

Over and Under: Making Trail/Road Crossings Safer

Prein&Newhof

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The continuity of Michigan's trail system is impressive—until it intersects a major road. While riding, walking, running, boarding, or skating long trails, nobody enjoys having to detour or to stop and wait for interrupting traffic.

Sometimes the best way to cross a busy road is to go over or under it. Bridges and tunnels separate non-motorized users from automobile traffic, reducing conflict, and enhancing continuity. While pedestrian tunnels and bridges are expensive, recent Prein&Newhof projects show that safety investments pay off and that using data can attract funding. Recently, two Michigan communities and a major private employer built crossings for major streets and each found unforeseen benefits. Here are their stories.

City of Ionia: M-66 Bridge

Phase II of the Grand River Valley Rail Trail goes through Ionia, crossing busy M-66, the city's main north-south road. Ionia's original plan had the trail crossing M-66 "at-grade," meaning users wait for gaps in traffic before crossing the road. When city officials learned a group of cyclists riding from Michigan City, Indiana to St. Johns, Michigan waited 15 minutes for M-66 traffic to subside before they could cross, they decided to re-think their plan. Prein&Newhof led a pedestrian traffic study that showed no large-enough traffic gaps at the crossing location during normal trail use hours. The study convinced the Michigan Department of Transportation (MDOT) that a non-motorized bridge, while expensive, was the right approach to crossing M-66.



Installed last fall, the new 'Bulldog Blue' bridge (Ionia High School's colors), is an iconic arch/truss bridge that is the gateway into the

Vander Male retires after 39 years with Prein&Newhof

Robert (Bob) Vander Male, PE retired at the end of March after nearly four decades with Prein&Newhof. Bob joined P&N in December 1977, after receiving a bachelor's degree in civil engineering from Michigan Technological University and a master's degree in civil engineering from the University of Michigan. He also spent three years as an engineering officer in the US Army. His work at P&N was

City of Ionia and a signature piece of public artwork. To highlight the bridge, Ionia chose multi-colored LED lights to illuminate and accent it at night.

City of Walker: M-45 Tunnel

The 6.5-mile-long Fred Meijer Standale Trail between Walker and Grand Rapids has one problem spot. Commuters, GVSU students, tourists, and residents get stuck when the trail crosses M-45/Lake Michigan Drive. The nearest safe crossing is an intersection a half-mile out of their way. Instead, many users wait for a large-enough traffic gap and "jay-walk."

Fred Meijer Standale Trail users will have a much safer and more convenient crossing later this year when the City of Walker completes a \$3 million pedestrian tunnel under M-45/Lake Michigan Drive. Walker's 10-ft. by 14-ft. tunnel imitates P&N's 2011 design of a tunnel with a similar purpose in the City of Greenville. Observing Greenville's successful example in use convinced Walker that a tunnel was right for them. The tunnel will be a memorable identifier for Walker as part of the Fred Meijer Standale Trail.

Walker's funding includes a \$1.9 million grant from MDOT's Transportation Alternatives Program, private donations, and over \$120,000 from the city's budget. Construction begins this spring.

Meijer, Inc: Three Mile Road Tunnel

Meijer's corporate campus in Walker has buildings on either side of Three Mile Road. Employees walk between offices and their respective parking lots, creating pedestrian safety challenges.

Meijer asked Prein&Newhof to study pedestrian movements and their potential traffic and safety impacts. Part of P&N's study included an online employee survey to learn their walking patterns, which revealed that 40 percent of employees didn't cross



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Michigan's growing network of non-motorized trails offers many safe and enjoyable travel opportunities. For decades, transportation design focused on auto-mobility. Communities are now looking to include pedestrian and non-motorized mobility and safety in their road designs.



Congratulations to P&N Civil Engineer Mike Schwartz, PE who is serving as president of the Michigan Society of Professional Engineers.





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TUNNEL, continued

Three Mile Road at the marked crosswalk, but chose instead to cross mid-block, saving themselves a quarter mile walk. Based on the employee behavior study, P&N recommended a pedestrian tunnel under Three Mile Road between two major buildings on Meijer's campus. Meijer built its tunnel in 2014.

Along with increasing safety, the pedestrian tunnel has become a centerpiece of Meijer's corporate campus. It is ADA-compliant and features covered walkways leading to the tunnel to protect employees from the weather.

If you need a pedestrian safety champion on your side, contact P&N traffic engineer, **Ariana Jeske, PE, PTOE** at ajeske@preinnewhof.com. For bridges and tunnels, contact **Scott Post, PE** spost@preinnewhof.com or **Jason Washler, PE** at jwashler@preinnewhof.com.



Prein&Newhof welcomes four more team members

Tom Eilers joined P&N with 15 years of construction inspection experience. Tom is working from our Muskegon office, where he is providing construction engineering services for MDOT projects.

Patrick Matlock joined P&N as a construction observer working from our Muskegon office. He has a Bachelor's degree in Civil Engineering from Michigan Technological University and a Bachelor's degree in Surveying Engineering from Ferris State University. Patrick was in the Navy from 1998 to 2006, where he served as a construction electrician.

Ryan DeGroot, who previously worked for P&N as an intern, is now working from our Grand Rapids office. After graduating in May from Calvin College with a Bachelor of Science degree in Civil Engineering, Ryan will work as an engineer-in-training on our municipal engineering team.

Will Thies, who previously worked for P&N as an intern, is now working from our Grand Rapids office. Following his May graduation from Calvin College, with a Bachelor of Science degree in Civil Engineering, he will work as an engineer-in-training on our process engineering team.

Prein&Newhof specializes in:

- Civil & Environmental Engineering
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