



# connexions

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## ROWE Expands Services with Unmanned Aerial System

ROWE has purchased its first unmanned aerial system (UAS) or “drone” and now provides completely in-house aerial imaging services. The DJI Inspire Pro 1 is the first drone in what will surely become a fleet as more of our clients begin to require this technology.

With the UAS, ROWE can provide aerial videos and still photography for the following purposes.

- Construction progress updates
- Structure and equipment inspection
- Topographic survey and mapping

Contact Project Manager Gregory N. Lemke, CP, at (810) 341-7500 or [GLemke@rowepsc.com](mailto:GLemke@rowepsc.com) for more information. Let us help you see your project like you’ve never seen it before.



Above is ROWE's new drone at a construction site.

## Engineers Overcome Challenges During I-94 Project near Airport

ROWE’s Construction Services Division was busy this summer with several high-profile projects, including one in a busy area of Michigan – adjacent to the Detroit Metropolitan Airport. Our team provided full construction engineering services for 11.1 miles of HMA cold milling and resurfacing, concrete pavement repairs, concrete pavement inlay, crack treatment, and pavement markings on eastbound and westbound I-94, along with the collector/distributor road, from Wayne Road to Beech Daly Road in the City of Romulus, MI.

During construction, ROWE’s engineers and field technicians had to overcome numerous challenges, including:

- Maintaining traffic to the airport while completing concrete pavement repairs and HMA paving on the ramps that service the airport. This included several changes to typical Michigan Department of Transportation (MDOT) work zone setups that had to be designed with little notice while in the field.
- Monitoring the budget throughout construction and finding contract savings that will allow the owner to reconstruct an additional 3.71 lane miles of concrete pavement on the main thoroughfare that services the airport.
- Constant communication with eight stakeholders and statewide MDOT staff.
- Coordination with our large engineering and oversight team to ensure all construction operations were covered, which often occurred 24 hours a day for several days in a row.



Above, a plane flies over construction on the \$8.9M I-94 project, which began in June and was completed in November.

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# ROWE Plays Part in Kirtland College's Expansion to Grayling, MI

Kirtland Community College is expanding and ROWE is excited to contribute professional services to plan and execute this growth. The college has campuses in Roscommon, Gaylord, and West Branch, and is now developing its new campus south of Grayling, MI. For the Grayling campus, ROWE:

- Surveyed 188 acres to provide the description required by the Michigan Department of Natural Resources to allow the college to build on the undeveloped land.
- Developed a master plan to allow college leadership to plan for expansion of the campus.
- Completed the grading plan for three athletic fields.
- Completed civil/site components for a 50,000-square-foot health science center that opened in August, including designing a 2,400-foot entrance boulevard and roadway, corresponding road widening, 115,000-square-foot parking area, site grading, site layout, and utility extension

Prior to beginning the science center project, ROWE met with the college and local utility authority to discuss the authority's plans to extend a municipal water and sewer system to the area. Since the utility system was not in place when the new building opened, ROWE designed the utilities on the campus in such a way the college will be able to easily hook into the municipal system once it is constructed.

ROWE looks forward to continuing work with the college to develop the campus.

Click [here](#) to view a time lapse video of the new health science center's construction.



Above and at left are views of the college's new health science center.

## Construction and Budget Constraints Don't Deter Project's Success



Above is a view of the Great Lakes Central Railroad Crossing, which was reconstructed. Below is one of the two truck safety turnouts that were added to the project.



ROWE successfully overcame several challenges to complete the design and preparation of plans and specifications for a \$3.6M project to upgrade approximately five miles of M-113 in Fife Lake Township in Grand Traverse County, MI. The project included crushing and shaping the existing HMA roadway along with an HMA overlay. It also included horizontal and vertical alignment upgrades, shoulder widening, vertical curves, sight distance, and superelevation corrections. Safety upgrades included guardrail, permanent signs, and permanent markings.

Project challenges included the following.

- Two sag vertical curves did not meet sight distance requirements; to accommodate budget and construction constraints, engineers designed a seven-foot maximum grade raise, which was completed while the roadway was open to traffic.
- The existing roadway was nearly devoid of ditches and had poor drainage, which was contributing to its poor condition. The design provided new ditches throughout the project limits, which was done while limiting right-of-way impacts as much as possible.
- Considerable clearing was necessary, which required coordination with the Michigan Department of Natural Resources and was complicated by new Michigan Department of Transportation (MDOT) seasonal restrictions.
- Management of the project was transferred between three MDOT TSCs and ROWE made revisions to the design to accommodate the desired changes in scope and budget each time a new TSC took over leadership.

Click [here](#) to view a video of the project's construction from Team Elmer.

## Scrap Tire Grants Assist City with Paving Five Streets

After assisting the City of St. Clair, MI with the successful application for Michigan Department of Environmental Quality Scrap Tire Market Development Grants, the city completed two projects with a considerable cost savings. The grants, received during the years 2015 and 2016, totaled approximately \$260K; the city spent an additional \$360K for the work.

The first project was completed this summer and consists of two streets totaling 0.5 mile in length – Troon Street, a local street, and Vine Street, a major street. Construction on Troon Street included full pavement removal and base repairs as needed and the placement of four inches of rubberized asphalt. Construction on Vine Street included milling the existing asphalt, joint repairs, and the placement of rubberized asphalt.

