



Institute for
Sustainable
Infrastructure



FOR IMMEDIATE RELEASE:

Reconstruction of Runway 3L/21R and Associated Taxiways at Detroit Metropolitan Wayne County Airport Earns Envision Gold Award for Sustainable Infrastructure

WASHINGTON, D.C. – November 15, 2019 – The Institute for Sustainable Infrastructure (ISI) announced today that the ongoing reconstruction of Runway 3L/21R and associated taxiways at Detroit Metropolitan Wayne County Airport (DTW) received the Envision® Gold award for sustainable infrastructure. Previously, the Wayne County Airport Authority (WCAA) achieved Envision Silver for another airfield project—the reconstruction of DTW’s Runway 4L/22R and associated taxiways—in 2016. The project team built on past successes and lessons learned to expand the sustainability objectives and initiatives throughout the recent Runway 3L design and construction.

This \$180 million project is reconstructing Runway 3L/21R and parallel Taxiway M and partial parallel Taxiway P. These facilities were originally constructed in the 1950’s and had deteriorated to a point where full reconstruction was necessary. As part of this project, decommissioned pavement is being removed, geometry is being updated to current design standards, bypass taxiways are being added, and Taxiway P is being extended. These measures are expected to improve safety by reducing acute angle intersections, adding shoulder pavement, and improving the operational flow throughout the completed area.

The Airport Authority is committed to reducing its carbon footprint. In 2016, WCAA entered the Airport Carbon Accreditation (ACA) Program to track, report on, and reduce greenhouse gas (GHG) emissions. As part of this effort, WCAA signed a Carbon Reduction Commitment to reduce GHG emissions by 10% by 2020, using 2013 as the baseline year. WCAA implemented several carbon reduction strategies, including using principles from industry-leading sustainable design guidelines, such as Envision, for new infrastructure projects. The Airport Authority achieved its goal one year early and is in the process of setting a new target.

“Incorporating sustainable measures into two large runway projects, including the reconstruction of our primary runways, has been a fulfilling experience for the Airport Authority,” said Deputy Director Theresa Samosiuk, the WCAA project manager for both the 4L and 3L runway projects. “While reconstructing Runway 3L/21R and its associated taxiways, we will maintain nearly all materials on site. We are also reducing future maintenance through LED lighting and other measures, contributing to the Airport Authority’s overall sustainability goals – which includes a target for 100%

LED airfield lighting at DTW. It's exciting to have a direct and positive impact on how we deliver infrastructure projects across the airports."

"Our Planning Design & Construction and Environment & Sustainability teams have been able to apply lessons learned and effective practices from the Runway 4L project to our 3L work, and we'll do the same with future projects," said Wayne County Airport Authority CEO Chad Newton. "The Airport Authority is striving to be a leading steward of the environment, and we're making progress thanks to the dedication of our employees."

The Airport Authority worked in close collaboration with Kimley-Horn, C&S Companies, and Ajax Paving Industries, Inc. to deliver this award-winning sustainable project. C&S's Carly Shannon, the Envision Administrator, commends WCAA for proactively and consistently pushing the boundaries. "It is rare to have clear commitment to embrace not only sustainability, but the Envision rating system at the very start of a project. This—combined with the Airport Authority's intention to exceed accomplishments on the prior runway project—inspired the entire team to raise, implement, and track high-value measures that will contribute to the overall airport sustainability program at DTW."

The Envision sustainable infrastructure framework assesses project sustainability across five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate and Resilience. These key areas contribute to positive social, economic, and environmental impacts on a community during the planning, design, and construction of infrastructure projects.

Some of the factors contributing to the DTW project earning an Envision Gold include:

Excellence in Public Health and Safety - Safety is of the utmost importance to WCAA and this project incorporates new materials and methodologies to address site safety. These include using an earthen berm as a visual screen between taxiing and departing aircraft, as well as using a combination of fencing and a carefully selected seed mix to deter wildlife from dwelling on the airfield. In addition to minimizing wildlife concerns, the seed mix is native to the region and reduces the need for mowing. Water needed for dust control was obtained from on-site stormwater detention ponds, rather than from the airport's potable water system, reducing water-truck fill times and the water footprint of the project. The project's contractor also went above and beyond by hiring an environmental health and safety professional to monitor site conditions and personnel daily. A health fair was also held for workers and their families to attend.

Whole Systems Design and Delivery - The project team and owner leveraged many opportunities to increase efficiency of communications and take an interdisciplinary approach. Document control software ensured transparency and tracking, so that team members were focused on the most recent and relevant design elements. Bi-weekly meetings of the entire project team included all disciplines, WCAA representatives, and often other key stakeholders. A sustainability charrette was held at the onset of design with follow-up meetings at key milestones, engaging representatives from WCAA Airfield Operations, Maintenance, Environment & Sustainability, and other departments. This diverse and continued engagement enabled holistic integration of sustainability into the

project. Finally, sustainable construction practices were incorporated into bid packages and specifications, and sustainability is a continuous agenda topic during weekly construction meetings.

Workforce Development - The Airport Authority and each member of the project team sought to maximize professional and workforce development opportunities while engaging disadvantaged businesses and populations. The scale of the runway reconstruction presents a unique opportunity for diverse skill sets and learning, which were used to engage local schools, design team and WCAA interns/co-ops, and trade organizations.

