

# OHIO ASPHALT

*THE JOURNAL OF OHIO'S ASPHALT PROFESSIONALS*

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FALL 2021

## 2021-2022 FPO Asphalt Pavement Industry Scholarship Recipients



**AUTUMN MAHER**

U. of Cincinnati



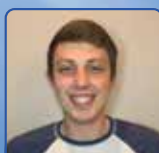
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ON THE COVER: A CLOUD OF UNCERTAINTY FOR STUDENTS WHEN IT COMES TO PAYING FOR COLLEGE IS BEING LIFTED THROUGH THE FPO ASPHALT PAVEMENT INDUSTRY SCHOLARSHIP PROGRAM. SEE PAGE 8 TO MEET THE 2021-2022 SCHOLARSHIP RECIPIENTS, AND CONTINUE TO PAGE 11 TO LEARN HOW FPO WILL BE HELPING STUDENTS EVEN MORE IN THE FUTURE.



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

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## THE PRESIDENT'S PAGE



**ANDREW GALL**

PRESIDENT & EXECUTIVE DIRECTOR

**“A recent ‘Performance Audit of the Ohio Department of Transportation’ issued by the Ohio Auditor of State concluded: ‘Overall, pavement conditions are good’ in Ohio. Furthermore, when benchmarked against other states with similar climate and traffic volumes using nationally accepted metrics, it characterized Ohio’s pavements as good as or better than other states in the region. The report stated: ‘Ohio does have comparable or better pavement conditions than peer states as demonstrated by uniform national pavement performance measures.’ With approximately 98% of Ohio’s roadways having an asphalt surface, you can reasonably conclude this validates the performance of asphalt.”**

# Asphalt Pavements in Ohio: Quality Awarded. Performance Recognized.

The average driver gives little thought to what pavement material is used or how a roadway is constructed than if the road is smooth, quiet and doesn’t require frequent maintenance or extensive reconstructions. In other words they care most about the quality of new pavements and the performance over time. Fortunately, Ohio is a leader in constructing and maintaining quality, long-lasting, high-performing asphalt roadways.

Flexible Pavements of Ohio (FPO) recognizes quality pavement construction with the association’s annual awards program. Projects demonstrating exceptional quality in asphalt pavement construction are nominated by contractors and evaluated by FPO staff. These projects represent all types of pavements, ranging from interstate highways to rural roadways, airport runways, multiuse paths and even commercial parking lots. In total, 762 pavements in Ohio have been recognized by FPO with the Quality Asphalt Pavement Award since the program’s inception 20 years ago. The sheer number of these awards reflects the commitment of the asphalt paving industry to provide designers and owner agencies with projects built to the highest standards of quality construction that will exhibit many years of excellent service and long-term performance.

FPO’s Master Craftsman Award recognizes pavements that have stood the test of time. To qualify for this award, pavements must be in good condition and remain in service for a minimum of 15 years without resurfacing or extensive repairs. Over the last 11 years, 15 pavements ranging from high-traffic and high-volume interstates to rural roadways and municipal streets have been

recognized with this award. Projects range from Interstate 71 “Fort Washington Way” in downtown Cincinnati with 16 years of service when recognized in 2016, and only recently resurfaced in 2020, to Emerald Parkway in the City of Dublin with more than 20 years since initial construction and still exhibiting excellent smoothness and service to the traveling public.

Recently, the Asphalt Pavement Alliance (APA) awarded ODOT District 2 with a Perpetual Pavement Award for State Route 199 in Wood County. This award is presented for high-performing asphalt pavements with at least 35 years of service and an average interval between resurfacing of no less than 13 years. The average pavement life of the national 2020 Perpetual Pavement Award winners is more than 53 years. S.R. 199 has an incredible service life of 91 years, making it the oldest pavement in the country to be recognized for this award in the history of the program. This marks Ohio’s fifth Perpetual Pavement Award and the second in District 2. See page 18 of this issue for additional information on the project.

The long-term performance of Ohio’s roadways is measured from years of data collection. And, according to the Ohio Department of Transportation, pavement performance has been steadily improving over time. A pavement on the general system experiences an average life of 12 years before the Pavement Condition Rating (PCR) degrades to an unacceptable level. On the priority system this average life increases to just more than 14 years. Generally, treatments for pavements in this condition would consist of “pavement repair and overlay” or resurfacing of the existing roadway to return

the pavement to its original, smooth state in a fraction of the time for reconstruction or new construction. A trait undoubtedly appreciated by Ohio's traveling public.

