

FEASIBILITY REPORT
FOR
PROPOSED ROAD IMPROVEMENT PROJECT
OF
GENSMER CIRCLE
CREDIT RIVER TOWNSHIP, MINNESOTA
OCTOBER 2014

Prepared by:



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I hereby certify that this Plan, Specification, or Report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under State of Minnesota Statutes 326.02 to 326.16.


Shane Nelson, PE

43381
License No.

October 3, 2014
Date

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EXHIBITS

- EXHIBIT A. Gensmer Circle - Benefiting Properties
- EXHIBIT B. Local Residential Rural Street Section
- EXHIBIT C. Gensmer Circle Reconstruction Project - Preliminary Cost Estimate

I. INTRODUCTION

The purpose of this feasibility report is to present the Township of Credit River with a preliminary examination of road improvements for Gensmer Circle. The report discusses the scope of the improvements to Gensmer Circle. The report was initiated by the Credit River Town Board after a board meeting, and has been prepared in compliance with Minnesota State Statutes 429 for projects resulting in special assessments.

II. PROJECT LOCATION

Gensmer Circle is located in Section 20, Township 114 North, Range 21 West, Credit River Township, Scott County, Minnesota. There are currently 4 existing properties that receive their direct access from the project. The residential properties are rural type lots with lot sizes ranging from 2.5 acres to 3.0 acres. The project area and roadway locations are depicted on the Benefiting Properties Exhibit (Exhibit A) included in the Appendix of this report.

III. ROADWAY IMPROVEMENT PROJECT

A. Existing Conditions

Gensmer Circle was originally constructed in 1980. The roads have not been reconstructed since they were originally built over 34 years ago. There are many indications that the road is failing and is near or at the end of its design life.

Maintenance has been performed on an as needed basis, however, options are limited due to the severity of the failures. Severe transverse, potholes and alligator cracking were observed. Some causes of road cracking may be repetitive loads, excessive loads, failure of subgrade material, poorly drained subgrades and weathering.

Gensmer Circle is approximately 400 feet in length and predominately utilizes a rural section with minimal ditch sections. Because of the minimal ditches, there are no driveway culverts for the first two driveways. From field observations, it appears that positive, albeit minimal, drainage does convey the water away from the road surface. The width of the existing road is approximately 23 feet with little to no shoulders. The existing cul-de-sac bulb on the west end of Gensmer Circle is approximately 78 feet in diameter, which does not meet Township standards, but may be sufficient for the anticipated traffic.

A geotechnical investigation has not been performed at the time of this report. For this report, the subgrade was assumed to be in good condition and not in need of reconstruction. However, a geotechnical report shall be obtained prior to final design to determine if any additional subgrade work is required and for the

pavement design. Geotechnical investigations are also necessary to adequately determine the existing bituminous and Class 5 thicknesses.

The total length of the project is approximately 0.08 miles (400 feet).

B. Proposed Improvements

The proposed project consists of reclaiming the existing bituminous and adding additional Class 5 Aggregate Base prior to paving the road. The current road does not meet the current Township standards for width. Improving the road to Township standard width of 26 feet is beyond the scope of this report. This project proposes to confine the roadway surface to the existing width, approximately 23 feet, with a new gravel shoulder and a minimum ditch of 1 foot. The minimum assumed section for this report was 3 1/2" of bituminous with 12" of Class 5 aggregate base. Easements or right of way were not considered for purposes of this report. Further evaluation of existing easements/right of way will be necessary during final design.

The project involves reclaiming the existing bituminous surface and performing a test roll to identify any soft spots in the subgrade. Assuming the subgrade is sufficient, Class 5 Aggregate Base will be placed to raise the road profile so that a 1 foot ditch can be achieved by filling the in-slopes. Minor excavation to remove any high spots and ensure positive drainage will be performed. Achieving a Township Standard 3 foot deep ditch is beyond the scope of the proposed project. Shouldering material will be placed following the placement of the bituminous surface. The finished surface will be approximately 8-15 inches higher than the existing road.

