Hermantown City Council Meeting – December 21, 2020

Because attendance at the regular meeting location is not feasible due to the health pandemic, Hermantown's December 21, 2020, City Council Meeting, as well as Pre-Agenda Meeting, will be conducted remotely with no access to Council Chambers.

Both meetings will utilize the platform "Zoom" – which allows the public to view and/or hear the meeting from their phone or computer. A reminder that City Hall is still closed at this time due to the global health pandemic.

The 6:30 p.m. City Council Meeting will be available at:

https://us02web.zoom.us/j/81578902809?pwd=bjN5T242ZytUSEZQbVI5L2lBc1JZQT09

and/or by calling the number (312) 626-6799 and utilizing the meeting ID number of 815-7890-2809 and the passcode of 305866.

Public comment may be possible, but difficult, during the meeting, but any public comments, questions, or concerns can be e-mailed to Community Engagement Manager, Joe Wicklund, at jwicklund@hermantownmn.com up to 3:30 p.m. the day of the meeting with the e-mail title "December 21, 2020, Meeting." It is important to note that all comments regarding the December 21, 2020, meeting are public data.

A few important tips regarding the Zoom platform:

- If your computer does not support audio, you can still watch the meeting on your computer and call in on your phone to hear the meeting
- It is a challenging situation for all of us, so grace and understanding are appreciated

The 4:30 p.m. Pre-Agenda Meeting will be available at:

https://us02web.zoom.us/j/83856193995?pwd=M1VUbjc0ZkUrMjRNVkxlWTlpbGlwQT09

and/or by calling the number (312) 626-6799 and utilizing the meeting ID number 838-5619-3995 and the password 323079. Public comment is not a factor in the pre-agenda meeting, but the public is invited to listen to this meeting.

City of Hermantown Minnesota
5105 Maple Grove Road
Hermantown, MN 55811

AGENDA

Pre-Agenda Meeting Monday, December 21, 2020 at 4:30 p.m.
Large Conference Room
City Hall - Hermantown Governmental Services Building

Pre-agenda: The Pre-agenda meeting is a work session between the City Council and City staff to review the upcoming City Council meeting and future meetings. The agenda is the same document as the upcoming City Council meeting, but does not follow the same format as the City Council meeting. It is a time for the City Council and City staff to have discussions about the agenda items, and asking and answering questions. Traditionally it is not a time for public comment on the agenda items, as the public can listen to the conversation and ask questions or provide input at the upcoming City Council meeting.

City Council Continuation Meeting December 21, 2020 at 6:30 p.m.
Council Chambers
City Hall - Hermantown Governmental Services Building

Invitation to participate:
The Hermantown City Council welcomes your thoughts, input and opinions to this meeting. The agenda for this meeting contains a brief description of each item to be considered, and the City Council encourages your participation. If you wish to speak on an item contained in the agenda, you will be allowed to address the Council when a motion is on the floor. If you wish to speak on a matter that does not appear on the agenda, you may do so during the public comment period regularly scheduled and set for the beginning of the meeting.

When addressing the City Council, please state your name and address for the record. Please address the City Council as a whole through the Mayor. Comments to individual Council Members or staff are not permitted. Speakers will be limited to three (3) minutes.

Order of discussion
1. Reading of the resolution title by Mayor
2. Motion/Second
3. Staff Explanation
4. Initial Discussion by City Council
5. Mayor invites public to speak to the motion (3 minute rule)
6. Follow up staff explanation and/or discussion by City Council
7. Call of the vote

This agenda has been prepared to provide information regarding an upcoming meeting of the Hermantown City Council. This document does not claim to be complete and is subject to change at any time.

CITY OF HERMANTOWN
AGENDA

Pre-Agenda Meeting Monday, December 21, 2020 at 4:30 p.m.
Large Conference Room
Hermantown Governmental Services Building

City Council Continuation Meeting December 21, 2020 at 6:30 p.m.
Council Chambers
Hermantown Governmental Services Building

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. ANNOUNCEMENTS *(Council Members may make announcements as needed.)*

5. PUBLIC HEARING – *(Only when necessary. The rule adopted three minutes per person if necessary. Any action required after the public hearing will be taken immediately following the closing of the public hearing.)*

6. COMMUNICATIONS

A. 20-187 Brian Fritsinger, St. Louis County Deputy Administrator
TO: John Mulder, City Administrator
RE: Thank you

B. 20-189 Natalie Peterson, Duluth Airport Authority Dir. Of Comm. & Marketing
TO: John Mulder & Joe Wicklund
RE: Support Request

7. PRESENTATIONS *(Department Heads may give reports if necessary.)*

8. PUBLIC DISCUSSION *(This is the time for individuals to address the Council about any item not on the agenda. The time limit is three minutes per person.)*

9. CONSENT AGENDA *(All items on the Consent Agenda are items which are considered routine by the City Council and will be approved by one motion via voice vote. There will be no discussion of these items unless a Council Member or citizen so requests, in which event the item will be removed from the Consent Agenda and considered at the end of the Consent Agenda.)*

A. Minutes - Approval or correction of December 7, 2020 City Council Minutes

B. Accounts Payable – Approve general city warrants from December 1, 2020 through December 15, 2020 in the amount of $323,341.32

(motion, roll call)

This agenda has been prepared to provide information regarding an upcoming meeting of the Hermantown City Council. This document does not claim to be complete and is subject to change at any time.

C. Motion to approve/deny the following Tobacco License Renewal Applications effective January 1, 2021 through December 31, 2021 contingent upon complete applications being received:

Adolph Store	3710 Midway Rd.
Stokkes Liquor	3706 Midway Rd.
Chalet Lounge	4833 Miller Trunk Hwy
Pure Pleasure/Dima Corp	5193 Miller Trunk Hwy
Hermantown General Store	5105 Morris Thomas Rd
Express Lane #2323/Applegreen Midwest	4221 Haines Rd.
Holiday Stationstores LLC #190	4795 Miller Trunk Hwy
Kwik Trip, Inc. #220	4978 Miller Trunk Hwy
Kwik Trip, Inc. #216	4805 Miller Trunk Hwy
Kwik Trip, Inc. #572	4145 Haines Rd.
Korner Store	4704 Hermantown Rd.
Midway Calumet	5691 Hwy 2
Fleet Farm	4165 Loberg Ave.
Fleet Farm Fuel	4181 Loberg Ave.
Speedway #4602	5601 Miller Trunk Hwy
Walmart Stores, Inc.	4740 Loberg Ave.
Lake Effect Vapor	4120 Richard Ave.

(motion, roll call)

D. Motion to approve/deny Massage Establishment License Renewal Applications for the following effective January 1, 2021 through December 31, 2021:

Infinity Massage & Wellness LLC	4897 Miller Trunk Hwy
Cookie Kilian Manual Therapy & Massage	4891 Miller Trunk Hwy

(motion, roll call)

E. Motion to approve/deny Massage Therapist License Renewal Applications for the following effective January 1, 2021 through December 31, 2021:

Infinity Massage & Wellness LLC Therapists: Elizabeth Chiu; Andrea Elden; Olivia Engebretsen; Mandy Felknor; Amber Hunt; Anna Meintz; Lynn O'Connor; Suvi Persons; Alyssa Sarberg; Madisson Simmons; Sarma Stumbris; Jason Wade; Michelle Wall; Lauren Williams; Scott Armendariz; Gregory Bachinski; Taryn Isaacson; Nicole Moeller; Rebecca Morrow; Karla Ann Nelson; Olivia Warpula,

Cookie Kilian Manual Therapy & Massage Therapist: Cookie Kilian

(motion, roll call)

10. MOTIONS

11. ORDINANCES

A. **2020-08** An Ordinance Declaring A Temporary Moratorium On Certain Planned Unit Developments In An R-3 Zoning District Within The City Of Hermantown

(motion, roll call)

12. **RESOLUTIONS** *(Roll call will be taken only on items required by law and items requiring 4/5's votes, all others can be done by voice vote.)*

A. **2020-171** Resolution Requesting A Free Conveyance Of A Tax-Forfeited Parcel For Public Right Of Way

(motion, roll call)

B. **2020-172** Resolution Approving A Change From Communications & Community Engagement Manager To Communications & Community Engagement Director

(motion, roll call)

C. **2020-173** Resolution Supporting Duluth Airport Efforts For Direct Flights To Denver Colorado

(motion, roll call)

D. **2020-174** Resolution Approving A Special Use Permit For The Grading And Filling Within A Shoreland Overlay Zoning District

(motion, roll call)

E. **2020-175** Resolution Authorizing The City Of Hermantown To Sponsor A Grant Funding Request Associated With The Construction Of An Accessible Trail From Hermantown Road (Engwall's) To Morris Thomas Road And The Keene Creek Trail Segment

(motion, roll call)

F. **2020-176** Resolution Accepting Traffic Study And Directing Preparation Of Preliminary Engineering Feasibility Report For Road Improvement District No. 534 (Ugstad Road)

(motion, roll call)

G. **2020-177** Resolution Approving A Request For Proposals For Design And Construction Engineering For Road Improvement District No. 534 (Ugstad Road)

(motion, roll call)

H. **2020-178** Resolution Approving Authorization For Professional Services For Geotechnical Evaluation Services By Braun Intertec Corporation

(motion, roll call)

I. **2020-179** Resolution Approving Final Plans And Specifications And Ordering Advertisement For Bids For 2021 Road Improvement Plan (Old Hwy 2)

(motion, roll call)

J. **2020-180** Resolution Receiving Preliminary Engineering Report And Ordering Improvement And Directing Preparation Of Final Plans & Specifications For Keene Creek Trail

(motion, roll call)

K. **2020-181** Resolution Authorizing And Directing The Mayor And City Clerk To Execute And Deliver A Cooperative Agreement Between St. Louis County And The City Of Hermantown For 2021 Road Striping CP 0000-369585

(motion, roll call)

L. **2020-182** Resolution Awarding Contract For 2021 Ford F550 Chassis To Ford Of Hibbing In The Amount Of $54,775.00 Plus Applicable Taxes And Fees

(motion, roll call)

M. **2020-183** Resolution Approving Final Pay Request For 2020 Road Improvement District No 531 & No. 532 To Ulland Brothers, Inc. In The Amount Of $30,000.00

(motion, roll call)

13. RECESS

DATE: 2020

TO: City Council Members

FROM: John Mulder, City Administrator

RE: Correspondence

In your packet is a correspondence summary log. This briefly summarizes and assigns a log number for written correspondence received at City Hall. You are provided with the summary so that you may request a full copy of any correspondence article of interest to you. Bonnie & I have copied only the correspondence that we believe to be of special interest.

JM

12/3/2020	20-186	Jon Loye, TKDA	John Mulder, City Administrator	SID 531 & 532 Project Submittals	11/30/2020
12/15/2020	20-187	Brian Fritsinger, Deputy Cty. Administrator, St. Louis County	John Mulder, City Administrator	Thank you	12/10/2020
12/15/2020	20-188	Jeremy Menz, Fryberger Law Firm	Bonnie Engseth, City Clerk	Document Destruction	12/10/2020
12/15/2020	20-189	Natalie Peterson, Director of Communications & Marketing, Duluth Airport Authority	John Mulder, City Administrator	Support Request	12/3/2020

20-187

Saint Louis County

Administration • 100 North Fifth Avenue West, Room 202 • Duluth, MN 55802
Phone: (218) 733-2955 • Fax: (218) 726-2469 • www.stlouiscountymn.gov

Brian Fritsinger
Deputy County Administrator

December 10, 2020

John Mulder
City Administrator
5105 Maple Grove Road
Hermantown, MN 55811

Dear John,

As you're aware, St. Louis County reached out to inquire about the possibility of using City of Hermantown facilities to conduct COVID-19 testing for law enforcement, EMS, and corrections personnel working in St. Louis County.

