



Creative thinking to the rescue in Ottawa County

Prein&Newhof
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New sewer avoids ramp construction and meets MDOT's schedule.

The new I-196 ramp in Jenison, MI may be a blessing to residents now that it is open, but it was a hassle for the wastewater system.

The new ramp crosses directly over the Rush Creek Trunk Sewer, which connects south-east Ottawa County with the Grandville Wastewater Plant. The existing sewer was not designed to handle the ramp's weight, and was becoming too small for the county's needs – but Ottawa County only had a short time to fix it before MDOT began constructing the new ramp in spring 2007.

Finding a Better Way

Late in 2006, the Ottawa County Road Commission (OCRC) turned to its 30-year relationship with Prein&Newhof to find a solution.

The initial plan was to replace all the sewer along Baldwin Street and under the proposed ramp, or to construct a parallel sewer beside it. Unfortunately, this would take far too long and would hold up MDOT's construction plans.

"We had to step back and find another option," said P&N Project Manager Nathan Vriesman, P.E.

The P&N team came up with a completely new route for a relief sewer (shown in green), so none of the sewer in MDOT's 2007 construction area had to be replaced. This also gave the OCRC an extra year to replace the pipe underneath the planned ramp (shown in red).

This allowed MDOT to begin on the Baldwin Street portion of their work immediately, as no sewer work needed to be done there.

"This plan bought us time to do the design and construction right," said Vriesman. "The new section was designed in 2007 and constructed in early spring of 2008. By the time MDOT started on the ramp in May 2008, we were long gone."

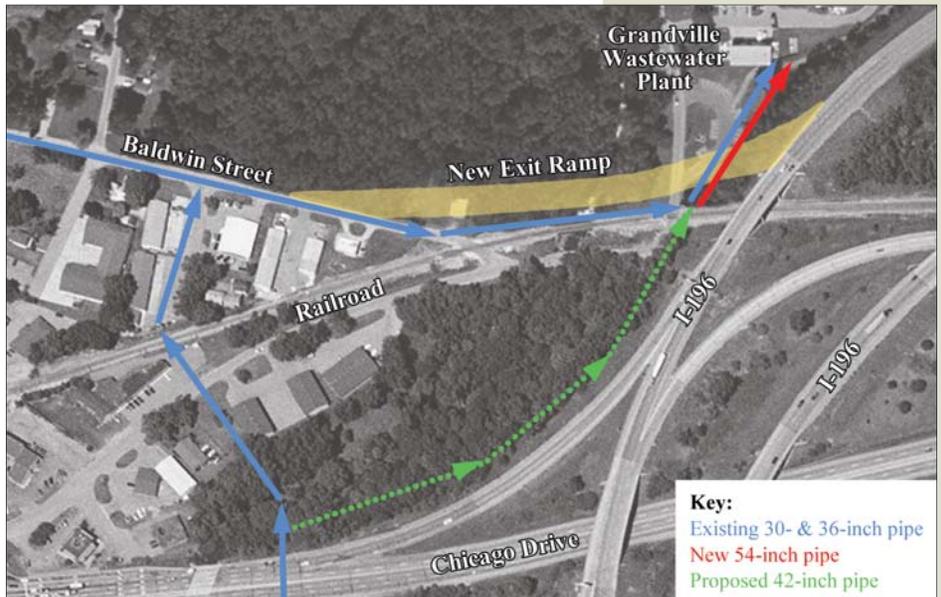
Gull Lake invests in the future, residents start to buy in

The small community around Sherman Lake in Kalamazoo County has considered adding a sewer system every 5-10 years since the 1980s, but always decided that it was too expensive. Finally, the ideal opportunity presented itself.

In 2005, the wastewater system at the YMCA Adventure Center on Sherman Lake was reaching its capacity. Rather than spending over \$500,000 to upgrade this system, the YMCA asked the Gull Lake Sewer & Water Authority (GLSWA) if it could connect to the nearby Gull Lake wastewater system – and offered to pay for the connection.

GLSWA and Prein&Newhof (the Authority's engineer) saw an opportunity to serve Sherman Lake and protect the environment.

"If a septic system near a lake leaks, it can cause huge environmental damage," said P&N Project Manager Tom Wheat, P.E. "Sewers around



Thinking Ahead

The pipe along Baldwin Street will stay in service, and the County can construct the relief sewer whenever the additional capacity becomes necessary.

Prein&Newhof's existing relationship with Ottawa County and area townships allowed the P&N team quick access to record plans, maps, and flow records to efficiently analyze the existing conditions.

P&N specified a 54-inch Vylon PVC pipe for the new sewer and a 42-inch PVC pipe for the proposed relief sewer. At this size, it will be able to serve the entire area watershed.

