



# City of Grand Island

Tuesday, May 14, 2013

Council Session

## Item I-3

**#2013-147 - Consideration of Approving Bid Award for North  
Interceptor - Phase I; Project No. 2012-S-6**

Staff Contact: John Collins, P.E. - Public Works Director

# **Council Agenda Memo**

**From:** Marvin Strong PE, Wastewater Treatment Plant Engineer

**Meeting:** May 14, 2013

**Subject:** Approving Award for the Construction of Project No. 2012-S-6;  
North Interceptor Phase I at the Wastewater Treatment Plant

**Item #'s:** I-3

**Presenter(s):** John Collins PE, Public Works Director  
Terry Brown PE, Manager of Engineering Services  
Marvin Strong PE, Wastewater Plant Engineer

## **Background**

Public Works Staff in conjunction with the design engineer, Black & Veatch of Kansas City, Missouri have jointly developed multi-year replacement planning stages for the City of Grand Island's large diameter gravity sanitary sewer interceptor network. The current planned interceptor, entitled the "North Interceptor" will replace aged gravity sanitary sewer, reduce or eliminate current sewer pumping station(s), provide additional capacity for existing, and new growth areas of Grand Island.

The new North Interceptor gravity sewer interceptor route was developed to incorporate, and partner with other utilities for the Capital Avenue Widening Project, and the new Headworks Pumping Station Project at the Waste Water Treatment Plant.

A phased approach of constructing the North Interceptor was developed as follows:

- Phase I - Wastewater Treatment Plant (WWTP) to 7<sup>th</sup> Street / Skypark Road
- Phase II (Part A) - 7<sup>th</sup> Street / Skypark Road to Broadwell Avenue
- Phase II (Part B) - Broadwell Avenue to Webb Road
- Phase II (Part C) - Webb Road to Diers Avenue (Lift Station No. 19)

## Discussion

The Wastewater Division of the Public Works Department advertised for bids for North Interceptor Phase I (Project 2012-S-6) on March 26, 2013 and opened bids on April 23, 2013.

Phase I Construction Highlights include:

- Installation of approximately 7,100 linear feet of 54-inch diameter sanitary sewer and associated manholes. Approximately 1,250 linear feet of the 7,100 linear feet will require removal and replacement of the City's existing 30-inch diameter sanitary sewer and manholes.
- Installation of approximately 850 linear feet of 42-inch sanitary sewer within a maximum of 66-inch diameter casing pipe. The casing pipe will be installed by microtunneling and will be for a 135 linear foot crossing at US Highway 30 and a 625 linear foot crossing at the Union Pacific Railroad tracks.
- Sliplining of approximately 3,860 linear feet 30-inch reinforced concrete host pipe with 24-inch diameter sanitary sewer.
- Sliplining of approximately 950 linear feet of 36-inch reinforced concrete host pipe with 24-inch diameter sanitary sewer.
- Installation of approximately 680 linear feet of 24-inch diameter sanitary sewer and associated manholes.

Sliplining is a rehabilitation technology completed by installing a smaller, "carrier pipe" into the larger existing pipe.

The Public Works Department, Wastewater Division, and the Purchasing Division of the City Attorney's Office have reviewed all bids received. Four (4) bids were received with base bids ranged from \$8,687,110 to \$13,741,545. The engineer's opinion of cost for the base bid was \$9,741,000. The alternatives varied in pricing between the individual bids.

Bid Summary Table

		Merrymen		S.J. Lewis	Super Excavators	Judds Bros.
Base Bid		\$ 8,687,110	\$	9,327,000	\$ 13,413,311	\$ 13,741,545
Alternatives						
A.	54" Interceptor Piping (FPRM) w/ FRP MH's	\$ 8,943,086	\$	9,446,095	\$ 13,418,056	\$ No Bid
B.	54" Interceptor Piping (FPRM)	\$ 9,222,986	\$	9,644,795	\$ 13,728,266	\$ No Bid

