



BOLTON & MENK, INC.

By Design

Spring 2004
Volume XIV • Number 1

A variety of engineering services ease project construction

Bridging the Transition, Design to Construction

The work of engineering begins with design and continues through the construction phase of every utility, transportation, water and wastewater treatment project. During the design phase, project plans and specifications are shaped in concert with client goals, regulatory comments, analysis of alternates and the outcome of many public meetings. The goal is always to meet the needs of the client and end user.

Once a project is bid, a successful contractor begins the process of interpreting the construction documents and building the project. Regardless of the quality and completeness of the plans, the contractor almost always has a somewhat different perspective on how to construct and schedule the project. Often the contractor brings suggestions to the project team that improve both process and end results. Sometimes, however, the contractor's proposal may conflict with project goals.



To ease the construction phase, Bolton & Menk assists clients with these engineering services:

Contract Administration

Basic construction contract administration includes assistance with pre-construction meetings, review of contractor's payment requests and related periodic site visits, assistance with funding agency paper work, and project closeout and final acceptance. On complex projects, the engineer reviews shop drawings for conformance with design objectives and requirements.

Construction Staking

Engineering survey staff establish reference points for control of construction. Project complexity determines the amount of surveying needed. Work is coordinated with design documents and in many cases, sur-

vey control can be obtained directly from the digital plan files.

Experienced engineering surveyors can help coordinate the elevation and location of key design features such as hydrants and catch basins through the ever-changing landscape of construction.

Construction Observation

A construction observer is a critical link between the contractor and owner during the construction phase of a project. The construction observer has two primary responsibilities: 1) helping to ensure the owner's original project goals are met by monitoring the contractor's progress and performance; and 2) serving as the focal point for communication among the owner,

INSIDE

News & Updates

Success Stories

Willmar Moves
into New Office



By Design

VOLUME XIV • NUMBER 1

PUBLISHED QUARTERLY BY
BOLTON & MENK, INC.

EDITOR: Nancy Thorkelson
PRODUCTION: Envision:
Design that Works, Inc.

OFFICES:
MANKATO, MINNESOTA
1960 Premier Drive
Mankato, MN 56001-5900
Phone (507) 625-4171
Fax (507) 625-4177

BURNSVILLE, MINNESOTA
1515 East Highway 13
Burnsville, MN 55337-2917
Phone (952) 890-0509
Fax (952) 890-8065

FAIRMONT, MINNESOTA
219 North Main
Fairmont, MN 56031-1833
Phone (507) 238-4738
Fax (507) 238-4732

WILLMAR, MINNESOTA
2040 Highway 12 East
Willmar, MN 56201-5818
Phone (320) 231-3956
Fax (320) 231-9710

SLEEPY EYE, MINNESOTA
140 First Avenue North
P.O. Box 434
Sleepy Eye, MN 56085-0434
Phone (507) 794-5541
Fax (507) 794-5542

CHASKA, MINNESOTA
1107 Hazeltine Boulevard, Suite 480
Chaska, MN 55318-1008
Phone (952) 448-8838
Fax (952) 448-8805

AMES, IOWA
2730 Ford St.
Ames, IA 50010-0668
Phone (515) 233-6100
Fax (515) 233-4430

*Bolton & Menk is an
affirmative action employer.*

www.bolton-menk.com



Kreg Schmidt Named Chaska Office Manager

It is our pleasure to announce to you that Kreg Schmidt has been promoted to Manager of the Chaska Office. As the Office Manager, Kreg is responsible for day-to-day management of the office as well as for developing staff and maintaining client relations. Kreg will also continue project management responsibilities with his current clients.

Bill Engelhardt has been named Principal-In-Charge of Inter-Division Project Development. Bill's new responsibilities include identifying, developing, and securing projects with multi-discipline scope.

With Kreg Schmidt leading our Chaska office, we are well positioned to respond to the dynamic needs of the Chaska office service area and continue to provide high quality civil and municipal engineering services.



Sorenson Joins the Transportation Department

In order to meet the growing traffic engineering concerns of our clients, and to expand our services to new clients, Bolton & Menk's Transportation Department has added Pete Sorenson as a Traffic Engineering Specialist. We are excited to have Pete on board, as he brings over 37 years of experience in the traffic engineering field.

