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ON THE COVER: From state routes, to city roundabouts, to local roads or streets and more, Flexible Pavement of Ohio members made for smoother rides throughout the state in 2020. See the 65 winning projects and facilities celebrated in the annual Quality Paving Awards Program. Beginning on Page 10.

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

This year the subject of investing in our transportation infrastructure has been in the forefront of conversation in Ohio’s legislature and the halls of Congress. State and federal gas tax revenue accounts for 98% of the Ohio Department of Transportation’s (ODOT) budget, and these issues are critically important to our industry and the condition of our roadways. The year started with the state’s transportation budget in the Ohio Legislature, and now the national debate on infrastructure funding has begun in Washington. It is important our industry helps frame this discussion and remind our legislators of the importance of a well-funded transportation infrastructure program.

Ohio’s two-year, $8.3 billion transportation budget bill was signed by Governor Mike DeWine in March to provide needed funding for our state’s roads and bridges. This bill passed the legislature with strong bipartisan support in both the Ohio House of Representatives and Senate. Currently, ODOT is preparing for another busy construction season with a $1.92 billion construction program, including 4,596 miles of pavement. This needed investment will go a long way in maintaining Ohio’s roadways. I would like to thank our members for their outreach efforts in contacting legislators to discuss the need for this investment.

The passage of ODOT’s budget is certainly good news for Ohio’s asphalt industry. However, reduced traffic due to closures related to COVID-19 has resulted in a decline in fuel consumption. This decline eroded much of the benefit from the 2019 increase in the state motor fuel tax. ODOT recorded a 15.5% drop in traffic volumes resulting in a nearly $200 million loss in projected revenue last year. During the next biennium, ODOT is anticipating a revenue reduction of 9% ($174 million) for Fiscal Year 2022 and a reduction of 8% ($159 million) for FY 2023. This reduction in state revenue makes the debate in Washington even more vital to address the needs of Ohio’s transportation system.

Unfortunately, the bipartisan support for transportation enjoyed at the Ohio Statehouse does not exist in a sharply divided U.S. Congress. In fact, the conversation has been expanded to a fundamental disagreement over the very definition of infrastructure. It is now more important than ever for us to clearly define the needs of our transportation system and the benefit of investing in our economy. Transportation funding is needed across the nation, including here in Ohio, if we are to adequately maintain and modernize our transportation infrastructure. The decline in state revenue makes the federal discussion more urgent and consequential to Ohio and our industry. The current Fixing America’s Surface Transportation Act (FAST Act), which provides federal funding for American’s transportation infrastructure, expires on September 30 of this year. Congress needs to...
take action now to enact a well-funded, multi-year transportation infrastructure bill this summer.

The passage of a long-term surface transportation bill with funding based on a dedicated revenue stream for the Highway Trust Fund is needed. The risk of inaction will result in uncertainty for our industry and sacrifice the condition of our transportation system. Investment in our nation’s transportation infrastructure should remain a bipartisan issue and a national priority.

A national coalition organized by the U.S. Chamber of Commerce has been recently formed representing more than 300 business, policy and labor organizations, including the National Asphalt Pavement Association. This coalition is leading the campaign, “Build by the Fourth of July,” with the goal of urging members of Congress to pass infrastructure legislation this summer. Please go to https://www.uschamber.com/lets-rebuild-america for additional information and to make your voice heard.
Ah, spring has sprung and so have the potholes. With the spring thaw the potholes appear like dandelions. So, too, are the media reports on the problem. Drivers suffer blown tires, bent rims and suspension damage driving over the damaged pavement while road authorities scramble to repair the potholes in inclement weather.

Is this the inevitable result of our climate or is there a path available that minimizes the pothole phenomenon? The answer is “yes,” and the good news is that in the long run it is likely more economical than our present path of finding, fixing the potholes and repeating.

Of course, we know potholes are directly caused by the combined effects of water, freeze and thaw and traffic loading. But, the underlying cause is neglect. If pavements are allowed to deteriorate into a weakened state, they become susceptible to damage from the effects of climate and traffic. In the old days we euphemistically called this situation “deferred maintenance,” and the result was the “spring breakup.” Years ago this effect was so severe that maintenance crews couldn’t keep up with the patching. It took until summer to restore safe travel.

The issue of repairing potholes has been well researched over the years. The Federal Highway Administration (FHWA), the Ohio Department of Transportation (ODOT) and the City of Cincinnati — and we expect many others — have sponsored research into the most-efficient means of repairing potholes. As a result, many agencies now employ better equipment, methods and materials to make longer-lasting repairs to potholes. Fixing potholes is a necessary activity for reasons of safety and liability. But, is this the best we can do for the public?

It is now widely believed that maintaining pavements in good condition can be more economical in the long term than allowing them to fall into a state of disrepair where they need frequent pothole repair, and, ultimately, expensive rehabilitation, reconstruction or replacement. It seems as if an ounce of prevention is worth a pound of cure.
So, why do we do it this way? Adequate funding is an issue. Certainly, in the short term, sufficient funding would have to be made available to not only deal with the current conditions but to begin rehabilitating or reconstructing pavements, so that they can be economically maintained in good condition into the future.

Beginning in the early 2000s, the FHWA began promoting the concept of preventive maintenance (now called pavement preservation). The basis for this was the realization that not only keeping good pavements in good condition saved or deferred expensive rehabilitation in the long term, it also greatly reduced maintenance costs repairing potholes as well as user costs associated with traveling on poor roads and enduring lengthy construction delays when roads must be reconstructed.

