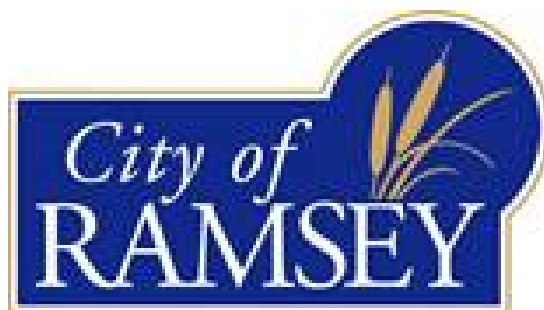


FEASIBILITY REPORT

JARVIS STREET RECONSTRUCTION AND RAILROAD CROSSING QUIET ZONE IMPROVEMENTS

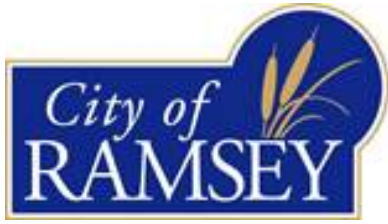
CITY OF RAMSEY
PROJECT NO. 15-20



February 5, 2015

Prepared By:

City of Ramsey
Engineering Department
7550 Sunwood Drive
Ramsey, MN 55303
763-433-9820
763-433-9848 (Fax)



February 5, 2015

Honorable Mayor and City Council
City of Ramsey
7550 Sunwood Drive
Ramsey, MN 55303

Re: Feasibility Report for City of Ramsey Project No. 15-20
Jarvis Street Reconstruction and Railroad Crossing Quiet Zone Improvements

Dear Mayor and City Council Members:

Transmitted herewith is a Feasibility Report for the proposed Jarvis Street Reconstruction and Railroad Crossing Quiet Zone Improvements project. This report examines the feasibility of reconstructing approximately 3,800 linear feet of Jarvis Street between Trunk Highway 10 and 165th Avenue NW that is mutually owned and maintained by the City of Elk River and the City of Ramsey, improving the Jarvis Street crossing of the Burlington Northern Santa Fe railroad tracks for future establishment of a quiet zone, and completing other appurtenant improvements as needed.

This Feasibility Report examines the scope of the proposed improvements, explores estimated costs and available funding sources, defines a preliminary project schedule, and provides a determination for the necessity, feasibility and cost-effectiveness of the proposed improvements.

I would be happy to discuss this report with you at your convenience. Please feel free to call me at 763-433-9825 with any questions.

Sincerely,
City of Ramsey

Bruce Westby, PE
City Engineer

Enclosure

C: Kurt Ulrich, City Administrator
Diana Lund, Finance Director
Grant Reimer, Public Works Superintendent
Leonard Linton, Civil Engineer II

CERTIFICATION

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 the laws of the State of Minnesota.

Bruce Westby, PE

Date: February 5, 2015

License No. 40116

I hereby certify that this plan, specification or report was reviewed for Quality Control and Quality Assurance purposes and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Leonard Linton, PE

Date: February 5, 2015

License No. 21112

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TITLE SHEET

LETTER OF TRANSMITTAL

CERTIFICATION SHEET

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Appendix A

City of Elk River Feasibility Report

Appendix B

City of Elk River Proposal Letter - August 28, 2014

Appendix C

Bolton & Menk Memorandum - October 29, 2014

Engineer's Opinion of Probable Cost – 36' Street Option

Appendix D

Preliminary Assessment Map

Preliminary Assessment Roll

1. EXECUTIVE SUMMARY

City of Ramsey Improvement Project 15-20 proposes to reconstruct the pavement section on approximately 3,800 linear feet of Jarvis Street between Trunk Highway 10 and 165th Avenue NW that is mutually owned and maintained by the City of Elk River and the City of Ramsey, to improve the Jarvis Street crossing of the Burlington Northern Santa Fe (BNSF) railroad tracks to allow future establishment of a quiet zone, and other necessary appurtenant improvements.

The City of Elk River previously prepared a Feasibility Report for their overall 2015 Street and Utility Improvements project to determine the necessity, feasibility and cost-effectiveness of all proposed improvements, including the improvements identified herein to be paid for by the City or Ramsey. The City of Elk River's Feasibility Report is attached this Report as *Appendix A*. A map showing the location of the proposed improvements the City of Ramsey has been requested to share in the costs of is included as Figure 3 in Appendix A of Elk River's Feasibility Report.

Staff from the City of Ramsey typically rate the pavement sections of all city streets annually using the Pavement and Surface Evaluation Rating (PASER) system. The pavement section of the shared segment of Jarvis Street was rated in 2014 at a PASER rating of 2, ranking it among the worst paved street segments within the City and warranting a complete reconstruction.

In June of 2014, staff was informed that the City of Elk River intended to reconstruct Jarvis Street between Trunk Highway 10 and 165th Avenue as part of their 2015 Street and Utility Improvements project. This section of Jarvis Street includes a segment approximately 3,800 feet long that is bisected by the political boundaries of the cities of Elk River and Ramsey and is therefore mutually shared and maintained between the two cities. It also includes a Burlington Northern Santa Fe (BNSF) railroad crossing that is currently not designated as a whistle-free quiet zone. A map showing the location of these improvements is included on the third page of the attached proposal letter from the City of Elk River.

Elk River's staff explained that a joint meeting of the City Councils was held on May 9th, 2011, and that at the time the Ramsey City Council provided verbal support for sharing in the costs of reconstructing the shared section of Jarvis Street, as well as the railroad crossing quiet zone improvements. Based on the results of the joint meeting the City of Elk River developed the Jarvis Street reconstruction and quiet zone improvements project for inclusion with their 2015 Street and Utility Improvements project.

City of Ramsey staff agreed that the condition of Jarvis Street is such that it should be reconstructed in the near future, and that the Jarvis Street railroad crossing quiet zone improvements would benefit City of Ramsey residents and businesses. However, these improvements were not included in Ramsey's 5-year Capital Improvement Plan (CIP) so funds were not available to pay for the improvements in 2015. It was therefore discussed that the reconstruction of the shared segment of Jarvis Street should be delayed until the City of Ramsey was in a better position to fund our share of the improvements.

On August 15th, 2014, staff from both cities met again to further discuss the benefits and viability of the project, including potential financing options. Elk River's staff noted their strong preference to reconstruct Jarvis Street in 2015 and that they may be able to pay the City of

Ramsey's share of the costs up-front, and then allow Ramsey to repay our share of the costs back over a 3-year period.

On August 28th, 2014, the City of Elk River provided a proposal letter to the City of Ramsey formalizing their request for the City of Ramsey to share in 50% of the costs for reconstructing the shared segment of Jarvis Street, plus 50% of the costs for the quiet zone improvements, and that Elk River will pay for Ramsey's share of the costs up-front while allowing repayment over a 3-year period. A copy of the proposal letter is included in **Appendix B**. Staff has since verified that repayment would be allowed to occur interest-free over calendar years 2016 to 2018, which would not impact the City's adopted 2015 budget.

On September 16th, 2014 staff presented Elk River's proposal to the Public Works Committee for consideration of recommending Council approval of the project, pending further direction from Elk River. It was discussed that though the railroad crossing is located entirely within the City of Elk River, City of Ramsey businesses and residents would share the benefit of the quiet zone so the request to share in 50% of the costs seems reasonable. It was also discussed that Elk River proposed to reconstruct Jarvis Street as a 9-ton road with bituminous pavement and concrete curb and gutter at a width of 32-feet, which appears to be reasonable considering that Jarvis Street is a Municipal State Aid route, and that the concrete curb and gutter will help protect the pavement edges and extend the life of the pavement.

The Public Works Committee also discussed that a 10-foot wide off-road bituminous trail was proposed west of Jarvis Street that could ultimately serve to connect the City of Ramsey's Mississippi River Trail, which is to be constructed on the south side of Highway 10, to Elk River's section of the Mississippi River Trail, which is routed through the City of Elk River and not along Highway 10. Based on the proposed improvements, and assuming a 50/50 cost split, the City of Ramsey's total cost-share amount was estimated to be \$970,728. The Public Works Committee recommended Council approval of Elk River's proposal to use a 50/50 cost split and a 3-year payback term for calendar years 2016 to 2018.

On October 20th, 2014, the Elk River City Council reviewed the Feasibility Report for the City of Elk River's 2015 Street and Utility Improvements project, which included the 32-foot wide street design with 10-foot wide off-road bike trail. At that time, the Elk River City Council directed their staff to redesign Jarvis Street to a 36-foot wide street with two 12-foot wide through lanes and two 6-foot wide on-road bike lanes and no off-road trail.

In January of 2015, Elk River provided their Feasibility Report to Ramsey City staff, along with a memo from their consulting engineer Bolton-Menk, Inc, (BMI) dated October 29th, 2014 addressing the revised design and estimated project costs. A copy of this memo is attached in **Appendix C**. Per the BMI memo, as well as a 2-page cost estimate that adjusted the estimated costs for the old 32-foot wide street design to the revised 36-foot wide design, which is also attached in **Appendix C**, the City of Ramsey's total share of the project costs decreased by \$50,422.50 resulting in a total estimated cost-share of \$920,305.50.

On January 27th, 2015 the Ramsey City Council ordered a Feasibility Report to better define the City of Ramsey's portion of the project, which has been completed and is attached to this case. The Feasibility Report addresses the feasibility of reconstructing Jarvis Street as a wider street section to accommodate vehicular and on-road pedestrian uses, as well as reconstructing the

Burlington Northern Santa Fe railroad crossing to allow the establishment of whistle-free quiet zone.

Elk River's estimated costs include 10% contingency costs plus 10% indirect costs for administrative, engineering, and legal costs. See Appendix B of Elk River's Feasibility Report for a detailed cost summary as prepared by Bolton & Menk, Inc., in addition to Bolton & Menk's memo dated October 29th, 2014.

This improvement project, which is included in the City of Ramsey's current 5-year Capital Improvement Plan, can be funded using a combination of Public Improvement Revolving (PIR) funds, special assessments to benefiting properties, and Stormwater Utility funds.

Preliminary assessments in the amount of \$4,500 per lot are proposed for the 10 single-family residential property owners having direct access onto the improved street segment. The proposed rate is in accordance with the recently adopted Special Assessments Policy.

To ensure that all special assessments levied with this project are commensurate with the benefit received, staff requests Council authorization to order a benefit appraisal consultation based on the current property use at the time the improvements are made.

The proposed improvements to be funded by the City of Ramsey are necessary, feasible, and cost-effective from an engineering standpoint, and can be constructed as proposed herein.

2. INTRODUCTION

2.1 Authorization

The preparation of this report was authorized by the Ramsey City Council on February 25, 2014. This project has been designated as City Improvement Project No. 13-10.

2.2 Program Overview

This Feasibility Report explores proposed improvements to Jarvis Street between Trunk Highway 10 and 165th Avenue as part of Elk River's 2015 Street and Utility Improvements project. This section of Jarvis Street includes a segment approximately 3,800 feet long that is mutually shared and maintained between the cities of Elk River and Ramsey and is proposed to be reconstructed. In addition, improvements are proposed to the Burlington Northern Santa Fe (BNSF) railroad crossing to allow it to be designated as a whistle-free quiet zone after the improvements are complete.

A map showing the location of these improvements is included on the third page of the attached proposal letter from the City of Elk River in *Appendix B*.

2.3 Scope

The scope of this Report addresses the proposed improvements including the reconstruction of approximately 3,800 linear feet of Jarvis Street, south of 165th Avenue, and the BNSF railroad crossing quiet zone improvements.

3. EXISTING CONDITIONS

3.1 Existing Pavement and Soil Conditions

The existing shared segment of Jarvis Street is located partially within the City of Ramsey and partially in the City of Elk River. The street is contained within a variable width right-of-way, and is currently a 22-foot wide rural bituminous pavement section with maximum 2-foot wide aggregate shoulders, shallow drainage ditches, numerous driveway culverts, and no public utilities (watermain or sanitary sewer). The pavement section on this segment of Jarvis Street has a Pavement and Surface Evaluation Rating (PASER) of 2, ranking it among the worst pavement sections in the City and warranting a complete reconstruction.

The City of Elk River's Feasibility Report identifies required subgrade corrections of up to 5-feet in various areas. Based on the staff's experience while completing work in this area of the City, staff is confident that the underlying soils are suitable for street construction and as such do not anticipate any issues with the improvements as proposed by the City of Elk River.

Due to the shallow construction techniques required for the proposed improvements, staff does not believe that groundwater will be a concern during construction, although ground water has been noted in the past in this area at depths as shallow as 4-feet. This report therefore assumes that dewatering will not be an issue during construction, and that sump pumps will be sufficient for any necessary construction dewatering.

3.2 Watermain

Watermain does not currently exist under Jarvis Street, and the City has no plans to extend water service to this area of the City in the foreseeable future.