I'm writing this letter to let you know I heard great feedback from county staff about the amazing support that was extended to us by the City of Hermantown and want you to know just how much we appreciate the positive response and partnership. Use of the Law Enforcement Complex is an excellent fit for our testing initiative and enables us to conveniently assist our public safety and health partners with continuity of their operations by identifying positive cases early and isolating them before they spread amongst other public safety and health colleagues.

We're so grateful for quality partnerships (like the one with the City of Hermantown) as these partnerships reinforce that we're all in this together.

Thank you again, and please extend our thanks to the other City of Hermantown staff who helped make this happen and help to support the on-going testing efforts!

I hope you and your family are staying healthy and safe. Happy Holidays to you all!

Sincerely,

Brian Fritsinger
Deputy County Administrator

20-189

From: Natalie Peterson <npeterson@duluthairport.com>
Sent: Thursday, December 03, 2020 12:03 PM
To: CH-John Mulder <jmulder@hermantownmn.com>
Cc: CH-Joseph Wicklund <jwicklund@hermantownmn.com>
Subject: Direct Denver Air Service Support Request

Caution: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

John and Joe,

The Duluth Airport Authority is submitting a grant application to the Department of Transportation requesting a $1M revenue guarantee to attract an air carrier to fly direct air service between Denver and Duluth. This will provide a direct flight option to Denver but it will also open up better alternatives and move competitive pricing to the West and beyond. We are asking for area businesses and the community to show their support for this request.

The first attachment is our 2-page flier on the Denver project. There are key facts and figures on it. The second attachment is a letter template with addressee, opening line, talking points and leading questions meant to help the writer personalize their support letter. Please consider drafting a letter of support. We really want to know how a direct connection with a western hub would benefit the businesses and residents of the City of Hermantown.

Here are three additional key points to hit on (among others from your individual businesses perspective):

- Having a direct daily connection with a western hub will put downward pressure on fares westbound in the network. This is something that is needed to combat leakage which is 60% to MSP.
- Connecting with DEN will give DLH daily flights to three major hubs for the first time ever, giving travels more connections and cheaper fares than ever before.
- Connectivity to three major hubs in northeast Minnesota directly supports the region's economy.

If you're willing to write a letter of support on behalf of the City of Hermantown, please email me your letter of support in the next couple of weeks. We need to have all letters of support in by Wednesday, December 23rd.

In addition, we're asking area businesses in the region to consider a financial pledge that will contribute to the grant's local share. A financial pledge helps demonstrate to DOT that the business community and government bodies are fully supportive of the new air service route. Please consider a pledge as low as $1K or more toward this project. We are trying to accommodate maximum flexibility for businesses to pledge funding. The City of Hermantown could pledge to donate this year or pledge to do so in 2021 or 2022. A pledge amount can also be broken into thirds over a 3 year timespan should that be more convenient and/or feasible. Let us know if you are interested in one of these approaches. Your pledge will only be requested in the event that we are successful with our application and awarded a grant. To date, we've received commitments totaling $215K with strong financial pledges from the City of Duluth and St. Louis County. We're working toward a $250K in matching dollars which will strengthen our grant application.

DOT just released the application and final applications are due by the end of January 26th. Thank you for your help and we look forward to your support for this important project.

As always, we appreciate your support and partnership!

Natalie Peterson
Director of Communications & Marketing
Duluth Airport Authority
4701 Grinden Drive
Duluth, MN 55811
1-218-625-7768

DULUTH INTERNATIONAL AIRPORT
Travel Globally. Fly Locally.

CITY OF HERMANTOWN
CITY COUNCIL MEETING
December 7, 2020
6:30 p.m.

MEETING CONDUCTED VIA ZOOM

Pledge of Allegiance

ROLL CALL: Councilors Geissler, Hauschild, Nelson, Mayor Boucher

CITY STAFF: John Mulder, City Administrator; Bonnie Engseth, City Clerk; Kevin Orme, Director of Finance & Administration; Eric Johnson; Community Development Director; Joe Wicklund, Communications Manager; Jim Crace, Chief of Police; Steve Overom, City Attorney

ABSENT: Councilor Peterson

VISITORS: 3

ANNOUNCEMENTS

PUBLIC HEARING – Truth In Taxation

Notice of Proposed
Total Budget and Property Taxes

The Hermantown city council will hold a public hearing on the budget and on the amount of property taxes it is proposing to collect to pay for the cost of services the city will provide in 2021.

EXPENDITURES: The General Fund budget amounts below compare the city's 2020 General Fund budget with the amount the city proposes to spend in 2021.

2020 Adopted Budget	Proposed 2021 Budget	Change from 2020 - 2021
$6,133,120	$6,288,201	2.53%

TAXES: The property tax amounts below compare that portion of the current budget levied in property taxes in the city of Hermantown for 2020 with the property taxes the city proposes to collect in 2021.

2020 Property Taxes	Proposed 2021 Property Taxes	Change from 2020 - 2021
$6,219,094	$6,502,851	4.56%

LOCAL TAX RATE COMPARISON: The following compares the city's current local tax rate to the city's proposed tax rate for 2020.

2020	2021 Proposed	Change from

Tax Rate	Tax Rate	2020-2021
42.89%	43.74%	1.96%

Attend the Public Hearing

All Hermantown residents are invited to attend the public hearing of the city council to express their opinions on the budget and on the proposed amount of 2021 property taxes. The hearing will be held on:

Monday, December 7, at 6:30 p.m.
Hermantown City Hall
5105 Maple Grove Road
Hermantown

If the discussion of the budget cannot be completed, a time and place for continuing the discussion will be announced at the hearing. You are also invited to send your written comments to:

City of Hermantown, Mayor's Office,
5105 Maple Grove Road, Hermantown, MN 55811

Public Hearing closed at 6:37 p.m.

2020-161 Resolution Adopting The Final 2020 Property Tax Levy Collectible In 2021 In The Amount Of $6,502,851

Motion made by Councilor Geissler, seconded by Councilor Hauschild to adopt Resolution 2020-161, Resolution Adopting The Final 2020 Property Tax Levy Collectible In 2021 In The Amount Of $6,502,851. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-162 Resolution Adopting The Final 2021 City General Fund Budget In The Amount Of $6,288,201 And Overall Budget Of $20,475,938

Motion made by Councilor Hauschild, seconded by Councilor Nelson to adopt Resolution 2020-162, Resolution Adopting The Final 2021 City General Fund Budget In The Amount Of $6,288,201 And Overall Budget Of $20,475,938. Roll Call: Councilors Geissler, Hauschild, Nelson, Peterson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

COMMUNICATIONS

Communications 20-179 through and including 2020-185 were read and placed on file.

Communication 20-183 from MN Dept. of Transportation to City of Hermantown regarding Intersection – Hwy 194/Hwy 53

Communication 20-184 from Greg Zimmerman, Planning & Zoning Commission Member to Eric Johnson, Community Development Director regarding Resignation

Communication 20-185 from Dave Berg Consulting, LLC to John Mulder, City Administrator regarding Water/Sewer Bill Analysis

PRESENTATIONS

PUBLIC DISCUSSION

CONSENT AGENDA

Motion made by Councilor Nelson, seconded by Councilor Geissler to approve the Consent Agenda which includes the following items:

A. Approve November 16, 2020 City Council Continuation Minutes

B. Approve general city warrants from November 16, 2020 through November 30, 2020 in the amount of $570,701.99

Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

MOTIONS

ORDINANCES

RESOLUTIONS

2020-163 Resolution Approving The CARES Final Funding Report

Motion made by Councilor Geissler, seconded by Councilor Nelson to adopt Resolution 2020-163, Resolution Approving The CARES Final Funding Report. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-164 Resolution Authorizing The Disposal Of Surplus City Property

Motion made by Councilor Nelson seconded by Councilor Hauschild to adopt Resolution 2020-164, Resolution Authorizing The Disposal Of Surplus City Property. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-165 Resolution Authorizing The Disposal Of Surplus City Property

Motion made by Councilor Hauschild, seconded by Councilor Nelson to adopt Resolution 2020-165, Resolution Authorizing The Disposal Of Surplus City Property. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-166 Resolution Receiving Preliminary Engineering Report And Calling For Public Hearing For Street Improvement District No. 539

Motion made by Councilor Nelson seconded by Councilor Geissler to adopt Resolution 2020-166, Resolution Receiving Preliminary Engineering Report And Calling For Public Hearing For Street Improvement District No. 539. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-167 Resolution Authorizing And Directing Mayor And City Clerk Approve Partner Sponsorship For The City Of Hermantown To Attend The 2021 Duluth & St. Louis County At The Capitol Days

Motion made by Councilor Geissler, seconded by Councilor Hauschild to adopt Resolution 2020-167, Resolution Authorizing And Directing Mayor And City Clerk Approve Partner Sponsorship For The City Of Hermantown To Attend The 2021 Duluth & St. Louis County At The Capitol Days. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-168 Resolution Approving Final Plans And Specifications And Ordering Advertisement For Bids For 2021 Road Improvement District No. 536

Motion made by Councilor Nelson seconded by Councilor Hauschild to adopt Resolution 2020-168, Resolution Approving Final Plans And Specifications And Ordering Advertisement For Bids For 2021 Road Improvement District No. 536. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-169 Resolution Approving Change Order Number 4 For Sewer Improvement District No. 448

Motion made by Councilor Geissler, seconded by Councilor Nelson to adopt Resolution 2020-169, Resolution Approving Change Order Number 4 For Sewer Improvement District No. 448. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

2020-170 Resolution Approving Pay Request Number 9 For Sewer Improvement District No. 448 To Utility Systems Of America, Inc. In The Amount Of $118,902.95

Motion made by Councilor Nelson seconded by Councilor Hauschild to adopt Resolution 2020-170, Resolution Approving Pay Request Number 9 For Sewer Improvement District No. 448 To Utility Systems Of America, Inc. In The Amount Of $118,902.95. Roll Call: Councilors Geissler, Hauschild, Nelson, Mayor Boucher, aye. Councilor Peterson, absent. Motion carried.

Motion made by Councilor Geissler, seconded by Councilor Nelson to recess the meeting at 6:54 p.m. Motion carried.