C. Estimated Costs

The 2015 construction costs have been estimated for the proposed Gensmer Circle improvement project assuming that it would be bid in conjunction with other Town improvement projects. If this project was completed as a stand-alone project, project costs could be expected to be 15-25% higher. The estimated costs are estimates only and are not guaranteed prices. The costs shown are estimates based on actual bid prices from projects of similar scope and adjusted for inflation.

Before bidding, the construction estimate should be updated to reflect changes in construction costs and the final design. Final contracts will be awarded on a unit price basis and the contractor will only be paid for work completed. No costs are included for easements. The total estimated project cost is \$85,835. An estimate of the cost of the improvements is shown in Exhibit C.

D. Financing and Assessments

The Township costs of the improvements for the reconstruction of Gensmer Circle are proposed to be partially assessed to the benefiting properties. For this project, the recommended assessment method is to assess the benefiting properties on a per unit basis.

The Township may pass a general obligation/revenue bond that will be backed by assessment of the costs to the benefiting properties. The assessments may be paid in full up front or amortized over a period of time, typically 10 years, with an interest rate as determined by the Town Board. Generally, interest rates on assessments are on the order of 6 percent.

The Township policy is to pay forty percent of the project costs and assess the remaining sixty percent to the benefiting properties. Therefore, the proposed cost to be assessed to the benefiting properties with this project is estimated at \$51,500. The remaining amount, estimated at \$34,335, will be paid from Township funds.

For this project, sixty percent assessment to the benefiting properties would yield an assessment of approximately \$12,875 per unit.

IV. PROJECT SCHEDULE

The schedule of the project will be determined by the Town Board with consideration of resident input. A tentative schedule is as follows:

October 6, 2014	Town Board Approval of Feasibility Report and Calls for a Public Improvement Hearing. Mail Notice of Public Improvement Hearing.
November 3, 2014	Town Board conducts Public Improvement Hearing Town Board Orders Plans and Specifications
February 2, 2015	Town Board Approves Plans and Specifications and Authorizes Advertisement for Bids
March 2015	Bid Opening Town Board Conducts Assessment Hearing
April/May 2015	Town Board Approves Bids and Awards Contract
June 2015	Construction Starts
August 2015	Substantial Completion

