

FEASIBILITY REPORT
FOR
PROPOSED ROAD IMPROVEMENT PROJECT
OF
FLAG TRAIL
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.

A handwritten signature in blue ink, appearing to read 'Shane Nelson', is written over a horizontal line.

Shane Nelson, PE

43381
License No.

October 3, 2014
Date

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EXHIBITS

- EXHIBIT A. Flag Trail - Benefiting Properties
- EXHIBIT B. Collector Rural Street Section
- EXHIBIT C. Collector Rural Overlay Street Section
- EXHIBIT D. Flag Trail Reconstruction Improvement 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 Flag Trail. The report discusses the scope of the improvement project for Flag Trail. 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

Flag Trail is located in Sections 30 and 31, Township 114 North, Range 21 West, Credit River Township, Scott County, Minnesota. There are currently 9 existing residential properties that receive their direct access from the project, 1 commercial property with direct access, 1 residential/agricultural property in the Green Acres program and 31 residential properties with indirect access. The residential properties are rural type lots with lot sizes ranging from 2.5 acres to 10 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

Flag Trail was originally paved in segments. The portion of Flag Trail south of High Point Trail was paved in 2001 while the section north of High Point Trail to Texas Avenue was paved in 1990. The roads have not been reconstructed since they were originally built.

For the section north of High Point Trail, 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. Severe transverse and some alligator cracking was observed.

This portion of Flag Trail is approximately 1580 feet in length and predominately utilizes a rural section with ditch sections and driveway culverts. The width of the existing road is approximately 25 feet with little to no shoulders.

For the section of Flag Trail south of High Point Trail, the road has consistent transverse cracks but does not have extensive alligator cracking. The subgrade appears to be in sufficient condition without excessive signs of failure. This portion of Flag Trail is approximately 3280 feet in length and predominately utilizes a rural section with ditch sections and driveway culverts. The width of the existing road is approximately 24 feet with little to no shoulders.

A geotechnical investigation has not been performed at the time of this report. For this report, it was assumed that only portions of the subgrade would need to be corrected. However, a geotechnical report shall be obtained prior to final design. Geotechnical investigations are also necessary to adequately determine the existing bituminous and Class 5 thicknesses.

The Township has identified Flag Trail as collector road. The total length of the project is approximately 0.92 miles (4860 feet).

B. Proposed Improvements

The project consists of reclaiming and overlaying the existing pavement on Flag Trail north of High Point Trail and overlaying Flag Trail south of High Point Trail. The current road does not meet current Township standards for width. Improving the road to the Township standard width of 26' is beyond the scope of this report. This project proposes to confine the roadway surface to the existing width, approximately 24 - 25 feet, with a new gravel shoulder. Because the Township has identified Flag Trail as a collector road, it will receive an additional ½ inch of bituminous pavement.

The proposed section for the segment of Flag Trail from Texas Avenue to High Point Trail is 4" of bituminous over 12" of aggregate base and reclaimed material (Exhibit B). This section of the project involves reclaiming the existing bituminous surface in-place and paving a new bituminous 4" surface. Following the reclaiming, the reclaimed material will be shaped and re-compacted. The Contractor will then perform a roll test with a loaded truck to determine if there are any soft spots in the subgrade. If isolated soft spots in the subgrade are found, they will be repaired. Class 5 aggregate base will then be placed to the required thickness. Finally, the bituminous surface will be placed. Minor excavation to improve drainage will be completed, if necessary. Shouldering material will be placed on each side of the road to establish the shoulder level with the new bituminous surface.

Flag Trail south of High Point Trail is proposed to be overlaid with 2" of bituminous (Exhibit C). New shoulder material will also be placed for this portion of Flag Trail; however, no ditch work will be completed.

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.

C. Estimated Costs

The 2015 construction costs have been estimated for the proposed Flag Trail improvement project. 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 \$387,500. An estimate of the cost of the improvements is shown in Exhibit D.

D. Financing and Assessments

The Township costs of the improvements for Flag Trail 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. Properties that receive indirect but necessary access will be assessed ¼ unit.

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 standard project costs and 100% of the cost for the additional ½” of bituminous. The estimated cost for the additional ½” of bituminous is \$25,820. The Township will assess the remaining sixty percent to the benefiting properties. Therefore, the proposed cost to be assessed to the benefiting properties for this project is estimated at \$217,010. The remaining amount, estimated at \$170,490, will be paid from Township funds.

For this project, the proposed assessments are as follows:

Residential, Direct Access	\$10,460
Residential, Indirect but necessary access	\$2,615
Commercial	\$31,380
Agricultural/Green Acres (Deferred)	\$10,460

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.
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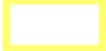
November 3, 2014	Town Board conducts Public Improvement Hearing. Town Board Orders Plans and Specifications.
February 2, 2015	Town Board Approves Plans and Specifications and Authorizes Advertisement for Bids. Town Board calls for Assessment Hearing.
March 2015	Bid Opening Town Board Conducts Assessment Hearing
April/May 2015	Town Board Approves Bids and Awards Contract
June 2015	Construction Starts
August 2015	Substantial Completion

V. CONCLUSIONS AND RECOMMENDATIONS

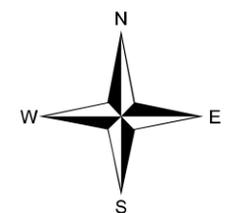
We find that this project is necessary, cost effective and feasible from a technical and engineering standpoint, and benefits the properties proposed to be assessed. We would recommend that the Town Board accept this report.