"Because of this project, Ottawa County is prepared," said Vriesman. "With the new route, we had time for careful planning but we didn't slow down MDOT."

Sherman Lake would protect the lake, and make the area more attractive to new residents."

The pipeline to the YMCA camp was planned along Gull Lake's northern edge, and would serve the residents there. To reach the rest of Sherman Lake's residents, the GLSWA contributed an additional \$285,000 to loop the pipeline along the lake's southern shore. Prein&Newhof designed and oversaw construction for the entire system.

The P&N team chose a low-pressure grinder system, because it worked the best in the area's varying topography. The pipeline was installed by directional drilling, causing the least amount of disruption for the residents.

When residents connect, they will have a grinder pump installed on their property to pump their wastewater into the system. To date, about 25 residents have connected.

"Gull Lake thought ahead and was willing to invest," said Wheat. "So the system is in place whenever residents choose to connect."

"It was a tough situation, but P&N came up with a creative plan that got us the capacity we needed and met MDOT's tight schedule."

Patrick Staskiewicz,
Public Utilities Engineer,
Ottawa County Road Comm.

"P&N is very responsive to what we're looking for, both in the field and on paper. They have great attention to detail."

Rich Pierson, Director, Gull
Lake Sewer & Water Authority



Ed Dempsey brings new GIS skills to P&N



Prein&Newhof recently expanded its Geographic Information Systems (GIS) capabilities by adding **Edward Dempsey, GISP**, to its staff.

Ed serves as a GIS Specialist in P&N's Grand Rapids Office.

Ed has nearly 10 years of experience in the GIS industry. He specializes in making custom GIS applications that allow untrained people to use complicated GIS features easily. Ed's past GIS projects include:

- Finding the ideal locations for industrial parks and buildings.
- Plotting and analyzing crime incidents over multiple jurisdictions.
- Mapping hurricanes and their potential impacts.
- Identifying the effects of urban and suburban development on water quality.

Ed has created GIS applications for federal, state, county, and local governments. Most recently, he was a lead GIS programmer at the National Oceanic and Atmospheric Admin. (NOAA) Coastal Services Center. He has also been a GIS programmer and researcher for the South Carolina Department of Commerce and the Greater Atlanta Data Center at Kennesaw State University.

Ed has a Bachelor of Arts degree in Geography from the State University of New York at Geneseo, and a Masters degree in City and Regional Planning from Clemson University. He was certified as a GIS Professional (GISP) in 2004 by the GIS Certification Institute.

Frizzo certified as GIS Professional



P&N congratulates **Daniel Frizzo, GISP**, who was recently certified as a Geographic Information Systems Professional (GISP) by the GIS Certification Institute. Dan manages the CADD and GIS teams in

P&N's Kalamazoo Office. He holds an Associate of Applied Science in Civil Engineering Technology from Michigan Technological University. He has been with P&N for 11 years.

Tom J. Newhof hired as P&N Business Manager



Prein&Newhof welcomes **Thomas J. Newhof** as its new Business Manager.

Tom has nearly 20 years of experience in the commercial banking industry, where his responsibilities included

originating, underwriting, closing, and servicing commercial real estate loans; mentoring and advising junior associates; and customer service.

His responsibilities at Prein&Newhof include management of Accounting, Human Resources, and other support services.

Tom holds a Masters Degree in Business Administration (MBA) from Michigan State University and a Bachelor of Science Degree in Accounting from Calvin College.

Grants & Loans Guide released

Prein&Newhof recently updated and republished its free financing reference guide for Michigan communities. The guide includes information on 16 different funding programs – including current contact information – and an extensive list of print and online resources.

Grants & Loans 2008/09 alerts community leaders to a wide range of funding opportunities they may not be aware of, and gives them tools to pursue funding for their communities.

To obtain a free copy of the guide, contact James R. Hegarty, P.E., at (616) 364-8491 or jhegarty@preinnewhof.com.

Muskegon runway recognized for paving excellence

The Asphalt Pavement Association of Michigan recognized the Muskegon County Airport with its Award of Merit for the project to shift and extend Muskegon County's Runway 14/32.

The runway was lengthened 1,100 feet to improve safety and winter operations. P&N also re-designed and improved various taxiways around the runway.

The project completed a 10-year program to improve capacity and safety at the airport. Other parts of this project included relocating Grand Haven Road and improving the navigation system for Runway 14/32.

Prein&Newhof specializes in civil and environmental engineering, environmental consulting, surveying, GIS, and laboratory testing.

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- Take Responsibility
- Build Expertise
- Build Our Community

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