_____
Mayor

ATTEST:

_____
Clerk

CITY OF HERMANTOWN

CHECKS #66746-66804
12/01/2020 -12/15/2020

PAYROLL CHECKS	
Electronic Checks - #71460-71501	76,950.36
LIABILITY CHECKS	
Electronic Checks - #71455-71459	$59,526.94
PAYROLL EXPENSE TOTAL	**$136,477.30**
ACCOUNTS PAYABLE	
Checks - #66746-66804	$67,320.04
Electronic Payments -#99904- #99906	$641.03
Check- #108 TD Ameritrade to Utility Systems of America	$118,902.95
ACCOUNTS PAYABLE TOTAL	**$186,864.02**
TOTAL	**$323,341.32**

Fund	Account	Department	Vendor Name	Description	Amount	Check #
101	217450	Employee Flexplan	FURTHER ELECTRONIC PAYMENTS	Claim Reimbursement - Electron	172.00	-99906
101	217450	Employee Flexplan	FURTHER ELECTRONIC PAYMENTS	Claim Reimbursement - Electron	384.36	-99905
101	217450	Employee Flexplan	FURTHER ELECTRONIC PAYMENTS	Claim Reimbursement - Electron	84.67	-99904
240	432510	Trunk Sewer Construction	UTILITY SYSTEMS OF AMERICA, INC.	Trunk Sewer Spur- Munger Spur	118,902.95	20108
101	452100	Parks	LIFTPRO	Ratchet Strap Tails	108.30	66746
101	431901	City Garage	A W KUETTEL & SONS INC	20'x14' Rubber-winter storage	300.00	66747
101	419901	City Hall & Police Building Maintenance	AT&T MOBILITY	Cell Phones/Tablets PW	33.48	66748
101	431100	Street Department	AT&T MOBILITY	Cell Phones/Tablets PW	117.18	66748
601	494400	Water Administration and General	AT&T MOBILITY	Cell Phones/Tablets PW	121.62	66748
602	494900	Sewer Administration and General	AT&T MOBILITY	Cell Phones/Tablets PW	118.05	66748
101	415300	Administration & Finance	AT&T MOBILITY	Cell Phones Mulder	36.73	66748
101	421100	Police Administration	ATLAS BUSINESS SOLUTIONS INC	Software License 16 Emp @ 1.80	345.60	66749
602	372710	Sewer Permits	BILLMAN CONSTRUCTION INC	Refund Overpay Sewer Permits	15.00	66750
602	372710	Sewer Permits	BILLMAN CONSTRUCTION INC	4251 & 4253 Heartwood Lane	15.00	66750
602	494500	Sewer Maintenance	BLUE RIBBON CORPORATION	Transducer	960.02	66751
475	431150	Street Improvements	BRAUN INTERTEC CORPORATION	2020 RIP Materials Testing	500.00	66752
101	431100	Street Department	CENTRAL PENSION FUND	Training Per Contract	31.98	66753
602	494500	Sewer Maintenance	CENTRAL PENSION FUND	Training Per Contract	31.98	66753
601	494300	Water Distribution	CENTRAL PENSION FUND	Training Per Contract	31.98	66753
101	422903	Firehall #3 Midway Road	CENTURYLINK	Internet FH #3	69.98	66754
101	422902	Firehall #2 Morris Thomas Road	CENTURYLINK	Internet FH #2	69.98	66754
101	431901	City Garage	CINTAS CORPORATION	Mats at PW	20.58	66755
101	431901	City Garage	CINTAS CORPORATION	Supplies	13.50	66755
101	431901	City Garage	CINTAS CORPORATION	Mats at PW	2.10	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	26.22	66755
101	431901	City Garage	CINTAS CORPORATION	Supplies	32.00	66755
101	419901	City Hall & Police Building Maintenance	CINTAS CORPORATION	Mats at FD/PD	30.72	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	10.80	66755
101	431901	City Garage	CINTAS CORPORATION	Mats at PW	2.10	66755
101	431901	City Garage	CINTAS CORPORATION	Supplies	13.50	66755
101	419901	City Hall & Police Building Maintenance	CINTAS CORPORATION	Mats at CH	8.88	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	26.23	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	26.42	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	10.80	66755
101	431100	Street Department	CINTAS CORPORATION	Uniforms	10.80	66755
230	465100	HEDA	CREATIVE ARCADE	Website Monthly Maintenance	250.00	66756
101	214500	Escrow Deposits Payable	CRITCHLEY, DAN	Refund Erosion Control Permit	500.00	66757
101	419100	Community Development	CW TECHNOLOGY GROUP INC	CW Care Dec	267.26	66758

Fund	Account	Department	Vendor Name	Description	Amount	Check #
601	494400	Water Administration and General	CW TECHNOLOGY GROUP INC	CW Care Dec	267.26	66758
101	424100	Building Inspection	CW TECHNOLOGY GROUP INC	CW Care Dec	89.22	66758
101	431100	Street Department	CW TECHNOLOGY GROUP INC	CW Care Dec	356.10	66758
101	419100	Community Development	CW TECHNOLOGY GROUP INC	VPM Encryption License	26.16	66758
101	415300	Administration & Finance	CW TECHNOLOGY GROUP INC	Backup Protect Cloud	558.00	66758
101	424100	Building Inspection	CW TECHNOLOGY GROUP INC	VPM Encryption License	8.72	66758
602	494900	Sewer Administration and General	CW TECHNOLOGY GROUP INC	VPM Encryption License	26.16	66758
101	413100	Mayor	CW TECHNOLOGY GROUP INC	CW Care Dec	89.22	66758
275	452200	Community Building	CW TECHNOLOGY GROUP INC	EWC -CW Care - Dec	855.00	66758
101	415300	Administration & Finance	CW TECHNOLOGY GROUP INC	VPM Encryption License	52.33	66758
101	431100	Street Department	CW TECHNOLOGY GROUP INC	VPM Encryption License	34.88	66758
101	413100	Mayor	CW TECHNOLOGY GROUP INC	VPM Encryption License	8.72	66758
101	421100	Police Administration	CW TECHNOLOGY GROUP INC	CW Care Dec	1,958.53	66758
101	411100	Council	CW TECHNOLOGY GROUP INC	VPM Encryption License	34.88	66758
602	494900	Sewer Administration and General	CW TECHNOLOGY GROUP INC	CW Care Dec	267.26	66758
601	494400	Water Administration and General	CW TECHNOLOGY GROUP INC	VPM Encryption License	26.16	66758
101	415300	Administration & Finance	CW TECHNOLOGY GROUP INC	CW Care Dec	534.15	66758
101	421100	Police Administration	CW TECHNOLOGY GROUP INC	Workstation Disk Encrypt	24.00	66758
101	421100	Police Administration	CW TECHNOLOGY GROUP INC	VPM Encryption License	156.99	66758
101	419901	City Hall & Police Building Maintenance	DALCO	Kleenex towels and Aerosol cle	138.13	66759
101	419901	City Hall & Police Building Maintenance	DALCO	Restroom Supplies/Cleaner PD/C	296.04	66759
101	422901	Firehall #1 Maple Grove Road	DALCO	Kleenex Towels FH #1	53.21	66759
101	421100	Police Administration	DSC COMMUNICATIONS	Radio Parts	224.50	66760
101	415300	Administration & Finance	DULUTH AREA CHAMBER OF COMMERCE	St Louis Cty at Capital Sponso	3,700.00	66761
101	452100	Parks	DULUTH READY MIX INC	Concrete for Rose Rd Scoreboar	760.00	66762
601	494400	Water Administration and General	FURTHER	Monthly Participant Fee	3.92	66763
602	494900	Sewer Administration and General	FURTHER	Monthly Participant Fee	5.88	66763
101	431100	Street Department	FURTHER	Monthly Participant Fee	4.75	66763
101	421100	Police Administration	FURTHER	Monthly Participant Fee	38.15	66763
101	415300	Administration & Finance	FURTHER	Monthly Participant Fee	11.60	66763
101	419901	City Hall & Police Building Maintenance	FURTHER	Monthly Participant Fee	2.95	66763
101	419100	Community Development	FURTHER	Monthly Participant Fee	0.95	66763
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Uniform Gottschald	1,027.05	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Uniform Stracek	125.60	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Boots Stracek	159.96	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Radio Holder - Stracek	54.80	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Uniform Stracek	1,015.05	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Cuffs - Gottschald	80.00	66764

Fund	Account	Department	Vendor Name	Description	Amount	Check #
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Radio Holder - Gottschald	54.80	66764
101	421100	Police Administration	GALLS, LLC - DBA UNIFORMS UNLIMITED	Cuffs - Stracek	80.00	66764
602	494900	Sewer Administration and General	GOPHER STATE ONE-CALL INC	Nov Locates	111.60	66765
601	494400	Water Administration and General	GOPHER STATE ONE-CALL INC	Nov Locates	167.40	66765
101	421100	Police Administration	GREAT LAKES MOBIL LUBE EXPRESS	Oil Change Squad 17	74.37	66766
101	421100	Police Administration	GREAT LAKES MOBIL LUBE EXPRESS	Oil Change 2008 Tahoe	38.67	66766
101	421100	Police Administration	GREAT LAKES MOBIL LUBE EXPRESS	Oil Change 2014 Explorer	38.67	66766
602	494500	Sewer Maintenance	GREAT LAKES PIPE SERVICE INC	Clean and Video Lavaque Juncti	3,622.20	66767
101	415300	Administration & Finance	GREATAMERICA FINANCIAL SERVICES	Copier Lease/Konica Dec	96.00	66768
101	419901	City Hall & Police Building Maintenance	HARTEL'S/DBJ DISPOSAL CO LLC	Garbage Recycling Nov	269.60	66769
101	431901	City Garage	HARTEL'S/DBJ DISPOSAL CO LLC	Yard Trash Disposal Nov	165.76	66769
101	431100	Street Department	HERMANTOWN RADIATOR REPAIR	Front End Work Neil's truck	3,230.44	66770
602	494900	Sewer Administration and General	HERMANTOWN STAR LLC	Utilities Dept	140.25	66771
101	411300	Ordinance, Public Notice and Proceedings	HERMANTOWN STAR LLC	Ordinance 2020-07 (Fee schedul	49.50	66771
101	415300	Administration & Finance	HERMANTOWN STAR LLC	CQL Magazine Advertisement	1,440.00	66771
601	494400	Water Administration and General	HERMANTOWN STAR LLC	Utilities Dept	140.25	66771
101	431100	Street Department	INTER CITY OIL CO INC	Fuel	748.59	66772
101	431100	Street Department	INTER CITY OIL CO INC	Fuel	438.05	66772
101	431100	Street Department	INTER CITY OIL CO INC	Fuel	590.91	66772
101	431100	Street Department	INTER CITY OIL CO INC	Fuel	374.93	66772
101	431100	Street Department	INTER CITY OIL CO INC	Fuel	355.76	66772
101	431100	Street Department	JOHNSON FRAME & AXLE	Alignment Neil's Truck	65.00	66773
101	419100	Community Development	JOHNSON, ERIC	Phone Reimburse Jul-Dec 2020	150.00	66774
101	419901	City Hall & Police Building Maintenance	JOHNSTONE SUPPLY	Air Handling Unit V Belts PD/F	63.96	66775
602	494500	Sewer Maintenance	KWIK TRIP EXTENDED NETWORK	Gas Utility	141.18	66776
101	431100	Street Department	KWIK TRIP EXTENDED NETWORK	Car Wash PW	21.66	66776
101	419901	City Hall & Police Building Maintenance	KWIK TRIP EXTENDED NETWORK	Gas Building	138.94	66776
601	494300	Water Distribution	KWIK TRIP EXTENDED NETWORK	Gas Utility	211.77	66776
101	421100	Police Administration	KWIK TRIP EXTENDED NETWORK	Car Wash PD	33.00	66776
101	452100	Parks	KWIK TRIP EXTENDED NETWORK	Gas Park	42.74	66776
101	431100	Street Department	KWIK TRIP EXTENDED NETWORK	Gas Street	168.02	66776
101	421100	Police Administration	KWIK TRIP EXTENDED NETWORK	Gas PD	1,612.24	66776
101	214500	Escrow Deposits Payable	LUCZAK, TRAVIS	Refund Erosion Control Permit	500.00	66777
275	452200	Community Building	MEDIACOM	EWC - Cable TV	153.33	66778
275	452200	Community Building	MEDIACOM	EWC -dedicated internet	490.00	66778
275	452200	Community Building	MEDIACOM	EWC - Internet	354.90	66778
275	452200	Community Building	MEDIACOM	EWC - Telephone	462.43	66778
101	431901	City Garage	MENARD INC	4X8 OSB for Sidedoor Protectio	23.99	66779