ODOT has embraced pavement preservation in a big way, as it dedicates funding for pavement preservation and uses condition data to identify good candidate pavements for pavement preservation treatments. ODOT is also systematically replacing severely deteriorated pavements, mostly composite, concrete-base pavements, which cannot be economically maintained through pavement preservation techniques.

Asphalt pavements facilitate the pavement preservation approach. Asphalt pavements can be designed and built to have very long-lasting structural life (the perpetual pavement concept) that can then be maintained in good condition, indefinitely, with pavement preservation treatments to the surface.

If you are interested in these ideas, or consider yourself a pavement professional, there are several references with which you should be familiar:

- The American Public Works Association’s (APWA) publication, “The Hole Story, Facts and Fallacies of Potholes” is the most-concise treatise on the subject. Start there. It can be purchased from the APWA store at APWA.net.

- Flexible Pavements of Ohio (FPO) published a report in 2002, “Asphalt Revolution, the History of Hot Mix Asphalt in Ohio,” to commemorate the 40th anniversary of the association, which covered the history of roadbuilding and pavement developments in Ohio. The report can be found on the FPO website at https://www.flexiblepavements.org/history-of-flexible-pavements-of-ohio (See also the list of selected readings in the report).

- “Paving our Ways, A History of the World’s Roads and Pavements,” by Lay, Metcalf and Sharp, published in 2021 by the CRC Press, covers the history of roadbuilding and pavement engineering from ancient times to the present, and contains many fundamental truths of pavement engineering and construction. It is available from Amazon.
When the times get tough — as they did in 2020 with the COVID-19 pandemic, which impacted many things in the flexible pavements industry and everyone’s everyday lives — the tough get going, as proven by Ohio’s asphalt construction companies, personnel and the Flexible Pavements of Ohio’s Quality Asphalt Pavement Awards.

Annually, FPO recognizes companies demonstrating exceptional asphalt construction, production and craftsmanship, and 2021 is no different. For the 18th year, the FPO Quality Awards Program is recognizing the top flexible pavement projects in the state. This year’s winning projects from the 2020 construction season were assessed on quality-control test data for each mix used on the project, pavement smoothness, texture of the surface and density — and most importantly the quiet ride resulting from the project.

Top asphalt pavement paving projects are recognized in several Quality Award categories: Ohio Department of Transportation (ODOT) and Ohio Turnpike & Infrastructure Commission Projects; Local Roads or Streets; Commercial Parking Facilities; Special-Use Pavements; Airport Pavements; and the Ecological Award. In all, 65 projects, facilities and the work of 13 companies are being showcased. While the celebration this year may have changed, the level of craftsmanship in providing the best quality in materials, workmanship and smoothness of ride remains shining brightly.

FPO is pleased to honor these companies, which through their providing quality paving promotes the continued use of asphalt. Here is a look at the state’s 2020 top asphalt pavement paving projects and facilities:
ODOT & OHIO TURNPIKE PAVEMENTS

Resurfacing of State Route 51 from S.R. 105 to S.R. 163 in Ottawa County
ODOT District 2
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: Terry Taylor
Paving Foreman: RJ Boulton III
Paver Operator: Robert Heberling
Other Laydown Personnel: John Gardner, Pancho Cortez Jr., Claudia Thompson, Scott Burke, Bill Stratton & Derrick Jaegle
Quality Control Technicians: Bonnie Sears & Scott Gambrell

Resurfacing of S.R. 3 from Knox County to the Village of Loudonville in Ashland County
ODOT District 3
Paving Contractor: Shelly & Sands Inc.

Project Personnel
Paving Superintendent: Jake Chrastina
Paving Foreman: Jason Johnson
Quality Control Technician: Anthony Wood

Resurfacing of Interstate 71 from Morrow County to S.R. 13 in Richland County
ODOT District 3
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: Todd Ingram
Paving Foreman: Jake Willbond
Paver Operator: John Gorley
Other Laydown Personnel: Randy Sauder, Deryk Sammet, Kyle Carpenter, Bill Ridenour, Anne Davis & Wes Rhees
Resurfacing of S.R. 45 from Mahoning Avenue to Columbiana County in Mahoning County
ODOT District 4
Paving Contractor: The Shelly Company

Project Personnel
Paving Superintendent: Bill Purk
Paving Foreman: Tom Smith
Paver Operator: Dale Flynn
Other Laydown Personnel: Kelly Fraze & Todd Steiner
Quality Control Technician: Matt Stuller

Resurfacing of S.R. 18 & S.R. 241 in Summit County
ODOT District 4
Paving Contractor: Shelly & Sands Inc.

Project Personnel
Paving Superintendent: Jim Bronstrup
Paving Foreman: Jeff Kester
Paver Operator: Burton Gregory
Plant Foreman: Jonas Stutzman
Quality Control Technician: Mike Minger

Resurfacing of U.S. Route 22 in Muskingum & Guernsey counties
ODOT District 5
Paving Contractor: Shelly & Sands Inc.

Project Personnel
Paving Superintendent: Shane Novaria
Paving Foreman: Derrick Treadway
Paver Operator: Joe Combs
Other Laydown Personnel: Jody Baker, Charles Greer, Joey Gill, Anson Reynolds & Adam Prouty
Plant Foreman: Jim Campbell
Quality Control Personnel: Josh Samples

Resurfacing of I-70 in Licking County
ODOT District 5
Paving Contractor: The Shelly Company

Project Personnel
Paving Superintendent: Kevin West
Paving Foreman: Joe Bice
Paver Operator: John Rector
Other Laydown Personnel: Bret Gerding, Ryan Wiseman, Rick Franks, Mike Haendiges, Phil Williams & Steve Reid
Quality Control Technicians: Tyler Swackhammer, Levi Wray & Kevin Green
Resurfacing of S.R. 229 in Knox & Coshocton Counties
ODOT District 5
Paving Contractor: Kokosing Construction Co. Inc.