3.3 Sanitary Sewer

Sanitary sewer does not currently exist under Jarvis Street, and the City has no plans to extend sanitary sewer service to this area of the City in the foreseeable future.

3.4 Storm Sewer/Drainage

Stormwater drainage on Jarvis Street is currently conveyed along both sides of Jarvis Street in shallow rural ditches and through a series of driveway culverts.

Stormwater ponding may be required for this project since pavement widths are proposed to be expanded. This will be discussed with the Lower Rum River Watershed Management Organization in more detail on February 19th, 2015.

4. PROPOSED IMPROVEMENTS

4.1 Street and Stormwater Improvements

4.1.1 Jarvis Street

Jarvis Street is part of the City of Ramsey's Municipal State Aid System (MSAS) and is eligible for State Aid funding. Jarvis Street is also part of the City of Elk River's MSAS system of streets.

Pathway/Sidewalk:

Six-foot wide on-road bike lanes are proposed to facilitate pedestrian movements. This corridor is not typically utilized by pedestrians and based on the existing land uses it is not anticipated that the on-road bike lanes will be heavily used.

Street Design:

Jarvis Street is proposed to be reconstructed as a 36-foot wide urban section (two 12-foot through lanes and two 6-foot bike lanes) with bituminous pavement and B618 concrete curb and gutter on both sides to better delineate and facilitate drainage. Curb cuts and concrete flumes will be located along both sides of Jarvis Street to convey stormwater runoff from the street into the shallow ditch sections, where runoff will then be conveyed through culverts under driveways as needed.

Elk River is proposing to reconstruct Jarvis Street using a bituminous pavement section of 8" of class 5 aggregate base and 4½" of bituminous wear course. This pavement design meets State Aid standards for a 9 ton design section.

Elk River is proposing to perform variable-depth subgrade corrections along Jarvis Street by removing and replacing unsuitable soils with imported select granular borrow ranging in depths up to 60-inches. The intent is to provide a uniform subgrade section that will not be prone to differential settling over time and will require less maintenance over time to reduce the City's long-term maintenance costs and to maximize the life of the reconstructed street.

Stormwater Improvements:

Stormwater improvements are proposed to include new concrete curb and gutter, curb cuts along both sides of the streets, and concrete flumes to convey runoff into the shallow ditches, where it will then be conveyed through a system of ditches and culverts to stormwater ponding areas.

The opinion of probable costs includes a contingency cost of \$40,000 for purchasing land for stormwater easements and ponding as needed.

4.1.2 BNSF Railroad Crossing Quiet Zone Improvements

The existing railroad crossing will be reconstructed to include concrete curbing, raised concrete medians, new rails, ties and ballast, along with the installation of two-quadrant gate systems with flashers. These improvements will accommodate a future quiet zone.

Coordination with the BNSF Railway will be necessary during construction, and a public noticing process will be required following construction before the quiet zone can be established.

4.1.3 Other Considerations

Driveways:

Residential driveway aprons will need to be reconstructed to varying degrees with this project. The limits of construction will vary with each driveway based on the elevation of the street abutting the driveway apron, the pavement type, and the locations of existing pavement joints. During construction, staff will evaluate the construction limits for each driveway and will work with each of the property owners to determine the exact limits of construction in the field. Right-of-entry forms may be needed from residential property owner to complete work outside City right-of-ways and easements.

Aggregate Base Class 5 (modified):

The City owns a stockpile of aggregate base class 5 modified which is located on the future Public Works campus property. This material meets the City's aggregate base class 5 modified specifications and would typically be proposed for use with the project, but due to the shared nature of this project staff does not recommend using our aggregate base for this project. There will be ample opportunities on future projects to utilize this valuable resource.

4.2 Stormwater Treatment

Stormwater runoff will be conveyed from Jarvis Street via B618 concrete curb and gutter to curb cuts with concrete flumes, where the runoff will then be conveyed to drainage swales and stormwater ponding areas via shallow rural drainage ditches.

Since the street is proposed to be widened, staff has requested to discuss this issue with the Lower Rum River Watershed Management Organization during their February 19th Board meeting to determine whether additional infiltration or ponding improvements will be required.

4.3 Water Main Improvements

Watermain does not currently exist under Jarvis Street, and the City has no plans to extend water service to this area of the City in the foreseeable future.

4.4 Sanitary Sewer Improvements

Sanitary sewer does not currently exist under Jarvis Street, and the City has no plans to extend sanitary sewer service to this area of the City in the foreseeable future.

4.5 Construction Methods

The existing pavement will be reconstructed by removing the existing bituminous pavement section including class 5 aggregate base and aggregate shouldering.

The existing subgrade will be corrected by excavating variable depths of subgrade soils and replacing it with clean imported select granular borrow, unless it is determined during construction that the subgrade soils are suitable to allow the street to be reconstructed by scarifying the existing subgrade soils and re-compacting the scarified soils in place following concurrence from a geotechnical engineer.

Paving will be completed in two separate lifts upon acceptance of the aggregate base grading. It is anticipated that the final lift of the bituminous wear course will be placed in the same year as the bituminous base course.

4.6 Private Utilities

Staff has not yet met with the telephone, gas, and cable utilities regarding this project. If the City Council orders this project, staff will meet with the private utility companies to discuss the proposed improvements as noted in the project schedule within this Report, and to determine if modifications are feasible to minimize impacts to private utilities, including impacts to power poles.

Should any of the utility companies indicate that they wish to upgrade, replace and/or otherwise modify their services during this project, any such upgrades, replacements and/or modifications will be at the sole discretion and cost of the private utility.

City staff will contact Xcel Energy to see if they would like to bury any of their overhead lines with this project.

4.7 Permits

Permits that are anticipated to be required as part of the proposed improvements include:

- MPCA General Stormwater Permit (NPDES)..... Grading and Storm Water
- LRRWMO Permit..... WMO Stormwater Permit
- BNSF RailwayNotice of Intent – Quiet Zone Improvements

4.8 Right-of-Ways/Easements

It is anticipated that all improvements will occur within existing City right-of-ways and/or easements, with the exception of tying into private driveways or the grading of backslopes and/or ditches. However, it is not anticipated that the City will need to acquire any permanent right-of-way or easements for this project.

Rights of entries from individual property owners may need to be obtained prior to construction commencing for grading, driveway removals and paving, and restoration activities.

5. FINANCING

5.1 Opinion of Cost

Detailed opinions of probable costs for the proposed improvements can be found in *Appendix B* as prepared by the City of Elk River's engineer.

5.2 Funding

5.2.1 Assessments

Residential Assessments

Residential assessments are proposed to be levied against residential properties having direct access to Jarvis Street. To be consistent with the City's Special Assessments Policy, each residential property is proposed to be assessed using the "per lot" method.

Ten single-family residential properties are preliminarily proposed to be assessed at the rate of \$4,500 per lot. However, since special assessments have not been utilized widely for street reconstruction projects in Ramsey, and since State Statute and the City Charter does not allow for assessments to exceed the benefit to the property, staff wants to ensure that the assessment used with this project will not exceed the benefit to the assessed properties. Staff is therefore requesting Council authorization to order a benefit appraisal consultation for this project in accordance with the City's Special Assessments Policy.

The Preliminary Assessment Map and Roll are included in *Appendix D*.

5.2.2 City Contribution

The City contribution to the project includes all funding in excess of the amount collected through special assessments to benefiting properties. No funds were budgeted for this project in 2015. However, the City of Elk River proposes to pay for the cost of all improvements up-front, and is agreeable to letting the City or Ramsey pay them back interest-free over the three-year period including calendar years 2016, 2017 and 2018.

This improvement project, which is listed in the City's current 5-year Capital Improvement Plan, is proposed to be funded using a mix of Public Improvement Revolving (PIR) funds, special assessments, and stormwater utility funds.

6. PROJECT SCHEDULE

The proposed project schedule is as follows:

Council Orders Feasibility Report	January 27, 2015
Council Accepts Feasibility Report/Orders Public Hearing	February 10, 2015
Staff Conducts Neighborhood Information Meeting	February 18, 2015
Council Conducts Public Hearing/Authorizes Plans and Specifications	February 24, 2015
Council Approves Plans and Specifications/Authorizes Ad for Bids.....	April 28, 2015
Staff Receives Bids	May 22, 2015
Council Awards Contract	May 26, 2015
Contractor Begins Construction	June 2015
Contractor Completes Construction	October 2015
Council Conducts Assessment Hearing.....	October 13, 2015

7. CONCLUSIONS AND RECOMMENDATIONS

City of Ramsey Improvement Project 15-20 proposes to reconstruct the pavement section on approximately 3,800 linear feet of Jarvis Street between Trunk Highway 10 and 165th Avenue NW that is mutually owned and maintained by the City of Elk River and the City of Ramsey, to improve the Jarvis Street crossing of the Burlington Northern Santa Fe (BNSF) railroad tracks to allow future establishment of a quiet zone, and other necessary appurtenant improvements.

It is the recommendation of City staff that City Project No. 15-20 is feasible, necessary, and cost-effective from an engineering standpoint.

APPENDIX A

City of Elk River Feasibility Report

Feasibility Report for 2015 Street and Utility Improvements

City of Elk River, MN
BMI Project No. N15.108340

October 8, 2014



Submitted by:

Bolton & Menk, Inc.
7533 Sunwood Drive NW
Ramsey, MN 55303
P: (763) 433-2851
F: (763) 427-0833



BOLTON & MENK, INC.
Consulting Engineers & Surveyors

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Phone (763) 433-2851 • Fax (763) 427-0833
www.bolton-menk.com

October 8, 2014

Honorable Mayor and City Council
13065 Orono Parkway NW
Elk River, MN 55330

RE: 2015 Street and Utility Improvements
Project No.: N15.108340

Honorable Mayor and City Council Members,

Enclosed for your review is the 2015 Street and Utility Improvements Feasibility Report. The report includes street and utility improvements on 165th Avenue NW and Jarvis Street NW as well as reclamation and mill and overlays on various streets within the City. This report includes a brief description of the proposed improvements, permits, ponding areas, wetlands impacts and estimated construction costs.

Sincerely,

BOLTON & MENK, INC.

Cody Holmes, P.E.
Project Engineer

Cc: Justin Femrite, P.E., City Engineer
Mark Kasma, P.E., Senior Principal Engineer



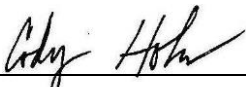
CERTIFICATION

Feasibility Report

for


2015 Street and Utility Improvements

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 the laws of the State of Minnesota.

By: 
Cody Holmes, P.E.
License No. 49143

Date: October 8, 2014

and

By: 
Mark D. Kasma, P.E.
License No. 21282

Date: October 8, 2014



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APPENDIX A

FIGURE 1 – STREET IMPROVEMENTS
FIGURE 2 – STREET IMPROVEMENTS
FIGURE 3 – 165TH AVENUE NW AND JARVIS STREET NW
FIGURE 4 – WETLAND IMPACTS
FIGURE 5 – TYPICAL SECTION WITH TRAIL
FIGURE 6 – TYPICAL SECTION WITHOUT TRAIL
FIGURE 7 – POSSIBLE PONDING ALTERNATIVES

APPENDIX B

PRELIMINARY COST ESTIMATE:

- **EDGE MILL AND OVERLAY**
- **RECLAMATION**

APPENDIX C

PRELIMINARY COST ESTIMATE:

- **165TH AVENUE NW AND JARVIS STREET NW**

APPENDIX D

PRELIMINARY COST ESTIMATE:

- **165TH AVENUE NW AND JARVIS STREET NW – NO TRAIL OPTION**

INTRODUCTION

The 2015 Street Improvements include improvements on multiple streets throughout the City. Different pavement management procedures are proposed to be utilized on each street, depending on the existing condition of the street. Each street was reviewed by Bolton & Menk and City Staff to determine the procedure that would be applied to it. Each procedure is described below, along with the street that is scheduled for that type of procedure.

Edge Mill and Overlay

Edge Mill and Overlay of a roadway consists of milling the existing bituminous along the existing gutter or bituminous edge in order to match the new overlay to the existing elevations. Areas of roadway will also be Milled and Overlaid, this consists of milling the existing bituminous surface along the roadway to a uniform depth and overlaying bituminous on the remaining pavement. The streets proposed to be edge milled and overlaid are in fair condition. The proposed Edge Mill and Overlay improvements are shown on Figure No. 1 and 2 in Appendix A.