A recent "Performance Audit of the Ohio Department of Transportation" issued by the Ohio Auditor of State concluded: "Overall, pavement conditions are good" in Ohio. Furthermore, when benchmarked against other states with similar climate and traffic volumes using nationally accepted metrics, it characterized Ohio's pavements as good as or better than other states in the region. The report stated: "Ohio does have comparable or better pavement conditions than peer states as demonstrated by uniform national pavement performance measures." With approximately 98% of Ohio's roadways having an asphalt surface, you can reasonably conclude this validates the performance of asphalt.

In the end, the proof is in the performance. Ohio has a long history of award-winning asphalt pavements that collectively and consistently demonstrate high quality and long-term service for both today and the future.



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# **A Needed 'Break of Sunshine' During COVID-19's Cloud of Uncertainty**

*Program Keeps Students on track for Bright Future in an Industry Career*

COVID-19's current impact on how it is affecting the home and workplace is well-documented, but what about future effects? Thanks to the Ohio Asphalt Pavement Industry Scholarship Program, a group of Ohio college students have fewer worries about their academic and professional futures.

"COVID-19 created a cloud of uncertainty around college, work and the future . . .," according to ScholarshipAmerica.org. "The importance and impact of a degree hasn't lessened because of COVID-19. But for millions of students, the pandemic has upended the increasingly delicate balancing act of paying for college."

As it has since its inception, the 2021-2022 Ohio Asphalt Pavement Industry Scholarship Program is helping students stay on track to earning their civil engineering, construction management or construction engineering degrees. In addition, the scholarship program is aiding the flexible pavement industry's efforts for asphalt pavement technology to be included in the curriculums at Ohio colleges.

Since 1995, and with the addition of this academic year's 14 recipients receiving scholarships, 520 students have benefitted from the Ohio

Asphalt Pavement Industry Scholarship Program. This fall, students are receiving one-year scholarships of \$2,000 or \$2,500, totaling \$29,000. Over its 26 years, the program has awarded more than \$726,099 in scholarships.

Prior to the Ohio Asphalt Pavement Industry Scholarship Program, universities in Ohio generally did not provide coursework in asphalt pavement technology. This changed as a result of FPO's 1994 Long Range Strategic Plan, which not only established the scholarship program but increased the instruction of asphalt pavement technology at a growing number of universities. As a result, this increased awareness in asphalt technology is benefitting not only students and academic institutions but also the flexible pavements industry.

The Ohio Asphalt Pavement Industry Scholarship Program is administered through the National Asphalt Pavement Association Research & Education Foundation (NAPAREF), and continues to maintain its original objectives, which is to:

- Encourage students to gain knowledge in flexible pavements by requiring each scholarship recipient to take at least one course in asphalt pavement technology



## 2021-2022 FPO Asphalt Pavement Industry Scholarship Recipients



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Scholarship  
Recipient

- Promote the offering of training by colleges/universities in asphalt pavement technology by creating a student demand for the course
- Provide close ties between the asphalt industry and universities to raise the awareness of asphalt pavement technology in the academic community and foster asphalt pavement-related research
- Create a workforce trained in asphalt technology

Since the beginning of the FPO scholarship program, 11 universities have participated. For the 2021-2022 academic year students at five universities are being awarded scholarships.

While the 2021-2022 Ohio Asphalt Pavement Industry Scholarship Program is providing a break of sunshine in COVID-19's cloud of uncertainty, the pandemic did cancel the in-person recognition of the scholarship recipients at this year's Ohio Asphalt Expo – which was not held due to COVID concerns. However, this does not overshadow the students' achievements and importance of the scholarship program, as ScholarshipAmerica.org notes, "It's up to all of us who support students to ensure that the COVID-19 generation of students isn't lost."

