



ENGINEERING NEWS

SIoux FALLS, SOUTH DAKOTA

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MISSION STATEMENT

Engineering Division

To enhance the economic well-being and quality of life in Sioux Falls by working with both public and private partners to provide for a safe, cost-effective, and efficient public infrastructure system.

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Engineering News

is published quarterly in January, April, July, and October. Send articles and comments to fuller@siouxfalls.org

Welcome

With the construction season in full swing, I want to thank everyone for their efforts in getting the projects started and progressing smoothly.

I am pleased to announce we have filled our Engineering Technician vacancy. Nick Traupel will begin work on Monday, July 13, as a member of the subdivision inspection

team. Nick graduated from Southeast Technical Institute in 2000 and has been employed with the City of Mitchell, South Dakota, for the past eight years. Nick has experience in AutoCAD, GPS, surveying, GIS, and construction inspection and testing. Please join me in welcoming him to Sioux Falls.

Have a safe and happy Fourth of July!

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Central Main Interceptor Replacement Project Update

The Central Main Interceptor (CMI) is the major sanitary sewer artery in the collections system and conveys approximately one-half the City's sewage. The CMI begins at the Tuthill Lift Station in the south central part of the city and extends north and parallels the Big Sioux River to the south side of the spillway. The Central Main was originally

constructed in 1968 and consisted of 36-, 42-, and 48-inch coal tar epoxy-coated reinforced concrete pipe (RCP). The pipe is corroding significantly along many sections of the line and needs to be upsized. The current replacement project consists of several phases in which the existing pipe will be replaced with a more corrosion-resistant material.

The replacement of the CMI is divided into three phases. Phase 1 was completed in 1994 and included the replacement of pipe in and north of Falls Park. The original pipe was replaced with 36-inch polyvinyl chloride (PVC) pipe and 60-inch ductile iron (DI) pipe. Phase 2 was completed during the Falls Park restoration project and the Phillips to



Overall view of site construction and bypass pumping piping for Segment 1 construction



Central Main Interceptor Replacement Project Update (continued)

the Falls project (approximately 1,700 feet). A 700-foot portion of Phase 3—segment 3—was constructed in 2007 near Cherapa Place, to coordinate construction activities with the new building and riverfront improvements.

Phase 3 is divided into six project segments and consists of approximately 19,000 feet of new 54- and 60-inch pipe. Segment 1 was completed in the spring of 2009 by Minger Construction. Segment 1 started north of Falls Park and ended at the spillway. This project replaced the corroded 48-inch concrete pipe with 60-inch Hobas pipe. The new Hobas pipe is resistant to the corrosion from the hydrogen sulfide gases that deteriorated the concrete pipe. The 48-inch pipe under the spillway was also rehabilitated using cured-in-place pipe that was constructed by Insituform Technologies. This special “no dig” process allowed for the replacement of the pipe without disrupting the spillway, a significant cost savings. The cured-in-place pipe construction is a process of lining the existing pipe with an initially flexible pipe that is cured by hot water into a rigid pipe. Extensive bypass pumping was used on segment 1 and will be used on future segments.

The July 20 edition of Construction Bulletin Magazine will contain an article discussing this year’s project. Construction Bulletin Magazine is published weekly by Read Publishing in Highland Ranch, Colorado. The magazine contains regional bid advertisements, bid results, and project articles.

HDR Engineering is currently designing segments 2, 3, and 4 of Phase 3 of the CMI project. These projects are scheduled to be constructed in 2010. Segment 2 involves the replacement of the 48-inch pipe under the railroad at the south end of Falls Park. Unique challenges with this project include bedrock removal and daily train traffic.

Segment 3 begins at the south end of Falls Park with a river crossing and extends to the 6th Street bridge.

Segment 4 is from approximately 8th Street to 11th Street. Unique challenges with this segment include working close to the Big Sioux

River and several excavations under downtown bridges with low head clearance.

All of segments 3, 4, 5, and 6 involve significant bike trail disruption and closures. An additional benefit of the project is that approximately 2.5 miles of new bike trail will be reinstalled after the pipe installation. The design team is also coordinating with the annual Sioux Falls Half-Marathon route to insure that new temporary routes are available for the event. The City will work to reduce the impacts to the park areas along the project.