Prior to joining Bolton & Menk, Pete was the Manager of the Traffic Engineering Section for Dakota County, one of the fastest growing metropolitan counties in the Midwest. He served Dakota County for 23 years. Prior to that, he was with Mn/DOT for 14 years working in Traffic Engineering and the Traffic Management Center in Minneapolis.

2 Cooperation Critical

Minnesota Trunk Highway 99 was reconstructed from Trunk Highway 14 to County Road 72 through the City of Nicollet during the 2002 and 2003 construction seasons. This was a \$2.2 million Cooperative Agreement project

3 Dynamic Change

The City of Saint Peter, MN contracted with Bolton & Menk to install a new sewer interceptor to reduce inflow and infiltration (water that enters sewer systems through deteriorated pipes). St. Peter's old sewer interceptor was threatened by the Minnesota River's meandering path and rising flood plain. Rising water levels in the river were a significant contributor to the inflow and infiltration problem.

An 1800-foot tunnel was blasted in a narrow area between Highway 169 and the river for a new sewer interceptor. While explosives ripped through the solid sandstone bedrock 27 feet beneath a historic residential neighborhood, seismic measurements showed that the blasting was less noticeable to nearby residents than the large machinery operating outside their homes.

Completion of the tunnel involved tunneling, de-watering, pipe placement and grouting techniques. Another complex challenge: the city had to maintain the existing sanitary flow of 3,000 gallons per minute while constructing the new system. Plus, flow had to be directed to both the existing lift station and to the city's new wastewater treatment plant while the new plant was being tested. A unique blend of engineering skills and tactics were required.

This project proved that major infrastructure improvements can be made in the heart of a city with minimal impact to residents. Great efforts were made to finish the project within one year and to minimize inconvenient street detours. Phased construction limited the number of closed roads at any one time.

3 PROJECTS,

3 construction phase success stories

1 Multi-Project Management

In 2003, the City of Fridley, MN entered the construction phase of projects ranging from neighborhood street reconstruction to watermain and storm sewer construction to parking expansion in a city park. Bolton & Menk was asked to take on construction management and observation responsibilities.

Bolton & Menk worked closely with the City to coordinate projects that were spread throughout the community. Project documentation was delivered weekly. On-site field engineering services addressed conflicts and project issues. Construction observers talked with residents daily, keeping them abreast of project phases and answering questions in a timely manner.

The result was a major infrastructure improvement for the City of Fridley with minimal public disruption — a true success.

between the City of Nicollet and the Minnesota Department of Transportation. Bolton & Menk, Inc. was retained by the City of Nicollet to perform design and construction engineering services.

The one-mile reconstruction project included grading, curb & gutter, sidewalk, bituminous pavement and detention pond construction. In addition, all sanitary sewer, watermain and storm sewer were reconstructed within project limits. The project was recently awarded a Merit Award for Construction Excellence from the Minnesota Department of Transportation.

Continued from page 1 — **Bridging the Transition, Design to Construction**

contractor, design team and others affected by the construction, including residents. Although the observer will not and cannot supervise the contractor (under terms of standard industry contracts), effective construction observation contributes significantly to overall project success.

Poor communication is one of the leading causes of construction disputes and complaints. Effective construction observation can improve the potential for a successful project, particularly when combined with regular construction meetings and a formal program for communication with

affected property owners.

Bolton & Menk routinely provides a full range of construction phase engineering services for many of our design projects. We also routinely perform construction observation and construction staking for projects designed by others such as: city engineering staff, developers, consultants and counties. For information regarding construction phase services, please contact any of our office managers or your contact engineer with Bolton & Menk.

Willmar Moves to New Office



Please note the new address of our Willmar office:
2040 Highway 12 East
Willmar, MN 56201-5818

Our phone and fax have remained the same.
Phone: (320) 231-3956
Fax: (320) 231-9710

Thanks to the confidence and trust of our valued clients, Bolton & Menk continues to grow and expand our staff. This growth in personnel, combined with on-going expansion of services to better meet our clients' needs, has led to our moving in late January into a new 7,000 square-foot building in Willmar.

Watch for an open house announcement this summer. We hope to see you there!



BOLTON & MENK, INC.

By Design

Spring 2004
Volume XIV • Number 1

Bolton & Menk, Inc.
1960 Premier Drive
Mankato, MN 56001-5900

PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE

PAID

Owatonna, MN
Permit No. 110