**Project Personnel**
Paving Superintendent: John Bryant
Paving Foreman: Todd Kaufman
Paver Operator: Britt Johnson
Other Laydown Personnel: Vinney Phelps, Mike Aten, Rick Walker, Basil Branham & Preston Ash

Resurfacing of I-70 in Muskingum County
ODOT District 5
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**
Paving Superintendent: Shane Novaria
Paving Foreman: Derrick Treadway
Paver Operator: Joe Combs
Other Laydown Personnel: Jody Baker, Charles Greer, Joey Gill, Anson Reynolds, Adam Prouty, Rick Van Wye, Brent Matheny, Chris Fletcher, Jacob Fletcher & Charles Harper
Plant Foreman: Larry Ewart
Quality Control Personnel: Josh Samples

Resurfacing of S.R. 41 from U.S. 35 to U.S. 22 in Fayette County
ODOT District 6
Paving Contractor: John R. Jurgensen Co.

**Project Personnel**
Paving Superintendent: Troy Morrison
Paving Foreman: Mike Ruark
Quality Control Technicians: Logan Kilburn & Mitch Schappacher

Resurfacing of U.S. 33 from Fishinger Road to S.R. 161 in Franklin County
ODOT District 6
Paving Contractor: The Shelly Company

**Project Personnel**
Paving Superintendent: Dave Gentill
Paving Foreman: Mike White
Paver Operator: Theron McCoy
Other Laydown Personnel: Mark Boyer, Ted Gress, Sam Sterling, Michael Judd & Rolland Jefferson
Quality Control Technicians: Kevin Green, Aaron Saum, Levi Wray & Cayne Bennett
Reconstruction of I-70 from Franklin County to U.S. 42 in Madison County
ODOT District 6
Paving Contractor: Kokosing Construction Co. Inc.

Paving Superintendent: Zach Walters
Paving Foreman: Zach Walters, JC Sharp, Adam McGomery & Rick Kessler
Paver Operator(s): Donald Mullins, Michael Cunningham, Nicholas Leppert & Todd Eberle
Quality Control Technician: Zach Walters

Resurfacing of S.R. 104 from Pickaway County to the City of Columbus in Franklin County
ODOT District 6
Paving Contractor: Shelly & Sands Inc.

Paving Superintendent: Marty Spring
Paving Foreman: Billy Scherer
Paver Operator: Jason Woods
Other Laydown Personnel: Justus Ousley, Jimmy Stanley, Frank Landrum, Chuck Snavely & Anthony Rosenberger
Plant Foreman: Roger Hinkle
Quality Control Personnel: Rich Neal

Resurfacing of U.S. 40 from Airport Access Road to Bridgewater Road in Montgomery County
ODOT District 7
Paving Contractor: Barrett Paving Materials Inc.

Paving Superintendent: Cole Barney
Paving Foreman: Jerry Haney
Paver Operator: Lonnie Wirling
Other Laydown Personnel: Ronny Crider, Curtis West, Michael Haney, Steven Chavez, John Bryant & Duncan Beaty

Resurfacing of I-75 from Warren County to S.R. 725 in Montgomery County
ODOT District 7
Paving Contractor: Barrett Paving Materials Inc.

Paving Superintendent: Robert Wendt
Paving Foreman: Matt Palm
Paver Operator: Larry Colley
Other Laydown Personnel: Stanley Brannock, Thomas Woodruff, Christopher Whitt, Jonathan Gardner, Derek MacLeod, Tanya Lightfoot, Scott Huxel & Charles Matthews
Quality Control Technician: Dave Scruggs
Resurfacing of I-75 & I-70 in Montgomery County
ODOT District 7
Paving Contractor: Barrett Paving Materials Inc.

**Project Personnel**

Paving Superintendent: Mike Haney
Paving Foreman: Eric Oswald

Paver Operator(s): David Wills & Timothy Lawrence

Other Laydown Personnel: Eliseo De La Pena Anguiano, Steven McDaniel, Michell Delk, Robert Batner, Andrew Gross, Joseph Doll, Rachel Lawson, Tanya Lightfoot & Stephan Bowermaster

Quality Control Technician: David Scruggs

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Resurfacing of S.R. 73 in Warren County
ODOT District 8
Paving Contractor: Barrett Paving Materials Inc.

**Project Personnel**

Paving Superintendent: Robert Wendt
Paving Foreman: Justin Burns
Paver Operator: Rodney Hallgath

Other Laydown Personnel: Gerado Navarro, Harold Sturgill, Steven Nickell, Travis Ward, Jessie Edmisten, Gavin Jett, Roger Van Hoose, Ashley Powell, Timothy Frank & Jonathan Gardner

Quality Control Technician: Jim Jebsen

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Resurfacing of U.S. 50 from the Village of Mariemont to the Village of Terrace Park in Hamilton County
ODOT District 8
Paving Contractor: Barrett Paving Materials Inc.