Fund	Account	Department	Vendor Name	Description	Amount	Check #
101	431901	City Garage	MENARD INC	Batteries & Spray Paint	14.95	66779
101	431901	City Garage	MENARD INC	Vacuum (shop)	184.99	66779
101	431901	City Garage	MENARD INC	Step Ladders -replace old/brok	199.96	66779
101	431901	City Garage	MENARD INC	Batteries Flashlights	130.44	66779
101	421100	Police Administration	METRO SALES INC	Copier Lease	330.08	66780
601	494300	Water Distribution	MN DNR PERMITTING/REPORTING	Utility Crossing Licenses Keen	2,250.00	66781
602	494500	Sewer Maintenance	MN DNR PERMITTING/REPORTING	Utility Crossing Licenses Keen	2,250.00	66781
101	431100	Street Department	NAPA AUTO PARTS	Battery Cable H21 "Blue"	6.59	66782
101	431901	City Garage	NAPA AUTO PARTS	Windshield Washer fluid	27.64	66782
601	494400	Water Administration and General	NORTHERN BUSINESS PRODUCTS	Monitor Risers	48.03	66783
101	415300	Administration & Finance	NORTHERN BUSINESS PRODUCTS	Toner	41.00	66783
602	494900	Sewer Administration and General	NORTHERN BUSINESS PRODUCTS	Monitor Risers	48.02	66783
101	415300	Administration & Finance	NORTHERN BUSINESS PRODUCTS	Paper, Pens, Tape	85.24	66783
101	411100	Council	NORTHERN BUSINESS PRODUCTS	Desk Sign Councilor Hauschild	37.45	66783
101	415300	Administration & Finance	NORTHERN BUSINESS PRODUCTS	Sheet Protectors	19.49	66783
101	415300	Administration & Finance	NORTHERN BUSINESS PRODUCTS	File Folders	56.08	66783
101	431901	City Garage	NORTHERN STATES SUPPLY INC	Nuts/Bolts	5.94	66784
101	452100	Parks	NORTHERN STATES SUPPLY INC	Drill/Driver for Paul's Truck	259.99	66784
101	452100	Parks	NORTHERN STATES SUPPLY INC	Unistrut & Parts Rose Rd Score	30.33	66784
101	431100	Street Department	NORTHERN STATES SUPPLY INC	Drill/Driver for Paul's Truck	259.99	66784
601	220100	Refund Payable	OAKES, AMY	Refund overpayment 0343-02	17.03	66785
101	419100	Community Development	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	8.65	66786
602	494900	Sewer Administration and General	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	250.98	66786
101	421100	Police Administration	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	20.35	66786
101	424100	Building Inspection	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	5.45	66786
601	494400	Water Administration and General	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	376.47	66786
101	415300	Administration & Finance	PITNEY BOWES PURCHASE POWER	Refill Postage Meter 4745753	43.60	66786
602	494900	Sewer Administration and General	PRO PRINT INC	2,500 #10 Regular Envelopes	113.28	66787
601	494400	Water Administration and General	PRO PRINT INC	2,500 #10 Regular Envelopes	113.28	66787
601	494300	Water Distribution	PRO TIRE	Tires Paul's Truck	708.00	66788
101	415300	Administration & Finance	SAFEGUARD QBS	Shipping for 1099 forms	18.63	66789
101	415300	Administration & Finance	SAFEGUARD QBS	Shipping for Envelopes	19.44	66789
601	494300	Water Distribution	SATHERS, LLC	Class 5	1,377.00	66790
101	431100	Street Department	SENST, PAUL	Reimburse Safety Boots	100.00	66791
601	494300	Water Distribution	SENST, PAUL	Reimburse Safety Boots	50.00	66791
602	494500	Sewer Maintenance	SENST, PAUL	Reimburse Safety Boots	50.00	66791
101	421100	Police Administration	SHEL/DON GROUP INC	Business Cards Gottschald & St	141.08	66792
101	424100	Building Inspection	SHEL/DON GROUP INC	Copies for Early Childhood Cen	13.00	66792

Fund	Account	Department	Vendor Name	Description	Amount	Check #
402	431150	Street Improvements	SHORT ELLIOTT HENDRICKSON INC	Arrowhead/Ugstad Rd Traffic Im	16,231.30	66793
101	421100	Police Administration	ST LUKES CLINICS	Blood Draws	28.50	66794
101	431100	Street Department	STONE RIVER WILDLIFE CONTROL	Beaver Removal Reinke Rd	85.00	66795
101	421100	Police Administration	STREICHER'S	Ammo	130.00	66796
101	422903	Firehall #3 Midway Road	SUPERIOR FUEL COMPANY	Propane FH #3	850.33	66797
101	422902	Firehall #2 Morris Thomas Road	SUPERIOR FUEL COMPANY	Propane FH #2	723.93	66797
101	452200	Community Building	TELCOLOGIX	Dec Maintenance	10.05	66798
101	422901	Firehall #1 Maple Grove Road	TELCOLOGIX	Dec Maintenance	70.35	66798
101	431100	Street Department	TELCOLOGIX	Dec Maintenance	16.75	66798
101	419901	City Hall & Police Building Maintenance	TELCOLOGIX	Dec Maintenance	237.85	66798
101	415300	Administration & Finance	TOSHIBA FINANCIAL SERVICES	Copier Lease Toshiba	145.57	66799
101	421100	Police Administration	TROY'S BP AMOCO INC	Snow Tires Squad 15	595.96	66800
101	421100	Police Administration	TROY'S BP AMOCO INC	Tires Squad 14	536.97	66800
101	421100	Police Administration	TROY'S BP AMOCO INC	Snow Tires Squad 17	585.96	66800
101	421100	Police Administration	TROY'S BP AMOCO INC	Snow Tires Squad 21	585.96	66800
101	421100	Police Administration	TROY'S BP AMOCO INC	Repair Squad 14	1,579.23	66800
601	494400	Water Administration and General	UNITED STATES POSTAL SERVICE	Postage Due acct overdrawn	10.00	66801
602	494900	Sewer Administration and General	UNITED STATES POSTAL SERVICE	Postage Due acct overdrawn	10.00	66801
101	431100	Street Department	UNITED TRUCK BODY COMPANY INC	Cutting Edges-Boss Plow-Jerrie	387.90	66802
251	421100	Police Administration	USA TOWING & RECOVERY	Tow DWI Forfeiture ICR20166915	65.00	66803
260	456101	Cable	WALDNER, LARS	Cable TV Coordinator December	625.00	66804

Totals: **173 records printed** **186,864.02**

TO:	Mayor & City Council		
FROM:	Eric Johnson, Community Development Director		
DATE:	**December 14, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Moratorium on new PUD applications for residential developments having more than three (3) units per acre with a maximum of four (4) dwelling units per building in a R-3, Residential district**	**Agenda Item: 11-A**	**Ordinance 2020-08**

REQUESTED ACTION

Approve a six month moratorium on any new PUD applications for residential developments having more than three (3) units per acre with a maximum of four (4) dwelling units per building within the R-3, Residential zoning district.

DESCRIPTION OF REQUEST:

The City has received applications for multiple family residential developments in the R-3, Residential zoning district during the past 18 months. These applications have come in as Planned Unit Development (PUD) requests and have been located in R-3, Residential zoning districts.

The R-3, Residential district does not allow for residential structures having more than two dwelling units in one building. A building with more than two dwelling units under one roof structure is deemed as multiple family and is not permitted in the R-3 district. However, the Planned Unit Development process allows projects where residential units are provided as part of the PUD, regardless of the underlying district. They may be single-family, two-family, multi-family dwellings, or any other type and arrangement of dwelling permitted in the city. The development of multiple types of residential development is strongly encouraged per the Planned Unit Development zoning code.

There have been mixed results with these applications and a number of questions raised by both the Planning and Zoning Commission and City Council on these projects. In an effort to study this further, City staff is proposing a six month moratorium on new PUD applications for residential projects having more than three (3) units per acre with a maximum of four (4) dwelling units per building within the R-3, Residential zoning district.

If enacted, the City would contract with a planning consultant to review and study how other communities address multiple family dwellings in single family residential districts and present guidelines/direction for the City to discuss. Assuming City Council enacts the moratorium, it would be effective immediately upon approval and be in place until June 21, 2020 or the effective date of ordinance provisions regarding multiple family residential structures in the R-3, Residential zoning district the City of Hermantown.

Ordinance No. 2020-08

The City Council of the City of Hermantown Does Ordain:

AN ORDINANCE DECLARING A TEMPORARY MORATORIUM ON CERTAIN PLANNED UNIT DEVELOPMENTS IN AN R-3 ZONING DISTRICT WITHIN THE CITY OF HERMANTOWN

WHEREAS, the City's Zoning Code allows planned unit developments ("PUDs") in R-3 Residential Zone Districts ("R-3 Zone"); and

WHEREAS, some uses allowed in a PUD, such as apartment buildings and commercial uses, are not allowed in an R-3 Zone; and

WHEREAS, proposed PUDs that include uses not allowed in a R-3 Zone have received strong opposition from residents; and

WHEREAS, the Planning Commission has discussed the issues presented by PUDs proposed for R-3 Zones with uses not allowed in an R-3 Zone and have recommended that the issues presented by such proposed PUDs be studied further; and

WHEREAS, the City Council has duly considered the recommendation of the Planning Commission and desires to conduct a study regarding PUDs within R-3 Zones and, that until such study is completed, prohibit certain PUDs within R-3 Zones.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Hermantown, Minnesota, that the following regulations be adopted as an Ordinance of the City of Hermantown:

1. No person, firm, entity, or corporation shall propose a PUD within a R-3 Zone District that includes more than three (3) units per acre with a maximum of four (4) dwelling units per building until the earlier of (i) June 21, 2021 or (ii) the effective date of ordinance provisions regarding PUDs in R-3 Zone Districts.

2. This Ordinance is adopted pursuant to the provisions of Minnesota Statutes Section 462.355, Subdivision 4.

3. The purpose and intent of this Ordinance is set forth in the above whereas clauses.

4. This Ordinance shall be effective immediately upon adoption.

5. This Ordinance shall be published once in the official newspaper of the City of Hermantown.

6. City Staff and the Planning and Zoning Commission are hereby directed to study the issues presented by PUDs in an R-3 zone district and provide their report and recommendations to the City Council as soon as possible.

Dated the 21st day of December, 2020.

_____

Mayor

ATTEST:

_____
City Clerk

Adopted: December 21, 2020

Published: _____

Filed: _____

Effective Date: _____

TO:	Mayor & City Council		
FROM:	Eric Johnson, Community Development Director		
DATE:	**December 9, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Conveyance of a tax forfeit parcel to the City from St. Louis County**	**Agenda Item: 12-A**	**Resolution 2020-171**

REQUESTED ACTION

Approve adoption of a resolution requesting a tax forfeit parcel from St. Louis County.

DESCRIPTION OF REQUEST:

Staff recommends adoption of a resolution approving a request to St. Louis County to convey a parcel of land to the City for the completion of the public right of way along Stebner Road under the authority granted by Minnesota Statute 282.01.

Background

From time to time, St. Louis County offers parcels for sale that have been returned to the State for failure to pay taxes – tax-forfeit properties. There is currently a 0.33 acre parcel located along Stebner Road, south of Highway 53 and adjacent to Lakes 10 Theater which has gone tax forfeit. This parcel is the missing 33 feet of right of way along this portion of Stebner Road and would complete the 66' right of way that the City typically maintains for public roads.

