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BY DESIGN

Streetscaping Project Proves Business Can Flourish During Downtown Renovation

Renovation comes with the price of inconvenience. It's a given, but can be especially daunting when a city considers renovation of the downtown business district. Though the mayhem of construction is temporary, its effects are naturally feared to affect business profitability and even survival.

New Ulm, Minnesota knows these concerns first-hand. For several decades the city investigated and worked toward a new look for its downtown business district. When construction began on April 1 of this year, eight months of heavy disturbance to downtown traffic stretched ahead. Extensive surface beautification and the upgrading of all underground services meant removal and replacement of every paved surface in the district.



What the community enthusiastically anticipates is a changed environment. New curb and gutter, "knuckles" in curbing to create space for landscaping, brick sidewalk inlays, new streetlights, planters and benches will create an inviting atmosphere for pedestrians and add to the city's "old world" flavor. New sewer and water mains, new sewer and water services to each building, and an upgraded steam heating system are less visible but will increase efficiency and service to property owners.

New Ulm City Engineer Steve Koehler says the project is going exceptionally well, "Any time you dig a hole of this magnitude it's an adventure. This is an immensely complicated job."

Mike Schmitz of Bolton and Menk is the on-site construction representative for the \$2.84 million

project. He believes the success of the project is built on careful planning by the City of New Ulm, New Ulm's Chamber of

Commerce, and business owners. "We're working closely with owners to establish alternate access and parking for their businesses during construction, and weekly meetings with contractors to give them an understanding of the project," notes Schmitz.

"Contractors are working on only two blocks at a

time, sidewalks are left intact as long as possible and temporary bridges to front entrances are placed when sidewalks must be removed."

Efforts to keep people coming downtown have been spearheaded by New Ulm's Chamber of Commerce. Director Jeanine McKenna explains, "Our efforts have taken two main directions, communication and promotions. Weekly meetings with contractors have given



New Ulm's Glockenspiel, a downtown landmark

(Streetscaping Project, continued on page 4)

Trenchless Technologies are Changing the Process of Sewer Repair and Replacement



Trenchless Technology is becoming an increasingly hot topic for every community.

For many communities, this technology is a viable option for sewer repairs and replacement.

In formulating a plan for a community, it is recommended that the plan begin with diagnosing the sewer system via sewer televising. Sewer televising is a process in which a video camera is either "pulled" through the sewer or a camera is mounted on crawler units. The camera is connected to the surface, where truck-mounted recording equipment creates a video tape. Sewer televising allows inspection for the condition and evaluation of the sewer system. Once the sewer televising is complete, the inspection tapes are reviewed to determine the condition of the sewer system.

The quality of the televising greatly depends on the skill, knowledge, interest, and dedication of the camera operator. In our experience, some firms provide a technician with limited educational training, while others staff the survey with experienced, professional engineers.

Although the televising firm does provide a detailed report, we at BMI have developed an objective rating system which is used to standardize the observations from one year to another. The system rates the condition of the sewer system in several categories and the information is placed in a master database system for a city. The rating system was developed to rate the degree of deterioration on several key factors which reflect the sewer's ability to operate effectively and be maintained. The database is sorted and the highest priority repairs can then be determined. Once the master database is developed and the highest priority repairs are identified, a community is

then presented with several options.

The traditional method of repair was to dig up the street and make the repairs either in individual spot repairs or replace the entire pipe between manholes. This option may be expensive and, in some cases, almost impossible. Further, it will most always disrupt business, interfere with traffic flow and damage the integrity of the pavement surface. An alternate method of repair may be to use trenchless technology.

Trenchless technology includes several methods and materials depending on the specifics of the situation. They all involve the use of remote controlled equipment which can travel through the sewer to affect the repair or replacement. Television cameras travel with the equipment, and the operator on the surface continually monitors and directs the work.

One method of trenchless technology used to "replace" sewers is called "cured-in-place pipe" (CIPP). Some people may refer to this process as

*Insituform*¹ but several other companies are now offering similar products in Minnesota. CIPP is an inversion process in which a felt sock with a resin material is threaded through a section of sewer pipe and then molded under high pressure to the inside of the pipe. Once the resin is "cured" or hardened, a city has a new pipe inside the old pipe. Any size difference is more than offset by the increased smoothness and lack of joints in the new pipe.