C.	54" & 60" Interceptor Piping (PVC)	\$	9,109,910	\$	9,769,340	\$	13,582,256	\$	No Bid
D.	54" & 60" Interceptor Piping Triple Wall (PPSP)	\$	9,208,715	\$	9,677,255	\$	13,608,526	\$	No Bid
E.	54" & 60" Interceptor Piping (FPRM)	\$	9,324,458	\$	9,811,120	\$	13,940,126	\$	13,910,665
F.	54" & 60" Interceptor Piping (FPRM) w/ FRP MH's	\$	9,044,558	\$	9,612,920	\$	13,458,501	\$	No Bid
G.	Sliplining Pipe FPRM to HDPE	\$	(242,475)	\$	(173,075)	\$	(49,450)	\$	No Bid

FRP - Fiberglass Reinforced Plastic  
FRPM – Fiberglass Reinforced Polymer Mortar  
PPSP – Polypropylene Sewer Pipe  
HDPE – High Density Polyethylene

City staff and Engineer have discussed alternatives and are bringing forward the recommendation in:

Accepting Alternative A; replaces the base bid manhole and pipe materials of concrete and closed profile wall polyvinyl chloride (PVC), respectively, with fiberglass reinforced plastic (FRP) and fiberglass reinforced polymer mortar (FRPM), respectively.

Accepting Alternative G; replaces the base bid sliplining pipe material of fiberglass reinforced polymer mortar FRPM with high density polyethylene (HDPE).

Although polyvinyl chloride sewer pipe (PVCSP) pipe is an acceptable material for buried gravity sewer, we feel that utilizing fiberglass reinforced polymer mortar pipe (FRPM) will increase the project's success both during construction and in the long term, match the North Interceptor pipe materials, and provide better overall value to the City. The reasons for this include the following:

- Closed profile wall PVCSP pipe can become brittle in cold weather which can cause damage to the pipe during installation. FRPM does not have this issue.
- Long term deflection for the closed profile wall PVCSP pipe can be up to 7.5% versus 5.0% of FRPM. The greater the deflection, the more stress is on the pipe which can lead to lower design life. There is also a decrease in pipe capacity with greater deflection.
- The manholes that will be provided with the FRPM pipe will be fiberglass reinforced pipe (FRP), which is corrosion resistant. In addition, the manhole bases are fabricated FRPM 'tee base' pipe fittings. The combination of fittings, the FRPM pipe, and FRP

manholes makes this a completely corrosion resistant system resulting in a longer service life.

The result of accepting Alternative A, in the amount of \$8,943,086, and accepting the credit for Alternative G, in the amount \$(242,475) equates to a contractual award amount of \$8,700,611, which is a difference of \$13,501 than the base bid.

City Staff will conduct value engineering discussions with the contractor, identifying items that could potentially reduce the contractor's risk, contingency, and costs currently in the bidding documents. These discussions will be scheduled after bid award.

### **Alternatives**

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Move to approve the Mayor of the City of Grand Island, Nebraska authorized on behalf of the City of Grand Island to execute a contractual agreement with Merryman Excavation, Inc. of Woodstock, Illinois for the construction of North Interceptor Phase I, Project 2012-S-6.
2. Refer the issue to a Committee.
3. Postpone the issue to future date.
4. Take no action on the issue.

### **Recommendation**

City Administration, and design engineer, Black & Veatch recommend that the Council approve award of construction contract to build the North Interceptor Phase I, Project 2012-S-6 at the Wastewater Treatment Plant to Merryman Excavation, Inc. of Woodstock, Illinois.

### **Sample Motion**

Move to approve the Mayor of the City of Grand Island, Nebraska authorized on behalf of the City of Grand Island to execute a contractual agreement with Merryman Excavation, Inc. of Woodstock, Illinois for the construction of North Interceptor Phase I, Project 2012-S-6.



