

CREE POINT OUTFALL IMPROVEMENTS

Project Feasibility Report

City Project Number 11064

October 15, 2024



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Cree Point Outfall Improvements

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City Of Mankato

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II. CERTIFICATION PAGE

CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the state of Minnesota.



Alec W. Pietz, P.E.
Reg. No. 59617

10-7-2024
Date

III. PROJECT CONTACTS

TITLE	NAME	PHONE	EMAIL
Mayor	Najwa Massad	507.387.9693	nmassad@mankatomn.gov
Councilor at Large	Mike Laven	507.720.8674	mlaven@mankatomn.gov
Councilor Ward 1	Michael McLaughlin	507.720.1093	mmclaughlin@mankatomn.gov
Councilor Ward 2	Dennis Dieken	507.720.1817	ddieken@mankatomn.gov
Councilor Ward 3	Kevin Mettler	507.995.0070	kmettler@mankatomn.gov
Councilor Ward 4	Jenn Melby-Kelley	507.720.2502	jmelby-kelley@mankatomn.gov
Councilor Ward 5	Jessica Hatanpa	507.613.8067	jhatanpa@mankatomn.gov
City Manager	Susan Arntz	507.387.8695	sarntz@mankatomn.gov
Public Works Director	Jeffrey Johnson	507.387.8640	jjohnson@mankatomn.gov
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Project Operations	Kari Lozinski	507.387.8634	klozinski@mankatomn.gov
Project Designer	Asmaa Salama	507.387.8787	asalama@mankatomn.gov
Project Representative	Brandon Geldner	507.387.8541	bgeldner@mankatomn.gov

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IV. EXECUTIVE SUMMARY

The Cree Point Outfall Improvements project is located in a ravine adjacent to Shiloh Court and Cree Point Drive. The objective of the project is to provide a more robust outfall system through the ravine to better convey stormwater through the ravine and help minimize future erosion.

Suggested improvements include extending a new outfall from Shiloh Court down the adjacent ravine to an intersection point of the local ravine system. Other erosion mitigation measures

The estimated cost of these necessary improvements is approximately \$225,000.

From an engineering standpoint, the proposed improvements are necessary, cost effective, and feasible. This can best be accomplished by letting competitive bids for the work. It is recommended that the council accept this project feasibility report and schedule a preliminary assessment hearing for the proposed improvements.

V. PROJECT INTRODUCTION

The recommended drainage improvements for the Cree Point Outfall project are proposed for the summer of 2025. In accordance with Minnesota Statutes, Chapter 429, the City Council has authorized the preparation of a project feasibility report to define the scope and determine the reasonableness of the project. The specific objectives of this preliminary engineering report are to:

- Evaluate the need for this project.
- Determine the necessary improvements.
- Provide information on the estimated costs for the proposed project.
- Determine the project schedule.
- Determine the feasibility of the proposed project.

This project, as proposed, is approximately 850-feet in length from Shiloh Court to the outfall. Specific items that will be included in the construction are as follows:

- Storm sewer installation.
- Outfall armoring.
- Erosion control measures.

VI. EXISTING CONDITIONS

A. STORM SEWER

The existing storm sewer in the project vicinity drains local roads and outfalls at various points in the subject ravine. The storm sewer system at Shiloh Court drains a more sizable area than other systems and is located at the ravine head. This system is also subject to assisting drainage for a larger regional trunk system in larger storm events. The project location and existing storm water drainage system for the surrounding area is shown in Figure 1 in the Appendix with the storm system shown in green.

The ravine is subject to erosion and would benefit from an improved outfall system. The vast quantity of rain received in June 2024 was a stark reminder of this.

B. OTHER UTILITIES

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Other non-municipal-owned utilities may be present in portions of the project area. These include natural gas, electric, and telecommunications. The condition of these utilities is unknown, and their replacement is beyond the scope of this report.

VII. PROPOSED IMPROVEMENTS

A. STORM SEWER

As previously mentioned, approximately 850-feet of storm sewer pipe is proposed to be installed with this project to provide an improved outfall system. The storm sewer pipe would largely consist of fused HDPE pipe. Some storm structures and other miscellaneous work is proposed, as needed, in support of drainage improvements. Armoring of the storm sewer outfall will be installed to mitigate erosion. Temporary and permanent erosion prevention measures are also anticipated to be done with this project.

VIII. RIGHT-OF-WAY AND EASEMENT

No right-of-way acquisition will be required with this project as City of Mankato property and existing drainage easements will be utilized for the proposed improvements.

IX. APPROVALS/PERMITS

Approvals and permits are required from various agencies for the construction of the project. They include:

- City of Mankato Land Disturbance
- Minnesota Pollution Control Agency Construction Stormwater

X. PROJECT COST ESTIMATE AND FINANCING

Estimated projections for the cost of this project are summarized below.

ITEM	COST
Stormwater Improvements	\$176,332
TOTAL CONSTRUCTION	\$176,332
Construction Contingency	\$17,633
Administration	\$11,638
Engineering	\$19,397
TOTAL PROJECT COST	\$225,000

Funding for the proposed improvements is shown in the table below.

FUNDING SOURCE	AMOUNT	PERCENT
Stormwater Capital	\$225,000	100%
TOTAL FUNDS	\$225,000	100%

XI. POSSIBLE SCHEDULE

The following is a possible schedule for the proposed improvements of the Cree Point Outfall:

10/03/2024	Set Date of Hearing
10/15/2024	Project Feasibility Report and Order Project
10/17/2024	Advertise for Bids
11/07/2024	Open Bids
11/12/2024	Award Bid

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11/18/2024	Begin Construction (Weather Permitting)
12/31/2024	Substantial Completion
01/31/2025	Final Completion

XII. CONCLUSION AND RECOMMENDATIONS

The existing conditions of the ravine associated with the Cree Point Outfall need improvements to prevent and mitigate future environmental deterioration and possible damages to property. If the utility improvements are not made, maintenance costs will continue to be an issue leading to further hardship on the environment, City of Mankato, and adjacent property owners. From an engineering standpoint, this project is cost effective, necessary, and feasible. The best way to accomplish this project is by letting competitive bids for the work. Feasibility is contingent upon City Council findings with respect to project financing.

We recommend the Council accept this project feasibility report, set a date for the preliminary assessment hearing, order the City Engineer to prepare final plans and specifications and instruct the City Manager to advertise for bids in accordance with the requirement of law.

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XIII. APPENDIX

A. FIGURE 1: PROJECT LOCATION AND EXISTING STORM SEWER LAYOUT