See scholarship fund contributors, page 10

# FPO Asphalt Pavement Industry Scholarship Fund Contributors

The following companies and individuals have contributed to endow the Ohio Asphalt Pavement Industry Scholarship Fund through the National Asphalt Pavement Association Research & Education Foundation (NAPAREF) or by direct contributions:

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General Insurance Co.	Mid-Ohio Paving Inc.	*Denotes pledges of \$50,000 or more
Gerken Paving Inc.*	Northeastern Road Improvement	
	Northern Ohio Paving	

## 2022-2023 FPO Scholarship Entry Dates Set

Flexible Pavements of Ohio is pleased to announce the 27th year of its Ohio Asphalt Pavement Industry Scholarship Program. The period for submitting online applications for the 2022-2023 academic year will be open from Dec. 1, 2021 through Jan. 31, 2022. During this period, students can find information about the program and apply using the online application on the FPO website at: <http://www.flexiblepavements.org/scholarships/asphalt-scholarships-program>.

The college scholarship program is available to undergraduate civil engineering and construction management/engineering students in their sophomore or junior years who will be juniors or seniors during the 2022-2023 academic year. Scholarship recipients must agree to take a course in asphalt pavement technology prior to graduating. Graduate civil engineering students studying asphalt pavement technology are also eligible for an Ohio Asphalt Scholarship.







## FPO Board Votes to Increase Scholarship Program Funding

On June 22, 2021, the Flexible Pavements of Ohio (FPO) Board of Directors voted to significantly increase its support of the FPO Asphalt Pavement Industry Scholarship Program. The board voted to increase funding by devoting up to \$100,000 to award scholarships in amounts up to \$5,000 each for the 2022-23 academic year. This represents a three-fold increase from current and previous years.

In 2021, FPO awarded 14 scholarships of \$2,000-\$2,500 each to students at five universities amounting to a total of \$29,000. Perhaps because of the pandemic restrictions and students being off campus, FPO received substantially fewer applications for asphalt scholarships than in past years. In fact, an asphalt scholarship was awarded to every eligible applicant who applied this year.

The increased funding will allow the awarding of more scholarships of more value to more students at the 11 participating Ohio universities offering degrees in civil engineering, construction management or construction engineering.

FPO hopes this increase in scholarship funding will encourage the participating universities to offer a course in asphalt pavement technology, encourage students to study asphalt pavement technology and to apply for the asphalt scholarships.

This year, four additional university faculty members from three Ohio universities, Cleveland State, Youngstown State and Case Western Reserve universities, received grants from the National Center for Asphalt Technology (NCAT) to attend the professor training course in Auburn, Ala. The addition of qualified faculty members will increase the opportunities for students to receive education in asphalt pavement technology.

The next application period for the FPO asphalt scholarships will be during the 2021-22 winter. Complete information regarding the scholarship program, eligibility and application process can be found at <https://www.flexiblepavements.org/scholarships>.



# NEW & IMPORTANT Asphalt Pavement Reports

Two new reports are available that will be of interest to users of asphalt pavements.



## NCAT Report on Resilience of Asphalt Pavements

Resilience is becoming the dominant topic in discussion of infrastructure, replacing the formerly hot topic of sustainability. The National Center for Asphalt Technology (NCAT) has published a new report that clarifies the issue of resilience with respect to asphalt pavements.

Resilience is defined by the Federal Highway Administration (FHWA) as: “The ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions.”

The report describes the resilient characteristics of asphalt pavements as:

- Fast construction
- Perpetual pavement design
- Resilience/hardening can be built into long-term maintenance schedules
- Warm-mix asphalt technologies
- Adaptable materials for climate extremes
- Use of recycled materials
- Porous pavement systems

You can view the “Asphalt Pavement: A Critically Important Aspect of Infrastructure Resiliency (NCAT Report 21-02)” report at <https://eng.auburn.edu/research/centers/ncat/files/technical-reports/rep21-02.pdf>.



## Guide to Pavement Management

If you are interested in pavement management and pavement preservation, the American Public Works Association (APWA) and CarteGraph Systems Inc. are offering a free introduction to pavement management systems. The 12-page booklet, titled, “Preserve Your Pavement: A Road Map to Data-Driven Budgeting,” includes information on:

- The importance and benefits of a pavement management system
- A seven-step approach to putting your pavement data to work
- How to choose the right solution to meet current and future needs
- Five sets of budget and condition-based analyses that fuel data-driven pavement decisions

This publication can be downloaded at <https://www.cartegraph.com/download/preserve-your-pavement-guide>.

Another popular pavement management system, also offered by the APWA, is “Paver.” Find information on “Paver” at <https://www.apwa.net/>.



