the flexible pavements industry. “Each year you’ve worked to make your product more durable, longer

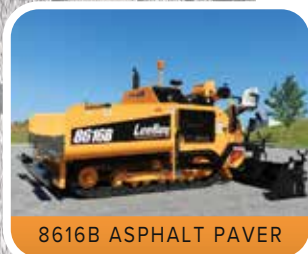
lasting and smoother; as well as provided improved driveability. And we appreciate that. As your customers, at ODOT, of course we expect that, but we appreciate all the efforts this community has made as it relates to flexible pavement quality.”

Barna then helped FPO Director of Customer Relations Andrew Gall recognize and honor the 20 ODOT & Ohio Turnpike and Infrastructure Commission Projects receiving Quality Asphalt Paving Awards for the 2015 season. Also recognized, in what Gall labeled as a “bumper crop” of award-winning pavements, were 12 Local Road or Street Projects, six Commercial Parking Facility Projects, four Special Use Pavement Projects and eight Airport Pavement Projects. (See pages 20-39 for descriptions and photos of the Quality Award projects.)

Following the luncheon, attendees had the opportunity to attend five more education sessions, ranging from Segregation Cause and Effect and Work Zone Intrusion Safety, to the continuing sessions in the Asphalt Plant and Paving Operations tracks.



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The opening day, and its nearly 20 hours of meetings, forums, education sessions, awards, expos and interaction concluded with the evening's Quality Paving Celebration reception.



Stephen Palmer

Prayer Breakfast

When it comes to the enjoyment of work, Pastor Stephen Palmer of Lighthouse Ministries in Columbus was preaching to the choir when he addressed asphalt industry members at Thursday morning's Prayer Breakfast.

Introduced and welcomed to the podium by FPO Co-chairman James Jurgensen II, of Valley Asphalt Corp., Pastor Palmer spoke of the merits of hard work and how God – according to the Bible – was a worker as well. “He is still working today,” the pastor said, “kind of in a behind-the-scenes in a lot of areas. But one thing is clear: God is a worker and he wants man – men and women – to work.” He said work exercises the body and the brain, adding, “Most of us would agree that we feel better when we mow the lawn or work in the garden . . . Physical labor is good for the human body. Work also benefits us spiritually. Oh the things we get into when our hands are idle.”

Pastor Palmer concluded by saying that oftentimes the difference between play and work is attitude. “The key to enjoying our work is in our thinking . . . If you think of work as tiring and boring it will be; if you think of it as making a difference in the world, it will.”



James Jurgensen II

Hard work and making a difference described the next groups to be recognized. Following Pastor Palmer's message, recipients of 2016-2017 FPO Asphalt Pavement Industry Scholarships were honored.

This year marks the 21st year of the scholarship program, which originates from the FPO 1994 Long Range Strategic Plan's goal of generating study in flexible pavements at Ohio's 10 universities offering degrees in civil engineering or construction management. With the inclusion of this year's 19 recipients, the FPO Asphalt Pavement Industry Scholarships program has supported 427 scholarships totaling \$567,000. “The scholarship program is an important function of the association, and one of which the members can be rightfully proud,” said FPO Director of Engineering Services Bill Fair, who announced this year's scholarship recipients. “Annually, we award these scholarships to help advance education in asphalt pavement technology to try to ensure that students



coming out of the Ohio universities in engineering and construction management are aware and trained in asphalt pavement technology . . . It also fosters our relationship with the universities.” Highlighting this year's scholarship program and winners, which will be featured in the fall issue of *Ohio Asphalt*, were the 15 students in attendance and faculty members at this year's event.

Acknowledgements and accolades continued with the announcement of FPO's individual honors. The late Robert “Bob” Toney received the association's Industry Service Award, and Nick Little of Shelly & Sands

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Inc. was bestowed the association's highest honor, the William W. "Bill" Baker Award. (See pages 40 and 41 for more information about this year's individual award honorees.)



Jay Hansen

The morning's keynote speaker was National Asphalt Pavement Association (NAPA) Executive Vice President Jay Hansen, who spoke on "Asphalt Opportunities in the FAST Act." Since the passing of the federal transportation funding bill, Fixing America's Surface Transportation (FAST) Act, last December, Hansen has shared with the industry "what this bill means to our markets going forward." The FAST Act is the first, long-term funding bill for

surface transportation in 10 years. Hansen, who joined NAPA in 1998 and has served as executive vice president since 2011, told the audience it must make it a point to become knowledgeable about what's in the 1,300-page FAST Act. "For Ohio, your highway market is 58 percent federally funded. So you're very dependent on what Congress does with this program . . . This bill determines how much money; it determines what the money can be spent on; and it determines who can spend the money."

As he delved into the FAST Act over the next 40 minutes, Hansen said that each federal transportation bill has its own identity. The current act's focus, he said is "moving freight on the national highway system." For Ohio, Hansen said the FAST Act means five years of certainty for funding levels. "We've had 36 short-term extensions since SAFETEA-LU (the funding bill signed in 2005). And that has impeded Ohio's ability to properly plan a bunch of our transportation projects, no doubt about it." Hansen spoke on each of the highway programs — or buckets providing funding — available in the FAST Act, and how Ohio's asphalt industry should pursue them.

Following the Prayer Breakfast, the Ohio Asphalt Expo's final four education sessions were held. Attendees could select from six hours of information on topics ranging from asphalt performance and durability, and recycled roofing shingles as asphalt additives, to the introduction of Ohio's Thinlay Asphalt Concrete.

In all, the 2016 Ohio Asphalt Expo was a showcase of a bumper crop of quality craftsmanship, individuals and educational sessions.



OHIO ASPHALT EXPO '17

A large banner for the Ohio Asphalt Expo '17. The background is a photograph of the Hilton Columbus/Polaris hotel, a large multi-story building with a red and white facade. In the foreground, there are several yellow asphalt pavers and a group of people standing around them. Overlaid on the right side of the banner is a yellow diamond-shaped sign that reads "OHIO ASPHALT EXPO". To the left of the sign, there is text providing event details.

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Asphalt Shingle Grinding Service LLC
Eagle Crusher Co. Inc.
Kraton Polymers
Southeastern Equipment Co. Inc.

Sustaining Level

Aggcorp Equipment Systems
Columbus Equipment Co.
Ohio CAT
Seneca Petroleum Co. Inc.

Exhibitors

The Expo featured 33 indoor and 8 outdoor exhibits showcasing the newest services, technology and equipment. The 2016 Ohio Asphalt Expo exhibitors included:

Aggcorp Equipment Systems
American Highway Products
Asphalt Shingle Grinding Service LLC
Astec Inc.
BOCA Construction Inc.
Cargill Deicing Technology
Columbus Equipment Co.
Dine Comply Inc.

Eagle Crusher Company Inc.
GeoShack
Heatec
Highway Equipment Co.
Ingevity
Kraton Polymers
Lott Industries Inc.
The McLean Co.
Maxam Equipment Inc.
Meeker Equipment Co. Inc.
Meredith Brothers Inc.
Murphy Tractor & Equipment Co.
Ohio CAT
QPR
Reliable Asphalt Products Inc.
Road Builders Supply LLC
Roof to Road LLC
Rudd Equipment Co.
Smith Challenger Manufacturing & Services Inc.
Southeastern Equipment Co. Inc.
Stansteel - Hotmix Parts
TransTech Systems Inc.
Unique Paving Materials Corp.
WEM Automation LLC
Zydex Inc.



2017 OHIO ASPHALT EXPO: CALL FOR PRESENTATIONS

The Asphalt Expo is Ohio's premier asphalt pavement event with multiple, concurrent educational sessions and an indoor and outdoor trade show and exhibition. Organized by Flexible Pavements of Ohio (FPO), the Ohio Asphalt Expo provides pavement owners, public works professionals, contractors and pavement designers with information on state-of-the-art industry practices and technologies to ensure successful, long-lasting asphalt pavements.