The following streets are proposed to be edge milled and overlaid:

- School Street NW (Proctor Avenue NW to TH 169)
- 8th Street NW (Dodge Avenue NW to Cul-de-Sac)
- Tyler Street Area – 197th Avenue NW (Evans Street NW to Dodge Street NW), 198th Avenue NW (Dodge Street NW to Zane Street NW), 197th Avenue NW (Zane Street NW to Tyler Street NW), 200th Avenue NW (Cul-de-Sac to Tyler Street NW), Vance Circle NW, Vance Street NW (Vance Circle to Ulysses Street NW), Ulysses Street NW (South Cul-de-Sac to 202nd Avenue NW), 195th Avenue NW (Ulysses Street NW to Tyler Street NW), Tyler Street NW (197th Avenue NW to 201st Circle NW), 201st Circle NW, 203rd Avenue NW (Smith Street NW to 560-feet east of Quincy Circle NW), Quincy Circle NW

Reclamation

Reclaiming of bituminous pavement is a process whereby the pavement and underlying aggregate base are milled together in-place, regraded and compacted as base material for the new pavement overlay. The new pavement section shall be a 9-Ton design and shall consist of 3.5-inches of bituminous pavement with 8-inches of aggregate base. The streets proposed to be reclaimed are in poor condition. The proposed reclamation improvements are shown on Figure No. 2 in Appendix A.

The following streets are proposed to be reclaimed:

- Elk Hills Area – Elk Hills Drive NW, Fawn Road NW, Line Avenue NW, and 700-feet of Elk Lane NW beginning at Elk Hills Drive
- Tyler Street Area – Tyler Street NW (Twin Lakes Road to 197th Avenue NW), Smith Street NW (201st Circle NW to 205th Avenue NW), 202nd Avenue NW (Smith Street NW to Ulysses Street NW), Ulysses Street NW (202nd Avenue NW to Vance Street NW, Vance Street NW (Vance Circle NW to 205th Avenue NW)

165TH AVENUE NW AND JARVIS STREET NW

The City is proposing to reconstruct 165th Avenue NW from Great River Energy on the west to Jarvis Street. Jarvis Street NW is proposed to be reconstructed from 165th Avenue NW on the north to Trunk Highway 10/169. The total length of the improvements is 2.4 miles. Figure No. 3 in Appendix A identifies the project limits.

165th Avenue NW and Jarvis Street NW is an existing 22' wide bituminous roadway with 0-2' wide aggregate shoulders. The typical section is rural with shallow ditches. Wetlands exist along both roadways. Figure No. 4 in Appendix A identifies the wetlands being affected by the improvements. The filling of these wetlands will be mitigated via the purchase of wetland bank credits overseen by the Soil and Water Conservation District (SWCD).

The proposed improvements consist of reconstructing both roadways to an urban section with a 32' wide face of curb to face of curb. Concrete curb and gutter shall be MnDOT Design B618. A 10' wide bituminous trail along the south side of 165th Avenue NW and along the west side of Jarvis Street NW was reviewed as possible option. Cost estimates were developed for each option. The typical section for the street is identified in Figure No. 5 in Appendix A. Figure No. 6 in Appendix A identifies a typical section for the street without the bituminous trail.

Figure No. 7 in Appendix A identifies locations for possible stormwater features. Final design will confirm which locations are needed to meet stormwater rate control and water quality requirements.

Railroad crossing improvements on 165th Avenue NW and Jarvis Street NW are proposed in this report. Improvements include the installation of concrete curbing, medians concrete panels, new rail, ties and ballast along with the installation of two-quadrant gate systems with flashers. These improvements are included to accommodate future quiet zones at the crossings. Coordination with the BNSF Railway will be necessary.

PERMITS

Permits will be required from the following agencies:

- Minnesota Department of Transportation (Drainage and Work Within the Right-of-Way)
- Minnesota Pollution Control Agency (Phase II General Stormwater Permit for Construction Activities)
- Department of Natural Resources (Work Within Waters Permit)
- Wetland Conservation Act (Wetland Permit)
- BNSF Railway (Notice of Intent - Quiet Zone Permit)

EASEMENTS AND LAND ACQUISITION

Temporary grading easements will be required from residents in both Elk River and the City of Ramsey along the route. Final design will identify which parcels are affected.

Land is proposed to be acquired for stormwater ponding. Figure No. 7 in Appendix A identifies possible ponding alternatives. Final design will identify the exact area required.

ESTIMATED COSTS

Appendix B identifies a preliminary cost estimate that includes estimated quantities and unit prices for the reclamations and edge mill and overlays. The cost estimate includes a contingency factor of 10% to account for any elements of construction that are unknown at this time. They also include indirect projects costs of construction such as engineering, legal fees and administrative costs which together are estimated at 10% of the project construction cost. The total project cost is estimated at \$2,634,324 and is based on current public construction cost information.

Appendix C identifies a preliminary cost estimate that includes estimated quantities and unit prices for 165th Avenue NW and Jarvis Street NW. The cost estimate includes a contingency factor of 10% to account for any elements of construction that are unknown at this time. They also include indirect projects costs of construction such as engineering, legal fees and administrative costs which together are estimated at 10% of the project construction cost. The total project cost is estimated at \$4,752,400 and is based on current public construction cost information.

Appendix D identifies a preliminary cost estimate that includes estimated quantities and unit prices for 165th Avenue NW and Jarvis Street NW without a trail. The cost estimate includes a contingency factor of 10% to account for any elements of construction that are unknown at this time. They also include indirect projects costs of construction such as engineering, legal fees and administrative costs which together are estimated at 10% of the project construction cost. The total project cost is estimated at \$3,795,400 and is based on current public construction cost information.

No costs have been included for purchasing temporary easements.

\$40,000 has been included for land purchases for ponding.

FUNDING

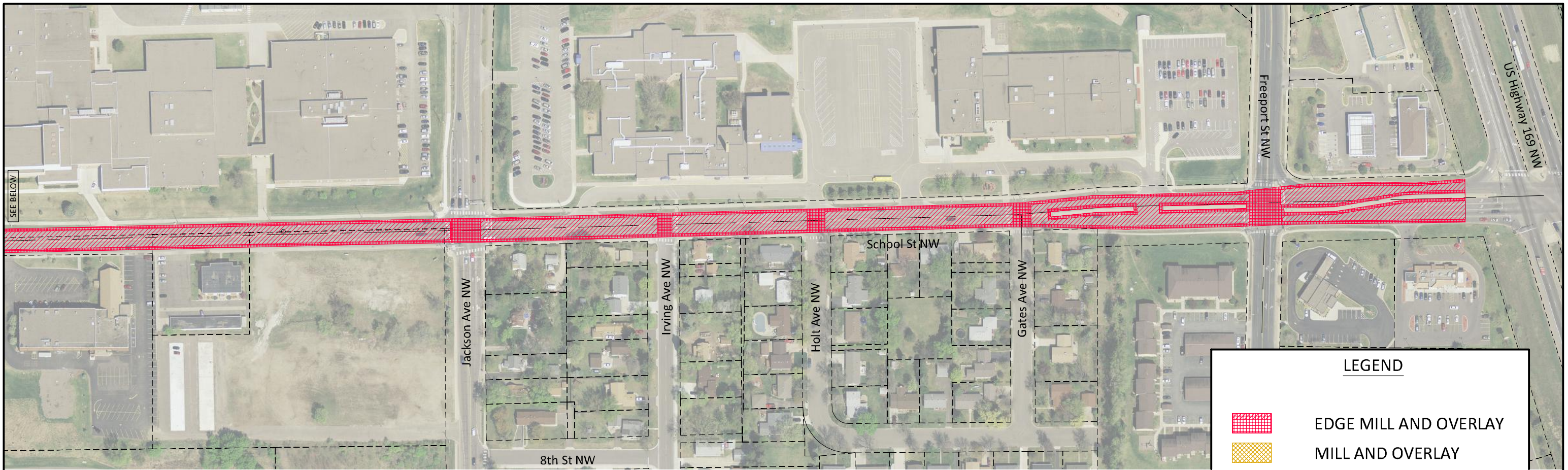
The City proposes to utilize Municipal State Aid (MSA) Funds and Local Funds for the improvements. MSA Funds will be used on all Municipal State Aid Streets. These streets include, Jarvis Street NW, 165th Avenue NW, School Street, Tyler Street, Smith Street, 197th Avenue and 198th Avenue. The remaining costs will be funded with revenue collected from the city franchise fee. The total project cost for the improvements herein are estimated at \$7,386,724 with a trail on Jarvis Street NW and 165th Avenue NW. The total project cost for the improvements herein are estimated at \$6,429,724 without the trail.

RECOMMENDATIONS

From an engineering standpoint, this project is feasible, cost effective and necessary, and can best be accomplished by letting competitive bids for the work.