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# Ohio DOT Finds Thinlay Asphalt Offers Competitive Cost, Durable Performance

BY JAMES MARSZAL, P.E.

*(Editor's note: This article, co-authored by FPO Pavements, Materials & Field Application Engineer James Marszal, P.E., and the National Asphalt Pavement Association, originally appeared in the summer 2021 issue of Pavement Preservation Journal. It is being reprinted with permission of FP2, a national non-profit trade association organized under the Internal Revenue Code Section 501(c)6 and supported by the pavement preservation industry, contractors, material suppliers and equipment manufacturers.)*

**T**oday, 87 percent of goods shipped in the U.S. are carried on highways, with 62.9 million jobs in retail tourism, agriculture and manufacturing relying on roadways; it's inescapable that highways drive America.

Yet in the 2021 report, Failure to Act, the American Society of Civil Engineers identifies a \$2.49 trillion funding gap for the U.S. surface transportation program. We have chronically underinvested in our nation's infrastructure needs, resulting in higher costs to businesses and households as systems become more congested and poor driving surfaces require drivers take alternative routes.

ASCE reports the persistent failure to invest in our aging infrastructure will cost the average American household \$3,300 a year in disposable income over the next 20 years. To help offset these costs to families and communities, the asphalt industry is working cooperatively with road owners to develop new mixtures that help reduce construction costs while preserving the system for future generations.

## THINLAYS AS PRESERVATION

The Federal Highway Administration describes pavement preservation as applying the right treatment, at the right time, using quality materials and construction, noting that good quality roadways cost less. One preservation option is the Thinlay, defined by the National Asphalt Pavement Association as a suite of asphalt mixes that can be placed at a depth of  $\frac{3}{8}$  in. or more. This article focuses on the Ohio experience.

In Ohio, utilizing thin lift asphalt concrete as a pavement preservation tool has been prevalent for several decades. The Ohio Department of



S.R. 72 Asphalt Thinlay, Clark County, Ohio

Transportation (ODOT) specification Item 424 – Fine Graded Polymer Asphalt Concrete provides a Type A polymer modified sand asphalt mix that originated in the mid-1960s.

This mix placed as thin as  $\frac{3}{8}$  in. remains popular today in select regions and communities for roadways with light or medium traffic loading. As pavement preservation efforts increased in the early

2000s, a Type B (a.k.a. Smoothseal) 4.75 mm mix was added to the specification. The Type B Smoothseal mix typically placed 1-in. thick has become a very popular and well-established preservation treatment for heavy and medium traffic applications. This mix has consistently demonstrated its long-life even under the toughest conditions, including interstate highways with average daily traffic (ADT) exceeding 100,000 vehicles.



Both Item 424 Type A and Type B Fine Graded Polymer mixes include high quality PG 76-22M performance grade binders and select aggregates to provide the performance and durability (strength, stability and friction) characteristics to excel as thin lift preservation treatments. These mixes are considered premium products optimized for high performance and durability.

## THINLAYS IN OHIO

In recent years, the heightened interest in pavement preservation—combined with fiscal limitations—had Ohio designers and specifiers looking for thin lift treatments that were durable, long-lasting, and more economical.

In 2016, Thinlay asphalt concrete was introduced to the Ohio paving community specifically to address those requirements and provide a more economical asphalt mixture alternative in the highly competitive preservation market.

Recognizing the limited history of Thinlay asphalt concrete, costs on average have trended at 11 percent less than ODOT 424 Type B Smoothseal and 24 percent less than ODOT 424 Type A sand asphalt, helping stretch maintenance budgets.

Ohio's Thinlay asphalt concrete was developed to be placed as a preservation treatment on structurally sound pavements that are showing signs of aging, oxidation, or minor surface disintegration/distress.

Acceptable types of distress when specifying Thinlay asphalt include:

- Dry-looking oxidized or "bony" looking pavements
- Pavements that have begun to ravel
- Pavements with cracking too fine or too extensive for crack sealing
- Minor rutting typically less than or equal to ¼ inch
- Pavements with low or limited structural distress or fatigue failure. Note: If localized distressed areas exist, appropriate pavement repairs must be undertaken to correct them in advance of using Thinlay asphalt.

Suitable projects for Thinlay asphalt have no unrepaired structural/fatigue damage and adequate structural capacity to carry the projected traffic over the course of the expected life of the Thinlay asphalt preservation treatment.