The educational presentations at the Ohio Asphalt Expo are provided by speakers who are highly accomplished in their fields of expertise and are recognized as knowledgeable industry leaders. FPO is currently seeking presentation proposals for the 2017 Ohio Asphalt Expo, scheduled for March 14-15, 2017, in Columbus. Presentations may be submitted for one of three thematic tracks: Asphalt Plant Operations, Asphalt Paving Operations & Equipment and Regulatory & Governmental Policy. All presentations should logically fit within one of the Expo themes, be topical in nature, and not be direct marketing for a specific company, product or service.

Please submit a presentation topic, suggested speaker/presenter and brief description of the presentation by Friday, Sept. 2, 2016, to Andrew Gall, director of Customer Relations, by e-mail at andrew.gall@flexiblepavements.org or by fax at (614) 791-4800.









Project Owners, Customers, Users Enjoying Quality of Ohio Asphalt Industry's End Product

50 Projects Recognized as Quality Asphalt Paving Award Winners

“

“Quality in a service or product is not what you put into it. It is what the client or customer gets out of it.”

~ Peter Drucker

”

The end product of Ohio's 2015 paving season was a smooth, quality pavement recognized by project owners and enjoyed by its customers and users. The Ohio asphalt industry has been recognized throughout the state once again for providing quality asphalt pavements designed for high-traffic interstates, low-volume rural roadways, mixed-use and pedestrian pathways, athletic surfaces, airports and commercial parking facilities.

The quality and craftsmanship of Ohio's asphalt pavements are also being recognized at the national

level, with nearly 40 percent of Flexible Pavements of Ohio's 2015 Quality Asphalt Paving Awards winners also being honored through the National Asphalt Pavement Association's (NAPA) 2015 Quality in Construction Awards program.

These award-winning projects were honored during the 2016 Ohio Asphalt Expo Luncheon. Here is a look at the top asphalt pavement projects from the 2015 construction season:

ODOT & OTIC Pavements



Resurfacing of Interstate 75 in Hancock County, ODOT District 1 Paving Contractor: The Shelly Company

From Hancock County Road 60 to C.R. 313, The Shelly Company milled 1½-inches from I-75, performed concrete joint repair and placed a 1¾-inch asphalt intermediate course and a 1½-inch surface course. Despite limited access to the site for work trucks, Shelly was able to keep paver operations moving. It's efforts had the project recognized by the National Asphalt Pavement Association (NAPA) with a 2015 Quality in Construction Award for projects under 50,000 tons.



ODOT District 1's Chris Hughes and The Shelly Co.'s Bryan T. Stennett



Resurfacing of State Route 39 in Ashland County, ODOT District 3 Paving Contractor: Shelly & Sands, Inc.

Along with the resurfacing of S.R. 39 from S.R. 603 to the Ashland/Holmes county line/S.R. 3, Shelly & Sands provided pavement milling, base repair and minor bridge work. In all, the contractor placed more than 31,000 tons of asphalt, which included a variable 3- to 6-inch base course, a ¾-inch, 9.5-millimeter intermediate course and 1¼-inch 9.5-mm surface course.



Shelly & Sands' Jason Johnson and ODOT District 3's Eric Finger

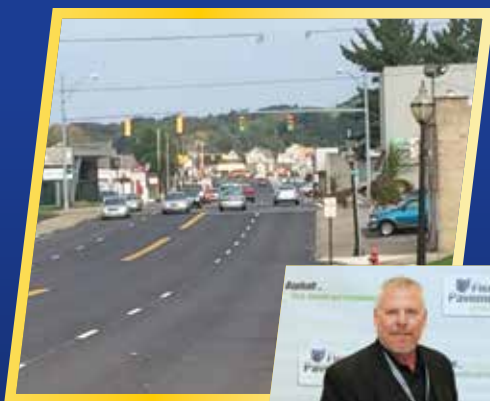


Widening of I-70 in Clark County, ODOT District 7 Paving Contractor: John R. Jurgensen Co.

John R. Jurgensen (JRJ) Company's third I-70 widening project was from Clark County's Enon Road to U.S. Route 68. A NAPA 2015 Quality in Construction Award winner for projects over 50,000 tons, the project featured - in addition to the existing pavement's planing and overlay - construction of a 12-foot-wide lane and 12-foot-wide shoulder on cement-treated subgrade and aggregate base. JRJ received the maximum smoothness incentive by utilizing a Material Transfer Vehicle to place the widening's surface and intermediate courses to eliminate thermal segregation and improve ride quality.



ODOT District 7's Michelle Porr and John R. Jurgensen's Sean Davis and Brian Trainer



**Resurfacing of U.S. Route 422 in Mahoning County,
ODOT District 4
Paving Contractor: Shelly & Sands, Inc.**

Shelly & Sands performed 3½ miles of minor rehabilitation and resurfacing, which included two miles of U.S. 422 from Trumbull County to S.R. 193 and 1½ miles of S.R. 289 from Himrod Avenue to the City of Campbell. The company provided pavement milling, repair and resurfacing from U.S. 422 with a variable depth-leveling course with ¾-inch Smoothseal surface, a 1¾-inch Type 2 intermediate course and 1½-inch Type 1 surface course on S.R. 289.



Shelly & Sands' Mark Mills



**Resurfacing of I-70 in Licking and Muskingum counties,
ODOT District 5
Paving Contractor: The Shelly Co.**

Under tight maintenance of traffic (MOT) restrictions that required all work to be conducted at night and all lane restrictions removed during the day, The Shelly Co. provided milling, joint repair and resurfacing of this high-traffic volume interstate. The Shelly Company's work on the project earned it a NAPA 2015 Quality in Construction Award for projects under 50,000 tons.



The Shelly Co.'s John Shonk and ODOT District 5's Brent R. McLoughlin



**Resurfacing of S.R. 241 in Stark County,
ODOT District 4
Paving Contractor: Northstar Asphalt, Inc.**

Northstar Asphalt milled and resurfaced more than four miles of S.R. 241 using 1½ inches of Type 1 surface course asphalt mix. The project, which included work on three structures along S.R. 241, stretched from S.R. 93 to Erie Street in Stark County.



Northstar Asphalt's Andy Triner and ODOT District 4's Kenan Tektas



**Resurfacing of S.R. 28 in Clermont County,
ODOT District 8
Paving Contractor: John R. Jurgensen Co.**



Recognized as a 2015 Quality in Construction Award winner for projects under 50,000 tons by NAPA, JRJ performed 79,000 square yards of pavement planing and placed 7,600 tons of 19-mm intermediate course and 6,600 tons of 12.5-mm surface course. Ride quality was improved by the company's use of a material transfer vehicle of the surface and intermediate courses to eliminate thermal segregation. Along with the resurfacing, JRJ used 300 tons of bridge deck waterproofing asphalt concrete in the repair of three bridges.

ODOT District 8's Jon Milesky and John R. Jurgensen's Brian Jones and Sean Davis

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**Resurfacing of U.S. 422 in the City of Girard,
ODOT District 4
Paving Contractor: Shelly & Sands, Inc.**

The scope of work for this two-mile-long project called for Shelly & Sands to provide pavement milling, repair and resurfacing with a 2½-inch-deep Type 2 intermediate course and a 1-inch-deep Smoothseal surface.



Shelly & Sands' Mark Mills



**Resurfacing of U.S. 224 in Seneca County,
ODOT District 2
Paving Contractor: Erie Blacktop, Inc.**

Erie Blacktop provided milling, pavement repair, installation of a new culvert and placement of a 9.5-mm surface course on this two-lane project, which is located on U.S. 224 in Seneca County's Village of Attica to the Huron County line. This project was geographically located in District 2 but construction administration of was provided by staff from the District 3 office.



ODOT District 3's Eric Calvert and Erie Blacktop's Randy Wikel



**Resurfacing of S.R. 209 & S.R. 821 in Guernsey County,
ODOT District 5
Paving Contractor: Shelly & Sands, Inc.**

Several challenges were overcome in this resurfacing of S.R. 209 in the City of Cambridge to the Village of Byesville and of S.R. 821 in the Village of Byesville. Shelly & Sands performed various thicknesses of milling ranging from 1½ to 3 inches, and resurfacing with variable thicknesses of intermediate course and 1½-inch Type I surface course. Shelly & Sands also met the challenges of maintaining traffic within city and village corporate limits during paving operations, variable-width pavements and multiple utilities located within the roadway.



