



Southern Tier Transportation Project

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Industry and Residents*

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The Community That Builds Communities

An award-winning design project led by Erdman Anthony in New York state's Southern Tier has balanced the needs of residential and high-density, mixed-use areas with increasing commercial truck traffic.

The project has addressed safety and mobility concerns related to transportation in Horseheads, a town north of Elmira. The centerpiece is a new highway connector road, bookended by roundabouts, that reroutes local truck traffic. It also encompasses a new bridge; levee and railroad crossing improvements; and safety upgrades to two and a half miles of adjacent roads.

Working on behalf of the Chemung County Department of Public Works, Erdman Anthony provided planning, design, and construction inspection services, secured permits, and worked with utilities.

New connector road

The new road stretches three quarters of a mile, from New York State Route 13 to Old Ithaca Road. Of primary concern was rising truck traffic to and from the Center at Horseheads, an industrial park. The route to the park required trucks to travel through residential neighborhoods and mixed-use areas, and to pass an elementary school. They also sometimes navigated a five-legged intersection in downtown Horseheads, though this was not technically permitted.

With the new road, a projected 700-plus commercial trucks a day can now bypass these areas. The project enables revitalization and scalable growth at the park—an economic boost for the area—in addition to easing the traffic concerns that come with it.



“I really want to emphasize how important this project is to the community,” said Andrew Avery, public works commissioner for Chemung County. “Numerous trucks, many of them loaded with sand headed for the industrial center, were creating problems for residents.”

The road provides a direct route to controlled-access NYS Route 13 and beyond to Interstate 86. The two roundabouts, designed to accommodate tractor trailers, eliminate the need for traffic lights and left-turn lanes.

“Roundabouts are safer than signaled intersections,” said Erdman Anthony project manager Paul Presutti, PE, PTOE. “They slow down vehicles entering the intersection and reduce the number of potential vehicle conflict points, all while maintaining traffic flow.”