V. CONCLUSIONS AND RECOMMENDATIONS

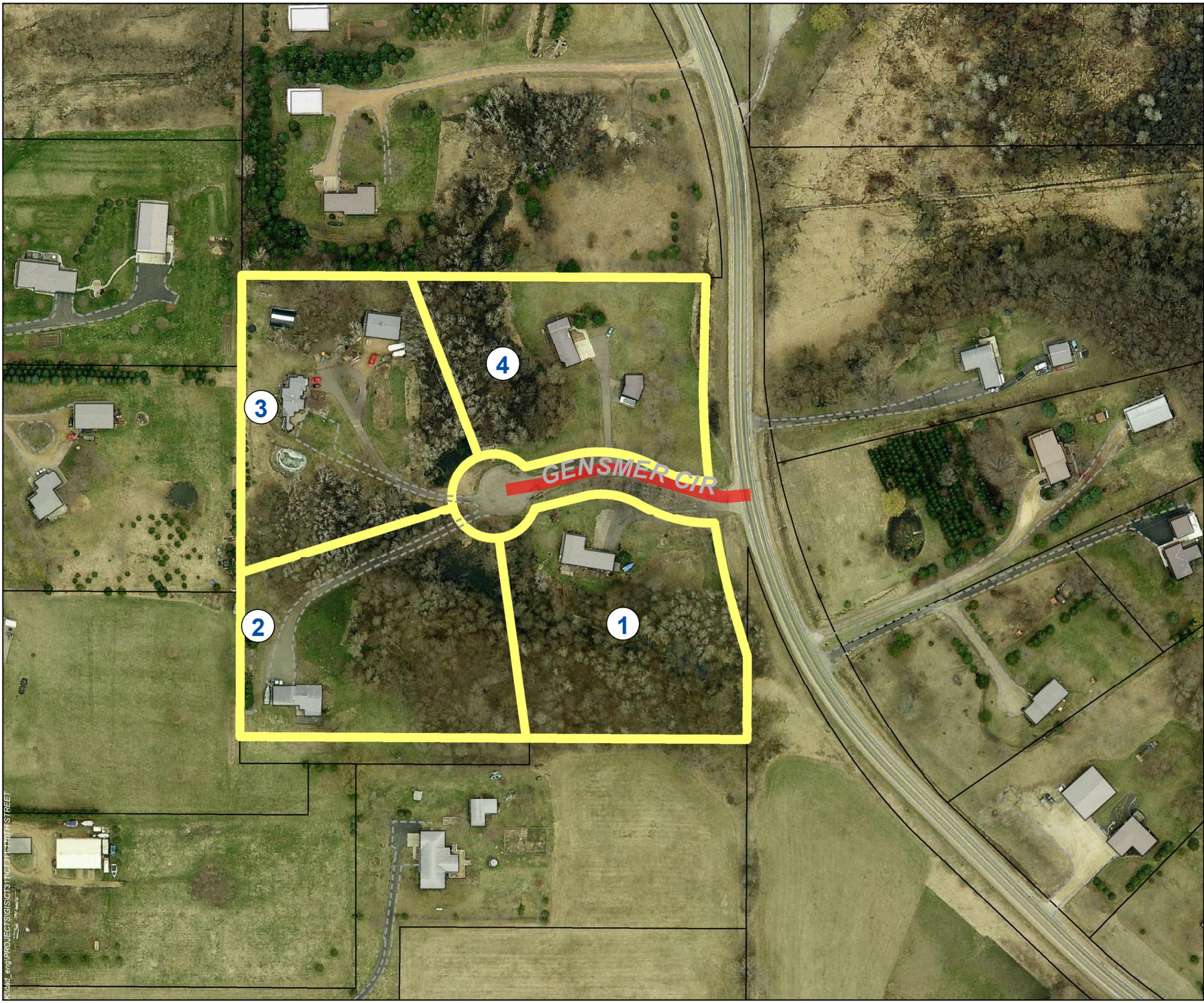
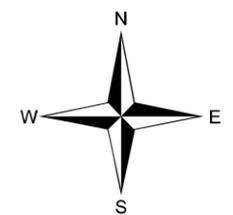
We find that this project is necessary, cost effective and feasible from a technical and engineering standpoint, and benefits the properties proposed to be assessed. We would recommend that the Town Board accept this report.

