



Building a Better World  
for All of Us®

May 2, 2017

RE: City of Sandstone, MN  
Capital Improvement Plan  
SEH No. SANST 119217 14.00

Leaha Jackson  
Interim City Administrator  
City of Sandstone  
119 4th St.  
Sandstone, MN 55072

Dear Leaha and City Council:

This letter supplements the draft Sandstone Capital Improvement Plan (CIP) dated March 21, 2012 and prepared by Short Elliott Hendrickson Inc. (SEH®). A work session was held by the Sandstone City Council on March 22, 2017 to review the draft CIP and have the council prioritize the proposed projects into a top five (5) list. The council compiled their top 5 list at their regular council meeting on April 5, 2017. The council then directed SEH to update the costs for the projects on their top 5 list. We have completed the cost updates and have also added three (3) more projects for council consideration. The project numbering is consistent with the draft CIP. The top six (6) projects with summary and updated costs are as follows.

#### 7.1 - RIVER BLUFF AVENUE – 4<sup>TH</sup> STREET TO 5<sup>TH</sup> STREET AND ALLEY NORTH AND SOUTH OF 4<sup>TH</sup> STREET

This project will consist of a complete replacement of the sanitary sewer main and services in River Bluff Avenue, 4<sup>TH</sup> Street and the alley north and south of 4<sup>TH</sup> Street to the manhole upstream of the Robinson Park Lift Station. The 4-inch water main in 4<sup>TH</sup> Street and River Bluffs Avenue will be replaced with a 6-inch DIP with new services, hydrants and valves.

River Bluff Avenue and 4<sup>TH</sup> Street will be reconstructed to a 32-foot wide urban section with new pavement and concrete curb and gutter. The existing storm sewer in this area will also be replaced.

The estimated cost for this project is \$490,000.

#### 7.17 - LUNDORFF DRIVE NORTH OF HIGHWAY 23

This project has two alternatives which both would provide water main looping to the portion of the City west of the railroad tracks, along TH 23. One alternative would also provide sanitary sewer. No roadway construction is proposed in either alternative.

**Alternate 1** – Water main looping from 1st Avenue and Highway 123 (just north of the fire hall), across the railroad and TH 23 (via bored crossing), then along the north side on TH 23, southwest to a connection with the existing water main in the north ditch of Highway 123 near Casey's. No sewer main extension is part of this project.

The estimated cost is \$570,000.

**Alternate 2** – Water main looping from 1st Avenue and Highway 123 (just north of the fire hall), across the railroad and TH 23 (via bored crossing), then continue west (cross country) to the extension of Lundorff Drive North from TH 23 with a connection to the existing water main. Sanitary sewer is extended north in Lundorff Drive to the cross country water main route mentioned above and also extended north from the existing main in the north ditch of Highways 23 and 123 to extended to the cross country water main route mentioned above.

The estimated cost is \$850,000.

#### 7.6 - MINNESOTA STREET – GROUSE AVENUE TO PINE AVENUE

The cost to reclaim the pavement, add 6-inch Redrock Class 5 and grading/compacting the roadway would cost approximately \$35,000. Because the roadway is a hillside, the gravel roadway may require substantial maintenance depending on weather.

The cost to construct the roadway to an urban section is estimated at a cost of \$155,000.

#### 7.2 - PINE AVENUE – HIGHWAY 123 TO JEFFERSON STREET

The total reconstruction of Pine Avenue from Highway 123 to Jefferson Street is proposed as an urban section with concrete curb and gutter and replacement of the catch basins and storm outlets at the intersection of Highway 123.

Replacing the existing 8-inch VCP sanitary sewer with 8-inch PVC is proposed due to the deterioration of the 8-inch VCP. Replacement of the 4-inch forcemain is also planned. The existing 15-inch and 12-inch water main are good materials and in good condition. The proposed cost for this project is \$650,000.