*S.R. 539 Asphalt Thinlay, Wayne County, Ohio*

Thinlay asphalt is a 6.3 mm mix designed for thin lift (¾ in. minimum) placement. The Ohio specification utilizes the well-established Marshall mix design method along with standard performance grade binders, readily available aggregates and allows the use of recycled asphalt pavement (RAP) for economy.

The specification includes several different mix types designed to perform for different traffic demands. ODOT Supplemental Specification (SS) 860 includes Thinlay asphalt designed for medium (MED) traffic levels using a PG 64-22 binder and light (LT) traffic using a PG 58-28 binder. Specifications for heavy (HT) and ultra-light (Ultra-LT) traffic are available upon request from **Flexible Pavements of Ohio**, the state asphalt pavement association.

The mix type for each traffic level is unique and designed to provide the best performance for the agencies and driving public. The heavy and medium mix designs require crushed aggregates and stiffer binders to enhance the mixtures' strength and stability. The light and ultra-light designs use more natural sand and softer binders to provide greater cracking resistance. Compaction blow counts, stability and flow requirements, and voids in mineral

aggregate (VMA) also vary for each type of mix to customize each design to traffic demand and help extend pavement service life.

In a recent 2020 project, contractor The Shelly Company constructed an ODOT Thinlay asphalt project located in Clark County on State Route 72 just south of Springfield, Ohio.

This section traverses both suburban and rural areas, with daily traffic consisting of 9,355 vehicles (AADT) and 535 trucks. A medium Thinlay asphalt placed at ¾ in. was specified for this section. The existing pavement was prepared by fine milling ½ inch to remove minor surface imperfections and provide a uniform paving surface. A non-tracking bond or tack coat was specified to facilitate a strong bond between the Thinlay asphalt and the milled pavement surface.

"The S.R. 72 project is a good example of how ODOT has been able to extend our preventive maintenance program with the use of various products, in this case Thinlay asphalt," said Tom Rossman, PE., ODOT D-7 pavement management engineer. "The Thinlay alternative allows us to provide a quality product on a roadway that the traveling

public will appreciate for both its smooth ride and easy application. Thinlay also allows the department to provide more miles of preventive maintenance options to our program. We appreciate the efforts of the industry to formulate this additional product to use in our preventive maintenance program."

#### LOCAL AGENCIES FOLLOW

Since 2016, ODOT has placed 46,943 tons of Thinlay asphalt concrete for preservation treatments on 23 projects throughout Ohio. In addition to the ODOT Thinlay asphalt work on state and U.S. routes, additional tonnage has been placed on local and private projects

as agencies and owners become more familiar with the benefits of Thinlay asphalt.

Many owners are utilizing Thinlay asphalt because of the versatility of the material, which allows for placement as a surface course when resurfacing roadways with light and ultra-light traffic demands. Thinlay lift thickness when placed as a surface course typically range from 1 to 1 ½ in.

Although relatively early in the life of these treatments, performance of Thinlay Asphalt has been encouraging over the initial five years, and ODOT continues to monitor performance

as part of its pavement management system. Additional performance monitoring is expected to collect data that will generate Thinlay performance curves with the goal of adding Thinlay asphalt as an official and approved treatment strategy in ODOT's pavement asset management system.

"Our ODOT District 3 placed the Thinlay product about four years ago on two different routes, Wayne County S.R. 539 and Ashland County S.R. 60—and the ¾-inch overlay still looks good, with some minor reflective cracking," said Mike Schafrath, P.E., ODOT D-3 work plan coordinator. "This certainly is another tool in our toolbox for us to use. I like the softer binder on these low volume roadways, and it's an economical pavement preservation for us."

Ohio has a demonstrated track record using thin asphalt concrete treatments for preservation. To reduce costs given limited budgets, it's working alongside the asphalt pavement industry to develop and implement alternative specifications that design mixtures for both performance and budgets.

While all of Ohio's thin mixtures are available, the current Thinlay asphalt concrete specification distributed in 2020 includes the addition of a recycling agent to improve Thinlay cracking resistance—particularly when placed as a thin ¾-in. preservation treatment.