**Project Personnel**

Paving Superintendent: Bob Jodrey
Paving Foreman: Mitchel Miller

Paver Operator: Michael Borders

Other Laydown Personnel: Michael Miller, Charles Walters, Robert Hunley, Kanye Jordan, Sara Kimberly, Jonathan Gardner, Kasey Chaney & Brent Groves

Quality Control Technicians: Jim Jebsen

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Resurfacing of I-275 from Four Mile Road to the Combs Hehl Bridge in Hamilton County
ODOT District 8
Paving Contractor: John R. Jurgensen Co.

**Project Personnel**

Paving Superintendent: Troy Morrison
Paving Foreman: Jeremy Basford

Quality Control Technicians: Gino Montesi & Mitch Schappacher
Resurfacing of I-71 (Fort Washington Way) in Hamilton County
ODOT District 8
Paving Contractor: Barrett Paving Materials Inc.

**PROJECT PERSONNEL**
Paving Superintendent: Bob Jodrey
Paving Foreman: Mitchel Miller
Paver Operator: Brent Groves

Other Laydown Personnel: Robert Hundley, Kayne Jordan, Charles Walters, Roger Van Hoose, Cody Winefield, Michael Borders & Kevin Maggard
Quality Control Technician: Jim Jebsen

Resurfacing of S.R. 328 in Vinton County
ODOT District 10
Paving Contractor: Shelly & Sands Inc.

**PROJECT PERSONNEL**
Paving Superintendent: Shane Novaria
Paving Foreman: Tim Fletcher
Paver Operator: Seth Cox

Other Laydown Personnel: Ryan Fletcher, Brady Stottsberry, Brett McInturf, Chad Lincoln & Brice Sayers
Quality Control Technician: Josh Samples

Resurfacing of S.R. 555 from Wagoner Road to the Village of Chesterhill in Morgan County
ODOT District 10
Paving Contractor: Shelly & Sands Inc.

**PROJECT PERSONNEL**
Paver Operator: Don Untied

Other Laydown Personnel: Doug Butler, Jason Brownrigg, Scott Knapp, Troy Haley & Zy King
Plant Foreman: Ed Junn
Quality Control Personnel: Josh Samples

Resurfacing of S.R. 7 from Washington Street to Green Street & S.R. 339 from S.R. 618 to Veto Road in Washington County
ODOT District 10
Paving Contractor: Shelly & Sands Inc.

**PROJECT PERSONNEL**
Paving Superintendent: Scott Hamm
Paving Foreman: Mike Bell (Intermediate) & Mike Hylbert (Surface)

Paver Operator: Troy Coleman (Intermediate) & Russ Matix (Surface)
Plant Foreman: Gary Work
Quality Control Personnel: Zach Durback & Brett Leach
**Resurfacing of S.R. 519 from U.S. 250 to the Village of New Athens in Harrison County**

ODOT District 11  
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**  
Paving Superintendent: Chad Taylor

Paving Foreman: Brian Medley  
Paver Operator: Brian Baumburger  
Other Laydown Personnel: Steve Taylor, Aaron Todd, Mark DuVall, Clayton Shepard & Mike Warrick

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**Resurfacing of U.S. 30 from County Road 451 to S.R. 170 in Columbiana County**

ODOT District 11  
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**  
Paving Superintendent: Shane Novaria  
Paving Foreman: Derrick Treadway

Paver Operator: Joe Combs  
Other laydown Personnel: Jody Baker, Charles Greer, Joey Gill, Anson Reynolds, Adam Prouty, Rick Van Wye  
Plant Foreman: Jim Campbell  
Quality Control Personnel: Josh Samples

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**Resurfacing of U.S. 36 from Coshocton County to I-77 in Tuscarawas County**

ODOT District 11  
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**  
Paving Superintendent: Shane Novaria  
Paving Foreman: Derrick Treadway

Paver Operator: Joe Combs  
Other laydown Personnel: Jody Baker, Charles Greer, Joey Gill, Anson Reynolds, Adam Prouty, Rick Van Wye  
Plant Foreman: Jim Campbell  
Quality Control Personnel: Josh Samples

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**Resurfacing of S.R. 558 from S.R. 45 to S.R. 517 in Columbiana County**

ODOT District 11  
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**  
Paving Superintendent: Chad Taylor  
Paving Foreman: Rick Smith

Other Laydown Personnel: Roger Shipley, Ricky Smith, Jr., Andre Lucious, John Oliver, Melissa Dickenson, Brandon Coyne & Paul Demarchy

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**Resurfacing of S.R. 558 from S.R. 45 to S.R. 517 in Columbiana County**

ODOT District 11  
Paving Contractor: Shelly & Sands Inc.

**Project Personnel**  
Paving Superintendent: Bill Purk  
Paving Foreman: Tom Smith  
Paver Operator: Dale Flynn

Other Laydown Personnel: Kelly Fraze & Todd Steiner  
Quality Control Technician: Matt Staller
Resurfacing of S.R. 43 in Jefferson County
ODOT District 11
Paving Contractor: NLS Paving Inc.

Project Personnel
Paving Superintendent: Ryan Schlosser
Paving Foreman: Ben McManaway
Paver Operator: Travis Moore

Other Laydown Personnel: Barb Vargo, Mike Fowler, David Westhafer, Chad Moore, James Saus, Tony Moore, Gary Garrison & Tamara Marriner
Quality Control Technicians: Edward Hoffman, QC Manager; George Malott, QC Plant Technician; CJ Thomas, Field Quality Control Supervisor & Density Technician

Resurfacing of the Ohio Turnpike from Mileposts 80.50 to 90.02 in Ottawa & Sandusky Counties
Ohio Turnpike & Infrastructure Commission
Paving Contractor: Kokosing Construction Co. Inc.