Stacy Nonhof, Purchasing Agent

*Working Together for a  
Better Tomorrow, Today*

**BID OPENING**

**BID OPENING DATE:** April 23, 2013 at 2:00 p.m.

**FOR:** North Interceptor Phase I – Project 2012-S-6

**DEPARTMENT:** Public Works

**ESTIMATE:** \$9,741,000.00

**FUND/ACCOUNT:** 53030055-85213  
53030055-53012

**PUBLICATION DATE:** March 26, 2013

**NO. POTENTIAL BIDDERS:** 5

**SUMMARY**

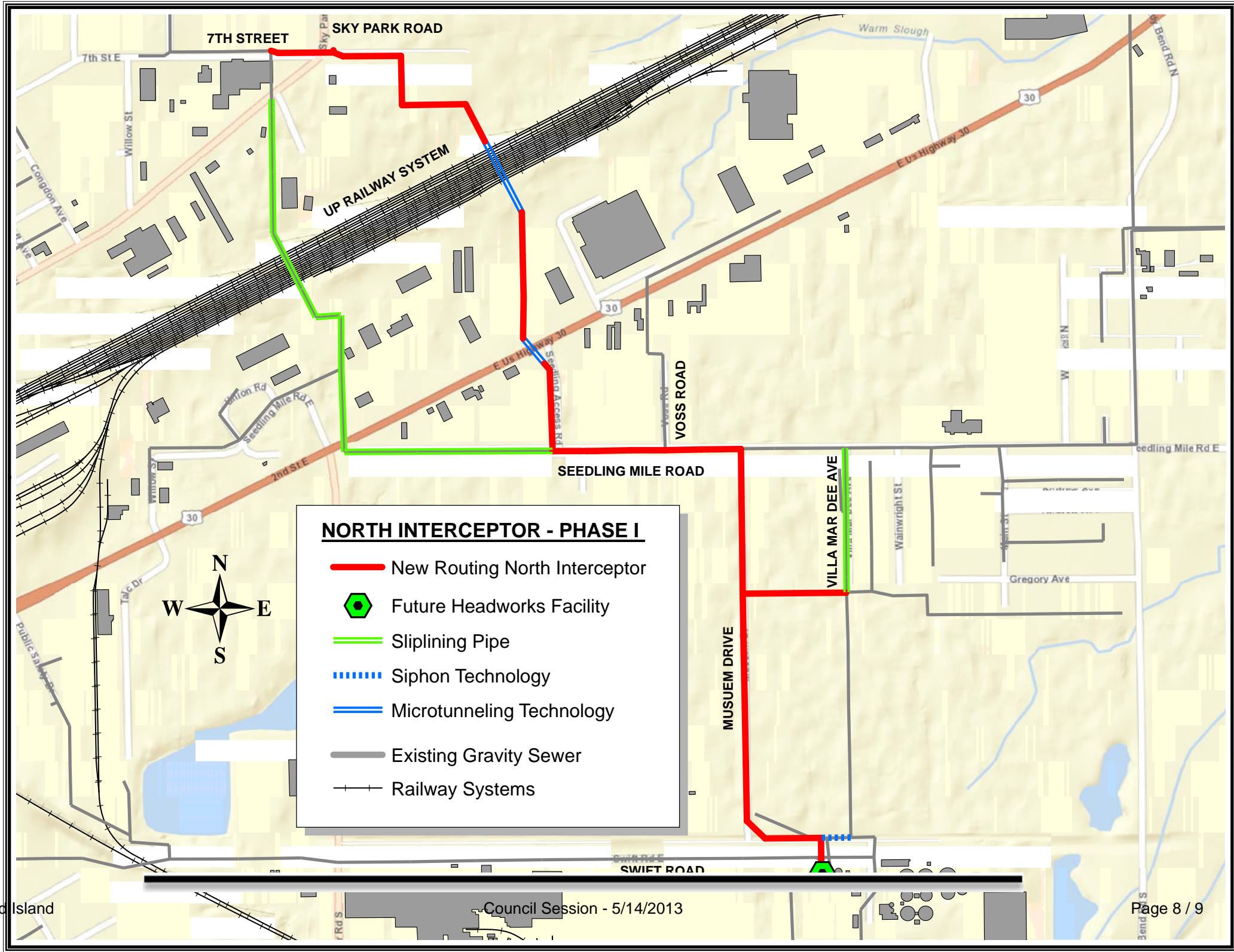
<b>Bidder:</b>	<b><u>Super Excavators, Inc.</u></b> Menomonee Falls, WI	<b><u>S.J. Louis Construction, Inc.</u></b> Rockville, MN
<b>Bid Security:</b>	Continental Casualty Co.	Liberty Mutual Ins. Co.
<b>Exceptions:</b>	None	None
<b>Base Bid Price:</b>	\$13,413,311.00	\$9,327,000.00
<b>Alternative A:</b>	\$13,418,056.00	\$9,761,095.00
<b>Alternative B:</b>	\$13,878,666.00	\$9,959,795.00
<b>Alternative C:</b>	\$13,582,256.00	\$9,769,340.00
<b>Alternative D:</b>	\$13,608,526.00	\$9,677,255.00
<b>Alternative E:</b>	\$13,940,126.00	\$9,811,120.00
<b>Alternative F:</b>	\$13,498,501.00	\$9,612,920.00
<b>Alternative G:</b>	\$ -49,450.00	\$ -173,075.00