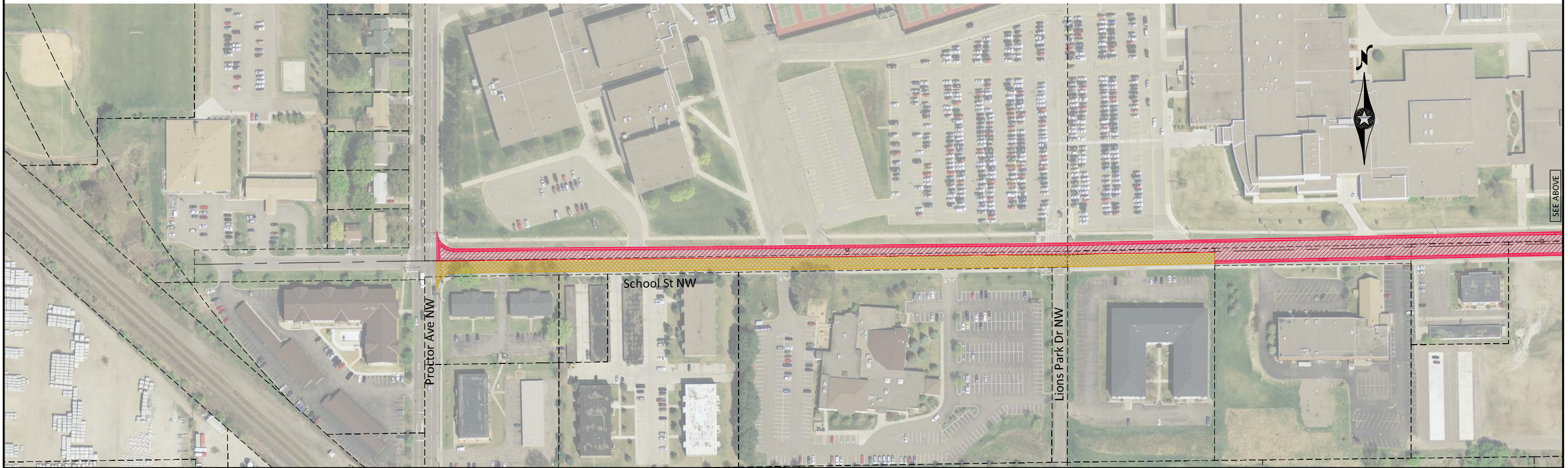


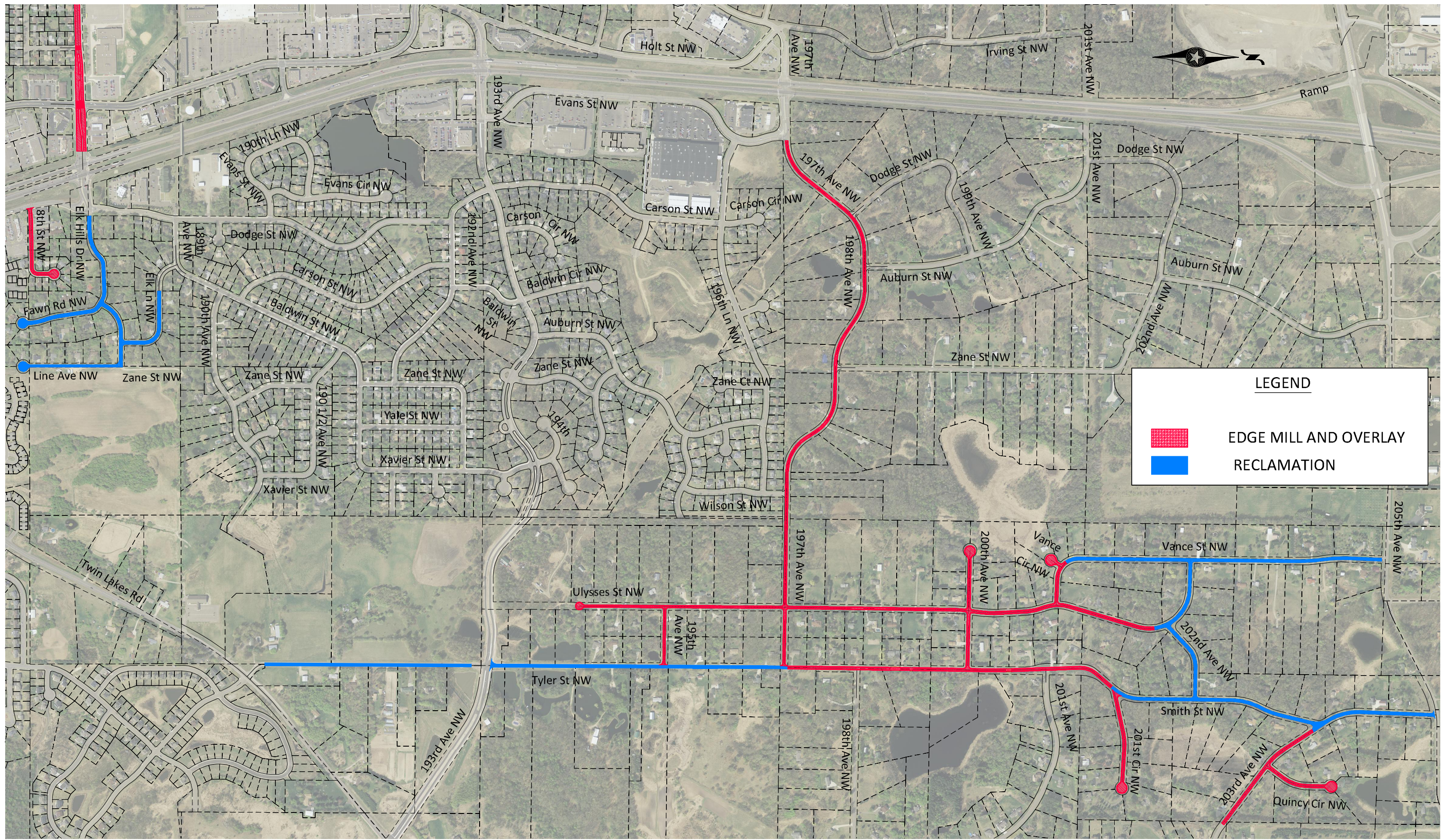
APPENDIX A



LEGEND

	EDGE MILL AND OVERLAY
	MILL AND OVERLAY





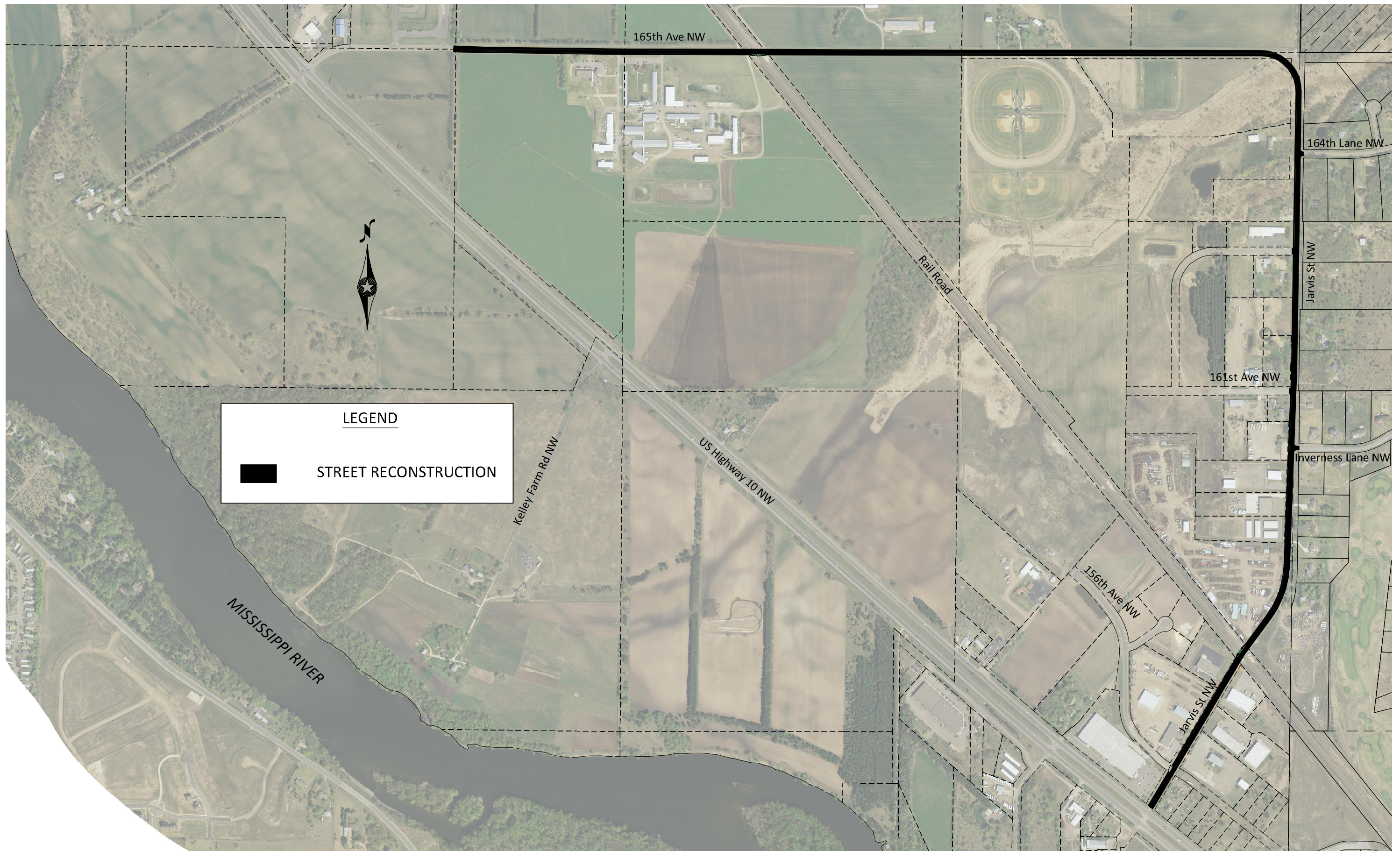
LEGEND

	EDGE MILL AND OVERLAY
	RECLAMATION



BOLTON & MENK, INC.
 Consulting Engineers & Surveyors
 7533 SUNWOOD DRIVE NW
 RAMSEY, MN 55303
 PHONE (763)-433-2851 FAX (763) 427-0833

ELK RIVER, MINNESOTA
 8TH STREET NW, ELK HILLS AREA, TYLER STREET AREA



LEGEND


STREET RECONSTRUCTION



BOLTON & MENK, INC.
 Consulting Engineers & Surveyors
 7533 SUNWOOD DRIVE NW
 RAMSEY, MN 55303
 PHONE (763)-433-2851 FAX (763) 427-0833

ELK RIVER, MINNESOTA
 165TH AVENUE NW AND JARVIS STREET NW

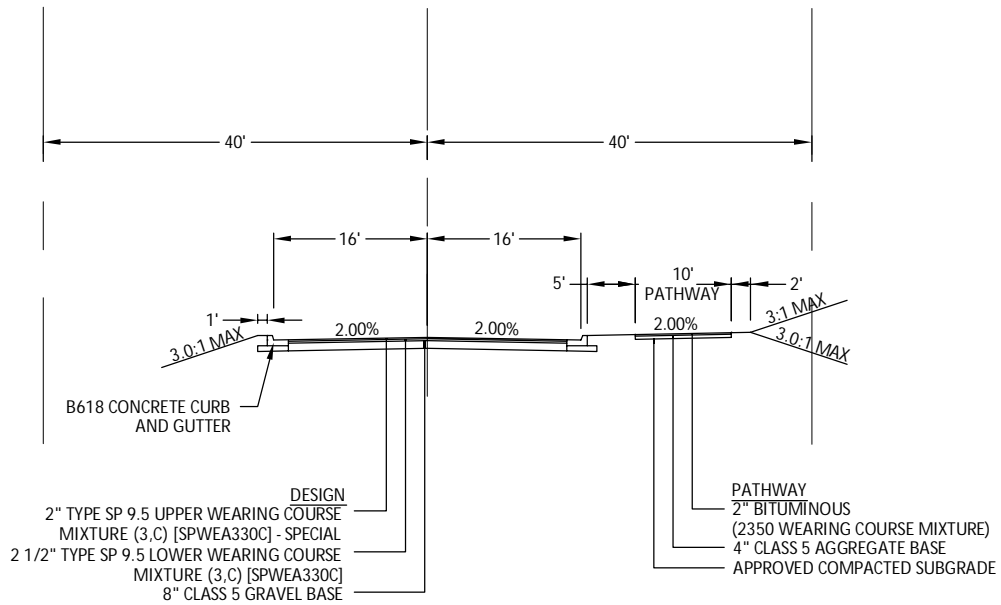
STREET IMPROVEMENTS

FIGURE 3

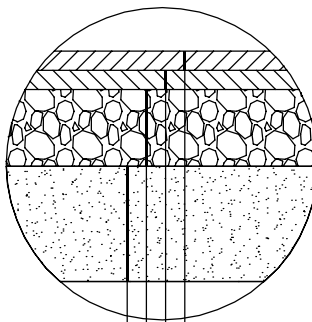


**TOTAL WETLAND IMPACT =
33275.92 Sq. Ft. 0.76 Acres**





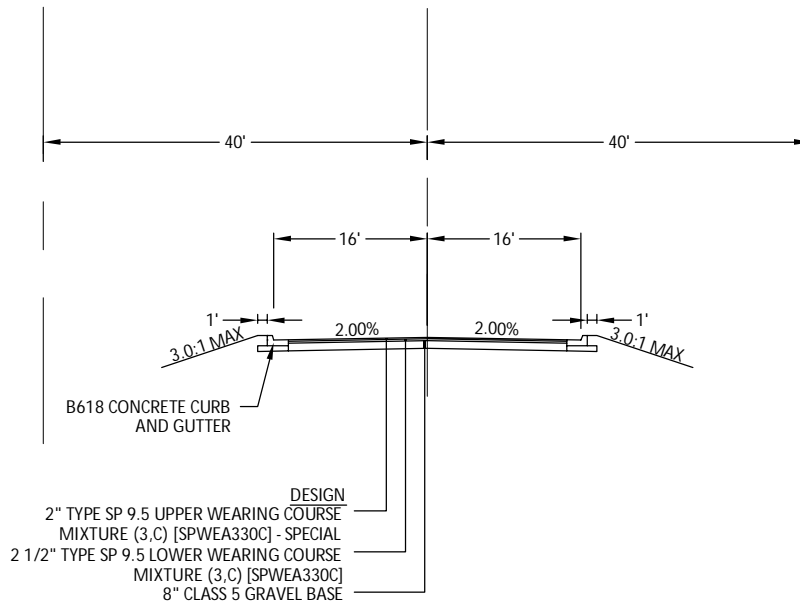
TYPICAL SECTION
32' FACE TO FACE WITH TRAIL



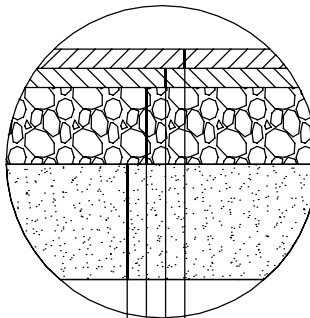
- DESIGN
- 2" TYPE SP 9.5 UPPER WEARING COURSE MIXTURE (3,C) [SPWEA330C] - SPECIAL
 - 2 1/2" TYPE SP 9.5 LOWER WEARING COURSE MIXTURE (3,C) [SPWEA330C]
 - 8" CLASS 5 GRAVEL BASE
 - 24"-60" SELECT GRANULAR BORROW (VARIES)

TYPICAL SECTION
SUBGRADE EXCAVATION





TYPICAL SECTION
32' FACE TO FACE WITHOUT TRAIL



- DESIGN
- 2" TYPE SP 9.5 UPPER WEARING COURSE MIXTURE (3,C) [SPWEA330C] - SPECIAL
 - 2 1/2" TYPE SP 9.5 LOWER WEARING COURSE MIXTURE (3,C) [SPWEA330C]
 - 8" CLASS 5 GRAVEL BASE
 - 24"-60" SELECT GRANULAR BORROW (VARIES)

TYPICAL SECTION
SUBGRADE EXCAVATION





POTENTIAL STORMWATER FEATURE (TYP.)

EXISTING STORMWATER POND (TYP.)