Shelly & Sands' Tim Fletcher and ODOT District 5's Jeffrey Guiler



**Resurfacing of S.R. 123 in the Village of Carlisle,
ODOT District 8 and Village of Carlisle
Paving Contractor: John R. Jurgensen Co.**

A Local Project Administration (LPA) project, JRJ was noted for providing good mat texture and overall completeness in the resurfacing of S.R. 123 from Dayton Oxford Road to Carlisle Business Parkway in the Village of Carlisle. The milling and resurfacing of this major arterial included repair of utility cuts throughout the corridor and ADA-accessibility improvements within the village.



ODOT District 8's Jon Milesky, Village of Carlisle's Shelby Ingle and John R. Jurgensen's Hutch Rogge and Troy Morrison



**Reconstruction of the Ohio Turnpike in Erie & Sandusky
counties, Ohio Turnpike & Infrastructure Commission
Paving Contractor: Gerken Paving, Inc.**

Part of the multi-year reconstruction of the Ohio Turnpike, Gerken Paving, in partnership with Kokosing Construction, reconstructed six miles of the turnpike's westbound center lanes and right lanes and outside shoulder with 15½-inches of asphalt. Gerken placed more than 200,000 tons of asphalt on the project between mileposts 101.2 and 107.2 in Erie and Sandusky counties.



Gerken Paving's Jeff Giesler



**Resurfacing of S.R. 73 in the City of Springboro,
ODOT District 8
Paving Contractor: John R. Jurgensen Co.**

The resurfacing of nearly two miles of S.R. 73 from I-75 to S.R. 741 in the City of Springboro called for JRJ to make pavement repairs, spot curb replacements, pavement planing and placement of a 2-inch, 12.5-mm surface course. JRJ performed milling and paving work at night to minimize disruption of traffic for the route's more than 27,000 daily motorists. The project was recognized with a NAPA 2015 Quality in Construction Award for projects under 50,000 tons.



ODOT District 8's Jon Milesky and John R. Jurgensen's Troy Morrison



Resurfacing of S.R. 7 in Belmont County, ODOT District 11 Paving Contractor: Shelly & Sands, Inc.

Shelly & Sands provided minor rehabilitation within this more than three-mile, four-lane resurfacing project of S.R. 7 between the Village of Bridgeport and the City of Martins Ferry. Along with the milling of the existing surface and minor pavement repairs, Shelly & Sands used approximately 10,000 tons of 12.5-mm surface course.



Shelly & Sands' Brian Medley and ODOT District 11's Jason Beranek

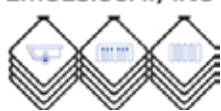


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**Resurfacing of U.S. 422 in Cuyahoga County,
ODOT District 12
Paving Contractor: The Shelly Co.**

Along with the milling of 1¾ inches and placement of 1¾ inches of 19-mm intermediate course and 1½ inches of 12.5-mm surface course, Shelly provided reconstruction of approaches on seven structures along the route to accommodate for the increased profile grade. Shelly performed resurfacing and reconstruction of the U.S. 422 approaches from Solon Road to S.R. 306 in Cuyahoga County by utilizing limited roadway closures. The project received recognition as a NAPA 2015 Quality in Construction Award for projects under 50,000 tons.



The Shelly Co.'s Bill Purk



**Resurfacing S.R. 56 in Madison County,
ODOT District 6
Paving Contractor: Shelly & Sands, Inc.**

The resurfacing of 15 miles of S.R. 56, from the Village of Mount Sterling/Pickaway County line to the corporate limits of the City of London in Madison County, included milling, partial-depth pavement repairs, the utilization of more than 17,000 tons of 12.5-mm surface asphalt mix and the preparation of nearly 31 miles of shoulder.



ODOT's Jeff Holbrook and Shelly & Sands' Jason Sayre



**Rehabilitation of I-275 from Colerain Avenue to Winton Road
in Hamilton County,
ODOT District 8
Paving Contractor: John R. Jurgensen Co.**

This two-section, design/build road widening and rehabilitation of I-275 from Colerain Avenue to Winton Road in Hamilton County included different requirements for JRJ. The project's first section called for the pavement milling and placement of a two-course overlay. For the second portion of the project, the company had to remove the asphalt overlay of a concrete pavement, crack and seat the existing concrete in addition to placing a 6-inch 302 asphalt base, a 1¾-inch 19-mm intermediate course and 1½-inch 12-mm surface course. The project was a NAPA 2015 Quality in Construction Award winner for projects over 50,000 tons.



ODOT District 8's Jon Milesky and John R. Jurgensen's Brian Trainer



Resurfacing of S.R. 211 & S.R. 800 in the City of Dover, ODOT District 11 Paving Contractor: The Shelly Co.

A successful partnering with both the City of Dover and ODOT District 11 staffs allowed The Shelly Co. to successfully provide a 2-inch pavement milling and 2-inch resurfacing of S.R. 211 and S.R. 800. The project's location included resurfacing work at the busy intersection of S.R. 39 in the City of Dover, which called for The Shelly Co. to maintain strict coordination with both city and ODOT personnel in order to provide safe travel in this high vehicular and pedestrian traffic area.



The Shelly Co.'s Jerome K. Julasz and Bill Purk and ODOT District 11's Jason Beranek



Resurfacing of U.S. 23 in Pike County, ODOT District 9 Paving Contractor: Shelly & Sands, Inc.

The resurfacing of 11 miles of U.S. 23 in the Village of Piketon in Pike County included the removal of 3¼ inches of pavement and placement of 1¾ inch-intermediate and 1½-inch surface mix. The project was noted for its fine texture and smoothness due in part because Shelly & Sands was able to surface the shoulder under the guardrails and eliminate the use of a cold longitudinal joint.



ODOT District 9's Jason Bednarczyk and Shelly & Sands' Marty Spring



Rehabilitation of I-275 from Interstate 74 to Colerain Ave. in Hamilton County, ODOT District 8 Paving Contractor: John R. Jurgensen Co.

Because of the project's aggressive schedule, primarily the work on the 5½-mile rehabilitation project on I-275, from I-74 to Colerain Avenue in Hamilton County, was performed at night. JRJ milled 3-inches of pavement surface and provided an overlay consisting of a 19-mm intermediate and 12.5-mm surface mix. NAPA awarded the project a 2015 Quality in Construction Award for projects over 50,000 tons.



ODOT District 8's Jon Milesky and John R. Jurgensen's Troy Morrison

Local Roads or Streets



Construction of the Shawnee Road & Fort Amanda Road Roundabout in Allen County, Allen County Engineer's Office Paving Contractor: The Shelly Co.



The project involved replacement of a signaled, four-way intersection with a roundabout as part of the replacement and realignment of a three-span bridge over the Ottawa River adjacent to the intersection. The project's pavement work included a 4-inch 301 base, a 1¾-inch Type 1 intermediate course and a 1¼-inch Type 1 surface course. In order to mitigate the area's travel demands during construction - which includes high volumes of commuter, business and oversized loads traffic - The Shelly Co. used temporary pavement and performed the project's work in phases to maintain traffic. The project earned a 2015 Quality in Construction Award from NAPA in the projects utilizing less than 50,000 tons.

The Shelly Co.'s Jerry L. Hinesman and Allen County Engineer Brion Rhodes



Resurfacing of Spring Street in the City of Oxford, City of Oxford Paving Contractor: Barrett Paving Materials



As a part of the City of Oxford's 2015 Paving Program, Barrett Paving Materials provided milling, paving of 1½-inch Type 2 intermediate course and 1½- to 2-inch variable-depth Type 1 surface course of Spring Street from Elm to Main streets.