Paver Operator: Dave Gates
Quality Control Technicians: Binnie Sears, Josh Hocevar & Eric Maynard

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**Construction of a Roundabout at Elm Street & Bellefontaine Avenue in the City of Lima**
City of Lima  
**Paving Contractor:** Ebony Construction Co.

**Project Personnel**  
**Paving Superintendent:** Byron Clymer  
**Paving Foreman:** Brian Maunz

**Paver Operator:** Nick Burns  
**Other Laydown Personnel:** Corey Bowen, Marina Boullion, Tommy Nagel, Dalton Limes & Shane Bechtel

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**Construction of a Diverging Diamond Interchange at I-75 & Union Centre Blvd. in Butler County**
Butler County Engineer  
**Paving Contractor:** John R. Jurgensen Co.

**Project Personnel**  
**Paving Superintendent:** Troy Morrison  
**Paving Foreman:** Mike Ruark

**Quality Control Technicians:** Zeke Taylor & Orlando Scales

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**Rehabilitation of Sprague Road in the cities of Broadview Heights & Seven Hills**
City of Broadview Heights & City of Seven Hills  
**Paving Contractor:** Specialized Construction Inc.

**Project Personnel**  
**Paving Superintendent:** Bob Lanzara  
**Paving Foreman:** Greg “Kaz” Kacsmarik

**Paver Operator:** Andy Wechec  
**Other Laydown Personnel:** Jody Behrend, Kelly Castro-Van Meter, Joe Dipilito, Mike Gutglueck, Greg Kacsmarik, Jr., Michael McGlynn, Todd Osborn, Jeremy Ramunni & Matt Taylor

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**Home Road & U.S. 23 Intersection Improvement Project in Delaware County**
Delaware County Engineer  
**Paving Contractor:** Shelly & Sands Inc.

**Project Personnel**  
**Paving Superintendent:** Dana Mills  
**Paving Foreman:** Jason Sayre

**Quality Control Technician:** Anthony Wood
**Resurfacing of Augustus Drive from Central Avenue to Urbancrest Industrial Drive in Franklin County**
Franklin County Engineer
**Paving Contractor:** The Shelly Company & RAP Management

**Project Personnel**
**Paving Superintendent:** David Gentil
**Paving Foreman:** Mike White
**Paver Operator:** Theron McCoy

**Other Laydown Personnel:** Mark Boyer, Ted Gress, Samantha Sterling & Roland Jefferson
**Quality Control Technicians:** John Gentil & Chriss Sagan

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**Resurfacing of Polaris Parkway in the City of Columbus**
City of Columbus
**Paving Contractor:** The Shelly Company

**Project Personnel**
**Paving Superintendent:** Dave Gentil
**Paving Foreman:** Mike White
**Paver Operator:** Theron McCoy

**Other Laydown Personnel:** Mark Boyer, Ted Gress, Samantha Sterling, Michael Judd & Rolland Jefferson
**Quality Control Technicians:** Dustin Ditter, Levi Wray & Tyler King

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**Resurfacing of S.R. 3 (State Street) from Hoff Road to Northgate Way in the City of Westerville**
City of Westerville
**Paving Contractor:** Decker Construction Co.

**Project Personnel**
**Paving Superintendent:** Andy Mollenkamp
**Paving Foreman:** Michael Hunt
**Paver Operator:** Michael Heil

**Other Laydown Personnel:** John Brooks, Matt Hoefer, Brian Beam, Clay Henry & Jesse Adams

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**Resurfacing of C.R. 33A in Fairfield County**
Fairfield County Engineer
**Paving Contractor:** The Shelly Company

**Project Personnel**
**Paving Superintendent:** Kevin West
**Paving Foreman:** Joe Bice
**Paver Operator:** John Rector

**Other Laydown Personnel:** Bert Gerding, Ryan Wiseman, Rich Franks, Mike Haendiges, Phil Williams & Steve Reid
**Quality Control Technicians:** Andrew Gaskins, Tyler Swackhammer & Chris Sagan
Resurfacing of Parsons Avenue in Franklin County
Franklin County Engineer
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: Michael Morrison
Paving Foreman: Adam McGomery & JC Sharp
Paver Operators: Michael Cunningham & Nicholas Leppert
Other Laydown Personnel: Timothy Payne, Derrick Snoke, Earle Corn, Sam Kelly, Kyle Sanchez, Sean Merz, David Sammet, Michael Wahl, Kelly Owens & Chuck Welch

Resurfacing of Shakertown Road from Factory Road to Greystone Drive in the City of Beavercreek
City of Beavercreek
Paving Contractor: Barrett Paving Materials Inc.

Project Personnel
Paving Superintendent: Cole Barney
Paving Foreman: Jerry Haney
Paver Operator: Lonnie Wirling
Other Laydown Personnel: Duncan Beatty, Ronnie Crider, Curtis West, Steven Chavez, Michael Haney & Josh Bryant

Resurfacing of C.R. 313 from Allen County to the City of Findlay in Hancock County
Hancock County Engineer & ODOT District 1
Paving Contractor: The Shelly Company

Project Personnel
Paving Superintendent: Bryan Stennett
Paving Foreman: Bryan Stennett
Paver Operator: Jay Huffman
Other Laydown Personnel: Blake Miller, John Miller, Ryan Powell, Loyd Weaver, Rick Gardner, Brett Maag & Bryce Pearson
Quality Control Technicians: Christian Fraley, Mitchell Bailey, Alonzo Wilson & Marc Friila
Resurfacing of C.R. 34 (Two Ridge Road) from Cadiz Road to Canton Road in Jefferson County
Jefferson County Engineer
Paving Contractor: NLS Paving Inc.