In order for the City to officially request the available parcel, a resolution from the City Council making such a request is needed. The resolution lays out the City's statutory authority to acquire tax-forfeit property for road or right of way for road purposes, and makes a request directly of the County to convey the parcel to the City.

Minnesota Statute 282.01, Subdivision 1a, (e), reads:

(e) Nonconservation tax-forfeited land held in trust in favor of the taxing districts may be conveyed by the commissioner of revenue in the name of the state to a governmental subdivision for an authorized public use, if an application is submitted to the commissioner which includes a statement of facts as to the use to be made of the tract and the favorable recommendation of the county board. For the purposes of this paragraph, "authorized public use" means a use that allows an indefinite segment of the public to physically use and enjoy the property in numbers appropriate to its size and use, or is for a public service facility. Authorized public uses as defined in this paragraph are limited to:

(1) a road, or right-of-way for a road;

(2) a park that is both available to, and accessible by, the public that contains improvements such as campgrounds, playgrounds, athletic fields, trails, or shelters;

(3) trails for walking, bicycling, snowmobiling, or other recreational purposes, along with a reasonable amount of surrounding land maintained in its natural state;

(4) transit facilities for buses, light rail transit, commuter rail or passenger rail, including transit ways, park-and-ride lots, transit stations, maintenance and garage facilities, and other facilities related to a public transit system;

(5) public beaches or boat launches;

(6) public parking;

(7) civic recreation or conference facilities; and

(8) public service facilities such as fire halls, police stations, lift stations, water towers, sanitation facilities, water treatment facilities, and administrative offices.

No monetary compensation or consideration is required for the conveyance, except as provided in subdivision 1g, but the conveyance is subject to the conditions provided in law, including, but not limited to, the reversion provisions of subdivisions 1c and 1d.

Attachments
Parcel Location Map
St. Louis County Forms

Resolution No. 2020-171

RESOLUTION REQUESTING A FREE CONVEYANCE OF A TAX-FORFEIT PARCEL FOR PUBLIC RIGHT OF WAY

WHEREAS, the City of Hermantown is organized as a Statutory City in the County of St. Louis, Minnesota; and

WHEREAS, the City of Hermantown was notified by St. Louis County regarding the availability of tax forfeit parcels; and

WHEREAS, the City has determined that the specific land with Parcel Identification number of 395-0010-03121 is for the completion of Stebner Road public right of way, with a legal description attached hereto as "Exhibit A"; and

WHEREAS, the State of Minnesota has adopted Statutory provisions allowing for municipal acquisition of tax-forfeit parcels for public services facilities such as road right of way under Minnesota Statute 282.01, Subd. 1a, para (e)(1); and

WHEREAS, the City of Hermantown wishes to acquire the aforementioned parcel for public road right of way;

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota, as follows:

1. The City Council requests a free conveyance of parcel 395-0010-03121 to the City of Hermantown for the public uses permitted under Minnesota Statute 282.01, Subdivision 1a, (e)(1).

2. The City Council directs that any administrative expenditure directly associated with the acquisition of parcel 395-0010-03121 is to be paid from the General fund.

3. City Staff is directed to submit any necessary paperwork and application fees as is necessary to acquire parcel 395-0010-03121 for the public use.

Councilor ___ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ___ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

EXHIBIT A

Legal Description of Parcel to be acquired by the City of Hermantown

Parcel 395-0010-03121

That part of NE1/4 of SE1/4, described as follows: Beginning at the Southeast corner; thence Northerly along the east line on an assumed bearing of N00deg00'00"E, 419.64 feet; thence N48deg21'00"W, 44.16 feet; thence S00deg00'00"W, 449.15 feet to the south line; thence N89deg42'39"E, 33 feet to the point of beginning, EXCEPT the South 50 feet.

Location Map

DEPARTMENT OF REVENUE

State Deed Application Form

Application for State Deed for Tax-Forfeited Land

In St. Louis County

Type of Acquisition

- ☐ Purchase (Minn. Stat § 282.01, subd. 1a, par. (b) or subd. 3 or subd. 7a)
- ☐ Financed (Minn. Stat. § 282.01, subd. 6)
- ☐ Remove Blight/Afford. Housing (Minn. Stat. § 282.01, subd. 1a, par. (d))
- ☐ Conservation-related usage (Minn. Stat. § 282.01, subd. 1a, par. (h))
- ☐ Repurchase (Minn. Stat. § 282.012; Minn. Stat. § 282.241)
- ☑ Conditional Use Deed (Minn. Stat. § 282.01, subd. 1a, par. (e)) - Conditional Use Deed Supplement required -
- ☐ Failure to convey to city or association (Minn. Stat. § 282.01, subd. 1a, par. (f) or (g))
- ☐ Replacement for Lost/Destroyed Deed (Minn. Stat. § 282.33)
- ☐ Release (State Agencies only) (Minn. Stat. § 282.01, subd. 1a, par. (c))
- ☐ School Forest Deed (Minn. Stat. § 282.01, subd. 1a, par. (j)) - School Forest Deed Supplement required -
- ☐ Land Exchange (Minn. Stat. § 94.344)
- ☐ Authorized by statute or special law (include citation) _____

Correction

Is this application intended to correct a previous deed? ☐ Yes (Complete this section) ☑ No (Skip this section)

State deed number of original & date issued: _____

Information being corrected: ☐ Grantee's name ☐ Legal description ☐ Other: _____

Was this state deed recorded? ☐ Yes ☐ No

Recording Date: _____ Recording Number: _____

(If the state deed was not recorded, please return the original state deed with this application.)

Applicant (Grantee)

Name(s) of Applicant(s): City of Hermantown

Address of Applicant: 5105 Maple Grove Road

Phone Number or Email of Applicant: 218-729-3618

City: Hermantown State: MN Zip Code: 55811

Ownership Please check the appropriate box below:

☑ Single ownership ☐ Co-ownership: joint tenancy ☐ Co-ownership: tenancy in common ☐ Co-ownership: other

Property Information

Date of auditor's certificate of forfeiture: 11/23/2020

Date tax-forfeited land was sold (required for purchase and repurchase):

Date purchase price was paid in full (if applicable):

Purchase price (if applicable):

Legal description of property: (Please email longer legal descriptions to deed.application@state.mn.us) ☐ All or part of the described real property is Registered (Torrens)

Legal description of property (include name of the city/town in which the property is located):
That part of NE1/4 of SE1/4, described as follows: Beginning at the Southeast corner; thence Northerly along the east line on an assumed bearing of N00deg00'00"E, 419.64 feet; thence N48deg21'00"W, 44.16 feet; thence S00deg00'00"W, 449.15 feet to the south line; thence N89deg42'39"E, 33 feet to the point of beginning, EXCEPT the South 50 feet.

Parcel 395-0010-03121

Wells Please check the appropriate box below:

☐ There are one or more wells on this property. ☑ There are no wells on this property. ☐ No change since last well certificate.

(If wells disclosure certificate has been electronically filed, please list WDC number: _____)

Wetland Certification

☑ The wetland certification form has been completed and attached to this application.

Replacement

Complete this section only if "Replacement for Lost/Destroyed Deed" is selected above as the type of acquisition.

The applicant is (check the appropriate box): ☐ the grantee named in the original deed ☐ the grantee's successor

If the applicant is the grantee's successor, please state the name of the grantee in the original deed (otherwise leave blank):

Date that unrecorded state deed was issued

State Deed Number (if known)

Attach a statement of reasons in support of allegations that said deed has been lost or destroyed before it was recorded (please be specific).

Certification

All applications require the signature of the county auditor, date of the signature and raised county seal below. Applications for Replacement Deeds will require the signature of the applicant.

Please provide the information below as it corresponds to the type of acquisition selected on the front of the form.

Blight/Affordable Housing

Auditor to complete this section only if "Remove Blight/Afford. Housing" is selected above as the type of acquisition.

The County Board, or its delegate, of_____ County, Minnesota, has reviewed the application of _____ dated _____ , 20___, for the conveyance of certain tax-forfeited land described therein. The county board has determined that: (1) a sale at a reduced price is in the public interest because a reduced price is necessary to provide an incentive to correct the blighted conditions that make the lands undesirable in the open market or the reduced price will lead to the development of affordable housing; and (2) the governmental subdivision or state agency has documented its specific plans or correcting the blighted conditions or developing affordable housing and the specific law or laws that empower it to acquire real property in furtherance of the plans.

Conservation

Auditor to complete this section only if "Conservation-related usage" is selected above as the type of acquisition.

The County Board, or its delegate, of_____County, Minnesota, has reviewed the application of _____ dated _____ , 20___ , for the conveyance of certain tax-forfeited land described therein. The county board has determined that a sale at a reduced price is in the public interest for (select one):

___ (1) creation or preservation of wetlands; or
___ (2) drainage or storage of storm water under a storm water management plan; or
___ (3) preservation, or restoration and preservation, of the land in its natural state.

Failure to Convey

Auditor to complete this section only if "Failure to convey to city or association" is selected above as the type of acquisition.

The County Board, or its delegate, of _____County, Minnesota, has reviewed the application of _____, a (check one)☐ governmental subdivision /☐ common interest community, dated_____, 20 ___, for the free conveyance, due to a prior failure to convey which was duly certified, of certain tax-forfeited land described therein, and recommends that this application be granted.

Conditional Use Deed

Auditor to complete this section only if "Conditional Use Deed" is selected above as the type of acquisition.

The County Board, or its delegate, of_____ County, Minnesota, has reviewed the application of _____dated _____ , 20___ , for the conveyance for an authorized public use of certain tax-forfeited land described therein, and recommends that this application be granted.

School Forest

Auditor to complete this section only if "School Forest Deed" is selected above as the type of acquisition.

The County Board, or its delegate, of _____ County, Minnesota, and the Commissioner of Natural Resources has reviewed the application of _____, dated _____, 20___ for the conveyance for a school forest of certain tax-forfeited land described therein, and recommends that this application be granted.

Replacement

Auditor to complete this section only if "Replacement for Lost/Destroyed Deed" is selected above as the type of acquisition.

The property described herein was duly bid in for the state for taxes payable in the year_____, delinquent _____ ; and became forfeited to the State of Minnesota on the_____day of_____, _____.

Sign, Seal and Date Here

I certify that the above information is true and correct, the county board has taken the official action required under Minnesota Statute § 270C.88, and that therefore conveyance by state deed of the real property described above should be executed by the Commissioner of Revenue to the above named applicant(s) as required by Minnesota Statutes, Chapter 282.

Signature of County Auditor _____ County _____

Date of Signature of County Auditor _____

Applicant Signature (Replacement Deed Only) _____

Date of Applicant Signature (Replacement Deed Only) _____

(seal is required if application is mailed in)

Wetland Certification Form

TO: Commissioner of Revenue
Minnesota Department of Revenue

RE: Sale of Tax-forfeited Land Described As:

Insert legal description:

Legal description of property (include name of the city/town in which the property is located):
That part of NE1/4 of SE1/4, described as follows: Beginning at the Southeast corner; thence Northerly along the east line on an assumed bearing of N00deg00'00"E, 419.64 feet; thence N48deg21'00"W, 44.16 feet; thence S00deg00'00"W, 449.15 feet to the south line; thence N89deg42'39"E, 33 feet to the point of beginning, EXCEPT the South 50 feet.