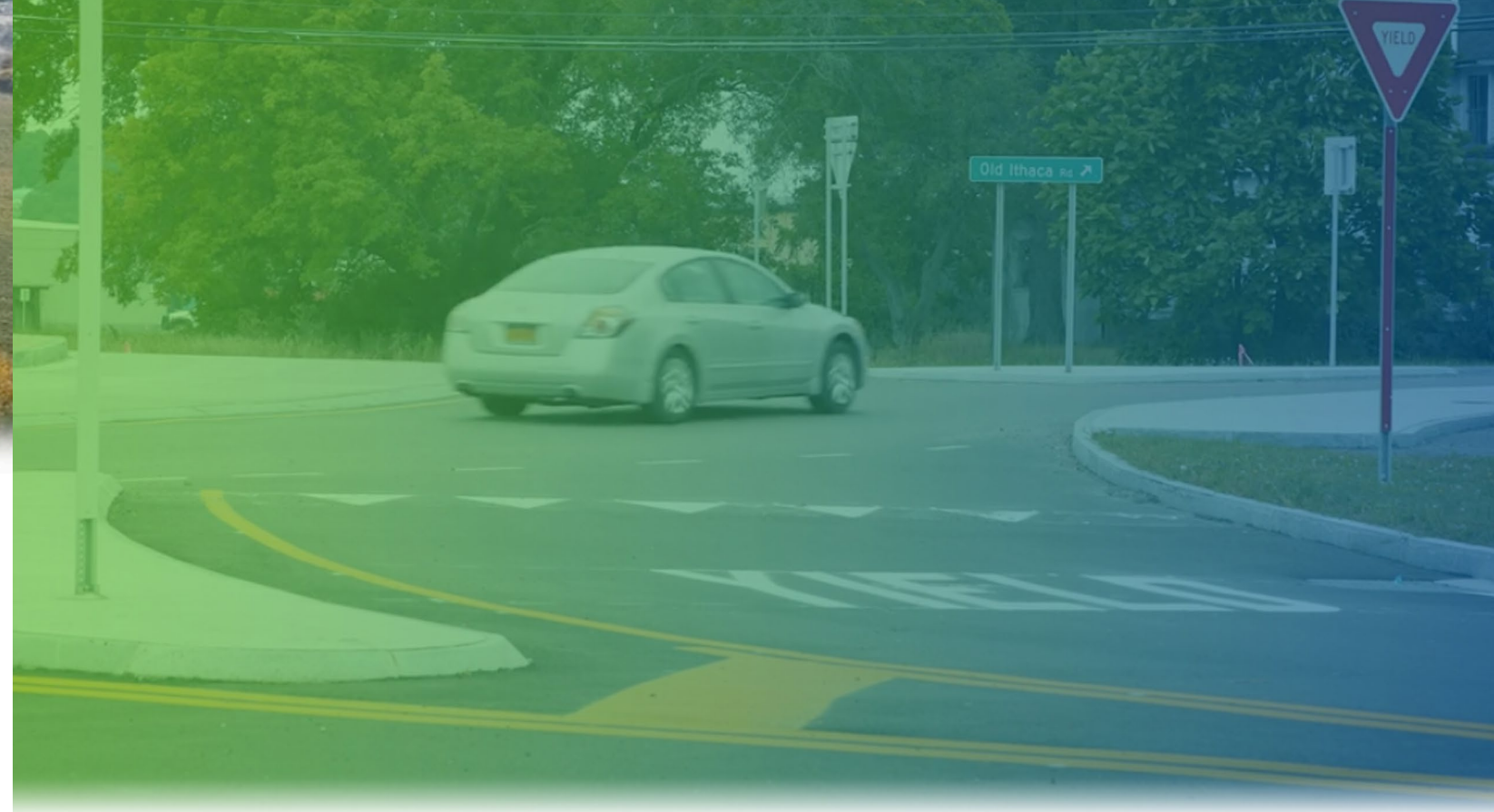
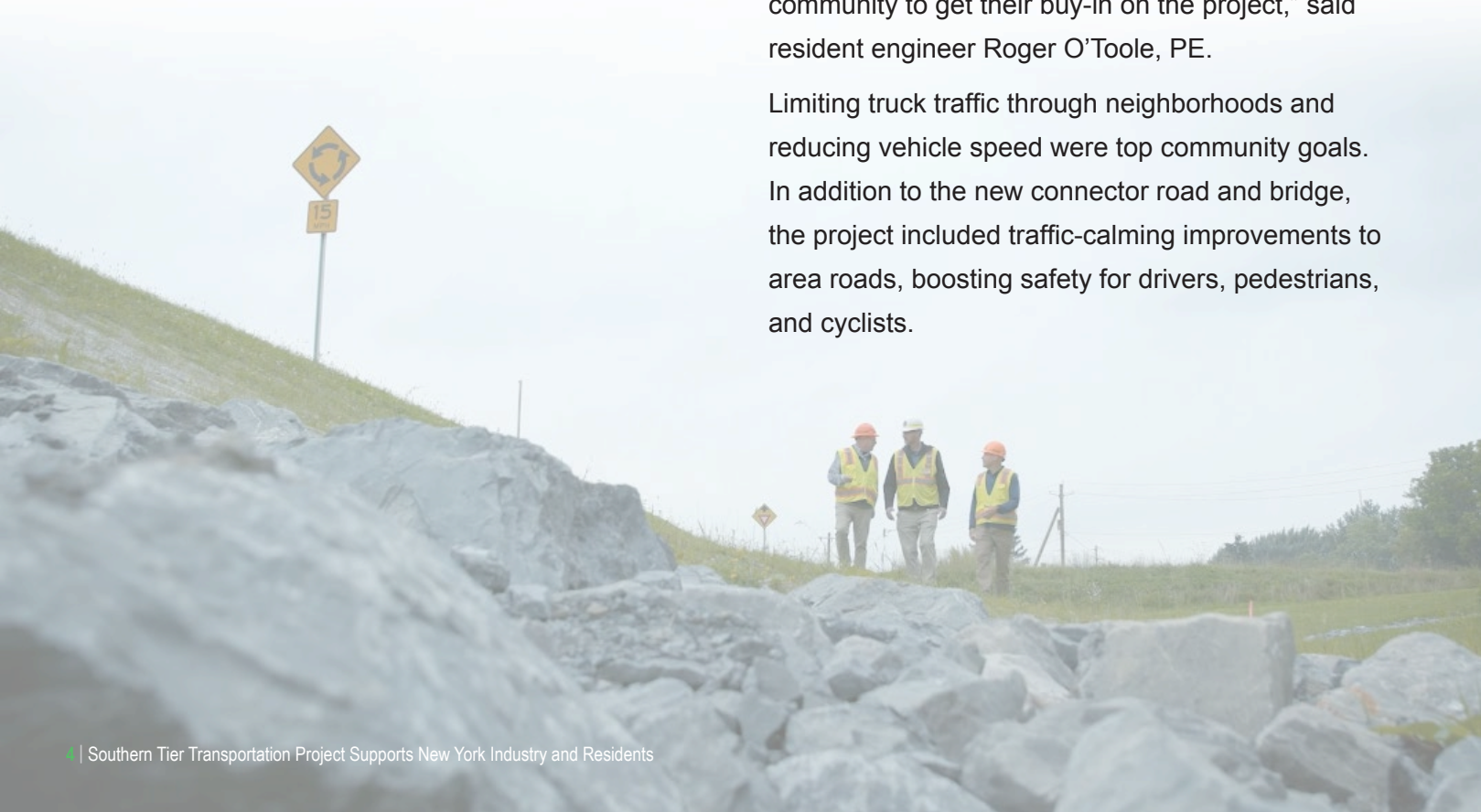
Community buy-in

Erdman Anthony coordinated communication among Chemung County, the New York State Department of Transportation, the construction contractor, 11 utility companies, and the public. Before a single shovel went into the ground, challenges included acquiring property rights from 29 different owners and securing community buy-in.

Erdman Anthony also held public forums to gain input directly from residents and businesses.