Barrett Paving Material's Darin Conley



Resurfacing of Hyatts Road in Delaware County, Delaware County Engineer's Office Paving Contractor: Shelly & Sands, Inc.



Shelly & Sands' resurfacing of Hyatts Road from South Section Line Road to Sawmill Parkway was noted for its excellent smoothness and ride quality. The project was part of the Delaware County Engineer's 2015 Countywide Pavement Resurfacing Program. The county's resurfacing program used more than 35,000 tons of asphalt in various thicknesses.

Shelly & Sands' Dan Montenegro



**Resurfacing of Madison Avenue in the City of Lakewood,
City of Lakewood
Paving Contractor: The Shelly Co.**

Full- and partial-base repairs to a busy corridor with little or no inconvenience to residents and retailers, that's the result of The Shelly Co.'s nearly three miles of 3-inch overlay of Madison Avenue from West 117th Street to Riverside Drive in the City of Lakewood. By modifying the originally designed four-phase project to three phases by reconfiguring the maintenance of traffic plan, The Shelly Co. accomplished the feat through partnering with the City of Lakewood and Cuyahoga County Public Works staffs. The project was recognized as a 2015 NAPA Quality in Construction Award for projects under 50,000 tons.



Shelly Co.'s Rob Myers and Scott A. Hardesty (right) and Cuyahoga County Area Engineer Darwin Merdes



**Resurfacing of the Lauby Road/Greensburg Road
Roundabout in the City of Green, City of Green
Paving Contractor: Northstar Asphalt, Inc.**

The multiphase, two-year project, which consisted of the widening and resurfacing of Lauby Road, resulted in the conversion of an existing signalized intersection at Greensburg Road to only the second roundabout to be constructed in the City of Green. Northstar Asphalt also provided additional work such as paved shoulders, the installation of new catch basins and upgraded lighting and guardrails. The company's work was noted for its quality of construction and overall smoothness.



Northstar Asphalt's Jeremy Neff and Andy Good



**Construction of roundabouts at Home Road & Section
Line Road and Home Road & S.R. 257 in Delaware County,
Delaware County Engineer's Office
Paving Contractor: Shelly & Sands, Inc.**

The construction of double roundabouts on Home Road's Section Line Road and S.R. 257 intersections earned Shelly & Sands praise for its ability to maintain traffic at these two high-volume locations. The new roundabouts are adjacent to one of Delaware County's primary bridge crossings. Following a 6-foot elevation change in the construction of the roundabouts, Shelly & Sands placed a 6-inch base and 6 1/4-inch intermediate and surface course. The project was also recognized as a NAPA 2015 Quality in Construction Award winner for projects under 50,000 tons.



Shelly & Sands' Dana Mills



Resurfacing of Marietta Road in the City of Lancaster, City of Lancaster Paving Contractor: The Shelly Co.

Part of the Lancaster Street Improvements project, which included pavement work on the City of Lancaster's Wheeling, Marietta and Sells roads, Rainbow Drive Northeast and Independence Boulevard, The Shelly Co. placed a 1½-inch overlay. However, some areas called for pavement reconstruction prior to placing the surface asphalt course. The end result was a greatly improved ride quality for motorists and a NAPA 2015 Quality in Construction Award for projects under 50,000 tons for The Shelly Co.



City of Lancaster's Mitch Noland and The Shelly Co.'s Joe Bice



Construction of the S.R. 161/Eiterman Road Roundabout in the City of Dublin, City of Dublin Paving Contractor: Kokosing Construction Co.

This roundabout's four-phase construction at the S.R. 161/Eiterman Road intersection is located near the U.S. 33 interchange in Dublin. Kokosing Construction built the roundabout with a 9-inch base placed in two lifts; a 1¾-inch 19-mm intermediate course; and a 1½-inch 12.5-mm surface course. For the surface course, Kokosing Construction used two pavers in live traffic so it could minimize cold joints.



Kokosing Construction's Jason Pike and City of Dublin's Dean Saunders



Resurfacing of C.R. 16 in Coshocton County, Coshocton County Engineer Paving Contractor: The Shelly Co.

The Shelly Co. milled nearly five miles of C.R. 16 and placed a 1¾-inch base course and 1¼-inch surface course from S.R. 93 in the Village of West Lafayette to the City of Coshocton's corporation limits. Work on the two-lane rural project was complicated because of truck lanes, heavy traffic volumes and curves and grade changes. The project was a NAPA 2015 Quality in Construction Award winner for projects under 50,000 tons.



The Shelly Co.'s Kenny Untied and Coshocton County Engineers' Andrew Jones and Fred Wachtel



Construction of the Fohl Street/Shepler Church Avenue Roundabout in Stark County, Stark County Engineer's Office Paving Contractor: Northstar Asphalt, Inc.

As a remedy to improve safety conditions and improve the flow of traffic, Northstar Asphalt converted the Fohl Street and Shepler Church Avenue intersection in Bethlehem Township into a single-lane traffic circle.



Northstar Asphalt's Walt Neff and Stark County Engineer's Patrick Marx



Resurfacing of East Liberty Street in the City of Wooster, City of Wooster Paving Contractor: Kokosing Construction Co.

Kokosing Construction provided pavement planing and repairs and a placement of a 3/4-inch intermediate course and a 1 1/4-inch Type 1 surface course in the paving of East Liberty Street and Pittsburg Avenue from North Beaver Street to the U.S. 30/S.R. 3 interchange in the City of Wooster.



City of Wooster's Roger Kobilarcsik and Kokosing Contruction's Ted Mohan



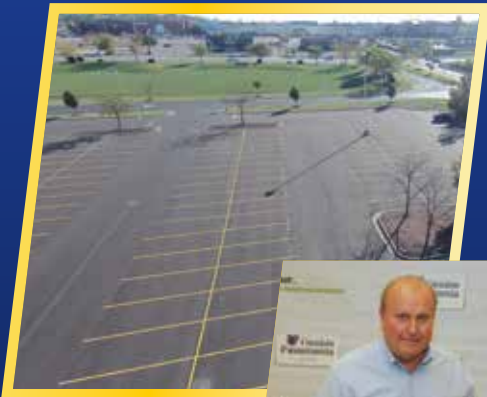
Resurfacing of West Market Street in the City of Warren, City of Warren Paving Contractor: Shelly & Sands, Inc.

Shelly & Sands' work was noted for its superior ride quality and excellent craftsmanship, as it provided Smoothseal on nearly 2 1/2 miles of West Market Street in the City of Warren from Lovers Lane to Maine Avenue. Shelly & Sands also replaced curb ramps, guardrail, signage and pavement markings along the route.



Shelly & Sands' Mark Mills

Commercial Parking Facilities



Resurfacing of Parking Lot at Meijer Store #159 in the City of Fairfield, Meijer, Inc.

Paving Contractor: John R. Jurgensen Co.



A tight work schedule was the major obstacle of this four-phase project that required milling, cement stabilization and intermediate and surface course paving. With each phase needing to be completed in less than five days - with no weather days allotted - JRJ milled 4½ inches and 3½ inches of asphalt in heavy-duty and light-duty sections of the parking lot, respectively; provided 12 inches of full-depth cement stabilization; and placed 5,590 tons of Type 2 intermediate course and 3,450 tons of Type 1 surface course. The project was noted for its excellent construction, joint alignment and uniform appearance.

John R. Jurgensen's Hutch Rogge

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Construction of Parking Lot at the Federal Express Ground Distribution Facility in the City of Twinsburg, Federal Express Paving Contractor: The Shelly Co.

In a partnering effort between The Shelly Company and Stateline Paving, the project called for an existing concrete foundation at the former General Motors Twinsburg Stamping Plant to be crushed and re-utilized as a base for a new parking facility at the FedEx Ground Distribution Facility. The Shelly Co. coordinated this complex project that featured construction of both heavy-duty truck and light-duty automobile parking areas within a tight paving schedule. In total, 32,500 tons of asphalt was placed in the Type 2 intermediate and Type 1 surface courses.