#### 7.20 - SIDEWALK EXTENSIONS

This proposed sidewalk extension is along Highway 123 from 1st Street (near PHASE) south to Minnesota Street and the Chris' Food commercial area then South to Old Military Road. This project could be included with the Highway 123 improvement MnDOT has scheduled for 2021. The project includes 5-foot sidewalk, pedestrian crossings, culvert extensions and grading. No easement or right-of-way costs are included. The estimated cost to Minnesota Street is \$186,000 and the additional cost from Minnesota to Old Military Road is \$155,000.

#### 7.12 - COMMERCIAL AVENUE – 3<sup>RD</sup> TO 5<sup>TH</sup>

Commercial Avenue, 3<sup>RD</sup> Street to 5<sup>TH</sup> Street has had a number of recent improvements with regard to sidewalk and curb. The roadway is in fair condition. Minor repairs of sidewalk and curb along with pavement patching and a sealcoat of the roadway to extend the pavement life would cost approximately \$50,000.

Total reconstruction would cost approximately \$315,000. This cost includes storm sewer replacement. No water or sanitary improvements are included as the existing mains appear to be in good condition.

#### ADDITIONAL PROJECTS

At this time we would recommend you add the following water system CIP items and prioritize them. They are as follows:

#### 17.21 - WATER FILTRATION REHABILITATION

In 2011 the City received a feasibility study they requested for the water filtration system. The existing filter vessel was evaluated for corrosion. The outcome of the evaluation indicated that the sampled thicknesses were on an average thicker than the original required steel thickness. Costs were given to

replace the filter with upgrades of controls, electrical and valuing and cost to rehab the existing vessel with upgrades of controls, electrical and valuing. Since the existing vessel is rehabable and a future plan when necessary to meet needs can be built by the existing water tower rehab of the existing vessel is recommended.

The cost is estimated at \$270,000.

#### 17.22 - 2<sup>ND</sup> WATER LINE BETWEEN WATER TREATMENT PLANT AND TOWER

Presently there only exists one connection from the water treatment plant to the tower. The city should consider a second looped/connection to have a backup if the existing pipe connection failed.

Also there does not exist piping to by-pass the filter should there be a failure there. This project would give the city a workable line in case of failure.

The estimated cost is \$145,000.

#### 17.23 - WELL NO. 2 PUMP IMPROVEMENT

The existing water treatment plans system has a built in system that would allow the wells to by-pass the wet well and high service pumps to go directly thru the filter and to the tower. It has been verified that the existing pump in Well 2 does not have the power to push it to the tower elevation.

This project would increase the horse power (HP) of the motor and pump production of Well 2.

The estimated cost is \$70,000.

#### 17-24 - FLOOD PLAN IMPROVEMENT WELL NO. 1

Well 1 is purely artesian unlike Well 2 which is pump enhanced. To meet future supply needs, this project would include improvements to convert this well to pump assisted and capable of pumping directly to the tower. This project would also include raising the well head casing above the flood plain elevation and installing a submersible pump.

The estimated cost is \$100,000.

#### 17-25 - NEW WATER TREATMENT

The existing water filter plant has been repaired in the past, but its design life is nearing completion. A new plant with a greater capacity will be necessary in the future depending on rehab costs and higher water demands. It is our recommendation that the City's well supply stay where it is at due to the known quality of water. A new plant could be built on top of the hill near the existing water tower. If more well production is required by future demands an addition well could be placed between Wells 1 and 2.

The cost for the new plant would be \$2,500,000.

The new plant with the addition of the second supply line up the hill grading of Wells 1 and 2 and the potential of a third well with excellent known quality of water would meet the City's need far into the future.

Lastly, the City could apply for funding for the above water work from the State Drinking Water Revolving Fund. This fund is basically a low interest rate loan (1 – 3%). Applications are reviewed and awarded

Leaha Jackson  
May 2, 2017  
Page 4

based on needs and demographics. We at SEH can help you prepare the application if that is your direction. It's a yearly submittal process. The next application deadline is Friday, May 5.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

A handwritten signature in black ink, appearing to read "Greg Anderson", written over the printed name.

Greg Anderson, PE  
City Engineer

ah

c: Steve Rose, SEH

s:\pts\sanst\119217\4-prelim-dsgn-rpts\2017 cip\2017 cip.docx