Reducing Excavated Materials Taken Off-Site and Decreasing Transportation Distances for Incoming Materials - Excavated materials are being reused on the project in the formation of embankment, subgrade, and an earthen berm. In addition to reducing impacts from hauling this material off-site and minimizing the need for virgin materials, this strategy is expected to meet the project goal of diverting 90% of construction waste from landfill disposal. All materials coming onto the project are tracked to understand transportation distances and to potentially inform future goal setting. Similar to the diversion achievement, 90% of materials are local or regional, contributing to the Detroit economy and reducing emissions and fuel use associated with trucking.

Highly Resilient and Adaptive to Long-Term Climate Change - The project team identified several likely climate-related impacts, including rising temperatures, increased precipitation, and frequency of intense snowstorms. Risks and vulnerabilities included deterioration of pavement, sub-base failure related to freeze/thaw cycle, and strains on the drainage system. To address deterioration of pavement, alternatives were analyzed to maximize durability over its 20-year lifespan. Strategies to adapt to freeze/thaw cycles include the installation of underdrains beneath the pavement's base to reduce moisture accumulation.

###

MEDIA CONTACTS:

Wayne County Airport Authority (WCAA)

Lisa Gass
Media Relations Manager
(734) 247-7379; lisa.gass@wcaa.us

C&S Companies

Carly Shannon, LEED AP BD+C, ENV SP
Director, Sustainability
(424) 281-1996, cshannon@cscos.com

Kimley-Horn

Arthur (J.J.) Morton, P.E.
Sr. Vice President, Project Manager
312-212-8487; Arthur.morton@kimley-horn.com

Ajax Paving Industries, Inc.

Pete Mann, Senior Project Manager
248-388-5595; pmann@ajaxpaving.com

Dan's Excavating, Inc.

Justin Peyerck, Project Manager
(586) 254-2040
jpeyerck@dansexc.com

Institute for Sustainable Infrastructure

For inquiries related to ISI, Envision or the Envision verification process, contact:
Melissa Peneycad, Managing Director | Director, Sustainable Projects
peneycad@sustainableinfrastructure.org

PROJECT ORGANIZATION INFORMATION:**About Detroit Metropolitan Wayne County (DTW) Airport:**

Detroit Metropolitan Wayne County Airport (DTW) welcomed more than 35 million passengers in 2018 and is one of the world's leading air transportation hubs. With service from 13 scheduled passenger airlines, Michigan's largest airport offers approximately 1,100 flights per day to and from more than 140 nonstop destinations on four continents. DTW received the highest score among mega airports in the J.D. Power 2019 North America Airport Satisfaction Study of customers' satisfaction with the airport they traveled through and scored the highest in the security check and terminal facilities factors. Visit jdpower.com/awards for details. DTW is operated by the Wayne County Airport Authority, which also operates nearby Willow Run Airport—an important corporate, cargo and general aviation facility. Visit www.metroairport.com for more information.

About Kimley-Horn: *Kimley-Horn has more than 50 years of experience providing professional consulting services to airports across the nation. We support large hubs to small general aviation airports in a variety of services ranging from airfield design to landside design to airspace modeling. Sustainability is a vital initiative at Kimley-Horn and we constantly seek ways to incorporate sustainable elements in our aviation projects. In 2018, ENR ranked Kimley-Horn as one of the top 100 Green Design firms in the nation.*

About C&S Companies: *C&S is one of the country's leading aviation consulting firms and has more than five decades of diverse airport planning, design, sustainability, environmental, and construction projects. Over the last ten years, C&S has become a top sustainability expert, partnering with airports ranging from large hubs to small commercial and general aviation facilities. The Reconstruction of Runway 3L/21R and Associated Taxiways is C&S's fifth Envision-awarded airport project.*

About Paving Industries, Inc.: *Ajax Paving Industries, Inc., is an industry leader in asphalt and concrete paving since 1951. Located in Southeastern Michigan, Ajax has a long history of delivering high-quality results with the utmost professionalism while maintaining an impressive safety record. From large scale road and highway projects, airport runways, to race tracks and test tracks; Ajax has always excelled and is one of the most sought after and expertly qualified paving contractors.*

About Dan's Excavating, Inc.: *Dan's Excavating, Inc., is a company who, since 1974, has grown to become a recognized industry leader in large scale, high profile underground, road construction, electrical construction and structural concrete work. Dan's works with an owner to form a partnership committed to building safe, economical and superlative projects utilizing DEI's staff of civil engineers, project management, and administrative experts. Dan's team evaluates, develops, and manages all aspects of*

work regardless of project size, scope, or design. DEI has been consistent since day one in its mission of demonstrating loyalty to a project, to the owner, and to all of its employees which has allowed Dan's to enjoy its highly deserved reputation of delivering quality projects completed more often than not ahead of time.

About Envision®: *Envision is the product of a joint collaboration between ISI, which was founded by three national engineering associations: American Society of Civil Engineers (ASCE), American Council of Engineering Companies (ACEC) and American Public Works Association (APWA), and the Zofnass Program for Sustainable Infrastructure at Harvard University Graduate School of Design. Visit us at www.sustainableinfrastructure.org.*