The Shelly Co.'s Alex Ploetz and Stateline Paving's Jarrod Satmare



Resurfacing of Parking Lot at the Franklin County Sheriff's Office Training Academy, Franklin County Engineer's Office Paving Contractor: Kokosing Construction Co.

Part of the Franklin County Engineer's Township Resurfacing Program, Kokosing Construction provided an improved parking facility for the Franklin County Sheriff's Office Training Academy. To remedy the area's high water table, Kokosing Construction placed underdrains and raised the parking area's pavement elevation two inches by using a 12-inch aggregate base, 2½-inch intermediate course and 1½-inch Type 2 surface course. During construction, Kokosing Construction maintained the needed access for law enforcement - which included a parking area for armored vehicles - by splitting the project into phases and providing a temporary drive that consisted of the site's reclaimed asphalt millings.



Kokosing Construction's Corey Brown and Franklin County Engineer's Dean Ringle



Construction of Parking Lot at the Federal Express Hub in the City of Toledo, Federal Express Paving Contractor: The Shelly Co.

The Shelly Co.'s close coordination with Federal Express and subcontractors made this multi-year, multi-phase project a NAPA 2015 Quality in Construction Award winner for projects under 50,000 tons. The project called for multiple new parking lots of differing heavy-duty and light-duty designs and use. The heavy-duty pavement was paved through multiple lifts totaling 10½ inches in total thickness. The light-duty pavement featured a 7-inch base course and 3-inch asphalt surface course.



The Shelly Co.'s Jamie Bates



Resurfacing of Parking Lot at the American Electric Power Cardinal Plant, American Electric Power Paving Contractor: Shelly & Sands, Inc.

The Unit Number 3 parking facility at AEP's Cardinal Plant in Jefferson County received a 2-inch milling, re-profiling for improved drainage and placement of a 2-inch asphalt surface by Shelly & Sands Co. The project owner noted its satisfaction of the resurfaced parking facility's overall completeness.



Shelly & Sands' Rick Smith



Buckeye Agricultural Complex at the Ohio Expo Center, Ohio Expositions Commission and Ruscilli Construction Co. Paving Contractor: The Shelly Co.

The Shelly Co. provided both indoor and outdoor paving of the Buckeye Agricultural Complex, which ranged from the pavilion's 1,000 horse stalls and repairs to the parking area. The project earned a NAPA 2015 Quality in Construction Award for under 50,000 tons.



The Shelly Co.'s Kenny Untied and Adam Prince



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Paving of Running Track at Edison H.S., Edison H.S. Paving Contractor: Erie Blacktop, Inc.

To meet the strict Ohio High School Athletic Association smoothness standard for running tracks, Erie Blacktop provided the Village of Milan's Edison High School track with a 1½-inch pavement planing, with cross-scope correction, and a 1½-inch resurfacing.



Erie Blacktop's Tyler Wasserman



Construction of the IOS 10844 Test Pad at the Transportation Research Center in East Liberty, Transportation Research Center Paving Contractor: The Shelly Co.

In accordance to the International Organization for Standardization's (IOS) specifications, The Shelly Co. constructed a test pad for Honda of America. The test pad, which will allow the automobile manufacturer to perform noise testing on new vehicles being shipped internationally, was constructed using special IOS mix designs with a 5½-inch total pavement thickness. The project received NAPA's 2015 Quality in Construction Award for projects under 50,000 tons.



Transportation Research Center's Todd Lowery and The Shelly Co.'s Lyle Dible



Construction of the Miamisburg Multi-Use Connect Trail in Montgomery County, Montgomery County Transportation Improvement District Paving Contractor: Barrett Paving Materials

Barrett Paving Materials was acknowledged for the overall completeness and aesthetic character in its construction of the multi-use trail from Byers Road to Miamisburg Springboro Pike in Montgomery County. For the project's construction, Barrett Paving Materials used a 2-inch Type 2 intermediate course and 1¼-inch Type 1 surface course.



Barrett Paving Materials' Paul Jordan



Construction of the Side Cut Bike Path in the City of Maumee, City of Maumee Paving Contractor: The Shelly Co.

City of Maumee-area cyclists and other outdoor enthusiasts are appreciating a new scenic, heavily wooded, multi-use trail from Jerome Road and Fort Street. The Shelly Co. constructed the Side Cut Bike Path using a 3-inch base, 2¼-inch Type 2 intermediate course and 2-inch Type 1 surface course.



City of Maumee's Matthew Miles and The Shelly Co.'s Byron Clymer

Airport Pavements



Resurfacing of Runway & Taxiway at the Portage County Regional Airport, Portage County Regional Airport Paving Contractor: Chagrin Valley Paving, Inc.

Utilizing two pavers in echelon, Chagrin Valley Paving was able to place the surface course of Portage County Regional Airport's Runway 9/27 in a single day. The surface course was just the final touch of the airport runway and taxiway, as Chagrin Valley Paving also milled existing pavement and placed a 1½-inch P-403 intermediate course and 2-inch P-403 surface course.



Chagrin Valley Paving's Anthony Grande and Paul Phillips



Gallia-Meigs Regional Airport Runway Rehabilitation Project, Gallia County Commissioner's Office Paving Contractor: The Shelly Co.

Upon providing the milling on this runway rehabilitation project, The Shelly Co. discovered unexpected cracks in the subgrade. It corrected the cracks with a non-shrink grout and completed the project with a 2-inch asphalt surface layer. The Shelly Co.'s rehabilitation remedy and paving earned the project a NAPA 2015 Quality in Construction Award for airport pavements.



The Shelly Co.'s Jeff Barnes



Resurfacing of Runway 18-36 at the Erie-Ottawa International Airport, Erie-Ottawa International Airport Paving Contractor: Erie Blacktop, Inc.

The project's scope was the reconstruction of the airport's main runway, Runway 18-36, and Taxiway E. Erie Blacktop successfully provided pavement removal and a two-course overlay on the 4,000-linear-foot runway. It also successfully handled the project's complexity in maintaining air traffic during construction and achieving superior smoothness and excellent joint construction.



Erie Blacktop's Tyler Wasserman



Resurfacing of Runway at Pike County Airport, Pike County Commissioners Paving Contractor: Shelly & Sands, Inc.

Shelly & Sands' rehabilitation and resurfacing work of Runway 07/25 at the Pike County Airport in the Village of Waverly earned it praise for providing mat uniformity, excellent joint construction and pavement smoothness. Shelly & Sands' work included full-depth base stabilization and paving of a 2½-inch P-401 intermediate course and a 1½-inch P-401 surface course.



Shelly & Sands' Marty Spring



Rehabilitation of Taxiway B, Phase 1 at the Toledo Express Airport, Lucas County Port Authority Paving Contractor: The Shelly Co.

The initial phase of the three-phase rehabilitation of Taxiway B at the Toledo Express Airport in Lucas County required The Shelly Co. to mill existing pavement, widen and overlay the taxiway. Along with providing a quality result, The Shelly Co. successfully provided the required close coordination with project subcontractors and port authority personnel on this NAPA 2015 Quality in Construction Award-winning project for airport pavements.



The Shelly Co.'s Dan Cassel and RS&H's Aaron Aljets and Jared Pose



Rehabilitation of Runway 6L-24R-Phase 2 at the Dayton International Airport, Dayton International Airport Paving Contractor: Barrett Paving Materials, Inc.

This project was made more difficult by the required grade changes. Barrett Paving Materials provided variable-depth milling and made grade changes that raised Runway 6L-24R as much as 12 inches in some areas. Barrett Paving Materials also provided new lighting and striping on the project, which earned a NAPA 2015 Quality in Construction Award for airport pavements.

Barrett Paving's Scott Barnes



Rehabilitation of Taxiway B, Phase 2 at the Toledo Express Airport, Lucas County Port Authority Paving Contractor: Gerken Paving, Inc.

On this second phase of rehabilitation for Taxiway B, Gerken Paving provided multiple-lift milling and three-stage paving. Paving included a variable-depth leveling course and 1 1/2-inch P-401 surface course, which

Gerken Paving performed by using two pavers with screeds set at 18 feet to provide 36-foot-wide echelon paving.