“One of the things that really made this project a success, and that we’re proud of, is all the outreach Erdman Anthony did on the front end with the community to get their buy-in on the project,” said resident engineer Roger O’Toole, PE.

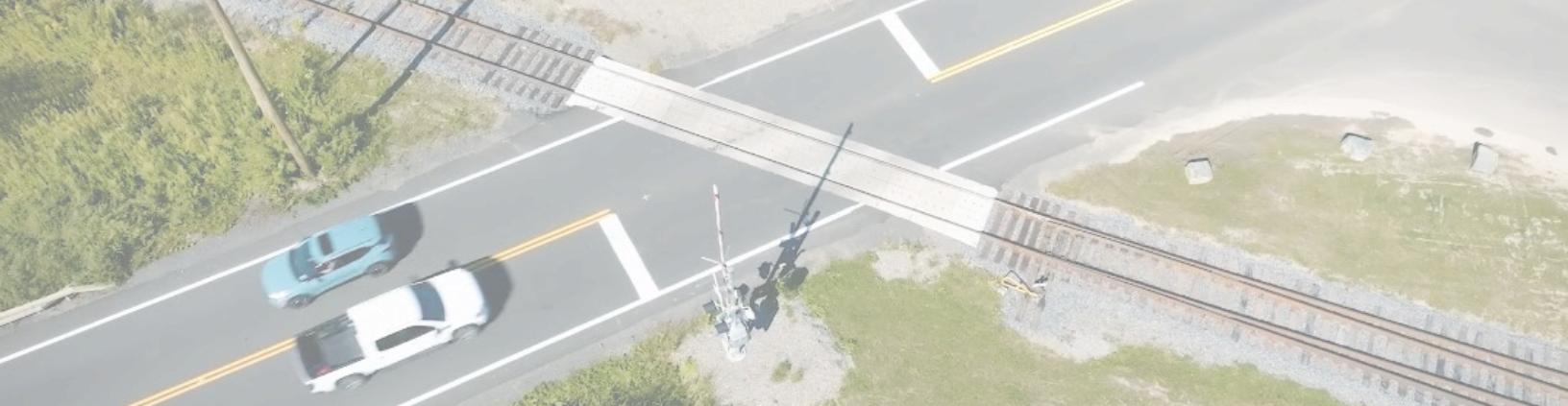
Limiting truck traffic through neighborhoods and reducing vehicle speed were top community goals. In addition to the new connector road and bridge, the project included traffic-calming improvements to area roads, boosting safety for drivers, pedestrians, and cyclists.



Roadway safety improvements

Old Ithaca Road is a busy local route. An offset intersection across the road, with Alex Drive and Ridge Road, was realigned to reduce right-of-way confusion and left-turn conflicts. To reduce excessive traffic speed, designers added new curbs and islands, narrowed the road width, and improved pavement markings.

In residential areas of Route 13, a route heavily trafficked by tractor trailers, residents requested new trees to provide a buffer between the neighborhood and the road.



Railway crossing

On Wygant Road, a passive highway grade railway crossing increased the likelihood of collisions and was long a source of concern for residents. In addition, the surface of the approach pavement and crossing was a perennial maintenance issue. Project engineers installed an automatic highway-rail grade crossing warning system and a modular precast concrete crossing—improvements that have been well received by commuters and the rail operator.

New bridge

The road includes a new two-span 238-foot bridge over Newtown Creek. It has a horizontally curved superstructure with resilient weathering steel girders supported by concrete abutments on steel H-piles. The deck is superelevated to meet highway design guidelines. Because of the structure’s horizontal geometry, it has modular bridge joints and unique configurations for bridge seat and pedestal elevations. The new bridge now accommodates water levels in the creek below.

Levee improvements

The project also better protects Horseheads from the effects of a flood by fortifying a 5,000-foot levee. Vegetation and development in and around the industrial park had eroded the century-old structure. The levee was not certified to handle a heavy flood event; this meant it could not be accounted for in the hydraulic model.

To receive FEMA approval, deteriorating portions of the structure were rebuilt. Drainage culverts were retrofitted with new headwalls, automatic flap gates on the creek side, and flap gates and manual slide gates on the dry side.

Flood plain analysis and drainage impacts were key elements of the project. On Old Ithaca Road, an extensive stormwater system now handles highway runoff that previously ponded on adjacent private property, even during minor rainfall. On the new connector road, runoff is controlled through a detention pond and several dry swales to maximize water quality while reducing runoff to predevelopment levels.

Under budget, ahead of schedule

The \$21 million project was completed \$1 million under budget and four months ahead of schedule.

“Without the expertise offered to us by Erdman Anthony, I know that we could not have gotten this project completed ahead of schedule and under budget,” said Avery. “This was the most complex project of my 35-year career, and it went the smoothest.”

Erdman Anthony received three awards for its work on the project: ACEC New York’s 2024 Gold Engineering Excellence Award, and 2023 Project of the Year from APWA’s New York Chapter and from APWA’s Central New York Branch.



Contact **Paul Presutti, PE, PTOE**, today to learn how you can get started on your next project.

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