<b>Bidder:</b>	<b><u>Judds Bros Construction Co.</u></b> <b>Lincoln, NE</b>	<b><u>Merryman Excavation, Inc.</u></b> <b>Woodstock, IL</b>
<b>Bid Security:</b>	<b>International Fidelity Ins. Co.</b>	<b>Fidelity &amp; Deposit Co.</b>
<b>Exceptions:</b>	<b>None</b>	<b>None</b>
<b>Base Bid Price:</b>	<b>\$13,741,545.00</b>	<b>\$8,687,110.00</b>
<b>Alternative A:</b>	<b>---</b>	<b>\$8,937,386.00</b>
<b>Alternative B:</b>	<b>---</b>	<b>\$9,222,986.00</b>
<b>Alternative C:</b>	<b>---</b>	<b>\$9,109,910.00</b>
<b>Alternative D:</b>	<b>---</b>	<b>\$9,208,715.00</b>
<b>Alternative E:</b>	<b>\$13,910,665.00</b>	<b>\$9,324,458.00</b>
<b>Alternative F:</b>	<b>---</b>	<b>\$9,044,558.00</b>
<b>Alternative G:</b>		<b>\$ -242,475.00</b>

cc: John Collins, Public Works Director  
Mary Lou Brown, City Administrator  
Stacy Nonhof, Purchasing Agent  
Terry Brown, Manager of Engineering

Catrina DeLosh, PW Admin. Assist.  
Fred Tustin, Project Manager  
James Strong, WWTP Engineer

**P1637**





RESOLUTION 2013-147

WHEREAS, On March 26, 2013 the City of Grand Island invited sealed bids for Construction of North Interceptor Phase I (Project 2012-S-1), according to plans and specifications on file with the Purchasing Division of the Legal Department; and

WHEREAS, On April 23, 2013 bids were received, opened and reviewed; and

WHEREAS, Merryman Excavation, Inc. of Woodstock, Illinois submitted a bid in accordance with the terms of the advertisement of bids, plans, and specifications and all other statutory requirements contained therein, such bid being in the amount of \$8,943,086 plus \$(242,475) for the deductive alternative for a total bid amount of \$8,700,611; and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA, that the bid of Merryman Excavation, Inc. of Woodstock, Illinois, in the amount of \$8,943,086 plus \$(242,475) for the deductive alternative for a total bid amount of \$8,700,611 for construction of North Interceptor Phase I (Project 2012-S-1) is hereby approved as the lowest responsible bid; and

BE IT FURTHER RESOLVED, which a contract agreement for such project, North Interceptor Phase I between the City of Grand Island and such Contractor, Merryman Excavation, Inc. of Woodstock, Illinois is entered into, and the Mayor is hereby authorized and directed to execute such contract agreement on behalf of the City of Grand Island.

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Adopted by the City Council of the City of Grand Island, Nebraska, May 14, 2013.

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Jay Vavricek, Mayor

Attest:

\_\_\_\_\_  
RaNae Edwards, City Clerk

Approved as to Form	☐ _____
May 14, 2013	☐ City Attorney