An asphalt recycling agent was incorporated into the specification to break down RAP binder stiffness and reduce cracking susceptibility. Ohio's new Thinlay asphalt concrete specification is both environmentally sustainable and economical and represents an additional step toward optimizing performance of Ohio's newest preservation treatment, Thinlays.

The specification and Technical Bulletin for Ohio's Thinlay Asphalt Concrete can be found at [www.flexiblepavements.org](http://www.flexiblepavements.org).

*Marszal is pavements, materials and field applications engineer for Flexible Pavements of Ohio. Images by Flexible Pavements of Ohio.*

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# ODOT District 2 Receives Perpetual Pavement Award

*With Service Life of 91 Years, Pavement Still Going Strong*



*ODOT District 2's 2020 Perpetual Pavement Award is displayed with the district's 2004 award presented for S.R. 25 in Wood County.*

The Asphalt Pavement Alliance (APA) selected the Ohio Department of Transportation (ODOT) District 2 to receive a 2020 Perpetual Pavement Award for a section of State Route 199 in Wood County. With a service life of 91 years and counting, it is the oldest winning pavement at the time of recognition since the award program began in 2001.

This award marks Ohio's fifth Perpetual Pavement Award and the second in District 2.

To qualify for a Perpetual Pavement Award, a pavement must be at least 35 years old and never experienced a structural failure. The average interval between the resurfacing of the winning pavement must be no less than 13 years. The pavement must demonstrate the characteristics expected from long-life asphalt pavements: excellence in design, quality in construction and value for the traveling public.

The award-winning section of S.R. 199 was originally constructed in 1929 with 3-inches of bituminous macadam placed on two separate 4-inch lifts of water bound macadam. The pavement was widened and resurfaced in 1962. Subsequent resurfacing projects occurred in

1987 and 2009, demonstrating the value and performance of asphalt pavements. Since 1962, the total thickness for this roadway has only increased 3.75 inches.

"The Ohio Department of Transportation is pleased and honored to receive the 2020 Perpetual Pavement Award for State Route 199 in Wood County," said Pat McColley, District 2 deputy director. "The Ohio Department of Transportation prides itself on constructing and maintaining a world-class transportation system, a system that safely and efficiently moves people and goods from place to place."

Long-life asphalt pavements serve the community, reduce the money needed for maintenance and conserve raw materials. Asphalt roads can be engineered to last indefinitely with only routine maintenance and periodic surface renewal. Perpetual pavements use fewer natural resources and offer road owners and users what they want most: an economical, smooth pavement that serves the community for decades.

"We have a history of long-lasting asphalt pavements in Ohio," said Andrew Gall, executive director of Flexible Pavements of Ohio. "State Route 199 in Wood County is another example of asphalt's exemplary performance, and I congratulate the Ohio Department of Transportation for being recognized with this prestigious award."

To learn more about Perpetual Pavements, visit Flexible Pavements of Ohio's website at [www.flexiblepavements.org](http://www.flexiblepavements.org).



*FPO's Andrew Gall presents the Perpetual Pavement Award to (from left) ODOT District 2 Deputy Director Pat McColley, Testing Engineer Eric Heckert and Pavement Engineer Julie Fabey.*



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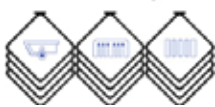


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# New Members Welcome

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

**AMMANN** **Ammann America Inc.**  
Ammann is a supplier of asphalt mixing plants, machines and associated services to the construction industry with a core focus in roadbuilding and transportation infrastructure.

Based in Switzerland, Ammann's North America headquarters is located in Davie, Fla.

## BLACKLIDGE

### Blacklidge

Blacklidge is a producer and distributor of asphalt material products. The company maintains nine operating facilities and a testing and development lab.

Blacklidge is headquartered in Gulfport, Miss.

**CTL ENGINEERING** **CTL Engineering Inc.**  
CTL Engineering is a full-service consulting engineering firm that provides environmental, geotechnical, construction administration & inspection, accident reconstruction, roofing/building envelope and specialized testing services to the construction industry.

CTL maintains offices in five states and India and is headquartered in Columbus.

## HAULHUB TECHNOLOGIES

### HaulHub Technologies

HaulHub Technologies provides a technological platform and support for the construction industry to provide digital and electronic ticketing solutions for material producers, contractors and transportation carriers at jobsites and plants throughout the country.

Haulhub is headquartered in Haverhill, Mass.

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