The second project was completed this fall and consists of three local streets totaling 0.6 mile in length – Hawthorne Street, Orchard Street, and South Ninth Street. Construction on Hawthorne included pavement removal, minor curb replacement, and placement of four inches of rubberized asphalt. Construction on Orchard and South Ninth included milling existing asphalt, base repairs, minor curb repairs, and the placement of rubberized asphalt.

ROWE also assisted the Village of Birch Run and cities of Caro, Clio, Flushing, and Lapeer with obtaining scrap tire grants totaling \$720,509.50 during the last grant cycle. If you would like more information about the scrap tire grant program, visit this [website](#) or contact ROWE Project Manager Louis P. Fleury, PE, at [LFleury@rowepsc.com](mailto:LFleury@rowepsc.com) or (810) 341-7500.



Above, from left is Troon Street before the project was completed, Troon Street after, Vine Street before, and Vine Street after.

## Huron-Clinton Path Makes the Grade

Golfers try to keep their golf balls out of water, but until a recent project at Huron-Clinton Metroparks, Stony Creek Golf Course golfers had to also worry about keeping their *carts* out of water. The grades of a 1.2-mile path on the Shelby Township, MI course were low and subsurface conditions were clay, so water wasn't draining off the path or soaking into the ground. At times, there was a foot of standing water on the path. ROWE was able to design path improvements and grading adjustments to reduce the amount of storm water flooding the golf course.

ROWE's engineers utilized their expertise in drainage design during the process to meet the Huron-Clinton Metropolitan Authority's expectations of proper pathway sizing, positive drainage from fairways,



Above is the Stony Creek path under construction.

and conveyance of storm water below the cart path. Challenges included finding solutions to address the soft soil conditions and underground spring release points.

The \$1.35M project is slated for completion in early December.



## Goodbye Drainage Woes

People are now enjoying the improvements along Dupont Street in the City of Flint, MI after the project, designed by ROWE, was recently completed. Prior to the work, the roadway had consisted of concrete with integral curb that had been overlaid several times, causing drainage issues in low spots and at many of the existing driveways. Construction included 1.5 miles of roadway cold milling and resurfacing, curb and gutter replacement, and sidewalk and driveway replacement, from Bishop Avenue to Carpenter Road.

# Asphalt Pavement Association of Michigan Honors ROWE Projects

Four projects for which ROWE provided engineering services have been recognized by the Asphalt Pavement Association of Michigan for their excellence.

- I-75 Overlay owned by the Michigan Department of Transportation-Oakland Transportation Service Center and located in Independence Township and the City of Auburn Hills, MI won the Award of Excellence in the Single Course Overlay Projects Category.
- North Almont Street Reconstruction owned by and located in the City of Imlay City, MI won an Award of Merit in the Urban Street Projects Category.
- Kettering-GM Mobility Research Center owned by Kettering University and located in the City of Flint, MI won an Award of Merit in the Special/Challenging Projects Category.
- Tuscola Intermediate School District Parking Lot Reconstruction owned by the school district and located in the City of Caro, MI won an Award of Merit in the Commercial Projects category.



I-75



Almont Avenue



Kettering-GM Mobility Research Center



Tuscola Intermediate Schools parking lot

## Staff Updates

### New Associates Named

In January 2017, two new associates will join ROWE's group of 21 associates; company shareholders who participate in firm management and long-range goal development to improve the quality of services provided to clients.

- **Jill M. Bauer, PE, PTOE**, is a 10-year ROWE employee who earned M.S. and B.S. degrees in civil engineering from Michigan State University. As a project manager in the Civil Utilities Division, she manages budgets, staffing, and schedules for projects, performs quality control reviews, and assists with design and analysis of various road and infrastructure projects.
- **Shelley S. Henry, CPA**, is a three-year ROWE employee who earned a B.B.A. in accounting from the University of Michigan. As the company's controller, she directs ROWE's financial planning and accounting practices, as well as its relationship with lending institutions, shareholders, and the financial community.



J. Bauer



S. Henry

### The ROWE Team Expands

- **Richelle A. Cooper** joined ROWE as an accountant in the Flint, MI corporate office. She has a B.S. in business administration from the University of Michigan, a master's in business administration from Kaplan University, and 13 years' accounting experience.
- **Michael P. Faeth, PE**, joined ROWE as a senior project manager in the Civil Utilities Division in the Mt. Pleasant, MI office. He has B.S. in civil engineering from Michigan State University and more than 30 years' civil engineering experience.
- **Andrew M. Miller** joined ROWE as a survey field technician I in the Survey Department in the Grayling, MI office. He has a B.S. in geomatics from Northern Michigan University.
- **Kenneth A. Perry, PS**, joined ROWE as a project manager in the Survey Department at the Flint, MI corporate office. He has a B.S. in surveying from Ferris State University and 30 years' surveying experience.
- **Christeena M. Sherman** joined ROWE as an accountant in the Flint, MI corporate office. She has a B.S. in professional accountancy from Saginaw Valley State University and three years' accounting experience.

For questions about these projects and more, contact Director of Corporate Marketing Jack Wheatley, PE, at [JWheatley@rowepsc.com](mailto:JWheatley@rowepsc.com) or (800) 837-9131.

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