Parcel 395-0010-03121
Hermantown, MN

Pursuant to Minnesota Statutes, sections 103F.535, subdivision 1, and 282.018, subdivision 2, as amended, and the procedures issued by the Department of Natural Resources and by the Board of Water and Soil Resources, I have reviewed the available data concerning the lands described above and have determined that the deed does not require a restrictive covenant because:

☐ The land is in a platted subdivision. (Auditor's plats are not deemed platted subdivisions for the purpose of this procedure.)

☐ The conveyance is a transfer to correct errors in legal descriptions or grantees.

OR

☑ Neither of the above statements apply to this parcel; therefore, the deed for this parcel must include a restrictive covenant prohibiting enrollment of this parcel in a state funded program providing compensation for conservation of marginal lands or wetlands.

If you have any questions or comments concerning this determination please contact:

Eric Johnson, telephone number 218-729-3618

Eric Johnson — 12/10/2020

SIGNED — DATE

Community Development Director — St. Louis

TITLE — COUNTY

Rev. 03/20

DEPARTMENT OF REVENUE

Supplemental Information for a Conditional Use Deed

In St. Louis **County**

ALL applications (*State Deed Application Form*) for a conditional use deed **must** be accompanied by a completed *Conditional Use Deed Supplement* form.

Property

Property identification number(s) (PIN) for requested property (attach additional sheets if necessary)
395-0010-03121

Market value of requested property: 100.00

Total acreage of requested property: 0.33

Describe current condition of the parcel (identify any improvements and natural features)

Forfeiture

Date of recording of auditor's certificate of forfeiture with the county recorder (if applicable)

Recorder's Document number (if applicable)

Date of recording of auditor's certificate of forfeiture with the county registrar of titles (if applicable)
11/23/2020

Registrar's Document number (if applicable)

Public Use

Authorized Public Use (Check only one box)

Minnesota Statute § 282.01, subd, 1a, par. (e) limits the authorized public uses for conditional use deeds to the following list. Please check the appropriate box below:

- ☑ Road or right-of-way for a road
- ☐ Trails
- ☐ Transit facilities
- ☐ Public beach or boat launch
- ☐ Public parking
- ☐ Civic recreation or conference facilities
- ☐ Park
  - Will the park be available to and accessible by the public? ○ Yes ○ No
  - Will there be signage indicating to the public this is a park? ○ Yes ○ No
  - Will the park contain amenities maintained for active utilization by the public? ○ Yes ○ No
  - Type of amenities:
  - Will the park primarily be open space? ○ Yes ○ No
- ☐ Public service facilities
  - Type of facility:

Describe in detail the intended public use of the property:
Obtain for completion of Stebner Road right of way. Currently, the City only has the eastern 33' of the right of way. This parcel would complete the 66' right of way along this section of Stebner Road.

Do you anticipate establishing the proposed use within 3-years? ☑ Yes ☐ No
If "no", when do you anticipate the use being established?

Enclosures

Fee Required

Minnesota Statute § 282.01, subd. 1g requires a fee of $250 to be submitted to the Commissioner of Revenue along with this application. If this application is denied, the Commissioner shall refund $150 of the application fee.

☑ The required fee is enclosed.

Supporting Documentation

Indicate the supporting documentation that you have included for consideration during the review of your application. Please note that some forms of documentation are required. Check all that apply:

- ☑ Photos (required)
- ☑ Maps (required)
- ☐ Other:
- ☑ Resolution authorizing application by the governmental subdivision (required)
- ☐ Plans documenting the intended use

Office Use only

This application it is hereby: rejected ___ granted ___

Fee Paid: ___
Refund: ___

_____ By _____
Commissioner of Revenue

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Communications & Community Engagement Director**	**Agenda Item: 12-B**	**Resolution 2020-172**

REQUESTED ACTION

Approve changing the Communications & Community Engagement Manager to a Communications & Community Engagement Director and reclassifying the position on the Management Compensation Plan

BACKGROUND

On April 1, 2019, Joe Wicklund began his employment as the Communications & Community Engagement Manager. At the time, this was a new position. Over the past 18 months, the City has learned the value of the position and the role Joe Wicklund has played in improving external relationships with key partners.

The attached proposed job description would add two main responsibilities to the position:

1. Serve as the liaison to the Essentia Wellness Center (EWC) including staffing the EWC Oversight committee. The City has made a very substantial investment in the Essentia Wellness Center, and the partnerships that go with it. It is important that we proactively work to maintain those healthy relationships and meet various obligations with our partners, including the State of MN for the purposes of the state bonding money.
2. Lead the City's legislative efforts: Over the past 5-7 years, the City has taken a more active and intentional role. That role has included participation and a supporting role in the Duluth/St Louis County Days at the Capitol, preparing a legislative agenda, and various trips to St. Paul to communicate the City's legislative priorities. This new position will lead that effort by working with the City Administrator and City Council to determine the legislative agenda and strategy.

In addition to these two responsibilities, the position will shift from providing "professional assistance to City Departments by assuming the primary responsibility for coordinating the management and development of" the communication programs to developing and leading the City's communications and community engagement efforts.

Mr. Wicklund has proven to be tremendous asset in building relationships, communications, and engaging our residents, these new roles will allow him opportunity to contribute at greater level.

The position is currently in Grade 10 of the City's management compensation plan. The recommendation is to reclassify the position in Grade 12. This is recommendation classification from the City's

compensation consultant, BakerTilly, (formerly Springsted). This position would be then in the same classification at the Public Works Director and the Community Development Director.

This change was planned for in the 2021 Budget.

SOURCE OF FUNDS (if applicable)
General Fund

ATTACHMENTS
Proposed Job Description

Resolution No. 2020-172

RESOLUTION APPROVING A CHANGE FROM COMMUNICATIONS & COMMUNITY ENGAGEMENT MANAGER TO COMMUNICATIONS & COMMUNITY ENGAGEMENT DIRECTOR

WHEREAS, the City of Hermantown is a Plan "A" Statutory City; and

WHEREAS, the City currently has position of Communications & Community Engagement Manager

WHEREAS, assigning additional responsibilities to the Communications & Community Engagement Manager and reclassifying this position to Communications & Community Engagement Director would provide greater service to the City; and

WHEREAS, attached as Exhibit "A" is the Job Description for the position of Communications & Community Engagement Director; and

WHEREAS, the City Council supports the change from a Communications & Community Engagement Manager to a Communications & Community Engagement Director to perform the duties as described in the Job Description under the supervision of the City Administrator; and

NOW, THEREFORE BE IT RESOLVED that the City Council of the City of Hermantown approves the following:

1. Job Description and Position of Communications & Community Engagement Director; and the classification in Grade 12 of the Management Compensation plan.

2. Joseph Wicklund is appointed to this position effective January 4, 2021

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

Exhibit A

City of Hermantown

JOB TITLE: Communications & Community Engagement ~~Manager~~Director

DEPARTMENT ~~Dept/Div~~Communications ~~: *Administration*~~
~~-~~FLSA Status: *Exempt*

General Definition of Work

Performs complex professional work developing and leading ~~Provides professional assistant to city departments by assuming the primary responsibility for coordinating the management and development of~~ the City's communications and community engagement programs. Serves as the City's liaison with outside agencies and community partners such as the Chamber of Commerce, Duluth Area Family YMCA, and other entities. Leads the City's legislative efforts. This position ensures high-quality and timely distribution of accurate and relevant information to stakeholders, ~~and~~ promotes a positive public image of our community, and related work as apparent or assigned. Work is performed under the general direction of the City Administrator..

Qualification Requirements

To perform this job successfully, an individual must be able to perform each essential function satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Essential Functions

- Creates and implements an overall communication and marketing strategy and plan.
- Evaluates and directs efforts to improve City operations related to communications and community engagement.
- Proposes and recommends solutions or course of action for approval, Coordinates implementation of approved programs related to communications and community engagement.
- Leads the planning, coordination and implementation of internal and external communications for the City in conjunction with Department Heads.
- Leads efforts on assigned City Council Priority Projects and other projects related to communications and community engagement as assigned by the City Administrator.
- ~~Assists the City Administrator and City Council in leading~~ Leads the City's ~~a~~ branding and vision process and efforts.
- Advises and supports staff on communications and media relations issues; anticipates and helps manage key communication issues.
- Coordinates use of all communication tools including but not limited to: Facebook, Promotional pieces for City programs & projects; Web Pages; City Bulletin Board; Everbridge (emergency communications)
- Develops and manages the content (both written and digital) of various forms and tools of communications to promote the City's mission and objectives Websites, Social media, press releases, presentations and other items.
- Develops and maintains information technology tools to improve city work flows and communications: Examples include use of video broadcasting of council meetings (cable & Internet) Video bulletin boards, Document management, electronic Council Packets, electronic records management, Everbridge usage.

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City of Hermantown

Communications & Community Engagement Director ~~Manager~~

Dept/Div: Communications~~*Administration*~~ FLSA Status: *Exempt*

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- Represents the City at meetings related to City projects for promotion and information purposes as directed by the City Administrator.
- Assists the Hermantown Economic Development authority with business recruitment and retention.
- Prepares City booth items at various events (Duluth/St. Louis County Days; Taste of Hermantown; Summerfest)
- Coordinates CATV functions, infrastructure, consultants, agreements and contracts
- Coordinates and/or participates in community events, ribbon cuttings, ground breakings, open houses, volunteer recognitions and other similar events
- Establishes rapport with outside groups to further City and outside group's priorities in a collaborative fashion. Examples include: Friends of the trails, Park User groups, Historical Society, EHRWC & lease holders
- Serves as the City's liaison to the partners at the Essentia Wellness Center, staffing the Oversight Committee
- Works with Chamber of Commerce on interaction/welcome of new residents & businesses
- Coordinates responses to miscellaneous inquiries from individual citizens – referring to individual departments when necessary.
- Works with the City Council and City Administrator to determine legislative agenda and strategy for identified legislative requests.
- Monitors City's legislative issues and other legislative issues that may impact the City, using outside agencies such as the League of MN Cities, and the Coalition of Greater MN Cities.
- Schedules and coordinates City lobbying efforts and appearances in front of legislative committees, and/or State Agencies including assisting in developing material for presentation to the Legislature and state agencies.

Knowledge, Skills and Abilities

- Comprehensive ~~Basic~~ knowledge of principles of public relations and communication through print and electronic media
- Comprehensive ~~Basic~~ knowledge of current principles, techniques and objectives of public information and relations programs
- General k~~K~~nowledge of city government and services and the operation of a public entity
- Ability to communicate ideas effectively orally and in writing
- Professional written, verbal and interpersonal skills
- Skill in preparing speeches, statements and articles
- Skill in making public presentations
- Skill in the practical use of technology used for marketing and communication purposes.
- Skill in the use of personal computers and software applications including word processing, spreadsheet, graphics and presentation software
- Ability to establish and maintain effective working relationships with public officials, community organizations, management, the media and the public
- Ability to handle confidential information with discretion
- Ability to react quickly to changing priorities and to effectively manage multiple project
- Ability to read and comprehend complex information

City of Hermantown

Communications & Community Engagement Director ~~Manager~~

Dept/Div: Communications~~*Administration*~~ FLSA Status: *Exempt*

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- Ability to prepare documents, memoranda, reports, speeches, articles, etc.
- Demonstrated success working with people at all levels in the organization, with a commitment to working on cross-functional teams
- Ability to manage projects, handle multiple tasks and meet deadlines
- Strong organizational and time management skills and attention to detail
- Strong work ethic and time commitment to organizational success
- Self-directed individual with initiative and flexibility

Education and Experience

- Bachelor's degree in journalism, communications, marketing, public relations or a related field.
- Master's Degree preferred,
- Minimum of t~~T~~hree years of experience in public relations, journalism, community engagement, or another communications field.
- Must pass background investigation.