The schedule and footage for all Phase 3 segments is listed in Table 1.

Table 1

Phase 3 Segments	Proposed Construction Dates	Approximate Footage
1. Spillway to NSP Substation	2009	1,427
2. Railroad Crossing at Falls Park	2010	176
3. Sioux Steel to 6th Street	2010	1,560
4. 8th Street to 11th Street	2010	2,035
5. 11th Street to Cherry Rock Avenue	2012	5,825
6. Cherry Rock Avenue to Tuthill Pump Station	2013	10,102
	Estimated Total Footage	21,125

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57th Street Project Update

The construction of 57th Street from Cliff Avenue to Sycamore Avenue is nearing completion. The contractor, T&R Contracting, estimates completion near the end of June. Remaining work items include grading and cleanup work in the boulevard and median areas, the planting of 250 trees,

permanent signage installation, and pavement striping.

The project includes constructing a four-lane divided concrete street from Ash Grove Avenue to Sycamore Avenue. The irrigated medians have stamped and colored concrete, aesthetic plantings, and native trees. An overpass was

constructed over the BNSF railroad as part of the project to eliminate an at-grade railroad crossing.

In February, the project was awarded the 2008 Large Project of the Year Award presented by the Eastern Branch of the South Dakota Section of the

American Society of Civil Engineers.

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Phillips Avenue Street Reconstruction Completed Early

Phillips Avenue between 10th Street and 12th Street reopened to traffic on May 28, 2009—over two weeks ahead of schedule. Mayor Dave Munson and Downtown Sioux Falls hosted a ribbon-cutting ceremony on May 28 in front of the Shriver Building. A red ribbon was strung along the entire two blocks of the project for each business to cut at the appointed time. After the ribbon was cut, the final barricades were removed, and the trolley led the way down the new and improved Phillips Avenue.

T&R Contracting started the project on March 16, 2009, with a week of almost perfect weather. They used this early momentum, along with the motivation of a \$10,000-per-day incentive for each day that the project was substantially completed prior to June 12, to substantially complete the project over two weeks early. This early completion earned the contractor a \$150,000 incentive payment.

There was still a significant amount of work to do after the street was reopened on May 28. This work included installing some of the final streetscape amenities, signing, striping, and placing the freestanding planters. The contractor was able to complete this work by June 17 and thus was able to earn an additional \$15,000 incentive payment for fully completing the project 15 days before the July 3 final completion date.

The Phillips Avenue reconstruction project encountered several challenges throughout the course of the project. The project team was able to work through these challenges by forging a partnership with the local businesses and organizations representing the downtown area. Together, we were able to accomplish our common goal of making Phillips Avenue the centerpiece of an ever-improving downtown Sioux Falls.

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Eplans Update

The Engineering Division began distributing all formally bid plans and specifications electronically in PDF format on the City's website earlier this year. The feedback from the contracting community has been very positive, and we are now ready to begin the next phase of implementation. For all projects advertised after July 1, 2009, the Engineering Division will no longer distribute paper copies of the plans and specifications

to contractors and suppliers. All bid documents will need to be downloaded from the City's website with the following exception: One paper copy of the bid documents will be distributed to the Sioux Falls Builders Exchange and the Plains Builder Exchange. The website where the bid documents can be downloaded is <http://eplans.siouxfalls.org>.

Shannon VerHey, P.E.
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Qualifying Utility Excise Tax Update

The Department of Revenue and Regulation has instituted a new test to determine whether realty improvement contracts for municipalities will be subject to the regular Contractor's Excise Tax or the Alternate Contractor's Excise Tax. Effective June 1, 2009, municipalities will be able to use a 50 percent primary purpose test to determine whether a mixed realty improvement

contract will be subject to the Contractor's Excise Tax of SDCL 10-46A or the Alternative Contractor's Excise Tax of SDCL 10-46B. Refer to the June 2009 special excise tax information bulletin located at the following link for detailed information: <http://www.state.sd.us/drr2/business/cet/0609bulletin.pdf>.





EMPLOYEE SPOTLIGHT

Shannon Ausen

Place of Birth: Shannon was born and raised on a farm in God’s country, Beaver Creek, Minnesota.

Job Title: Civil Engineer, P.E.