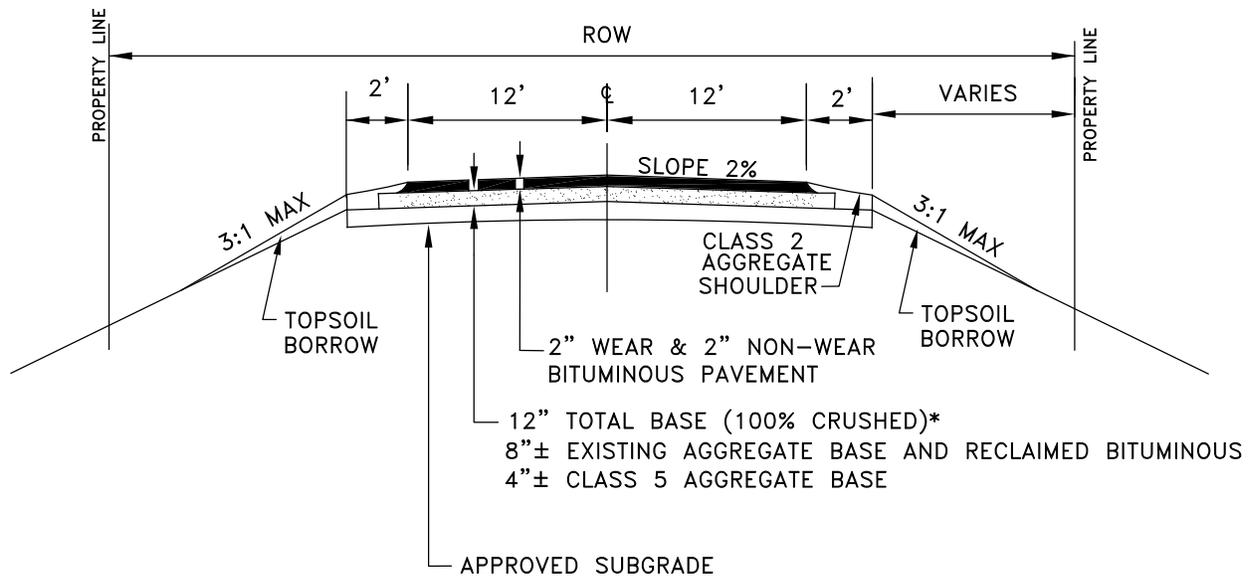
CREDIT RIVER TOWNSHIP

Legend

-  Benefiting Parcel
-  Direct Access - 11 Total
-  Indirect Access - 31 Total
-  Project Location

