

Village of Newberry Phase I – Sewer Lining

Michigan Clean Water State Revolving Fund Project Plan (2022)
Amendment 1

21-0321

March 22, 2023



1211 Ludington Street
Escanaba, MI 49829

PROJECT BACKGROUND

This study (Project Plan) was originally authorized by the Village of Newberry via execution of a letter proposal on July 20, 2021 and a project plan was submitted on May 2, 2022. The purpose of this Amendment 1 of the 2022 Project Plan is to evaluate needs and recommend alternatives for the change in scope.

SUMMARY OF PROJECT NEED

Reliable operation of the wastewater collection system within the Village of Newberry's utility systems are imperative to protect the health and safety of the Village's citizens and visitors. The Village has been operating and maintaining the wastewater treatment plant and collection system effectively, but there are areas of escalating deterioration and obsolescence that require a larger, preventative replacement, and rehabilitation effort. Operators, consultants, and regulators have collaborated on the proposed solutions for these areas of work.

ANALYSIS OF ALTERNATIVES

The Village has invested in regular maintenance, asset management, and capital improvements planning for their system. The principal alternatives, for the additional scope item outline in this amendment, are being considered as noted below:

Alternative 1: No Action

Not implementing a corrective measures project at this time while attempting to correct deficiencies in the system over time as maintenance budgets will allow.

Alternative 2: Lining of Easement East of Washington Blvd (Between Hospital and W John St) and Removal of Intruding Sewer Laterals

Alternative 2 includes 550 ft of additional sewer lining on the easement east of Washington Blvd (between the hospital and W John St) and removal of intruding sewer laterals in project locations (refer to Figure 1 and Figure 2 for project locations). Lining reduces restoration costs and disturbance, and in-turn, extends asset life. Intruding sewer laterals need removal in order to perform lining scope outlined in this entire project.

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3

Legend

- () Sanitary Manhole
- All Sanitary Pipes
- Proposed Lining



FIGURE 1. PROPOSED WASTEWATER LINING AREAS

0 250 500 1,000 1,500 2,000 Feet

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Legend

- Intruding Lateral
- (Sanitary Manhole
- All Sanitary Pipes



VILLAGE OF NEWBERRY
PROJECT: 21-0321
LUCE COUNTY, MICHIGAN

INTRUDING SEWER LATERAL TAP LOCATIONS

3



SELECTED ALTERNATIVE

Due to the nature of the existing infrastructure and the scope of the proposed project, rehabilitation to the sewer system is the viable option. Asset management efforts have shown an aging system that does not effectively serve the Village. Design will meet current EGLE, AWWA, and local standards with planned mitigation of environmental issues developed during the design and permitting process.

Construction Costs

The inclusion of Lining of Easement East of Washington Blvd (Between Hospital and W John St) and Removal of Intruding Sewer Laterals is the selected alternative. Cost Breakdown is shown in Table 1 below.

Table 1. Construction Costs of Additional Scope Items

Description	Quantity	Cost per Unit	Total Cost
Lining of Easement East of Washington Blvd (Between Hospital and W John St)			
Reinstate Sewer Lateral (per Lateral)	10	\$253	\$2,530
Lining of 10" Sewer (per LF)	550	\$42	\$23,100
Removal of Intruding Sewer Laterals			
Removal (per Lateral)	166	\$440	\$73,040
<i>Total Construction Cost of Additional Scope of Work</i>			<i>\$98,670</i>

Present Worth Analysis

A present worth analysis is also included in Table 1 below. For the additional lining of 550 ft of sewer main and the removal of intruding sewer laterals; the O&M change or impact is minimal on the Village-scaled budget. The anticipated savings in operating expenses is represented as negative "O&M impacts." Likewise, the "no action" alternative indicates escalating expenses as utility rates increase and energy efficiency decreases.

Table 2. Present Worth Analysis

Item	Description	Alternative 1: No Action	Alternative 2: Rehabilitation
1	Construction Costs	\$0	\$98,670
2	Engineering, Legal, Administration, Planning, and Contingencies	\$0	\$29,601
3	Total Capital Cost	\$0	\$128,271
4	Total Annual O&M Change	\$0	-\$100
5	Present Worth of O&M Costs	\$0	-\$3,000
6	Salvage Value	\$0	\$32,890
7	Present Worth of Salvage Value	\$0	\$35,000
8	Total Present Worth	\$0	\$90,271

Table row description for Table 1:

1. Construction costs developed by AMP and detailed in Attachment A.
2. Project support fees based on a percentage of construction costs of about 30%
3. Capital costs are sum of 1 and 2.
4. O&M costs are based on the full budget, adding or subtracting impacts at the throughout the system.
5. Present value of O&M costs for 20 years at -0.25% (per 2022 USDA/SRF guidance).
6. Land considered permanent, 50-year life for piping and valves, 30-year life for lining, 50-year life for structures, 20-year life for repairs, and 20-year life for equipment.
7. Present worth of line 6 at -0.25% interest for 20 years.
8. Total of items 3 and 5 minus 7.

Capital Costs

There is no change to the capital costs of \$1,682,00 from the original submission of the 2022 CWSRF Project Plan. There are some scope items that have been removed since the original Project Plan and this amendment will not increase the capital costs.

User Costs

There will be no additional impact to user costs from the original submission of the 2022 CWSRF Project Plan; the total capital costs are to remain the same.

ENVIRONMENTAL EVALUATION

The anticipated environmental impacts resulting from implementation of the selected alternative are relatively minor. There is no major increase in the extent of the system.

MITIGATION MEASURES

Where adverse impacts due to installation of the recommended improvements cannot be avoided, mitigation measures will be implemented. Costs for mitigation measures were considered and included where applicable in project opinions of probable cost and included in construction contract documents.

PUBLIC PARTICIPATION

An initial public hearing on the original scope of work held during a regular Village Council meeting on April 19, 2022. A public meeting on this amendment was on April 17, 2023. An advertisement was placed on the Village's Website prior to the Public Meeting on April 17, 2023. Simultaneously to the advertisement publication, copies of the amended project plan were made available to the public at Village Hall and on the Village's website. No written comments were received prior to the Public Meeting.