Physical Requirements

This work requires the occasional exertion of up to 10 pounds of force; work frequently speaking or hearing, using hands to finger, handle or feel and repetitive motions and occasionally requires standing, walking, sitting, climbing or balancing, reaching with hands and arms and lifting; work has standard vision requirements; vocal communication is required for expressing or exchanging ideas by means of the spoken word; hearing is required to perceive information at normal spoken word levels; work requires preparing and analyzing written or computer data, operating machines, operating motor vehicles or equipment and observing general surroundings and activities; work occasionally requires exposure to outdoor weather conditions; work is generally in a quiet location (e.g. library, private offices).

Special Requirements

Valid driver's license.

TO:	Mayor & City Council		
FROM:	Joe Wicklund, Communications		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Resolution Supporting DLH Flights to Denver**	**Agenda Item: 12-C**	**Resolution 2020-173**

REQUESTED ACTION

Approve support of the Duluth Airport Authority's efforts to open additional daily flights to Denver through a grant application to the Department of Transportation.

BACKGROUND

Earlier this month, Natalie Peterson, the Director of Communications & Marketing for the Duluth Airport Authority, reached out with a request for support from the City of Hermantown in their efforts to secure a sizeable grant from the Department of Transportation. This funding, in the form of a Small Community Air Service Development (SCASD) grant would allow for direct flight options from Duluth International Airport (DLH) to Denver.

As noted in the communication from Peterson, having a reliable, regular flight to a western hub would lead to lower fairs on flights, help prevent the considerable local economic losses of passengers traveling to the Twin Cities to fly west, and connect our entire region to three major hubs (Denver, Chicago, and Minneapolis-St. Paul) in terms of economic development opportunities. The Duluth Airport Authority believes the economic impact of this grant could be $6 million to our area, per the attached communication.

In 2017, the City passed a similar resolution (2017-43) in support of flights from DLH to Phoenix. Attached is a letter of support for this project, which meets the needs of the Duluth Airport Authority for this particular request, as well as aligning with its previous request.

SOURCE OF FUNDS (if applicable)

N/A at this time

ATTACHMENTS

Communication from Duluth Airport Authority
Draft of Support Letter

Resolution No. 2020-173

RESOLUTION SUPPORTING DULUTH AIRPORT EFFORTS FOR DIRECT FLIGHTS TO DENVER COLORADO

WHEREAS, the City of Hermantown has an interest in a healthy and vibrant Duluth International Airport ("DIA"); and

WHEREAS, the Duluth International Airport has identified finding a low cost carrier to connect Duluth to the Denver Colorado area as a top priority; and

WHEREAS, the Duluth International Airport and Visit Duluth are applying for a grant to the U.S. Department of Transportation to promote the connection to Denver Colorado; and

WHEREAS, a direct connection from the Denver Colorado are would have a significant positive impact on the local economy.

NOW, THEREFORE BE IT RESOLVED, that the Hermantown City Council approve and support the Airport Authority's grant to promote the connection between Duluth and Denver Colorado.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

20-189

From: Natalie Peterson <npeterson@duluthairport.com>
Sent: Thursday, December 03, 2020 12:03 PM
To: CH-John Mulder <jmulder@hermantownmn.com>
Cc: CH-Joseph Wicklund <jwicklund@hermantownmn.com>
Subject: Direct Denver Air Service Support Request

Caution: This email originated from outside the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

John and Joe,

The Duluth Airport Authority is submitting a grant application to the Department of Transportation requesting a $1M revenue guarantee to attract an air carrier to fly direct air service between Denver and Duluth. This will provide a direct flight option to Denver but it will also open up better alternatives and move competitive pricing to the West and beyond. We are asking for area businesses and the community to show their support for this request.

The first attachment is our 2-page flier on the Denver project. There are key facts and figures on it. The second attachment is a letter template with addressee, opening line, talking points and leading questions meant to help the writer personalize their support letter. Please consider drafting a letter of support. We really want to know how a direct connection with a western hub would benefit the businesses and residents of the City of Hermantown.

Here are three additional key points to hit on (among others from your individual businesses perspective):

- Having a direct daily connection with a western hub will put downward pressure on fares westbound in the network. This is something that is needed to combat leakage which is 60% to MSP.
- Connecting with DEN will give DLH daily flights to three major hubs for the first time ever, giving travels more connections and cheaper fares than ever before.
- Connectivity to three major hubs in northeast Minnesota directly supports the region's economy.

If you're willing to write a letter of support on behalf of the City of Hermantown, please email me your letter of support in the next couple of weeks. We need to have all letters of support in by Wednesday, December 23rd.

In addition, we're asking area businesses in the region to consider a financial pledge that will contribute to the grant's local share. A financial pledge helps demonstrate to DOT that the business community and government bodies are fully supportive of the new air service route. Please consider a pledge as low as $1K or more toward this project. We are trying to accommodate maximum flexibility for businesses to pledge funding. The City of Hermantown could pledge to donate this year or pledge to do so in 2021 or 2022. A pledge amount can also be broken into thirds over a 3 year timespan should that be more convenient and/or feasible. Let us know if you are interested in one of these approaches. Your pledge will only be requested in the event that we are successful with our application and awarded a grant. To date, we've received commitments totaling $215K with strong financial pledges from the City of Duluth and St. Louis County. We're working toward a $250K in matching dollars which will strengthen our grant application.

DOT just released the application and final applications are due by the end of January 26th. Thank you for your help and we look forward to your support for this important project.

As always, we appreciate your support and partnership!

Natalie Peterson
Director of Communications & Marketing
Duluth Airport Authority
4701 Grinden Drive
Duluth, MN 55811
1-218-625-7768

DULUTH INTERNATIONAL AIRPORT
Travel Globally. Fly Locally.

December 21, 2020

Brooke Chapman
Office of Aviation Analysis
Department of Transportation
1200 New Jersey Ave, SE
Washington DC 20590

Dear Associate Director Chapman,

I'm writing in support of the Duluth Airport Authority's application for a Small Community Air Service Development (SCASD) grant application.

In northeastern Minnesota, the City of Hermantown has been rare in recent years in its ability to attract both a growing population and host an improving economic environment. To both aid in and boost those efforts, we fully support the awarding of a SCASD grant to the Duluth Airport Authority as they look to expand flights to Denver.

The possible economic impact of $6 million annually is reason enough alone to make this case, but there are several additional critical components. Opening additional flight options to the west coast would create increased connectivity for our travelers, as well as those looking to explore our unique region. We know experiences during travel can change a person, and this opportunity would create that change for those in our region and those who land on our runway.

We would see an important economic decrease of our travelers having to utilize other airports, both in terms of improved pricing on DLH flights and greater flight options. This would have a positive impact at the community and individual level in our area.

Within that $6 million dollars of annual impact are likely so many more stories than we can quantify today. Which is yet another reason we strongly support this grant opportunity for our region.

Thank you for your consideration.

Sincerely,

TO:	Mayor & City Council		
FROM:	Eric Johnson, Community Development Director		
DATE:	**December 10, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Triple J Holdings of Duluth LLC - Special Use Permit for grading and filling in a Shoreland Overlay Area**	**Agenda Item: 12-D**	**Resolution 2020-174**

REQUESTED ACTION

Approve a Special Use Permit for filling and grading within a Natural Environment Shoreland Overlay Zone.

DESCRIPTION OF REQUEST:

The applicant purchased the property located at 4703 Hermantown Road in 2016 for the purposes of operating their automotive repair business. In 2020, the applicant purchased the residential home located at 4709 Hermantown Road. This property has a split zoning on it consisting of C, General Commercial along Hermantown Road with the rear of the property being zoned R-3, Residential.

The applicant purchased the 4709 Hermantown Road property for the purpose of reconfiguring the lot and combine a portion of it with the 4703 property. This would allow the applicant to enlarge the parking area associated with their existing business as well as create a stormwater pond.

SITE INFORMATION:

Parcel Size:	2.5 acres total
Legal Access:	4703 and 4709 Hermantown Road
Wetlands:	Yes, delineation approved in 2020; No proposed impacts
Existing Zoning:	C, General Commercial and R-3, Residential
Airport Overlay:	None
Shoreland Overlay:	Natural Environment
Comprehensive Plan:	Commercial

Development Details

A public hearing for the Special Use Permit was held on December 15, 2020. The applicant and one neighbor was in attendance. The neighbor was supportive of the project as it addresses parking congestion on the current business property. The Planning and Zoning Commission unanimously recommended the project to the City Council for approval.

The 4703 property consists of a 3,650 square foot building and a 6,300 square foot customer parking /vehicle storage area. The 4709 property consists of a 766 square foot home located on 1.25 acres. The previously attached garage and breezeway were recently demolished in

anticipation of this project. There is an unmapped tributary of Keene Creek in the rear half of the two properties which is located along the northern portion of the properties.

The applicant is proposing to grade and fill a 20,000 square foot area which would square off the parking area as well as create a stormwater pond for the property. This area is entirely within the 300' natural area shoreland associated with the unmapped tributary.

Wetlands
The National Wetland Inventory map shows the presence of wetlands along the northern portion of the two properties. The applicant engaged a wetland delineator from MSA Professional Services to document the location of the wetland for use in the design of the parking expansion. The proposed work does not impact any of the documented wetland area.

Special Use Permit
The Special Use Permit is for filling and grading within a Shoreland zone. There are general conditions for all SUPs. Staff finds the following in regard to the criteria for Special Use Permits in the Zoning Ordinance:

No special use permit shall be approved unless positive findings are made with respect to each and every one of the following criteria:

1. **The proposed development is likely to be compatible with development permitted under the general provisions of this chapter on substantially all land in the vicinity of the proposed development;**

   An automotive repair business is an allowed use within the C, General Commercial zoning district.

2. **The proposed use will not be injurious to the use and enjoyment of the environment, or detrimental to the rightful use and enjoyment of other property in the immediate vicinity of the proposed development;**

   Conditions placed on the SUP restricting wetland impacts and clearing and grading within 50 feet of the unnamed tributary meet the intent of the zoning ordinance to protect natural resources. An automotive repair business is an allowed use within the C, General Commercial zoning district.

3. **The proposed use is consistent with the overall Hermantown Comprehensive Plan and with the spirit and intent of the provisions of this chapter;**

   The property is within an area marked for commercial development in the Hermantown Comprehensive Plan. The purpose of the Shoreland Overlay Zone is to protect public waterways. Impervious surface caps are included to prevent excessive runoff from

constructed surfaces. The proposed impervious surface is below maximum limits and the required 50 feet buffer zone will protect the unnamed tributary.

4. **The proposed use will not result in a random pattern of development with little contiguity to existing programmed development and will not cause negative fiscal and environmental effects upon the community.**

   The existing business is in a small neighborhood commercial node at the intersection of Haines Road and Hermantown Road. There is a convenience store/gas station on the south side of Hermantown Road. An automotive repair business is an allowed use within the C, General Commercial zoning district.

5. **Other criteria required to be considered under the provisions of this code for any special use permit.**

   The applicant will follow the rules for grading and filling in a Shoreland Overlay Zone established in Section 725.02 and Section 555.07.1 and 555.07.2. Additional details of note include:

   A. No impervious surface or clearing, grubbing and grading will be allowed within 50 feet of the Ordinary High Water Level of the unnamed tributary.