**PROJECT PERSONNEL**
Paving Superintendent: Ryan Schlosser
Paving Foreman: Trevor Carpenter

Paver Operator: Randy Homan
Other Laydown Personnel: April Fuller, Brandon Green, Bill Rome, JR Garrison, Phil Lampasone, Ralph Ritter, Evan Rossiter & James Saus
Quality Control Technicians: Edward Hoffman, QC Manager; George Malott, QC Plant Technician; CJ Thomas, Field Quality Control Supervisor & Density Technician

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Resurfacing of C.R. 8 from S.R. 141 to C.R. 5 in Lawrence County
Lawrence County Engineer
Paving Contractor: The Shelly Company

**PROJECT PERSONNEL**
Paving Superintendent: Trevor Small
Paving Foreman: Josh Caldwell
Paver Operator: Andrew Smith

Other Laydown Personnel: Scott Phillips, Mike Campbell, Robert Matheney, Scott Bush & Bill Cottrill
Quality Control Technicians: Darren Evans & Nick Pickerell

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Resurfacing of Alexis Road from Flanders Road to Jackman Road in the City of Toledo
City of Toledo
Paving Contractor: Gerken Paving Inc.

**PROJECT PERSONNEL**
Paving Superintendent: Rob Jankowski
Paving Foreman: Chad Scott

Paver Operator: Spencer Lester Jr.
Other Laydown Personnel: Kevin Brinkman, Gabriel Brink, Robert Brown, Kevin Okonski & Steven Higginbotham
Quality Control Technicians: Cheryl Kerwin, James Saneholtz, Matt Hinkleman & Alex Cobb

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Resurfacing of Starr Avenue from Lallendorf Road to Whittlesey Street in the City of Oregon
City of Oregon & ODOT District 2
Paving Contractor: The Shelly Company

**PROJECT PERSONNEL**
Paving Superintendent: Joel Kiger
Paving Foreman: Daniel Irving

Paver Operator: Stacy Moran
Other Laydown Personnel: David Eaton, Jason Long, Ricardo Gonzalez, Sherri Kania, John Marinis & Chad Gray
Quality Control Technicians: Ron Beham & Ed Marshall
Resurfacing of Miltonsburg-Calais Road in Monroe County
Monroe County Engineer
Paving Contractor: Shelly & Sands Inc.

Project Personnel
Paving Superintendent: Sam Haverty
Paving Foreman: Justin Sheppard
Paver Operator: Jason Kahrig
Other Laydown Personnel: Chris Jackson & Mark Timmer
Quality Control Technician: Harold Walton

Resurfacing of Washington Street in the City of Dayton
City of Dayton
Paving Contractor: John R. Jurgensen Co.

Project Personnel
Paving Superintendent: Kenny Stacey
Paving Foreman: Derek Pence
Quality Control Technician: Mark Combs

Resurfacing of C.R. 30 in Morrow County
Morrow County Engineer
Paving Contractor: Mid-Ohio Paving Inc.

Project Personnel
Project Manager: Charlie Stewart
Paving Foreman: Skyler Nichols
Paver Operator: Skyler Nichols
Other Laydown Personnel: Curt Wagner, Phil Bowers, Greg Holfinger & Dean Bowers
Quality Control Technician: Skyler Nichols

Resurfacing of Martins Road, Parkway Drive & W. Ridgewood Circle in the City of Zanesville
City of Zanesville
Paving Contractor: NLS Paving Inc.

Project Personnel
Paving Superintendent: Ryan Schlosser & Jim McClelland
Paving Foreman: Trevor Carpenter & Jason Mladek
Paver Operator: Randy Homan
Other Laydown Personnel: Cody Caretti, Richard Fankhouser, April Fuller, Brandon Green, Bill Rome, Darren Roberts, Diego Patterson, Evan Rossiter, Noah Townsend & Mike Young
Quality Control Technicians: Edward Hoffman, QC Manager; George Malott, QC Plant Technician; CJ Thomas, Field Quality Control Supervisor & Density Technician
**Resurfacing of Roadways at the Catawba Bay Homeowners Association in Ottawa County**
Catawba Bay Homeowners Assoc.
**Paving Contractor:** Erie Blacktop Inc.

**Project Personnel**
- **Paving Superintendent:** Chris Walters
- **Paving Foreman:** Randy Schafer

*Paver Operator:* Don Rufer
*Quality Control Technician:* Mitch Gorsha

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**Resurfacing of Airbase Road in Pickaway County**
Pickaway County Engineer
**Paving Contractor:** The Shelly Company

**Project Personnel**
- **Paving Superintendent:** Dave Gentil
- **Paving Foreman:** Mike White
- **Paver Operator:** Theron McCoy

*Other Laydown Personnel:* Mark Boyer, Ted Gress, Sam Sterling, Michael Judd & Rolland Jefferson
*Quality Control Technicians:* Kevin Green, Levi Wray

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**Resurfacing of Adams Street from Park Avenue West to Orange Street in the City of Mansfield**
City of Mansfield
**Paving Contractor:** Kokosing Construction Co. Inc.