Job Functions: Shannon has dedicated her career to improving traffic flow in and around the city of Sioux Falls through access management, transportation planning, long-range corridor studies, and promoting good land development practices. She thinks medians are awesome!



Education/Background: Shannon graduated from Hills Beaver Creek High School and went on to South Dakota State University in Brookings, South Dakota, and graduated with a Bachelor of Science, Civil Engineering Degree. She was hired as a summer intern for the City of Sioux Falls Engineering survey crew in May 1989 and continued to work summers and also during the school year from 1989 through 1991. In the summer of 1991, Shannon changed direction slightly and worked as an intern for the Minnesota Department of Transportation in Marshall, Minnesota.

How Long With the City of Sioux Falls Engineering Department: Shannon has been with the City of Sioux Falls full time since June 1992.

Personal Interest/Hobbies: Shannon spends most of her time with her husband Al, who also works for the City of Sioux Falls in the Community Development Department, and their new baby girl, Reese, who has certainly changed her parents’ lives. Shannon’s free time is mainly spent outdoors either in her yard or at her parent’s farm in Minnesota. She enjoys fishing, mowing the lawn, golfing, hanging out with her nieces and nephews, and motorcycle and horseback riding. Al and Shannon do a lot of traveling—or did a lot of traveling before child. She is a Bryan Adams fan and spends a lot of time watching the Minnesota Twins and the Weather Channel.

Employee Updates

2009 Service Awards

- Norma Peters, 15 years in July
- Shannon VerHey, 10 years in August

ANNUAL CONSULTANT MEETING

Tuesday, September 22, 2009, 8:30 a.m. to 12 noon

**Morningside Community Center
2400 South Bahnson Avenue**

2009 City Engineering Tentative Bid Dates

Project Name	Estimated Bid Date
Jefferson Park Redevelopment	7/02/09
Pavilion Maintenance and Trash Compactor Room and Parking Structure	7/09/09
Concrete Pavement Restoration—Alley near 10th St. and Phillips Ave.	7/09/09
Landfill Gas Extraction Pre-subtitle D Area	7/09/09
Detention Basin Retrofit—Aspen Hills and Sertoma Hills	7/09/09
Terrace Park Shoreline Stabilization	7/16/09
Water Reclamation Plant Roof Replacement	7/16/09
Arena Roof Replacement and Rigging Upgrades	7/22/09
69th Street—Connie Avenue to Tallgrass Avenue	7/23/09
Cherry Rock Park Restroom	7/23/09
2009 Contract Overlay Area	7/30/09
69th Street—Charger Avenue to 1,091’ East of Southeastern Avenue	7/30/09
Convert Vertical Well No. 62 to Horizontal Collector Well	8/20/09
I-90 and Marion Road Interchange	9/02/09
Water Reclamation Plant Lime Feed System	9/10/09

Note: Bid dates are tentative and subject to change. Contractors should verify the bid dates by reviewing the Notice to Bidders on the City’s website at www.siouxfalls.org/Business/ntb.aspx. Not all of the City’s projects are listed.

SD100 Project Continues

The first segment of the future South Dakota Highway 100, otherwise known as the East Side Corridor, was constructed in 2008. This segment is located on Powder House Road between Arrowhead Parkway and 26th Street, and is in the final stages of construction. This segment consists of a four-lane concrete street section with 12’ shoulders, curb and gutter, a 32’ landscaped median, and a 10’ asphalt bike path. T&R Contracting is working on the splash guards in the median and the asphalt bike trail on the east side of the road. Final completion on this segment is expected by mid-summer.

2009 will see the next segment of the future SD100 constructed. This segment is on Powder House Road between Arrowhead Parkway and Madison Street, just east of Menards. The DOT will be constructing the west half of the ultimate four-lane section, with the east half to be constructed at some point in the future when traffic warrants and/or funding is available. 2009-2010 construction will consist of grading, utility relocation, and construction of a 36’ wide concrete street with curb and gutter. The intersection at Sixth Street will be fully constructed to its ultimate extents, and temporary asphalt tie-ins will be constructed at Arrowhead Parkway and Madison Street. Pending successful right-of-way negotiations, this project is expected to bid this fall. Some project grading and utility relocation is expected to occur in the fall of 2009, with the remaining grading and paving to occur in 2010.

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