RS&H's Jared Pose and Aaron Aljets (right) and Gerken Paving's Andrew Hill



Rehabilitation of Runway 5-23 at the Mansfield-Lahn Regional Airport, City of Mansfield Paving Contractor: Shelly & Sands Inc.

A 2015 NAPA Quality in Construction Award winner for airport pavements, the scope of the project included rehabilitation of Runway 5-23, Taxiway D and five other taxiways. Shelly & Sands successfully milled existing pavement, made full-depth pavement repairs and placed two, 2-inch lifts of P-401 asphalt.

Shelly & Sands' Jason Chrastina and City of Mansfield's Bob Bianchi



INDIVIDUAL AWARDS

Presented during the Ohio Asphalt Expo's Prayer Breakfast, the 2016 individual awards were announced by FPO President/Executive Director Cliff Ursich. The FPO leader since 2007 introduced and awarded both the Industry Service and William W. "Bill" Baker awards.



INDUSTRY SERVICE AWARD

For a man known for his smile, Robert "Bob" Toney would have been grinning from ear to ear for being honored at the Flexible Pavements of Ohio's Asphalt Expo as recipient of the Industry Service Award.

Toney, who passed away in May 2015, was a 30-year veteran of the heavy-equipment machinery industry. Having also worked with The McLean Company and Holt Company of Ohio, Toney most recently was a paving products specialist for Ohio CAT, where he worked for 17 years. "Being an equipment salesman, you can understand Bob's enthusiasm for the Flexible Pavements of Ohio's Annual Meeting and its associated equipment expo. To have the opportunity to exhibit asphalt paving equipment and explain how it helps the contractor pave a better quality project was important to him," said Ursich, who remembered Toney being a staple of the Ohio Asphalt Expo's outdoor equipment events, whether it was held in rain, snow, sleet or sunshine.

Toney was a long-time member of FPO's Ohio Asphalt Expo Committee, which Ursich said the honoree will be remembered for being "always prepared with ideas to make the Expo better the next year. He knew what worked and what was needed to grow the event's success."

However, Ursich said the Industry Service Award is about more than Toney's committee work. "It's about his commitment to the industry; the quality of the product. It's about his character ... Bob was a great friend, an asset to the Flexible Pavements of Ohio community. And for this, we honor him today with the Industry Service Award."

The Industry Service Award for 2016 was given posthumously to Bob Toney and accepted by his children, Allana and Andrew, and brother, Kevin. Speaking on behalf of the family, Allana, upon finding out her father was the award's recipient, said, "I was overcome with joy, knowing the pride that would swell within my father."

She said the first memory of her father to his last breath was he talking about asphalt. "He loved his company; he loved his work," Allana added. "My father was an incredible man who when he walked into a room and smiled, he just brought complete happiness to everyone around him." She closed by saying that if there was one thing to learn from her father's passing it would be: "You are incredibly loved by co-workers, by a family, by friends, and by the God of this universe. And the world is a better place with you in it."



WILLIAM W. "BILL" BAKER AWARD

What a way to end a career. On the official day of his retirement from Shelly & Sands Inc., Nick Little was honored with FPO's most-esteemed award in front of his company associates, peers and industry leaders.

Little, who on this March 31st was ending a nearly 40-year career in the asphalt and materials industry – all with Shelly & Sands – received the William W. "Bill" Baker Award, which honors the late-FPO executive director and his effectiveness, innovativeness, commitment to quality and broad impact. In presenting the award, Ursich said the qualities that FPO's leader from 1976-1991 had are the qualities sought – and were found – in this year's William Baker Award recipient.

Little, who retired as Shelly & Sands' company president after serving in the leadership role since 2003, began working at the Zanesville-based organization prior to earning a degree in business administration from the University of Cincinnati. With degree in hand, he officially began a career in the asphalt business in April 1977.

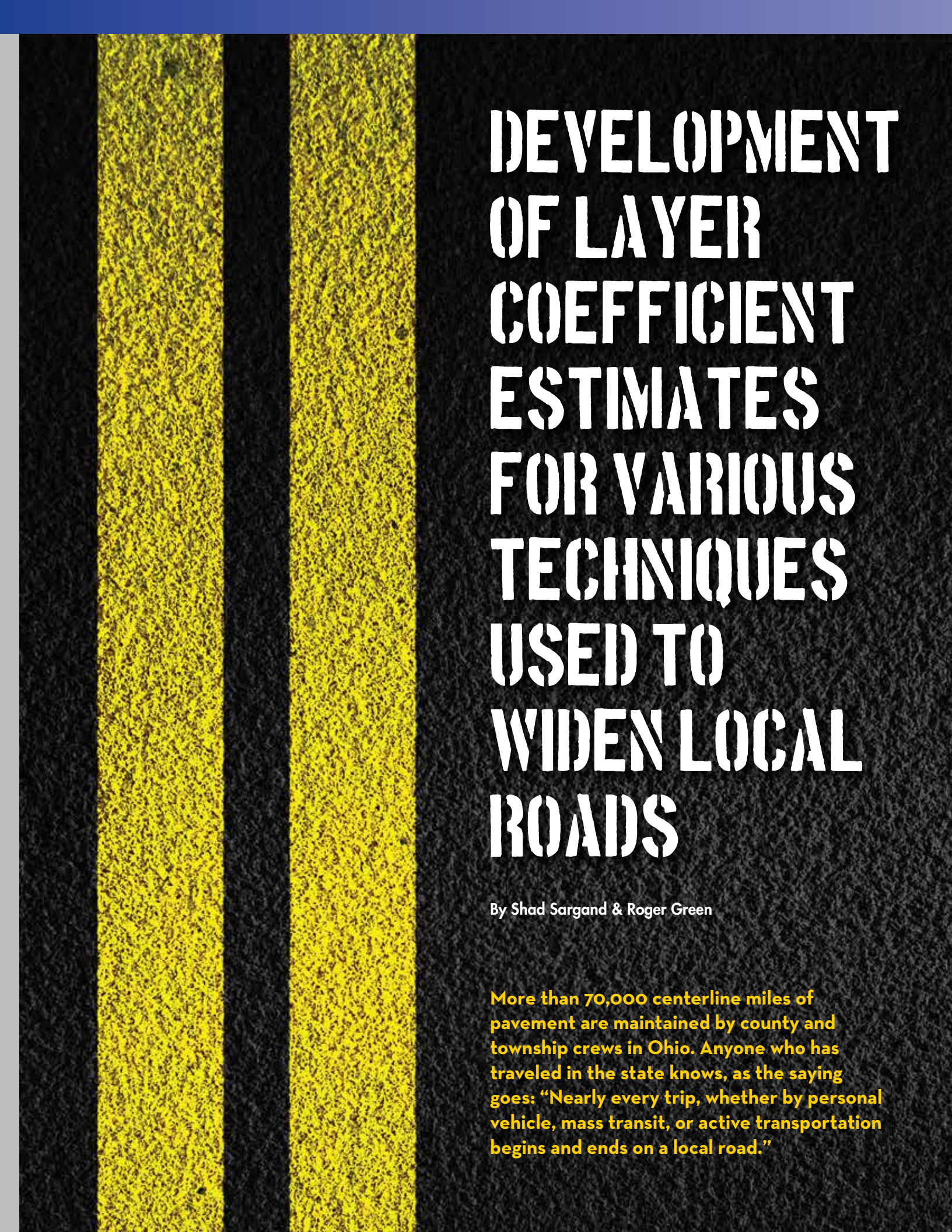
Remembering the opportunities given as a college student and in his early years at Shelly & Sands, Little has provided the same. "The memory of his summertime employment really stuck with Nick," Ursich said. "He's a believer in providing opportunity for those that want to work." To this day, college students on break can be seen doing beautification and other work around the Zanesville plant.

"That same attitude is manifested to this day by Shelly & Sands' participation in the FPO Scholarship Program ... He has ensured that Shelly & Sands has stepped up to the plate to make opportunities for students who want to work; in this case, work hard for good grades and for an education in asphalt," Ursich added.