APPENDIX B

MILL AND OVERLAY & RECLAIM

PRELIMINARY COST ESTIMATE CITY OF ELK RIVER

ITEM NO.	MN/DOT SPEC NO.	ITEM DESCRIPTION	NOTES	UNIT	TOTAL QUANTITY	UNIT COST	TOTAL COST
SCHOOL STREET							
1	2021.501	MOBILIZATION		LUMP SUM	1	\$20,000.00	\$20,000.00
2	2104.501	REMOVE AND REPLACE CURB AND GUTTER		LIN FT	50	\$20.00	\$1,000.00
3	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	20	\$6.00	\$120.00
4	2105.507	SUBGRADE EXCAVATION (EV)		CU YD	50	\$20.00	\$1,000.00
5	2211.503	AGGREGATE BASE CLASS 5		CU YD	50	\$30.00	\$1,500.00
6	2231.501	BITUMINOUS PATCHING MIXTURE		TON	175	\$100.00	\$17,500.00
7	2232.501	MILL BITUMINOUS SURFACE (2.0")		SQ YD	4450	\$2.50	\$11,125.00
8	2232.604	EDGE MILL BITUMINOUS SURFACE 6" WIDE (0.0" TO 2")		SQ YD	7145	\$1.50	\$10,717.50
9	2360.501	TYPE SP 12.5 WEARING COURSE (2,C) (SPWEB240C) (2360)		TON	3400	\$75.00	\$255,000.00
10	2504.602	ADJUST GATE VALVE		EACH	12	\$350.00	\$4,200.00
11	2504.602	RECONSTRUCT VALVE BOX		EACH	4	\$500.00	\$2,000.00
12	2506.522	ADJUST FRAME & RING CASTING		EACH	13	\$400.00	\$5,200.00
13	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ FT	20	\$52.00	\$1,040.00
14	2563.601	TRAFFIC CONTROL		LUMP SUM	1	\$5,000.00	\$5,000.00
15	2573.530	STORM DRAIN INLET PROTECTION		EACH	18	\$150.00	\$2,700.00
16	2582.501	PAVEMENT MESSAGE (LEFT TURN ARROW) EPOXY		EACH	9	\$180.00	\$1,620.00
17	2582.501	PAVEMENT MESSAGE (RIGHT TURN ARROW) EPOXY		EACH	6	\$180.00	\$1,080.00
18	2582.501	PAVEMENT MESSAGE (LEFT-THRU ARROW) EPOXY		EACH	2	\$180.00	\$360.00
19	2582.501	PAVEMENT MESSAGE (THRU ARROW) EPOXY		EACH	2	\$180.00	\$360.00
20	2582.502	4" SOLID LINE WHITE-EPOXY		LIN FT	1490	\$0.90	\$1,341.00
21	2582.502	4" BROKEN LINE WHITE-EPOXY		LIN FT	1660	\$0.90	\$1,494.00
22	2582.502	24" SOLID LINE WHITE-EPOXY		LIN FT	135	\$8.50	\$1,147.50
23	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY		LIN FT	3780	\$1.50	\$5,670.00
24	2582.503	CROSSWALK MARKING-EPOXY		SQ FT	1314	\$7.50	\$9,855.00
TOTAL COST SCHOOL STREET IMPROVEMENTS:							\$361,030.00
8TH STREET AREA							
1	2021.501	MOBILIZATION		LUMP SUM	1	\$2,000.00	\$2,000.00
2	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	10	\$8.00	\$80.00
3	2231.501	BITUMINOUS PATCHING MIXTURE		TON	40	\$100.00	\$4,000.00
4	2232.604	EDGE MILL BITUMINOUS SURFACE 6" WIDE (0.0" TO 2")		SQ YD	1110	\$1.50	\$1,665.00
5	2360.501	TYPE SP 12.5 WEARING COURSE (2,C) (SPWEB240C) (2360)		TON	350	\$75.00	\$26,250.00
6	2506.522	ADJUST FRAME & RING CASTING		EACH	13	\$400.00	\$5,200.00
7	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ YD	10	\$52.00	\$520.00
8	2573.530	STORM DRAIN INLET PROTECTION		EACH	1	\$150.00	\$150.00
9	2582.502	24" SOLID LINE WHITE-EPOXY		LIN FT	16	\$8.50	\$136.00
10	2582.503	CROSSWALK MARKING-EPOXY		SQ FT	144	\$6.00	\$864.00
TOTAL COST 8TH STREET IMPROVEMENTS:							\$40,865.00
ELK HILLS AREA							
1	2021.501	MOBILIZATION		LUMP SUM	1	\$5,000.00	\$5,000.00
2	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	150	\$6.00	\$900.00
3	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT		SQ YD	200	\$4.00	\$800.00
4	2105.501	COMMON EXCAVATION		CU YD	100	\$20.00	\$2,000.00
5	2105.507	SUBGRADE EXCAVATION (EV)		CU YD	300	\$20.00	\$6,000.00
6	2211.503	AGGREGATE BASE CLASS 5		CU YD	500	\$30.00	\$15,000.00
7	2331.604	BITUMINOUS PAVEMENT RECLAMATION (FULL DEPTH)		SQ YD	12910	\$1.50	\$19,365.00
8	2360.501	TYPE SP 9.5 WEARING COURSE (2,C) (SPWEA240C) (2360)		TON	1120	\$75.00	\$84,000.00
9	2360.501	TYPE SP 12.5 NON-WEARING COURSE (2,B) (SPNWB240B) (2360)		TON	1490	\$70.00	\$104,300.00
10	2360.503	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B) 3.0" THICK		SQ YD	200	\$30.00	\$6,000.00
11	2501.601	DRAINAGE IMPROVEMENTS AND REPAIR PIPE CULVERT		LUMP SUM	1	\$3,000.00	\$3,000.00
12	2506.522	ADJUST FRAME & RING CASTING		EACH	4	\$400.00	\$1,600.00
13	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ YD	150	\$52.00	\$7,800.00
14	2535.501	MONOLITHIC BITUMINOUS CURB (6" HEIGHT)		LIN FT	7600	\$8.00	\$60,800.00
15	2563.601	TRAFFIC CONTROL		LUMP SUM	1	\$5,000.00	\$5,000.00
16	2573.530	STORM DRAIN INLET PROTECTION		EACH	5	\$150.00	\$750.00
17	2582.502	24" SOLID LINE WHITE-EPOXY		LIN FT	18	\$10.00	\$180.00
18	2582.503	CROSSWALK MARKING-EPOXY		SQ FT	144	\$6.00	\$864.00
TOTAL COST ELK HILLS IMPROVEMENTS:							\$323,359.00

MILL AND OVERLAY & RECLAIM

PRELIMINARY COST ESTIMATE CITY OF ELK RIVER

ITEM NO.	MN/DOT SPEC NO.	ITEM DESCRIPTION	NOTES	UNIT	TOTAL QUANTITY	UNIT COST	TOTAL COST
TYLER STREET							
1	2021.501	MOBILIZATION		LUMP SUM	1	\$50,000.00	\$50,000.00
2	2104.501	REMOVE CURB AND GUTTER		LIN FT	50	\$5.00	\$250.00
3	2104.501	REMOVE AND REPLACE CURB AND GUTTER		LIN FT	200	\$20.00	\$4,000.00
4	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT		SQ YD	300	\$6.00	\$1,800.00
5	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT		SQ YD	300	\$4.00	\$1,200.00
6	2104.505	REMOVE CONCRETE VALLEY GUTTER		SQ YD	40	\$6.00	\$240.00
7	2104.505	REMOVE BITUMINOUS PAVEMENT		SQ YD	310	\$4.00	\$1,240.00
8	2105.501	COMMON EXCAVATION		CU YD	120	\$14.00	\$1,680.00
9	2105.507	SUBGRADE EXCAVATION (EV)		CU YD	210	\$20.00	\$4,200.00
10	2105.522	SELECT GRANULAR BORROW (CV)		CU YD	210	\$18.00	\$3,780.00
11	2211.503	AGGREGATE BASE CLASS 5		CU YD	120	\$30.00	\$3,600.00
12	2231.501	BITUMINOUS PATCHING MIXTURE		TON	300	\$100.00	\$30,000.00
13	2331.604	BITUMINOUS PAVEMENT RECLAMATION (FULL DEPTH)		SQ YD	36210	\$1.50	\$54,315.00
14	2232.604	EDGE MILL BITUMINOUS SURFACE 6" WIDE (0.0" TO 2")		SQ YD	23942	\$1.50	\$35,913.00
15	2360.501	TYPE SP 12.5 WEARING COURSE (2,C) (SPWEB240C) (2360)		TON	10610	\$75.00	\$795,750.00
16	2360.501	TYPE SP 12.5 NON-WEARING COURSE (2,B) (SPNWB240B) (2360)		TON	4180	\$70.00	\$292,600.00
17	2360.503	TYPE SP 9.5 WEARING COURSE MIXTURE (2,B) 3.0" THICK		SQ YD	300	\$30.00	\$9,000.00
18	2501.601	DRAINAGE IMPROVEMENTS AND REPAIR PIPE CULVERT		LUMP SUM	1	\$5,000.00	\$5,000.00
19	2506.522	ADJUST FRAME & RING CASTING		EACH	5	\$400.00	\$2,000.00
20	2531.501	CONCRETE CURB & GUTTER DESIGN B618		LIN FT	200	\$15.00	\$3,000.00
21	2531.507	6" CONCRETE DRIVEWAY PAVEMENT		SQ YD	300	\$52.00	\$15,600.00
22	2531.604	7" CONCRETE VALLEY GUTTER		SQ YD	40	\$52.00	\$2,080.00
23	2535.501	MONOLITHIC BITUMINOUS CURB (6" HEIGHT)		LIN FT	14290	\$8.00	\$114,320.00
24	2563.601	TRAFFIC CONTROL		LUMP SUM	1	\$5,000.00	\$5,000.00
25	2573.530	STORM DRAIN INLET PROTECTION		EACH	18	\$150.00	\$2,700.00
26	2582.502	24" SOLID LINE WHITE-EPOXY		LIN FT	80	\$10.00	\$800.00
27	2582.502	4" DOUBLE SOLID LINE YELLOW-EPOXY		LIN FT	15740	\$0.75	\$11,805.00
TOTAL COST TYLER STREET IMPROVEMENTS:							\$1,451,873.00

TOTAL COST STREET IMPROVEMENTS:	\$2,177,127.00
10% CONTINGENCIES	\$217,713.00
TOTAL STREET IMPROVEMENT COST	\$2,394,840.00
INDIRECT COSTS (10%)	\$239,484.00
TOTAL STREET IMPROVEMENT COST	\$2,634,324.00



APPENDIX C

**165TH AVENUE NW & JARVIS STREET NW
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	10370	\$3.50	\$36,295.00
5	COMMON EXCAVATION	CU YD	21146	\$2.00	\$42,292.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	33990	\$5.00	\$169,950.00
8	AGGREGATE BASE CLASS 5	TON	31482	\$11.00	\$346,302.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	4937	\$75.00	\$370,275.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6171	\$70.00	\$431,970.00
11	TACK COAT	GA	4100	\$5.00	\$20,500.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	BITUMINOUS TRAIL (10')	TON	1780	\$100.00	\$178,000.00
14	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
15	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
16	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
17	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
18	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
19	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
20	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
21	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
22	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
SUBTOTAL STREETS COST					\$2,533,700.00
10% CONTINGENCIES					\$253,400.00
TOTAL STREETS COST					\$2,787,100.00
INDIRECT COSTS (10%)					\$278,700.00
TOTAL STREETS COST					\$3,065,800.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	122	\$310.00	\$37,820.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	181	\$300.00	\$54,300.00
6	CASTINGS	EACH	75	\$700.00	\$52,500.00
7	12" RC PIPE CULVERT	LIN FT	6320	\$32.00	\$202,240.00
8	15" RC PIPE CULVERT	LIN FT	1692	\$30.00	\$50,760.00
9	18" RC PIPE CULVERT	LIN FT	1661	\$35.00	\$58,135.00
10	12" RC PIPE APRON	EACH	10	\$600.00	\$6,000.00
11	15" RC PIPE APRON	EACH	3	\$500.00	\$1,500.00
12	18" RC PIPE APRON	EACH	4	\$650.00	\$2,600.00
13	RANDOM RIPRAP CLASS IV	CU YD	225	\$90.00	\$20,250.00
14	STORM DRAIN INLET PROTECTION	EACH	75	\$150.00	\$11,250.00
SUBTOTAL STORM SEWER COST					\$510,800.00
10% CONTINGENCIES					\$51,100.00
TOTAL STORM SEWER COST					\$561,900.00
INDIRECT COSTS (10%)					\$56,200.00
TOTAL STORM SEWER COST					\$618,100.00

**165TH AVENUE NW & JARVIS STREET NW
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
RAILROAD CROSSING IMPROVEMENTS AT 165TH AVENUE & JARVIS STREET					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	224	\$1,400.00	\$313,600.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	2	\$250,000.00	\$500,000.00
3	COMMON EXCAVATION	CU YD	300	\$14.00	\$4,200.00
4	AGGREGATE BASE CLASS 5	TON	160	\$28.00	\$4,480.00
5	5" CONCRETE WALK	SQ FT	2000	\$6.00	\$12,000.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	640	\$18.00	\$11,520.00
7	TRUNCATED DOMES	SQ FT	160	\$42.00	\$6,720.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	2	\$12,500.00	\$25,000.00
9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$883,000.00
				10% CONTINGENCIES	\$88,300.00
				TOTAL QUIET ZONE COST	\$971,300.00
				INDIRECT COSTS (10%)	\$97,200.00
				TOTAL QUIET ZONE COST	\$1,068,500.00
				TOTAL PROJECT COST	\$4,752,400.00



