

CIVIL+STRUCTURAL ENGINEER MAGAZINE'S INAUGURAL YEA WINNERS

By Luke Carothers

THIS SPECIAL ISSUE of *Civil+Structural Engineer Magazine* marks the conclusion of our inaugural Yearbook of Engineering Achievement (YEA) awards and the announcement of our winners. Our first ever field of competitors for the award ran the gamut from water infrastructure projects to new applications of ringmail as a shading material. The average size of firms being honored in this issue is just under 360 employees with the smallest winner having just six employees and the largest winner having over 1,000. Our inaugural YEA winners are projects that significantly impact not only the communities in which they are located, but also the AEC industry as a whole and our conversations about sustainability and equity.

In the same way, these projects span not only the United States, but the entire world in location and impact. Out of the 11 projects selected as YEA award winners, 9 different states are represented, from the East Coast to the West Coast as well as the South and the Upper Midwest, with one project located in Dubai. These projects are residential and commercial buildings, pedestrian and transportation infrastructure projects, and water and stormwater infrastructure projects that serve a vital role in the communities they serve.

In some cases, our winners are part of larger redevelopment projects, seeking to improve underserved communities over the long run. Other winning projects present innovative solutions to commercial and residential issues in both urban and suburban communities. At an average cost of just under \$20,900,000 per project, these winning submissions demonstrate a willing investment in both protecting and rejuvenating communities that need it most. There are numerous projects amongst our inaugural YEA winners that are parts, both large and small, of larger initiatives to improve particular areas and communities. In some cases, these projects are aimed at improving the quality of life in underserved areas while, in other cases, these projects provide critical infrastructure to growing communities.

YEA 2021

- Firms Represented: 11
- Projects Submitted: 34
- Average Cost of Project: \$20,900,000
- Average Firm Size: 360 employees
- States Represented: Florida, Ohio, Wisconsin, California, Texas, Nebraska, Kentucky, Michigan, and Georgia
- Countries Represented: United States and New Zealand (UAE)

The inaugural YEA Awards were given to projects that demonstrably impacted sustainability and community improvement while also moving the AEC industry forward through groundbreaking innovation and the development of new technical processes. Some of these winning projects used alternative, environmentally-friendly materials as a part of the design process. Materials such as polycarbonate ringmail for shading and expansive timber for framing impact their local communities while also driving the AEC industry towards more sustainable building practices. Still, other projects are innovative in their ability to combine form and function. From shipping containers being repurposed as office units to a senior housing community that also provides housing for college students with children, the inaugural YEA winners provide crucial support within their setting and a model for others to follow.

Many of these winning projects are critical to the sustained health of their communities. Several of our winning projects feature water and stormwater solutions to communities that are in dire need. These solutions come in the form of ensuring water redundancy for a growing community, storing and managing water in a historically water-poor area, and enhancing water capacity to a growing industrial area. At the same time, whether through particular changes in design or long term planning considerations, these projects are models for further addressing the needs of underserved communities.

As we move forward into another new year, fraught with the endless challenges of the unknown, the inaugural YEA winners demonstrate the paths that we must take to move the AEC industry forward. And, as the builders and designers of the world around us, this will, in turn, move the world around us forward. As the engineers, architects, builders, designers, and carpenters of years past rose to meet the challenges of their age, these projects are cast in that same spirit, allowing us to rise to the challenges of an unknown future.

LUKE CAROTHERS is the Editor for Civil + Structural Engineer Media. If you want us to cover your project or want to feature your own article, he can be reached at lcarothers@zweiggroup.com.

UNITED WHOLESALE MORTGAGE PEDESTRIAN BRIDGE & OFFICE RENOVATION

Ruby + Associates, Inc.
Structural Engineers

Project Location: Pontiac, MI

Category: Small Firm

Started: February 1, 2020

Completed: October 1, 2021

Project Budget: Pedestrian Bridge—\$20,000,000

Project Cost: Pedestrian Bridge—\$20,000,000

Project Leadership Team:

Pedestrian Bridge

- Erection Engineering Services and Third Party Review of Bridge Design: Ruby + Associates, Inc. Structural Engineers
- General Contractor: The Alan Group, Inc.
- Fabricator: Cives Steel Company
- Erector: Ideal Contracting, LLC
- Owner: United Wholesale Mortgage (United Shore at time of construction)
- Architect: von Staden Architects
- Civil Engineer: Nowak and Fraus
- Engineer of Record: Thornton Tomasetti

Office Renovation and Sports Complex

- Office Renovation Connection Design, Cargo Container Support Design, Structural Engineering for Walkways and Stairs, Reinforcing and Slab Edge Detail Design, in addition to Sports Complex Addition Engineering and Interior Modification Support: Ruby + Associates, Inc. Structural Engineers
- Architect: von Staden Architects
- Cargo Architecture: Three Squared, Inc.
- Owner: United Wholesale Mortgage (United Shore during construction)
- General Contractor: Dailey Company

Project Overview: The United Wholesale Mortgage Pedestrian Bridge and Office Renovation project was born out of United Wholesale Mortgage's expansion and need to connect its employees to two facilities across the street from one another. The solution for this necessity was a record-breaking 1,000-foot walkway over South Boulevard. The nation's longest enclosed pedestrian walkway, this project connects 1.5 million square feet of office space with a safe and easy to traverse pathway. To complete this project, Ruby + Associates worked closely with Ideal Contracting and their



suppliers to erect 450 tons of structural and miscellaneous steel. To construct the walkway over the busy South Boulevard and surrounding properties, the steel team had to enact careful planning to avoid extended closures of the thoroughfare. This task was accomplished through measures such as working on the weekends and utilizing a 900T mobile crane to maximize the efficiency of setting multiple long span portions of the bridge. In order to erect these long spans, teams had to carefully plan the logistics and scheduling of assembling, transporting, and hoisting the box truss sections, weighing as much as 104 tons. A separate part of the project involved expanding United Wholesale Mortgage's offices, which converted a former warehouse and utilized shipping containers for offices, corridors, and other spaces. This sustainable re-use of materials provides a unique environment for employees and visitors.

Impact(s): The United Wholesale Mortgage Pedestrian Bridge and Office Renovation is essential to efforts to drive Pontiac's economy forward. Transforming spaces such as a 100 year old General Motors automotive factory and creating shared facilities helps connect this project to the community. In addition, these shared facilities will house programs for tutoring, literacy, arts and crafts, and sports activities that serve the youth of Pontiac. This project also has a massive impact on the AEC industry. A full 320 feet longer than the second longest pedestrian walkway in the United States, this project brings both prestige and pushes the boundaries of what is possible.

Highlights:

- Longest enclosed pedestrian walkway in the United States
- Sustainable "cargo architecture" concept
- Transformation of a 100 year old General Motors automotive factory