In 2003, the same year he took over the company's daily operations, Little was elected to the FPO Board of Directors. That service has continued over the next 13 years, as Little was the 2005 FPO chairman and has served on the association's Legislative, Membership and Finance committees since 2004. Most recently, along with his work with the other groups, Little has chaired the Environmental Committee since 2011.

"We have a lot of good people at Shelly and Sands," said Little in his remarks following his accepting the William Baker Award. "That's probably the reason why I'm up here; I'm just the figure head of the group. Quality is an important part and we have done a nice job I think ..."

Of FPO, Little said everyone should feel proud of being a part of the association. "It's a good organization; it's a great organization. I've met a lot of smart, interesting people by being involved in Flexible Pavements." It's also something he wants to remain a part of even in retirement, saying, "... I'll be around if anybody needs some help."



DEVELOPMENT OF LAYER COEFFICIENT ESTIMATES FOR VARIOUS TECHNIQUES USED TO WIDEN LOCAL ROADS

By Shad Sargand & Roger Green

More than 70,000 centerline miles of pavement are maintained by county and township crews in Ohio. Anyone who has traveled in the state knows, as the saying goes: “Nearly every trip, whether by personal vehicle, mass transit, or active transportation begins and ends on a local road.”

Many of these local roads are experiencing an increase in traffic due to increasing residential and commercial development. To accommodate the traffic increases, pavements are overlaid, widened and/or reconstructed in an effort to increase load-carrying capacity and/or maintain the geometrics of the roadway. For reasons of economy, availability and sustainability, many local engineers reuse available material such as recycled asphalt, recycled concrete, fly ash, etc., and employ construction methods such as full-depth reclamation, whitetopping, geotextile reinforcement, roller-compacted concrete, etc. to widen pavement. While it is easy for local transportation officials to compare these methods based on costs, the load-carrying capacity of these materials and techniques are unknown in Ohio. Due to the lack of layer coefficients for these materials, accurate thickness design of overlay, widening, or reconstruction is not possible, resulting in premature failure when the thickness design is too thin, or an overly conservative design when the thickness design is too thick.

The local engineers utilized the Ohio Department of Transportation's Ohio's Research Initiative for Locals (ORIL) program to address this lack of information. The newly formed ORIL program was established in the ODOT Office of Research to provide "... support to local agencies to address problems specific to the local roadway system." A project was initiated under the ORIL program with Ohio University (OHIO) to establish a range of layer coefficients (or moduli) for the various materials utilized to widen/construct roads on Ohio's local system. The results of this project provides local agencies with a repeatable, non-destructive methodology to characterize the stiffness and load capacity of materials used in road widening and construction when established values are unavailable.

The OHIO research team identified four pieces of equipment suitable for field evaluation: the dynamic cone penetrometer (DCP) [figure 1], the portable seismic pavement analyzer (PSPA) [figure 2], the lightweight deflectometer (LWD) [figure 3], and the falling weight deflectometer (FWD) [figure 4].



FIGURE 1.
Dynamic Cone



FIGURE 2.
Portable
Seismic
Properties
Analyzer
(PSPA) in
use.



FIGURE 3.
Lightweight
Deflectometer (LWD).



FIGURE 4.
Falling Weight
Deflectometer (FWD).

Ninety-nine test sites were selected from seven participating counties: Defiance, Mercer, Auglaize, Muskingum, Madison, Champaign and Harrison. The 99 test sites from 68 projects were selected to include a variety of treatments, including: aggregate overlay; excavation and backfill with crushed reinforced concrete; excavation and backfill with brick and 411 aggregate; excavation and backfill with surge and 411 aggregate; cement-treated, full-depth reclamation; mechanical full-depth reclamation; lime-treated, full-depth reclamation; asphalt-treated, full-depth reclamation; fly ash-treated, full-depth reclamation; full-depth reclamation with asphalt grindings; permazine full-depth reclamation; fiber cement; fabric-reinforced

stone; Geogrid-reinforced stone; Motorpave; recycled asphalt grindings; 70-percent asphalt/30-percent concrete-recycled material; concrete overlay; and fiber-concrete overlay. The layer coefficients for asphalt surface and intermediate layers, 0.43, and asphalt base, 0.36, currently used by ODOT, were determined by an ODOT-sponsored research project [Chou et. al., 1999] in 1999. These values were used in the analysis of the structural number of pavements containing asphalt on this project.

The research team visited each of the selected sites to collect data from at least three locations on each site using the falling weight deflectometer (FWD), the lightweight deflectometer (LWD), the portable seismic property analyzer (PSPA) and dynamic cone penetrometer (DCP). Material specimens were cored from the pavement for analysis in the laboratory. The data and cores were used to determine layer thicknesses, moduli, effective structural numbers and layer coefficients applicable to each treatment. Several approaches were used to obtain these numbers from the data collected, including: Back calculation from FWD data using MODULUS 6.0 software; back calculation from LWD data using EVERCALC; estimation of layer coefficients following the method in Section 2.3.5 of the AASHTO *Guide for the Design of Pavement Structures* [AASHTO, 1993]; computation of effective structural numbers from FWD results using Section 5.4.5 of the AASHTO *Guide for the Design of Pavement Structures* [AASHTO, 1993]; the solution of simultaneous equations using the AASHTO structure number equation's, and the method presented by Rohde [1994] based on the TRRL procedure from the United Kingdom.

For each material, there was wide variability of values both within a section and between different sections. There are many sources for this variability, including:

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construction, material source, age, subgrade soil stiffness and moisture, axle loads, climate, mix design, etc. Even so, a range of numbers for moduli and layer coefficients can be identified for most treatments and subgrades, which can be employed by local engineering personnel to design future projects

Analyzing FWD data using the procedure based on the Section 2.3.5 of the AASHTO *Guide for the Design of Pavement Structures* [AASHTO, 1993] provided the best estimate when compared with published layer coefficients for some of the materials. Presented in Table 1 are the layer coefficients obtained in this study at 85 percent reliability and 50 percent reliability for each widening technique via the AASHTO Section 2.3.5 method with FWD data. The level of reliability is a function of the risk a local agency is willing to accept. For high-traffic-volume routes where premature failure will result in high cost (i.e. long detours, loss to commercial business, etc.), a high level of reliability, 85 percent, is recommended. For low-volume routes in rural areas where a premature failure will result in little cost (i.e. alternative routes provide little loss in travel distance or time and there is little or no impact to commercial business), the lower reliability level could be used to reduce cost of construction.

Table 1. Layer coefficients for each widening technique computed from FWD via the AASHTO Section 2.3.5 method at 85% and 50% reliability.

Material/Technique	85% Reliability	50% Reliability
Fiber cement	0.03	0.15
FDR mechanical	0.05	0.13
FDR Permazine	0.07	0.10
FDR fly ash	0.07	0.18
Brick & 411	0.08	0.21
Aggregate overlay	0.09	0.13
Geogrid reinforced stone	0.10	0.15
Surge & 411	0.11	0.14
Full-depth asphalt grindings	0.11	0.18
FDR asphalt treated	0.11	0.17
Whitetopping	0.11	0.35
Motorpave	0.12	0.28
FDR asphalt grindings	0.14	0.14
Fabric-reinforced stone	0.15	0.22
Partial-depth grindings	0.16	0.22
FDR lime	0.17	0.22
FDR cement treated	0.19	0.34
70% asphalt, 30% concrete	0.20	0.26
Concrete & steel	0.24	0.29
Portland cement concrete	0.52	0.65

These layer coefficients were developed for the material and construction specification, construction procedures, source of material, subgrade stiffness and other factors unique to the counties in which the test sections were constructed. The research team cautions against the use of the coefficients for materials constructed using different materials, specifications, etc., without validation.

The full report can be found on the ORIL website: <http://www.dot.state.oh.us/groups/oril/Pages/Projects.aspx>.