FLAG TRAIL IMPROVEMENT PROJECT BENEFITING PROPERTIES EXHIBIT A



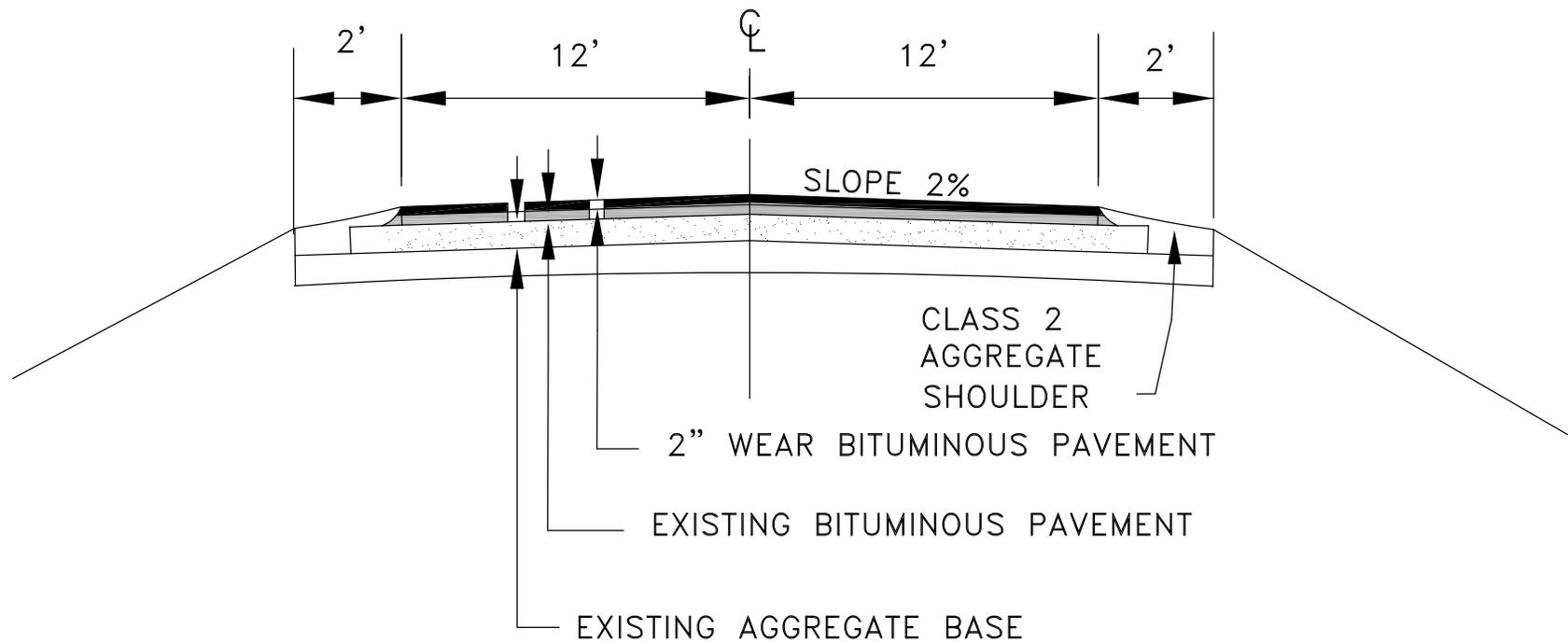


* SUBJECT TO REVIEW BY QUALIFIED SOILS ENGINEER

CREDIT RIVER TOWNSHIP
 FLAG TRAIL
 COLLECTOR RURAL STREET SECTION



Hakanson Anderson
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CREDIT RIVER TOWNSHIP
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 COLLECTOR RURAL OVERLAY STREET SECTION



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EXHIBIT C

EXHIBIT D
FLAG TRAIL
IMPROVEMENT PROJECT
PRELIMINARY COST ESTIMATE
CREDIT RIVER TOWNSHIP

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY		UNIT PRICE	EXTENSION
1	MOBILIZATION (MAX. 3% OF TOTAL BID)	1	L.S.	\$8,300.00	\$8,300.00
2	CLEARING AND GRUBBING	1	L.S.	\$2,000.00	\$2,000.00
3	REMOVE BITUMINOUS PAVEMENT (DRIVEWAYS)	100	S.Y.	\$5.00	\$500.00
4	REMOVE SIGN	1	EACH	\$30.00	\$30.00
5	SAWING BITUMINOUS PAVEMENT	288	L.F.	\$3.50	\$1,008.00
6	SALVAGE AND REINSTALL SIGN	1	EACH	\$75.00	\$75.00
7	SALVAGE STREET SIGNS	1	EACH	\$50.00	\$50.00
8	SALVAGE AND REINSTALL E911 SIGNS	9	EACH	\$40.00	\$360.00
9	SALVAGE AND REINSTALL MAILBOXES	9	EACH	\$100.00	\$900.00
10	SUBGRADE CORRECTION	4250	C.Y.	\$7.00	\$29,750.00
11	SUBGRADE PREPARATION	16	RDSTA	\$250.00	\$4,000.00
12	AGGREGATE BASE CLASS 5	1260	TON	\$14.50	\$18,270.00
13	AGGREGATE SHOULDERING	515	TON	\$20.00	\$10,300.00
14	MILL BITUMINOUS SURFACE	50	SY	\$6.50	\$325.00
15	FULL DEPTH RECLAMATION (P)	4389	S.Y.	\$1.25	\$5,486.25
16	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B)	1589	TON	\$65.00	\$103,285.00
17	TYPE SP 12.5 NON WEARING COURSE MIXTURE (2,B)	531	TON	\$60.00	\$31,860.00
18	BITUMINOUS DRIVEWAY PAVEMENT 2.5" THICK	100	S.Y.	\$13.00	\$1,300.00
19	BITUMINOUS MATERIAL FOR TACK COAT (0.05 gal/SY)	919	GAL	\$3.00	\$2,757.00
20	15" CS PIPE CULVERT	320	LF	\$28.00	\$8,960.00
21	15" CS PIPE APRON	12	EACH	\$150.00	\$1,800.00
22	WEEP DRAINS	4	EACH	\$200.00	\$800.00
23	GUIDE POST TYPE B	6	EACH	\$50.00	\$300.00
24	TRAFFIC CONTROL	1	L.S.	\$750.00	\$750.00
25	SIGN PANELS TYPE C	3	SQ FT	\$75.00	\$225.00
26	SILT FENCE	3770	LF	\$2.50	\$9,425.00
27	SELECT TOPSOIL BORROW	1457	C.Y.	\$25.00	\$36,425.00
28	TURF ESTABLISHMENT	1.8	ACRE	\$3,000.00	\$5,400.00
29	EROSION CONTROL BLANKET CATEGORY 3	978	S.Y.	\$2.50	\$2,445.00

ESTIMATED CONSTRUCTION COST	\$287,086
CONSTRUCTION CONTINGENCY (10%)	\$28,642
ENGINEERING, LEGAL AND FINANCING (25%)	\$71,772
ESTIMATED PROJECT COST	\$387,500