APPENDIX D

**165TH AVENUE NW & JARVIS STREET NW - NO TRAIL OPTION
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	9074	\$3.50	\$31,759.00
5	COMMON EXCAVATION	CU YD	20250	\$2.00	\$40,500.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	4000	\$5.00	\$20,000.00
8	AGGREGATE BASE CLASS 5	TON	26225	\$11.00	\$288,475.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	4937	\$75.00	\$370,275.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6171	\$70.00	\$431,970.00
11	TACK COAT	GA	4100	\$5.00	\$20,500.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
14	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
15	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
16	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
17	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
18	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
19	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
20	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
21	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
SUBTOTAL STREETS COST					\$2,141,600.00
10% CONTINGENCIES					\$214,200.00
TOTAL STREETS COST					\$2,355,800.00
INDIRECT COSTS (10%)					\$235,600.00
TOTAL STREETS COST					\$2,591,400.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	72	\$310.00	\$22,320.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	118	\$300.00	\$35,400.00
6	CASTINGS	EACH	38	\$700.00	\$26,600.00
7	12" RC PIPE CULVERT	LIN FT	2108	\$32.00	\$67,456.00
8	15" RC PIPE CULVERT	LIN FT	29	\$30.00	\$870.00
9	18" RC PIPE CULVERT	LIN FT	288	\$35.00	\$10,080.00
10	24" RC PIPE CULVERT	LIN FT	64	\$36.00	\$2,304.00
11	12" RC PIPE APRON	EACH	3	\$600.00	\$1,800.00
12	15" RC PIPE APRON	EACH	1	\$500.00	\$500.00
13	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
14	24" RC PIPE APRON	EACH	2	\$700.00	\$1,400.00
15	RANDOM RIPRAP CLASS IV	CU YD	75	\$90.00	\$6,750.00
16	STORM DRAIN INLET PROTECTION	EACH	38	\$150.00	\$5,700.00
17	SPILLWAYS	EACH	56	\$800.00	\$44,800.00
18	DRIVEWAY CULVERT	LIN FT	1000	\$25.00	\$25,000.00
SUBTOTAL STORM SEWER COST					\$265,100.00
10% CONTINGENCIES					\$26,500.00
TOTAL STORM SEWER COST					\$291,600.00
INDIRECT COSTS (10%)					\$29,200.00
TOTAL STORM SEWER COST					\$320,800.00

**165TH AVENUE NW & JARVIS STREET NW - NO TRAIL OPTION
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
RAILROAD CROSSING IMPROVEMENTS AT 165TH AVENUE & JARVIS STREET					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	128	\$1,400.00	\$179,200.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	2	\$250,000.00	\$500,000.00
3	COMMON EXCAVATION	CU YD	300	\$14.00	\$4,200.00
4	AGGREGATE BASE CLASS 5	TON	160	\$28.00	\$4,480.00
5	5" CONCRETE WALK	SQ FT	0	\$6.00	\$0.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	640	\$18.00	\$11,520.00
7	TRUNCATED DOMES	SQ FT	0	\$42.00	\$0.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	2	\$12,500.00	\$25,000.00
9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$729,900.00
				10% CONTINGENCIES	\$73,000.00
				TOTAL QUIET ZONE COST	\$802,900.00
				INDIRECT COSTS (10%)	\$80,300.00
				TOTAL QUIET ZONE COST	\$883,200.00
				TOTAL PROJECT COST	\$3,795,400.00

APPENDIX B

City of Elk River Proposal Letter - August 28, 2014



August 28, 2014

Mr. Kurt Ulrich
City of Ramsey
7550 Sunwood Drive NW
Ramsey, MN 55303

Re: Jarvis Street and Quiet Zone Improvements

Dear Kurt:

Thank you for taking the time to meet with me and our City Engineer, Justin Femrite, on August 15 to discuss planned reconstruction of Jarvis Street and possible quiet zone improvements to the Jarvis Street and BNSF rail crossing.

The reconstruction of Jarvis St. was discussed by the Elk River and Ramsey City Councils at their last joint meeting held on May 9, 2011. At the meeting, the Ramsey Council indicated their desire to fund a portion of the improvements necessary to quiet the Jarvis rail crossing.

We have worked with our design team to prepare a preliminary estimate of cost for the common boarder along Jarvis as well as rail crossing quiet zone. The attached figure identifies our full project limits in yellow with the proposed cost split areas highlighted in red. Jarvis St. is proposed to be constructed as a 9-ton, 32-foot wide roadway with concrete curb and gutter and a 10' trail on the west side. Storm sewer piping will be installed to convey the water along this section of road to expanded and newly created ponding areas. Improvements at the rail crossing include non-traversable medians, a new crossing surface and upgraded gate system.

As discussed, we are seeking approval on the splitting of costs (50/50) for both the street reconstruction and the necessary quiet zone improvements. We are working toward final improvement design with expected construction in 2015.

We understand the Jarvis improvements are not currently in the City of Ramsey Capital Improvement plan. The Jarvis project is part of a large 2015 reconstruction plan in Elk River and we are confident we will receive attractive bid pricing. With respect to your capital plans, the City of Elk River is willing to cover the upfront expenditures with repayment of your share of costs from the City of Ramsey over the next three years.

Phone: 763.635.1000

www.ElkRiverMN.gov



Thanks again, Kurt, for taking the time to meet and discuss these mutually beneficial improvements. We look forward to collaborating to improve the quality of life of our communities.

If you have any further questions, please don't hesitate to let me know.

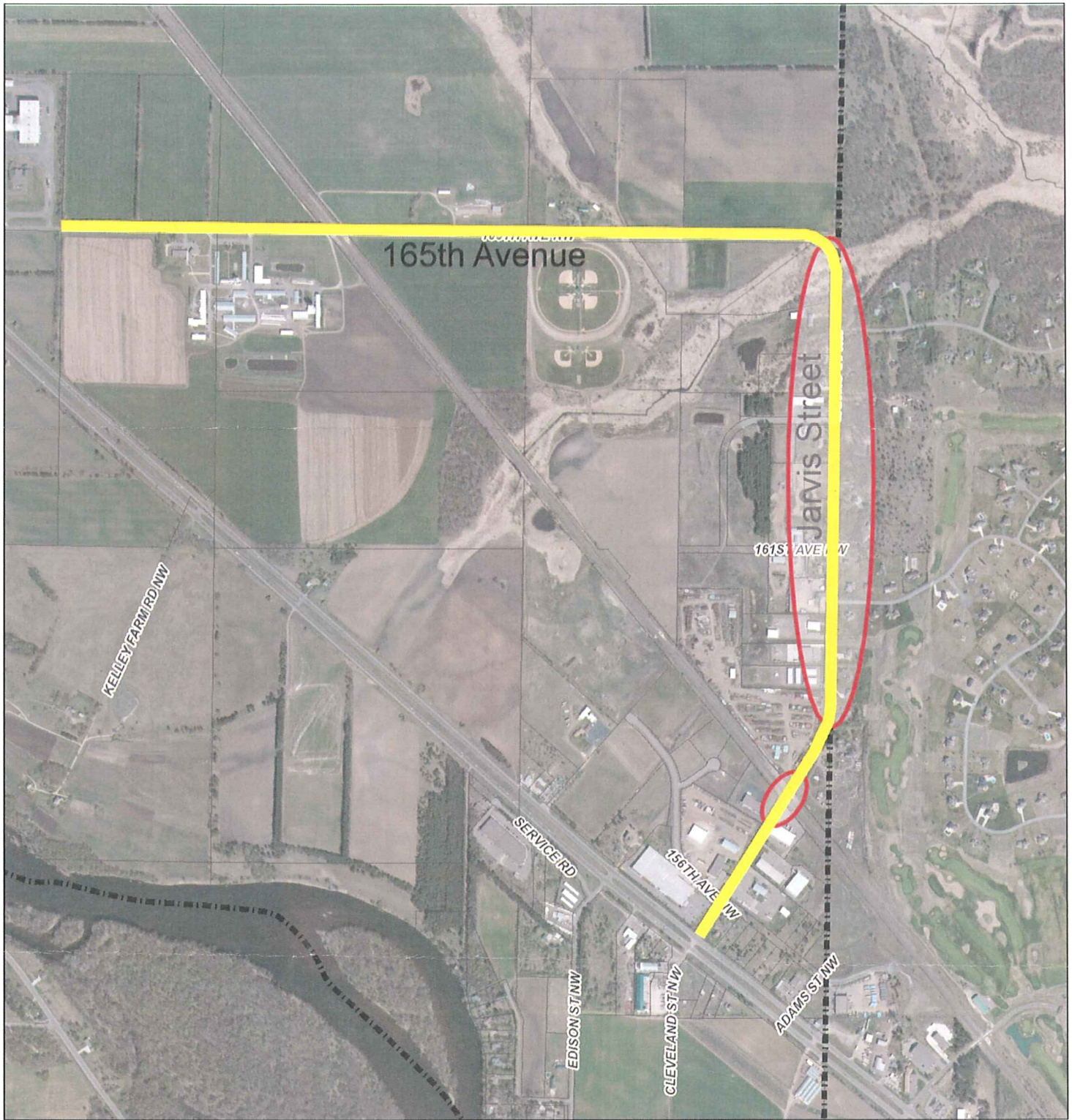
Sincerely,



Calvin P. Portner
City Administrator

Enclosure

cc: Justin Femrite, City Engineer



0 1,134 Feet

Disclaimer:
 This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information, and data located in various city, county, and state offices, and other sources affecting the area shown, and is to be used for reference purposes only. The City of Elk River is not responsible for any inaccuracies herein contained.



**165th and Jarvis
 Improvements**

JARVIS STREET
 COST SHARING
 STA. 79+00 TO STA. 117+00
 CITY OF ELK RIVER

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$15,000.00	\$15,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$6,000.00	\$6,000.00
3	RECLAIM BITUMINOUS PAVEMENT (9")	SQ YD	10133	\$4.00	\$40,532.00
4	SUBGRADE EXCAVATION	CU YD	5600	\$7.00	\$39,200.00
5	COMMON EXCAVATION	CU YD	5500	\$8.00	\$44,000.00
6	POND EXCAVATION	CU YD	2200	\$8.00	\$17,600.00
7	GRANULAR BORROW	CU YD	17600	\$5.00	\$88,000.00
8	AGGREGATE BASE CLASS 5	TON	8000	\$12.00	\$96,000.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E)	TON	1500	\$75.00	\$112,500.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B)	TON	1900	\$70.00	\$133,000.00
11	BITUMINOUS TRAIL (10')	TON	770	\$100.00	\$77,000.00
12	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	7600	\$12.00	\$91,200.00
13	COMMON TOPSOIL BORROW	CU YD	2500	\$20.00	\$50,000.00
14	SODDING TYPE LAWN	SQ YD	15000	\$3.50	\$52,500.00
15	STRIPING AND SIGNAGE	LUMP SUM	1	\$6,000.00	\$6,000.00
16	SILT FENCE	LIN FT	7600	\$3.00	\$22,800.00
17	TREE REMOVAL	ACRE	1.5	\$10,000.00	\$15,000.00
18	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$5,000.00	\$5,000.00
19	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
				SUBTOTAL STREETS COST	\$951,332.00
				10% CONTINGENCIES	\$95,130.00
				TOTAL STREETS COST	\$1,046,462.00
				INDIRECT COSTS (15%)	\$157,000.00
				TOTAL STREETS COST	\$1,203,462.00
				TOTAL CITY OF RAMSEY STREETS COST	\$601,731.00
STORM SEWER					
1	REMOVE CULVERT (RCP)	LIN FT	867	\$10.00	\$8,670.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	34	\$260.00	\$8,840.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	65	\$250.00	\$16,250.00
6	CASTINGS	EACH	24	\$700.00	\$16,800.00
7	12" RC PIPE CULVERT	LIN FT	1257	\$32.00	\$40,224.00
8	15" RC PIPE CULVERT	LIN FT	700	\$34.00	\$23,800.00
9	18" RC PIPE CULVERT	LIN FT	427	\$40.00	\$17,080.00
10	12" RC PIPE APRON	EACH	2	\$600.00	\$1,200.00
11	15" RC PIPE APRON	EACH	1	\$620.00	\$620.00
12	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
13	RANDOM RIPRAP CLASS IV	CU YD	30	\$80.00	\$2,400.00
14	STORM DRAIN INLET PROTECTION	EACH	24	\$150.00	\$3,600.00
				SUBTOTAL STORM SEWER COST	\$141,834.00
				10% CONTINGENCIES	\$14,180.00
				TOTAL STORM SEWER COST	\$156,014.00
				INDIRECT COSTS (15%)	\$23,440.00
				TOTAL STORM SEWER COST	\$179,454.00
				TOTAL CITY OF RAMSEY STORM SEWER COST	\$89,727.00

JARVIS STREET
 COST SHARING
 STA. 79+00 TO STA. 117+00
 CITY OF ELK RIVER

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
QUIET ZONE AT JARVIS IMPROVEMENTS					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	112	\$1,400.00	\$156,800.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	1	\$250,000.00	\$250,000.00
3	COMMON EXCAVATION	CU YD	150	\$14.00	\$2,100.00
4	AGGREGATE BASE, CLASS 5	TON	80	\$28.00	\$2,240.00
5	5" CONCRETE WALK	SQ FT	1000	\$6.00	\$6,000.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	320	\$18.00	\$5,760.00
7	TRUNCATED DOMES	SQ FT	80	\$42.00	\$3,360.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	1	\$12,500.00	\$12,500.00
9	SIGN PANEL TYPE C	SQ FT	50	\$35.00	\$1,750.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	500	\$2.00	\$1,000.00
				SUBTOTAL QUIET ZONE COST	\$441,510.00
				10% CONTINGENCIES	\$44,150.00
				TOTAL QUIET ZONE COST	\$485,660.00
				INDIRECT COSTS (15%)	\$72,880.00
				TOTAL QUIET ZONE COST	\$558,540.00
				TOTAL CITY OF RAMSEY QUIET ZONE COST	\$279,270.00
				TOTAL CITY OF RAMSEY CONTRIBUTION	\$970,728.00

APPENDIX C

Bolton & Menk Memorandum - October 29, 2014
Engineer's Opinion of Probable Cost – 36' Street Option



BOLTON & MENK, INC.