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Dr. Shad Sargand, Ph.D., is a Russ Professor and associate director of Civil Engineering and the Ohio Research Institute for Transportation and the Environment at Ohio University. Roger Green, P.E. is a research engineer at Ohio University.

GLOSSARY OF RECLAMATION TERMS

Here is a list of the terms used in the ORIL program report to refer to the different methods and materials used to widen rural roads. They have been collected for the convenience of the reader.

411 – Also referred to as “Stabilized Crushed Aggregate” (ODOT Construction and Material Specifications Item 411), this aggregate blend consists of coarse aggregate with a large amount of limestone fines. When water is added and the material compacted, the mix will harden due to the chemical cementation of the large stone with the lime fines. This blend is used as an aggregate base.

Aggregate Overlay – The use of stone as the surface layer of a pavement structure.

Asphalt Grindings FDR – Full-depth reclamation with the addition of recycled asphalt grindings to the asphalt-subgrade blend.

Asphalt FDR – Full-depth reclamation with the addition of an asphalt binder to stabilize the pulverized asphalt-subgrade blend.

Brick/411 – This mixture uses recycled brick from any available source (e.g. buildings that have been demolished). The brick is placed on top of the soil and is mixed in with a 411 blend then wetted and compacted to bind all the materials together. This is used as an aggregate base.

Cement FDR – Full-depth reclamation with the addition of cement and water to stabilize the asphalt-subgrade blend.

Concrete/Steel – Recycled concrete and rebar from any source (e.g. reinforced concrete from old buildings, bridges and pavement structures) that is placed on top of the subgrade and used as an aggregate base.

Fabric Reinforced Stone – The use of fabric on top of the natural subgrade with an aggregate base compacted on top of the fabric. This technique is used to increase the tensile strength of the aggregate-base material and to protect the subgrade.

Fiber Cement – A concrete pavement which has been reinforced with small fibers. The type of fibers found in this project were from woven fabrics that were mixed in with the concrete pavement.

Fly Ash FDR – Full-depth reclamation with the addition of fly ash and water to stabilize the asphalt-subgrade blend.

Full-Depth Reclamation (FDR) – A rehabilitation technique that involves pulverizing an existing flexible pavement with the underlying materials to a predetermined depth. The pulverized pavement is blended and compacted with the underlying materials creating a homogeneous layer as a base for a new pavement structure. Stabilizing agents such as cement, lime, fly ash, asphalt binder, or permazine may be added.

Full/Partial Depth Grindings – The use of asphalt products that have been milled from other bituminous surfaced projects and recycled for use as a surface layer or an aggregate base.

Geogrid or geotextile – A geosynthetic material used in stabilizing soil. The Geogrid is used to maintain structural integrity in a soil structure that might otherwise fail under tensile stress.

Lime FDR – Full-depth reclamation with the addition of lime and water to stabilize the asphalt-subgrade blend.

Mechanical FDR – Full-depth reclamation compacted without the use of a stabilizing agent.

Motorpave – Often referred to as “Item 405 Bituminous Cold Mix Pavement” by county engineers. Cold mix asphalt is less stiff than typical hot mix asphalt (HMA). Motorpave is typically placed in 2-inch (5 cm) lifts and covered with chip seal.

Partial Depth Grindings - see "Full/Partial Depth Grindings."

Permazine - Permazine is an enzyme-rich material created by a natural fermentation process used for soil stabilization. The fermentation process involves materials that are natural and organic and typically involves sugars. Permazine is mixed with soil and water to produce a cementitious effect that creates a stiff base structure suitable for pavement.

Permazine FDR - Full-depth reclamation with the addition of permazine to stabilize the asphalt-subgrade blend.

Recycled Material (70/30 asphalt/cement) - The use of recycled asphalt grindings from milling projects (70%)

mixed with cement (30%) and water. This blend is used as a base material for a pavement structure.

Surge - Refers to the stone that is the product of the primary crushing run. This stone is often large (sometimes up to 8 inches (20 cm) and is often used as base material for haul roads to protect very soft, wet soils.

Surge/411 - Mixture of surge stone with 411 ("Stabilized Crushed Aggregate") that is wetted and compacted.

Whitetopping - A reclamation technique where an existing asphalt pavement is overlaid with Portland Cement Concrete (PCC).

O A



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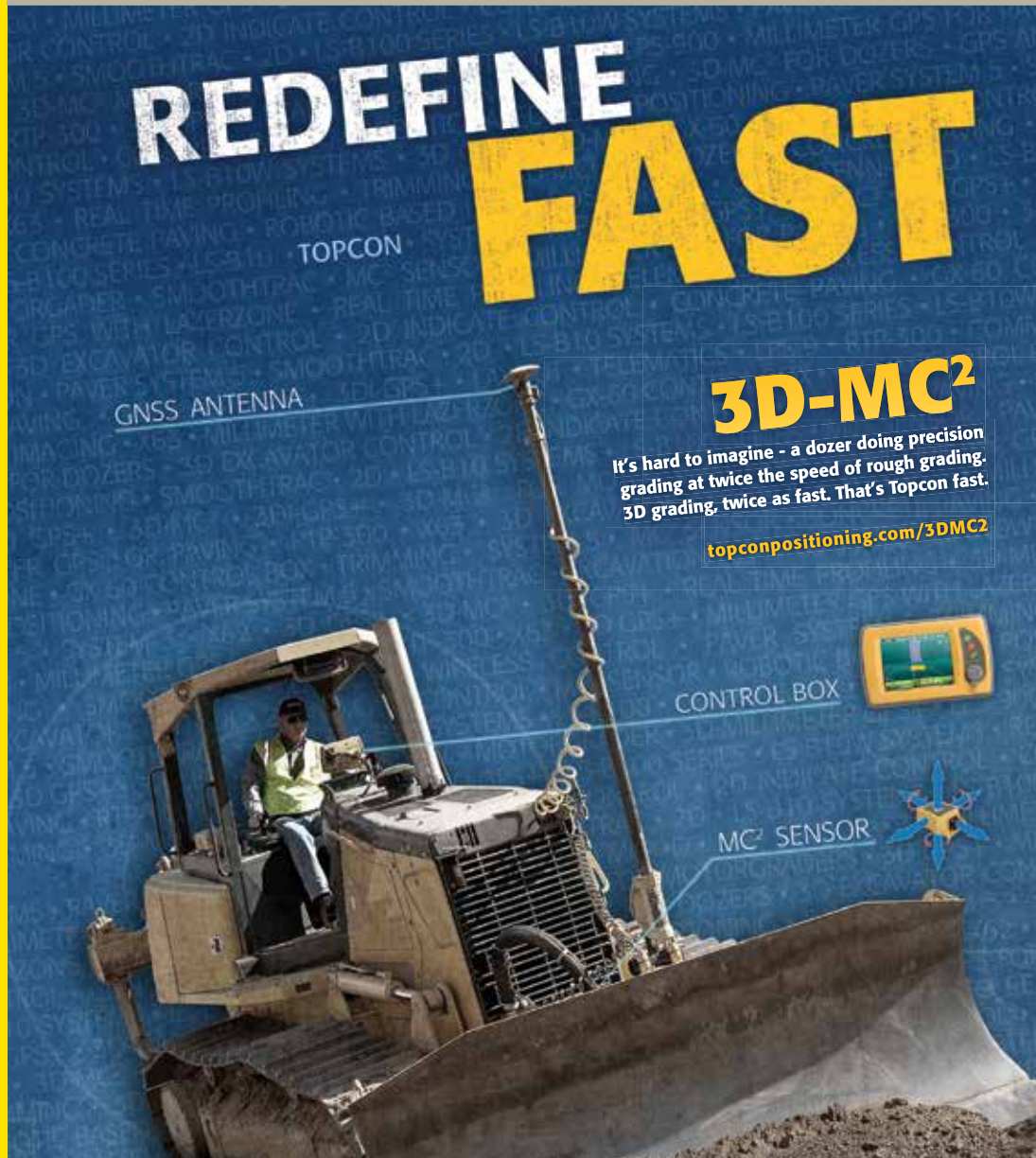
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