CREDIT RIVER TOWNSHIP

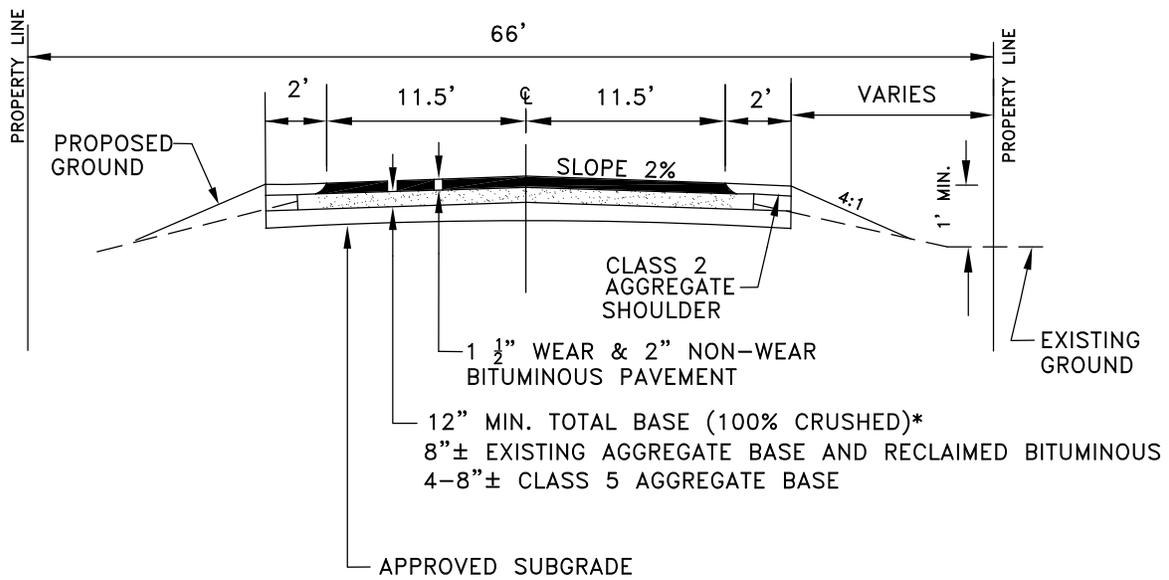
Legend

-  Benefiting Parcel
-  Direct Access - 4 Total
-  Project Location

GENSMER CIRCLE IMPROVEMENT PROJECT BENEFITING PROPERTIES EXHIBIT A



K:\cad_eng\PROJECTS\GIS\CT31\CT31-1771011 STREET



* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

CREDIT RIVER TOWNSHIP
 GENSMER CIRCLE
 LOCAL RESIDENTIAL RURAL STREET SECTION



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EXHIBIT C
GENSMER CIRCLE
IMPROVEMENT PROJECT
PRELIMINARY COST ESTIMATE
CREDIT RIVER TOWNSHIP

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY		UNIT PRICE	EXTENSION
1	MOBILIZATION	1	L.S.	\$5,000.00	\$5,000.00
2	REMOVE BITUMINOUS PAVEMENT (DRIVEWAYS)	133	S.Y.	\$5.00	\$665.00
3	REMOVE SIGN	1	EACH	\$30.00	\$30.00
4	SAWING BITUMINOUS PAVEMENT	138	L.F.	\$3.50	\$483.00
5	SALVAGE AND REINSTALL SIGN	1	EACH	\$75.00	\$75.00
6	SALVAGE STREET SIGNS	2	EACH	\$50.00	\$100.00
7	SALVAGE AND REINSTALL E911 SIGNS	4	EACH	\$40.00	\$160.00
8	SALVAGE AND REINSTALL MAILBOXES	2	EACH	\$100.00	\$200.00
9	COMMON EXCAVATION (CV)	100	C.Y.	\$7.00	\$700.00
10	SUBGRADE PREPARATION	4	RDSTA	\$250.00	\$1,000.00
11	AGGREGATE BASE CLASS 5	610	TON	\$14.50	\$8,845.00
12	AGGREGATE SHOULDERING	110	TON	\$20.00	\$2,200.00
13	FULL DEPTH RECLAMATION (P)	1660	S.Y.	\$1.50	\$2,490.00
14	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B)	151	TON	\$65.00	\$9,815.00
15	TYPE SP 12.5 NON WEARING COURSE MIXTURE (2,B)	201	TON	\$60.00	\$12,060.00
16	BITUMINOUS DRIVEWAY PAVEMENT 2.5" THICK	133	S.Y.	\$13.00	\$1,729.00
17	BITUMINOUS MATERIAL FOR TACK COAT (0.05 gal/SY)	83	GAL	\$3.00	\$249.00
18	18" CS PIPE CULVERT	50	LF	\$35.00	\$1,750.00
19	18" CS PIPE APRON	4	EACH	\$250.00	\$1,000.00
20	18" RC PIPE APRON	2	EACH	\$500.00	\$1,000.00
21	18" RC PIPE CULVERT	100	LF	\$36.00	\$3,600.00
22	TRAFFIC CONTROL	1	L.S.	\$500.00	\$500.00
23	SILT FENCE	300	LF	\$2.50	\$750.00
24	SELECT TOPSOIL BORROW	296	C.Y.	\$25.00	\$7,400.00
25	TURF ESTABLISHMENT	0.55	ACRE	\$3,000.00	\$1,650.00
26	EROSION CONTROL BLANKET CATEGORY 3	55	S.Y.	\$2.50	\$137.50

ESTIMATED CONSTRUCTION COST	<u>\$63,589</u>
CONSTRUCTION CONTINGENCY (10%)	<u>\$6,349</u>
ENGINEERING, LEGAL AND FINANCING (25%)	<u>\$15,897</u>
ESTIMATED PROJECT COST	<u><u>\$85,835</u></u>