Consulting Engineers & Surveyors

2035 County Road D East • Suite B • Maplewood, MN 55109-5314

Phone (651) 704-9970 • Fax (651) 704-9971

www.bolton-menk.com

MEMORANDUM

Date: October 29, 2014

To: Justin Femrite, P.E., City Engineer

From: Cody Holmes, P.E., Project Manager

Mark D. Kasma, P.E., Senior Principal Engineer

Subject: 165th Avenue NW & Jarvis Street NW- 36' Roadway Option
City of Elk River
BMI Project No. N15.108340

This memo is a follow up to your direction after the recent City Council meeting regarding 165th and Jarvis. Based on your request, we have generated a revised profile, cross sections and quantities for a 36' roadway that will include the trail. Based on those results, we have generated a revised preliminary cost estimate of \$3,985,100 (see attached). The estimated cost for the 32' roadway with no trail was \$3,795,400 (see attached). A cost difference of \$189,700.

The estimated additional cost for the City of Ramsey's share for the 36' roadway is \$56,910. The revised total estimated cost share for Ramsey is then \$920,352 (\$863,442 +\$56,910).

The proposed roadway design is summarized as follows:

- 36' face-to-face roadway (originally discussed at Kick-off Meeting)
- Catchbasins with outlet pipes at ponding areas only
- Curbcuts every 250' +/- to outlet water from the roadway where ditch elevations are too low to accept a catchbasin with an outlet. This should allow us to stay within the existing ROW and prescribed easement areas. Final design will confirm.
- There are some infiltration and ponding areas located outside of the existing ROW
- A typical section is attached

In regard to our work to date on this portion of the project, the preliminary design work completed by our Team is approximately 2.5-3 times what was originally estimated in our proposal. This is based on the additional options analyzed and completed. We have done this work in an effort to make sure that the City's final product meets and exceeds expectations. However, we believe that additional fees are more than warranted. I'll summarize those fees for you early next week so we can discuss before going any further. Please call either of us if you have any questions about the most recent work.

**165TH AVENUE NW & JARVIS STREET NW - 36' ROADWAY
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	10208	\$3.50	\$35,728.00
5	COMMON EXCAVATION	CU YD	26565	\$2.00	\$53,130.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	4500	\$5.00	\$22,500.00
8	AGGREGATE BASE CLASS 5	TON	29503	\$11.00	\$324,533.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	5554	\$75.00	\$416,550.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6942	\$70.00	\$485,940.00
11	TACK COAT	GA	4381	\$5.00	\$21,905.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
14	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
15	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
16	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
17	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
18	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
19	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
20	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
21	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
SUBTOTAL STREETS COST					\$2,298,400.00
10% CONTINGENCIES					\$229,800.00
TOTAL STREETS COST					\$2,528,200.00
INDIRECT COSTS (10%)					\$252,900.00
TOTAL STREETS COST					\$2,781,100.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	72	\$310.00	\$22,320.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	118	\$300.00	\$35,400.00
6	CASTINGS	EACH	38	\$700.00	\$26,600.00
7	12" RC PIPE CULVERT	LIN FT	2108	\$32.00	\$67,456.00
8	15" RC PIPE CULVERT	LIN FT	29	\$30.00	\$870.00
9	18" RC PIPE CULVERT	LIN FT	288	\$35.00	\$10,080.00
10	24" RC PIPE CULVERT	LIN FT	64	\$36.00	\$2,304.00
11	12" RC PIPE APRON	EACH	3	\$600.00	\$1,800.00
12	15" RC PIPE APRON	EACH	1	\$500.00	\$500.00
13	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
14	24" RC PIPE APRON	EACH	2	\$700.00	\$1,400.00
15	RANDOM RIPRAP CLASS IV	CU YD	75	\$90.00	\$6,750.00
16	STORM DRAIN INLET PROTECTION	EACH	38	\$150.00	\$5,700.00
17	SPILLWAYS	EACH	56	\$800.00	\$44,800.00
18	DRIVEWAY CULVERT	LIN FT	1000	\$25.00	\$25,000.00
SUBTOTAL STORM SEWER COST					\$265,100.00
10% CONTINGENCIES					\$26,500.00
TOTAL STORM SEWER COST					\$291,600.00
INDIRECT COSTS (10%)					\$29,200.00
TOTAL STORM SEWER COST					\$320,800.00

**165TH AVENUE NW & JARVIS STREET NW - 36' ROADWAY
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

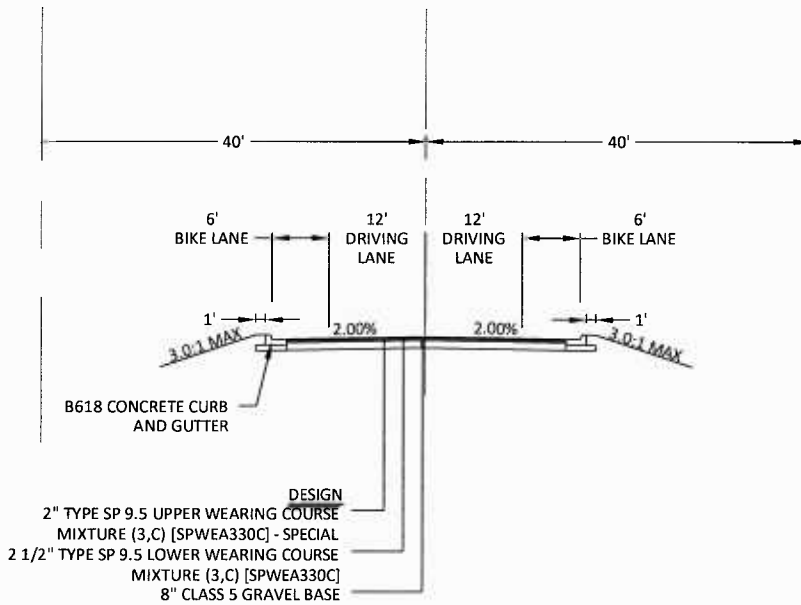
NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
RAILROAD CROSSING IMPROVEMENTS AT 165TH AVENUE & JARVIS STREET					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	128	\$1,400.00	\$179,200.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	2	\$250,000.00	\$500,000.00
3	COMMON EXCAVATION	CU YD	300	\$14.00	\$4,200.00
4	AGGREGATE BASE CLASS 5	TON	160	\$28.00	\$4,480.00
5	5" CONCRETE WALK	SQ FT	0	\$6.00	\$0.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	640	\$18.00	\$11,520.00
7	TRUNCATED DOMES	SQ FT	0	\$42.00	\$0.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	2	\$12,500.00	\$25,000.00
9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$729,900.00
				10% CONTINGENCIES	\$73,000.00
				TOTAL QUIET ZONE COST	\$802,900.00
				INDIRECT COSTS (10%)	\$80,300.00
				TOTAL QUIET ZONE COST	\$883,200.00
				TOTAL PROJECT COST	\$3,985,100.00

165TH AVENUE NW & JARVIS STREET NW - NO TRAIL OPTION
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER

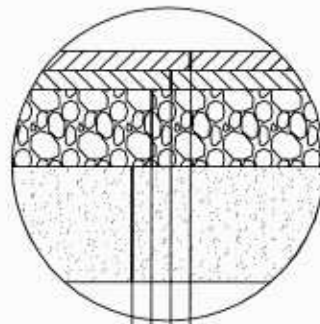
NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$50,000.00	\$50,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$15,000.00	\$15,000.00
3	RECLAIM BITUMINOUS PAVEMENT (8")	SQ YD	30952	\$4.00	\$123,808.00
4	SUBGRADE EXCAVATION	CU YD	9074	\$3.50	\$31,759.00
5	COMMON EXCAVATION	CU YD	20250	\$2.00	\$40,500.00
6	POND EXCAVATION	CU YD	5000	\$8.00	\$40,000.00
7	GRANULAR BORROW (LV)	CU YD	4000	\$5.00	\$20,000.00
8	AGGREGATE BASE CLASS 5	TON	26225	\$11.00	\$288,475.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E) - 2"	TON	4937	\$75.00	\$370,275.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B) - 2.5"	TON	6171	\$70.00	\$431,970.00
11	TACK COAT	GA	4100	\$5.00	\$20,500.00
12	REMOVE & REPLACE DRIVEWAYS	EA	40	\$800.00	\$32,000.00
13	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	25324	\$11.00	\$278,564.00
14	COMMON TOPSOIL BORROW	CU YD	9910	\$15.00	\$148,650.00
15	SODDING TYPE LAWN	SQ YD	20000	\$3.50	\$70,000.00
16	STRIPING AND SIGNAGE	LUMP SUM	1	\$15,000.00	\$15,000.00
17	SILT FENCE	LIN FT	27800	\$2.00	\$55,600.00
18	TREE REMOVAL	ACRE	3.0	\$10,000.00	\$30,000.00
19	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$12,000.00	\$12,000.00
20	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
21	SEED, FERTILIZER & MULCH	ACRE	11	\$2,500.00	\$27,500.00
				SUBTOTAL STREETS COST	\$2,141,600.00
				10% CONTINGENCIES	\$214,200.00
				TOTAL STREETS COST	\$2,355,800.00
				INDIRECT COSTS (10%)	\$235,600.00
				TOTAL STREETS COST	\$2,591,400.00
STORM SEWER					
1	REMOVE CULVERT	LIN FT	1172	\$10.00	\$11,720.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	72	\$310.00	\$22,320.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	118	\$300.00	\$35,400.00
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7	12" RC PIPE CULVERT	LIN FT	2108	\$32.00	\$67,456.00
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10	24" RC PIPE CULVERT	LIN FT	64	\$36.00	\$2,304.00
11	12" RC PIPE APRON	EACH	3	\$600.00	\$1,800.00
12	15" RC PIPE APRON	EACH	1	\$500.00	\$500.00
13	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
14	24" RC PIPE APRON	EACH	2	\$700.00	\$1,400.00
15	RANDOM RIPRAP CLASS IV	CU YD	75	\$90.00	\$6,750.00
16	STORM DRAIN INLET PROTECTION	EACH	38	\$150.00	\$5,700.00
17	SPILLWAYS	EACH	56	\$800.00	\$44,800.00
18	DRIVEWAY CULVERT	LIN FT	1000	\$25.00	\$25,000.00
				SUBTOTAL STORM SEWER COST	\$265,100.00
				10% CONTINGENCIES	\$26,500.00
				TOTAL STORM SEWER COST	\$291,600.00
				INDIRECT COSTS (10%)	\$29,200.00
				TOTAL STORM SEWER COST	\$320,800.00

**165TH AVENUE NW & JARVIS STREET NW - NO TRAIL OPTION
PRELIMINARY COST ESTIMATE
STA. 12+48 TO STA. 139+10
CITY OF ELK RIVER**

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
RAILROAD CROSSING IMPROVEMENTS AT 165TH AVENUE & JARVIS STREET					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	128	\$1,400.00	\$179,200.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	2	\$250,000.00	\$500,000.00
3	COMMON EXCAVATION	CU YD	300	\$14.00	\$4,200.00
4	AGGREGATE BASE CLASS 5	TON	160	\$28.00	\$4,480.00
5	5" CONCRETE WALK	SQ FT	0	\$6.00	\$0.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	640	\$18.00	\$11,520.00
7	TRUNCATED DOMES	SQ FT	0	\$42.00	\$0.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	2	\$12,500.00	\$25,000.00
9	SIGN PANEL TYPE C	SQ FT	100	\$35.00	\$3,500.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	1000	\$2.00	\$2,000.00
				SUBTOTAL QUIET ZONE COST	\$729,900.00
				10% CONTINGENCIES	\$73,000.00
				TOTAL QUIET ZONE COST	\$802,900.00
				INDIRECT COSTS (10%)	\$80,300.00
				TOTAL QUIET ZONE COST	\$883,200.00
				TOTAL PROJECT COST	\$3,795,400.00