**Project Personnel**
- **Paving Superintendent:** Todd Ingram
- **Paving Foreman:** Mike Hansford

*Paver Operator:* Stu Calhoun
*Other Laydown Personnel:* Scott Clabaugh, Ralph Rhinebolt, Dusty McAdow, Joe Edwards & Dale Conley
*Quality Control Technicians:* Corey Jensen, John Smith & Jay Goldsmith

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**Resurfacing of Millersboro Road & Lexington Ontario Road in Richland County**
Richland County Engineer
**Paving Contractor:** Shelly & Sands Inc.

**Project Personnel**
- **Paving Superintendent:** Jake Chrastina
- **Paving Foreman:** Bill Ball

*Quality Control Technician:* Anthony Wood
Resurfacing of Buckland Avenue from C.R. 41 to Cleveland Avenue in Sandusky County
Sandusky County Engineer
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: Terry Taylor
Paving Foreman: Matt Culler
Paver Operator: Jim McClure
Other Laydown Personnel: Laura Marcellus, Dan Burke, Amanda Downs, Curtis Survance, Carrie Stanek & Bryan Mayes
Quality Control Technicians: Scott Gambrell & Bonnie Sears

Resurfacing of Wilkens Boulevard from Merten Drive to Socialville-Fosters Road in Warren County
Warren County Engineer
Paving Contractor: Barrett Paving Materials Inc.

Project Personnel
Paving Superintendent: Mark Barnes
Paving Foreman: Matt Palm
Paver Operator: Larry Colley
Other Laydown Personnel: Derek MacLeod, Scott Huxel, Christopher Whitt, Thomas Woodruff, Paul Hanes & Gregory Young
Quality Control Technician: Jim Jebsen

Commercial Parking Facility

Resurfacing of Parking Lot at Park West in the Village of West Jefferson
FCL Builders LLC
Paving Contractor: Decker Construction Co.

Project Personnel
Paving Superintendent: Andy Mollenkamp
Paving Foreman: Michael Hunt
Paver Operator: Michael Heil
Other Laydown Personnel: John Brooks, Matt Hoefer, Brian Beam, Clay Henry & Jesse Adams
RESURFACING OF PARKING LOTS AT CARLISLE LOCAL SCHOOLS
Carlisle Local School District, Skanska & Megen Construction Joint Venture
Paving Contractor: John R. Jurgensen Co.

PROJECT PERSONNEL
Paving Superintendent: Kenny Stacey
Paving Foreman: Derek Pence
Quality Control Technician: Logan Kilburn

CONSTRUCTION OF PARKING LOT AT CHILDREN’S SCHOOLHOUSE NATURE PARK
Lake County Metroparks
Paving Contractor: Kokosing Construction Co. Inc.

PROJECT PERSONNEL
Paving Superintendent: Dean Kimble
Paving Foreman: Joe Paul
Paver Operator: James Hillen

Other Laydown Personnel: Troy Webster & Richard Podowski

CONSTRUCTION OF PARKING FACILITY AT CARVANA LLC IN LICKING COUNTY
Carvana LLC
Paving Contractor: Kokosing Construction Co. Inc.

PROJECT PERSONNEL
Paving Superintendent: Jason Pike & Mike Morrison
Paving Foreman: Adam McGomery, Zach Walters, JC Sharp & Rick Kessler
Paver Operators: Michael Cunningham, Nicholas Leppert, Donald Mullins & Todd Eberle

Other Laydown Personnel: Kevin Mosher, Timothy Payne, Sam Kelly, Kyle Sanchez, Derrick Snoke, Earle Corn, Michael Wahl, Shawn Merz, Chuck Welch, Gary Hurst, Todd Ritchey, Kendal Miller, Kirk Smith, David Sammet, Joshua Pribbenow, Bobby Hamond & Joel Grant

RESURFACING OF ROADWAYS & PARKING lots at Magee Marsh WILDLIFE AREA IN OTTAWA COUNTY
ODNR & ODOT District 2
Paving Contractor: Erie Blacktop Inc.

Paver Operator: Don Ruffer
Quality Control Technician: Mitch Gorsha
Construction of Vehicle Dynamic Area at the Transportation Research Center
Transportation Research Center
Paving Contractor: The Shelly Company

Project Personnel
Paving Superintendent: Jack Kramer
Paving Foremen: Gary Fisher & Justin Pearson

Paver Operators: William Sutherland & Dave Bailey
Other Laydown Personnel: Logan Johnson & Brock LeVan
Quality Control Technicians: Alonzo Wilson, Marc Friia, Timothy Smouffer, Ralph Fraley, Christian Fraley & Todd Lowery

Special-Use Pavements

Commercial Parking Facility in Wood County
Ryan Companies U.S. Inc.
Paving Contractor: The Shelly Company

Project Personnel
Paving Superintendent: Joel Kiger
Paving Foremen: Daniel Irving & Jordan Kinder

Paver Operators: Stacy Morrin & Shannon Scott
Other Laydown Personnel: David Eaton, Jason Long, Ricardo Gonzalez, Sherri Kania, John Marinis, Chad Gray, Coroy Hollar, Harley Serres, Jon Slaglo, Matt Davenport, Paul Asher & Jason Stoner

Airport Pavements

Rehabilitation of Runway Taxiway B, C, E & G at the Rickenbacker International Airport
Columbus Regional Airport Authority
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: Mike Morrison & Brock Burgett
Paving Foremen: Adam McGomery & JC Sharp

Paver Operators: Michael Cunningham & Nicholas Leppert
Other Laydown Personnel: Timothy Payne, Derrick Snoke, Earle Corn, Sam Kelly, Kyle Sanchez, Kevin Mosher, Sean Turner, Nick McDaniel, Paul McGregor, Jr., Donald Turner, Gary Hurst, Dan Ward, Amber Lucas, Todd Erberle, Junior Pohakau, Mike Henderson & Jordan Hart
Quality Control Technicians: Ashton Hershberger, Molly Priest, Ryan Ebright, Kyley Wood, Matthew Adrian, Corey Jensen & John Ervin
Rehabilitation of Runway 10/28 at Knox County Regional Airport
Knox County Regional Airport
Paving Contractor: Kokosing Construction Co. Inc.