A remote-controlled robot with a cutting saw is then used to reopen service lines. The CIPP method also has the ability to line the individual sewer service from the main line back up to a house without requiring the yard to be dug up.

A second method is called "Fold and Form" technology. Many people may know this method as *U-Liner*² or *Nu Pipe*³ but there are other firms offering similar services and products in this

(Trenchless Technologies, continued on page 3)

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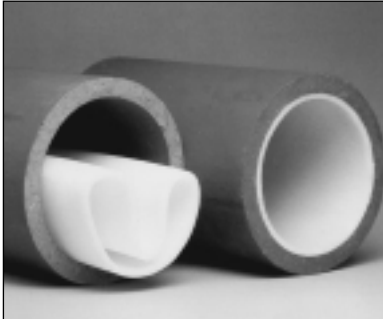
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*(Trenchless Technologies,
continued from page 2)*

area. The method involves folding a plastic pipe (either polyethylene or PVC) into a "U" shape. The pipe is



The U-Liner enters the host pipe folded (l.) & is pressurized to become round (r.) .

threaded into the existing pipe in the folded shape, then pressurized with high temperature steam until it assumes its round shape against the walls of the original pipe. Individual service connections are then cut out using a robot, as in the CIPP method. Again as in CIPP, any reduction in size is offset by increased smoothness and lack of joints.

CIPP and Fold and Form are both useful when the size of the original

pipe is adequate to service the area. However, another method is available if a larger pipe size is needed. This method is called "Pipe Bursting". The process of pipe bursting is uniquely suited to the need for increased pipe size in a growing community. The process includes pulling an expanding head through the sewer line with a winch and cable. The head "bursts" the old pipe and pushes the pieces back into the soil. As this is done, a new, larger sized pipe is fed right behind the bursting head and pulled into place. A disadvantage to this method is the individual service connections are shattered along with the original pipe, and each must be dug up and reconnected.

As in all goods and services on the market, there are appropriate uses of each of these technologies and there are situations where a given product or method does not apply. Further, there may be products on the market which do not meet the quality standards a community has come to expect. The advice of a qualified consulting engineer is essential in designing a solution which meets the needs of the community and doesn't waste

resources. It is recommended that every community should establish a policy and a master plan for sewer repairs and replacements. Then,



Pulled through the damaged pipe, the U-Liner is a safe & economical.

each repair or replacement can be evaluated for the method that best fits community needs and the particular situation.

¹ *Insituform* is a trademark product name marketed by Insituform Technologies, Inc.

² *U-Liner* is a trademark product name marketed by Visu-Sewer Clean & Seal, Inc.

³ *Nu Pipe* is a trademark product name marketed by Insituform Technologies, Inc.

Just for Fun...

Bolton & Menk Surveys the Summer's New Attractions



"Wild Thing" at Valleyfair

Valleyfair's newest ride opened May 11! The ten million dollar "Wild Thing" reaches speeds of over 74 miles per hour, with the largest hill dropping 196 feet (almost 20 stories). Bolton & Menk assisted with the construction surveying for the project.



Underwater World at Mall of America

Underwater World at Mall of America is the midwest's first interactive and multi-sensory marine science center. Visitors will move through a Minnesota dawn, below the surface of a lake, and into the Gulf of Mexico — all under 1.2 million gallons of fresh and salt water. BMI assisted with the construction and surveying for this project. Scheduled opening date is June 14.

*(Streetscaping Project,
continued from page 1)*

business owners a clear understanding of the project's progress, the New Ulm Journal publishes a weekly map showing where construction is located and how to best access businesses, and block captains throughout the community have distributed a weekly newsletter with similar information and an article provided by Bolton and Menk. Monthly promotions take place in various downtown parking lots to remind people of the availability of parking. They've included a barbecue, Mother's Day garden party, and a children's carnival."

Downtown business owners are enthused about the results of the project and report very little effect on business volume during construction. Donna Lambrecht of Lambrecht's Luggage and Gifts



*Sewer and water main replacement in
New Ulm.*

commends the crews: "Work is progressing beautifully. The crews are efficient and they've communicated well with us. They're working as hard as they can and have made customer travel as easy as possible. The result is that my numbers are as good or slightly better than they were a year ago."

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