TYPICAL SECTION
36' FACE TO FACE WITH TRAIL ON ROADWAY



- DESIGN
- 2" TYPE SP 9.5 UPPER WEARING COURSE MIXTURE (3,C) [SPWEA330C] - SPECIAL
 - 2 1/2" TYPE SP 9.5 LOWER WEARING COURSE MIXTURE (3,C) [SPWEA330C]
 - 8" CLASS 5 GRAVEL BASE
 - 24"-60" SELECT GRANULAR BORROW (VARIES)

TYPICAL SECTION
SUBGRADE EXCAVATION



CITY OF ELK RIVER, MINNESOTA
 165TH AVENUE NW AND JARVIS STREET NW
 TYPICAL SECTION - 36' FACE TO FACE WITH TRAIL ON ROADWAY

OCTOBER, 2014

FIGURE NO. 1

JARVIS STREET - 32' ROADWAY WITHOUT TRAIL
 COST SHARING
 STA. 79+00 TO STA. 117+00
 CITY OF ELK RIVER

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
STREETS					
1	MOBILIZATION	LUMP SUM	1.00	\$15,000.00	\$15,000.00
2	TRAFFIC CONTROL	LUMP SUM	1.00	\$6,000.00	\$6,000.00
3	RECLAIM BITUMINOUS PAVEMENT (9")	SQ YD	10133	\$4.00	\$40,532.00
4	SUBGRADE EXCAVATION	CU YD	5600	\$3.50	\$19,600.00
5	COMMON EXCAVATION	CU YD	6000	\$2.00	\$12,000.00
6	POND EXCAVATION	CU YD	2500	\$8.00	\$20,000.00
7	GRANULAR BORROW	CU YD	18500	\$5.00	\$92,500.00
8	AGGREGATE BASE CLASS 5	TON	9800	\$12.00	\$117,600.00
9	TYPE SP 12.5 WEARING COURSE MIX (4,E)	TON	1850	\$75.00	\$138,750.00
10	TYPE SP 12.5 NON WEARING COURSE MIX (4,B)	TON	2200	\$70.00	\$154,000.00
11	CONCRETE CURB & GUTTER DESIGN B618	LIN FT	7600	\$11.00	\$83,600.00
12	COMMON TOPSOIL BORROW	CU YD	2750	\$20.00	\$55,000.00
13	SODDING TYPE LAWN	SQ YD	15000	\$3.50	\$52,500.00
14	STRIPING AND SIGNAGE	LUMP SUM	1	\$6,000.00	\$6,000.00
15	SILT FENCE	LIN FT	7600	\$2.00	\$15,200.00
16	TREE REMOVAL	ACRE	1.5	\$10,000.00	\$15,000.00
17	REMOVE & REPLACE LANDSCAPING	LUMP SUM	1	\$5,000.00	\$5,000.00
18	LAND ACQUISITION	SQ FT	10000	\$4.00	\$40,000.00
				SUBTOTAL STREETS COST	\$888,282.00
				10% CONTINGENCIES	\$88,820.00
				TOTAL STREETS COST	\$977,102.00
				INDIRECT COSTS (10%)	\$97,750.00
				TOTAL STREETS COST	\$1,074,852.00
				TOTAL CITY OF RAMSEY STREETS COST	\$537,426.00
STORM SEWER					
1	REMOVE CULVERT (RCP)	LIN FT	867	\$10.00	\$8,670.00
2	REMOVE DRAINAGE STRUCTURE	EACH	2	\$400.00	\$800.00
3	CONNECT TO EXISTING	EACH	3	\$300.00	\$900.00
4	CONST DRAINAGE STRUCTURE DESIGN G	LIN FT	34	\$310.00	\$10,540.00
5	CONST DRAINAGE STRUCTURE DES 48-4022	LIN FT	65	\$300.00	\$19,500.00
6	CASTINGS	EACH	24	\$700.00	\$16,800.00
7	12" RC PIPE CULVERT	LIN FT	1257	\$32.00	\$40,224.00
8	15" RC PIPE CULVERT	LIN FT	700	\$30.00	\$21,000.00
9	18" RC PIPE CULVERT	LIN FT	427	\$35.00	\$14,945.00
10	12" RC PIPE APRON	EACH	2	\$600.00	\$1,200.00
11	15" RC PIPE APRON	EACH	1	\$500.00	\$500.00
12	18" RC PIPE APRON	EACH	1	\$650.00	\$650.00
13	RANDOM RIPRAP CLASS IV	CU YD	30	\$90.00	\$2,700.00
14	STORM DRAIN INLET PROTECTION	EACH	24	\$150.00	\$3,600.00
				SUBTOTAL STORM SEWER COST	\$142,029.00
				10% CONTINGENCIES	\$14,200.00
				TOTAL STORM SEWER COST	\$156,229.00
				INDIRECT COSTS (10%)	\$15,660.00
				TOTAL STORM SEWER COST	\$171,889.00
				TOTAL CITY OF RAMSEY STORM SEWER COST	\$85,944.50

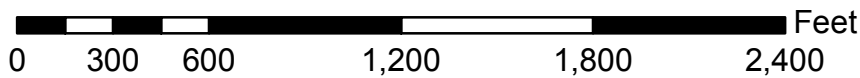
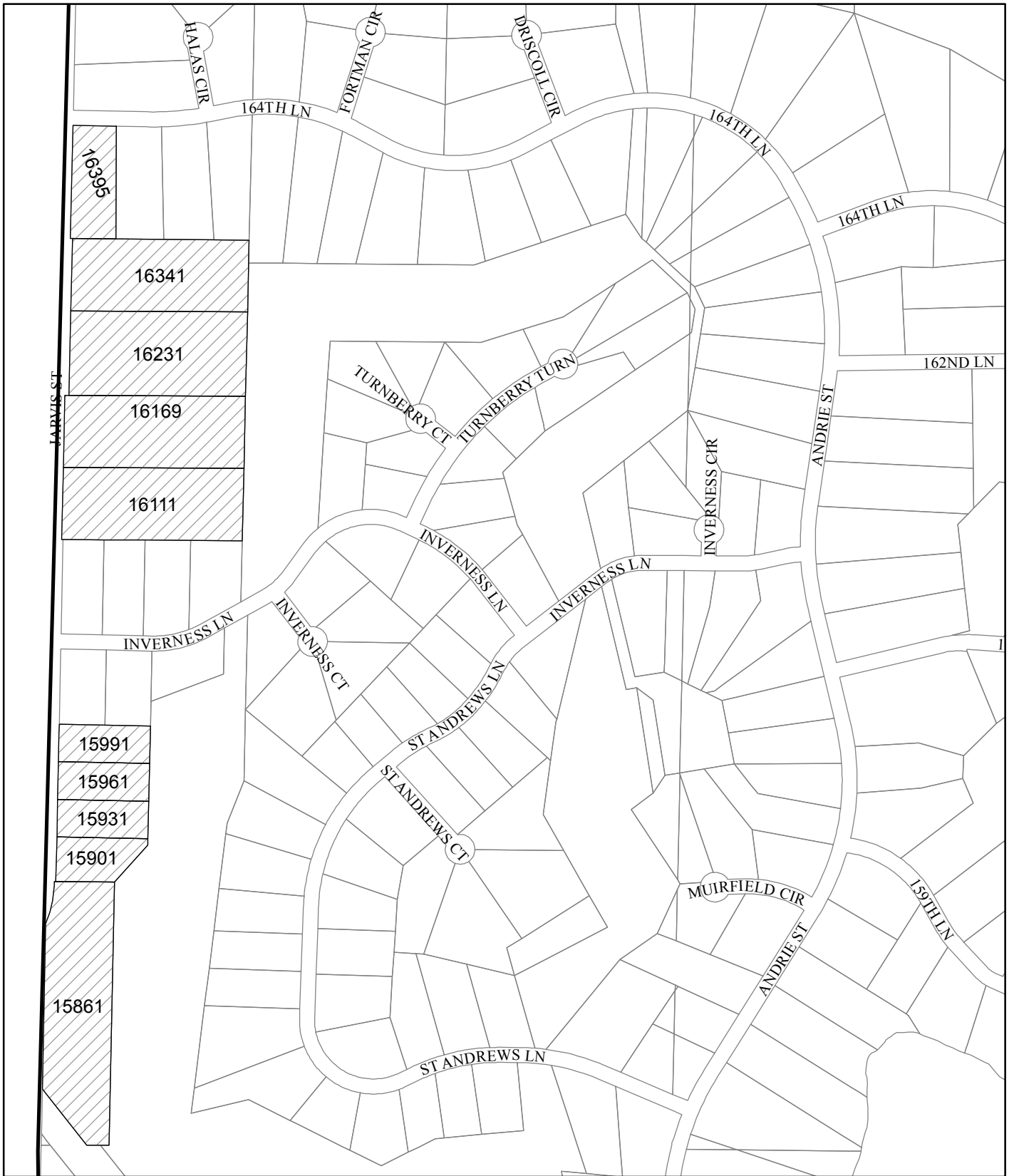
JARVIS STREET - 32' ROADWAY WITHOUT TRAIL
 COST SHARING
 STA. 79+00 TO STA. 117+00
 CITY OF ELK RIVER

NO.	ITEM	UNITS	QTY	UNIT PRICE	TOTAL PRICE
QUIET ZONE AT JARVIS IMPROVEMENTS					
1	PROPOSED CROSSING SURFACE (INCLUDES CONCRETE PANELS, NEW RAIL, TIES, AND BALLAST)	LF	80	\$1,400.00	\$112,000.00
2	PROPOSED SAFETY MEASURE (TWO-QUADRANT GATE SYSTEM WITH FLASHERS & CWT)	LUMP SUM	1	\$250,000.00	\$250,000.00
3	COMMON EXCAVATION	CU YD	150	\$14.00	\$2,100.00
4	AGGREGATE BASE. CLASS 5	TON	80	\$28.00	\$2,240.00
5	5" CONCRETE WALK	SQ FT	1000	\$6.00	\$6,000.00
6	CONCRETE CURB & GUTTER DESIGN B818 (NON-TRAVERSABLE MEDIAN)	LIN FT	320	\$18.00	\$5,760.00
7	TRUNCATED DOMES	SQ FT	80	\$42.00	\$3,360.00
8	FLAG PERSON (BNSF CROSSING)	LUMP SUM	1	\$12,500.00	\$12,500.00
9	SIGN PANEL TYPE C	SQ FT	50	\$35.00	\$1,750.00
10	HYDRAULIC SOIL STABILIZER, TYPE 5, WITH SEED & FERT.	SQ YD	500	\$2.00	\$1,000.00
				SUBTOTAL QUIET ZONE COST	\$396,710.00
				10% CONTINGENCIES	\$39,670.00
				TOTAL QUIET ZONE COST	\$436,380.00
				INDIRECT COSTS (10%)	\$43,670.00
				TOTAL QUIET ZONE COST	\$480,050.00
				TOTAL CITY OF RAMSEY QUIET ZONE COST	\$240,025.00
				TOTAL CITY OF RAMSEY COST FOR 32' ROADWAY WITHOUT TRAIL	\$863,395.50
				TOTAL COST INCREASE TO 36' WIDE ROADWAY	\$56,910.00
				TOTAL CITY OF RAMSEY CONTRIBUTION	\$920,305.50



APPENDIX D

**Preliminary Assessment Map
Preliminary Assessment Roll**

JARVIS STREET ASSESSMENT MAP



Legend

-  Assessable Parcels
-  City Limits

IP #15-20 Assessment Roll

PID	Name/Owner	Address	City	State	Zip
183225220009	DILLERUD JEFFREY E & KANDRA F	16395 JARVIS ST NW	ELK RIVER	MN	55330
183225230004	BAUM MARK L & TERI L	16111 JARVIS ST NW	ELK RIVER	MN	55330
183225230005	MULVANEY MICHAEL J & SHARON	16169 JARVIS ST NW	ELK RIVER	MN	55330
183225230007	HAUAN DAVID	16341 JARVIS ST NW	ELK RIVER	MN	55330
183225230008	BROWN-HAUAN MARILYN	16231 JARVIS ST NW	ELK RIVER	MN	55330
183225320009	OLSON CHRISTINA	15991 JARVIS ST NW	ELK RIVER	MN	55330
183225320010	MORGENROTH DANA	15961 JARVIS ST NW	ELK RIVER	MN	55330
183225320011	ANDERSON DANA	15931 JARVIS ST NW	ELK RIVER	MN	55330
183225330002	BIG C DEVELOPMENT LLC/ATTN STANLEY D LEBAKKEN	PO BOX 424	ANOKA	MN	55303
183225330004	PITT JEFFREY A	15901 JARVIS ST NW	ELK RIVER	MN	55330