Project Personnel
Paving Superintendent: John Bryant
Paving Foreman: Todd Kauffman
Paver Operator: Britt Johnson

Other Laydown Personnel: Vinney Phelps, Mike Aten, Rick Walker, Basil Branham, Preston Ash & Ann Davis

Flexible Pavements of Ohio’s Ecological Award is a special award open to FPO Producer Members and recognizes asphalt production facilities that best demonstrate safe and responsible environmental practices. The Flexible Pavements of Ohio Ecological Award is presented to the nominated facility judged best in meeting the criteria for design layout, clean operations, maintenance performance practices and community awareness activities.

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Welcome back to Probability’s Pizza Parlor at the crossroads of uncertainty and variability, where we talk about pizza and everyone’s favorite subject: Statistics. During your last visits we discussed the importance of sampling and the issues from single-point analyses. This season’s special is moving averages, along with its strengths and weaknesses.

A moving average is a simple analysis tool used by many state DOTs to study basic trends in collected quality control data. A moving average is calculated by taking the average value of a data set over a defined timeframe, or number of data points. As new data is introduced into the data set the older data is removed from the calculation and a new average value is computed with each additional data point. The greatest advantage of a moving average is the smoothing out of the data to remove single sharp changes in a data set. A good example of this would be weekly revenue at the pizza parlor. Investigating the past four weeks of sales: $20k, $20k, $21k and $23k, results in a four-week average of $21k. The fifth-week’s sales of $22k makes a new four-week average of $21.5k. Hooray, increases in average revenue. With this continued flow of data, one could plot the moving average to help visually determine a trend showing growth or decay without having a single good or bad week detracting your attention.

Unfortunately, the ease of a trend analysis and the smoothing of data is where the strengths of a moving average analysis ends. There are two big concerns with the moving average:

1. Its total dependency on historical data
2. It lacks an ability to track variations from data point to data point

The historical dependency becomes problematic when the data becomes stale or is no longer relevant to the current analysis due to some global or critical process change. This means that once a change occurs there is a lag before the moving average becomes fully aware and reflects the change. Take the case shown in Chart 1. There is a trend upward to a specification limit where a critical change is made to sharply reduce the testing results. However, since the moving average relies on historic data, there is a lag before the moving average can reflect the change. In this case, the data already appears to be trending up again; however, the moving average is still trending down. This will always be true until enough new data is introduced to the analysis. To help minimize this effect, DOTs generally have a short
analysis cycle, typically four. This allows the analysis to be short enough to show change relatively quickly, but not too short as to be influenced by a single disturbance.

The second issue with the moving average is its lack of any data set variance analysis. As mentioned, the moving average is a simple trend analysis. When testing binder content, air voids, etc. for asphalt testing a flat trend is preferable, this indicates that the contractor has, “on average,” good control over their material and is therefore providing a consistent product. There is an emphasis on “on average” since this analysis lacks the ability to investigate the variability within a data set. This can be seen in Chart 2, which shows two groups of data having the same moving average plot; however, the blue data shows widely dispersed data, where the yellow set is more consistent. The yellow set in Chart 2 is more desirable, however, a moving average specification by itself cannot guarantee this.

In lieu of a moving average analysis for asphalt testing, Ohio DOT investigates individual data points to remove historical bias and uses an accumulative range function to reduce the risk of high data variance. An accumulative range takes into consideration the spread between consecutive data points. Calculating the accumulative range for ODOT involves using a set of three consecutive data points, and is defined as the positive total of the individual ranges of two consecutive tests in three consecutive tests. This means that if given samples A, B and C, the equation to calculate the accumulative range would be |Absolute value (A-B) + Abs (B-C)|. Controlling an accumulative range reduces the chance of having large variations between data points, theoretically leading toward tighter control on a process and a more-consistent product. ODOT specifies a limit on the accumulative range for air voids and asphalt content. If the accumulative range for either property exceeds its respective limit four consecutive times, the production is deemed inconsistent and the producer must halt production; assess the situation; and correct the issue. Chart 3 demonstrates the accumulative ranges of the data presented in Chart 2. The tighter grouped data in yellow has a much lower accumulative range than the dispersed blue data.

A moving average is a great indicator of how an item may be trending, but it is not always the best tool for materials testing since it cannot tell the whole story of what is happening. It is always important to not only rely on a trend but to look at the individual data points, as well as the differences of those points, to confirm that the trend you may be seeing is representative of reality.
New Member Welcome

Flexible Pavements of Ohio would like to welcome the following companies as new members of the association:

**CONTRACTOR MEMBER**

Empire Paving
Cleveland, Ohio

Empire Paving is an asphalt paving contractor serving Northeast Ohio. Empire Paving provides new construction, resurfacing and preventative maintenance services for commercial and industrial customers.

**ASSOCIATE MEMBER**

CWMF Corp.
Waite Park, Minn.

The CWMF Corp. provides asphalt plant equipment, parts and service for portable and stationary asphalt plants throughout the country.

Please join us in welcoming our new members.
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