   B. The elevation of the lowest floor level shall be at least three feet above the Ordinary High Water Level of the unnamed tributary.

RECOMMENDATIONS:
Staff recommends approval of the Special Use Permit based on the findings set forth in the Staff report, subject to the following conditions:

1. The approval is for a Special Use Permit for filling and grading in a Natural Environment Shoreland of an unnamed tributary to Keene Creek to enlarge the parking/vehicle storage area and to create a stormwater pond for their automotive repair business. The Community Development Director may approve minor variations to structures and filling and grading indicated on the attached site plan as long as the variations do not result in shoreland impacts.

2. The applicant will follow the rules for grading and filling in a Shoreland Overlay Zone established in Section 725.02 and Section 555.07.1 and 555.07.2 including, but not limited to:

   a. No impervious surface or clearing, grubbing and grading will be allowed within 50 feet of the Ordinary High Water Level of the unnamed tributary.

b. The elevation of the lowest floor level shall be at least three feet above the Ordinary High Water Level of the unnamed tributary.
c. The smallest amount of bare ground is exposed for as short a time as feasible;
d. Temporary groundcover, such as mulch, is used, and permanent groundcover, such as sod, is planted;
e. Adequate methods to prevent erosion and trap sediment are employed;
f. Fill is stabilized to accepted engineering standards;
g. Adequate methods are employed to reduce the runoff and/or flow of water on or over the affected shoreland so that the grading, filling or alteration of the natural topography does not contribute to downstream flooding;
h. Adequate methods are employed to preserve water quality so that the grading, filling or alteration of the natural topography will not detrimentally affect the quality of the public waters of the City of Hermantown;
i. Adequate methods are employed for the preservation or establishment of local vegetation that provides wildlife habitat and screening; and
j. Fill used will consist of suitable material free from toxic pollutants in other than trace quantities.

3. The applicant shall sign a consent form assenting to all conditions of this approval.

4. The applicant shall pay an administrative fine of $750 per violation of any condition of this approval.

ATTACHMENTS:

Site Location Map
Proposed site plan

Resolution No. 2020-174

RESOLUTION APPROVING A SPECIAL USE PERMIT FOR THE GRADING AND FILLING WITHIN A SHORELAND OVERLAY ZONING DISTRICT

WHEREAS, Triple J Holdings of Duluth, LLC ("Applicant"), owner of the property at 4703 and 4709 Hermantown Road, submitted an application for a Special Use Permit (SUP) for the grading and filling within a Shoreland Overlay Zoning District in order to enlarge the parking area associated with their existing business at 4703 Hermantown Road as well as create a stormwater pond; and

WHEREAS, the Hermantown Planning and Zoning Commission held a public hearing on the Special Use Permit on December 15, 2020 following notice as required by the City's Zoning Code; and

WHEREAS, following the public hearing on the SUP, the Hermantown Planning Commission recommend on a 7-0 vote that the City Council approve the Special Use Permit; and

WHEREAS, after due consideration of the entire City file, the testimony at the public hearing and all other relevant matters the City Council hereby makes the following findings related to the Special Use Permit;

FINDINGS OF FACT

1. **The proposed development is likely to be compatible with development permitted under the general provisions of this chapter on substantially all land in the vicinity of the proposed development;**

   An automotive repair business is an allowed use within the C, General Commercial zoning district.

2. **The proposed use will not be injurious to the use and enjoyment of the environment, or detrimental to the rightful use and enjoyment of other property in the immediate vicinity of the proposed development;**

   Conditions placed on the SUP restricting wetland impacts and clearing and grading within 50 feet of the unnamed tributary meet the intent of the zoning ordinance to protect natural resources. An automotive repair business is an allowed use within the C, General Commercial zoning district.

3. **The proposed use is consistent with the overall Hermantown Comprehensive Plan and with the spirit and intent of the provisions of this chapter;**

   The property is within an area marked for commercial development in the Hermantown Comprehensive Plan. The purpose of the Shoreland Overlay Zone is to protect public waterways. Impervious surface caps are included to prevent excessive runoff from constructed surfaces. The proposed impervious surface is below maximum limits and the required 50 feet buffer zone will protect the unnamed tributary.

4. **The proposed use will not result in a random pattern of development with little contiguity to existing programmed development and will not cause negative fiscal and environmental effects upon the community.**

The existing business is in a small neighborhood commercial node at the intersection of Haines Road and Hermantown Road. There is a convenience store/gas station on the south side of Hermantown Road. An automotive repair business is an allowed use within the C, General Commercial zoning district.

5. **Other criteria required to be considered under the provisions of this code for any special use permit.**

   The applicant will follow the rules for grading and filling in a Shoreland Overlay Zone established in Section 725.02 and Section 555.07.1 and 555.07.2. Additional details of note include:

   A. No impervious surface or clearing, grubbing and grading will be allowed within 50 feet of the Ordinary High Water Level of the unnamed tributary.
   B. The elevation of the lowest floor level shall be at least three feet above the Ordinary High Water Level of the unnamed tributary.

CONCLUSION

On the basis of the foregoing Findings of Fact, the City Council of the City of Hermantown is hereby resolved as follows:

1. The approval is for a Special Use Permit for filling and grading in a Natural Environment Shoreland of an unnamed tributary to Keene Creek to enlarge the parking/vehicle storage area and to create a stormwater pond for their automotive repair business. Community Development Director may approve minor variations to structures and filling and grading indicated on the attached preliminary site plan as long as the variations do not result in greater wetland impacts.

2. The applicant will follow the rules for grading and filling in a Shoreland Overlay Zone established in Section 725.02 and Section 555.07.1 and 555.07.2 including, but not limited to:

   A. No impervious surface or clearing, grubbing and grading will be allowed within 50 feet of the Ordinary High Water Level of the unnamed tributary.
   B. The elevation of the lowest floor level shall be at least three feet above the Ordinary High Water Level of the unnamed tributary.
   C. The smallest amount of bare ground is exposed for as short a time as feasible;
   D. Temporary groundcover, such as mulch, is used, and permanent groundcover, such as sod, is planted;
   E. Adequate methods to prevent erosion and trap sediment are employed;
   F. Fill is stabilized to accepted engineering standards;
   G. Adequate methods are employed to reduce the runoff and/or flow of water on or over the affected shoreland so that the grading, filling or alteration of the natural topography does not contribute to downstream flooding;
   H. Adequate methods are employed to preserve water quality so that the grading, filling or alteration of the natural topography will not detrimentally affect the quality of the public waters of the City of Hermantown;
   I. Adequate methods are employed for the preservation or establishment of local vegetation that provides wildlife habitat and screening; and
   J. Fill used will consist of suitable material free from toxic pollutants in other than trace quantities.

3. The applicant shall utilize best management methods to demarcate and protect wetlands that are located on site, including providing electronic and GIS information to City documenting the wetland boundaries.

4. The applicant shall sign a consent form assenting to all conditions of this approval.

5. The applicant shall pay an administrative fine of $750 per violation of any condition of this approval.

Councilor ___ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ___ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

(TOP THREE INCHES RESERVED FOR RECORDING DATA)

SPECIAL USE PERMIT

Permission is hereby granted to Triple J Holdings of Duluth, LLC, ("Applicant") for filling and grading within a Natural Environment Shoreland Overlay Zone ("Project") in the City of Hermantown, County of St. Louis, State of Minnesota, on the property located at 4703 and 4709 Hermantown Road and legally described on Exhibit A attached hereto ("Property").

The permission hereby granted is expressly conditioned as follows:

a. That the Project will be constructed as described in the plans accompanying the application and the conditions contained herein.

b. This permit is not assignable except with the written consent of the City of Hermantown.

c. The Zoning Officer of the City of Hermantown shall be notified at least five (5) days in advance of the commencement of the work authorized hereunder and shall be notified of its completion within (5) days thereafter.

d. No change shall be made in the Project without written permission being previously obtained from the City of Hermantown.

e. Applicant shall grant access to the site at all reasonable times during and after construction to authorized representatives of the City of Hermantown for inspection of the Project to see the terms of this permit are met.

f. The permit is permissive only. No liability shall be imposed upon or incurred by the City of Hermantown or any of its officers, agents or employees, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of Applicant or any of Applicant's agents, employees or contractors relating to any matter hereunder. This permit shall not be construed as stopping or limiting any legal claims or right of action of any person against Applicant, its agents, employees of contractors, for any damage or injury resulting from any such act or omission, or as estopping or limiting any legal claim or right of action of the City of Hermantown against Developer, its agents, employees or

contractors for violation of or failure to comply with the permit or applicable provisions of law.

g. This permit may be terminated by the City of Hermantown at any time it deems necessary for the conservation of water resources, or in the interest of public health and welfare, or for violation of any of the provisions of this permit.

h. Applicant is initially and continually in compliance with all of the ordinances and regulations of the City of Hermantown Building Code and the Hermantown Fire Code.

i. All state licenses and other permits required for the Project have been obtained by the Applicant and copies are provided to the City of Hermantown before the release of a permanent Certificate of Occupancy.

j. That Applicant pay all direct costs incurred by the City of Hermantown in connection with the enforcement and administration of this permit within fifteen (15) days of Applicant being invoiced by the City for such costs.

k. The approval is for a Special Use Permit for filling and grading in a Natural Environment Shoreland of an unnamed tributary to Keene Creek to enlarge the parking/vehicle storage area and to create a stormwater pond for their automotive repair business. Community Development Director may approve minor variations to structures and filling and grading indicated on the attached preliminary site plan as long as the variations do not result in any wetland impacts.

l. The applicant will follow the rules for grading and filling in a Shoreland Overlay Zone established in Section 725.02 and Section 555.07.1 and 555.07.2 including, but not limited to:

    1. No impervious surface or clearing, grubbing and grading will be allowed within 50 feet of the Ordinary High Water Level of the unnamed tributary.
    2. The elevation of the lowest floor level shall be at least three feet above the Ordinary High Water Level of the unnamed tributary.
    3. The smallest amount of bare ground is exposed for as short a time as feasible;
    4. Temporary groundcover, such as mulch, is used, and permanent groundcover, such as sod, is planted;
    5. Adequate methods to prevent erosion and trap sediment are employed;
    6. Fill is stabilized to accepted engineering standards;
    7. Adequate methods are employed to reduce the runoff and/or flow of water on or over the affected shoreland so that the grading, filling or alteration of the natural topography does not contribute to downstream flooding;
    8. Adequate methods are employed to preserve water quality so that the grading, filling or alteration of the natural topography will not detrimentally affect the quality of the public waters of the City of Hermantown;
    9. Adequate methods are employed for the preservation or establishment of local vegetation that provides wildlife habitat and screening; and
    10. Fill used will consist of suitable material free from toxic pollutants in other than trace quantities.

m. The applicant shall utilize best management methods to demarcate and protect wetlands that are located on site, including providing electronic and GIS information to City documenting the wetland boundaries.

n. The applicant shall sign a consent form assenting to all conditions of this approval.

o. The applicant shall pay an administrative fine of $750 per violation of any condition of this approval.

IN WITNESS WHEREOF, the Mayor and City Clerk have hereunto set their hands on behalf of the City of Hermantown on the ____ day of _____, 2020.

CITY OF HERMANTOWN

By _____

Its Mayor

By _____

Its Clerk

STATE OF MINNESOTA)
)ss.

COUNTY OF ST. LOUIS)

The foregoing instrument was acknowledged before me this ___ day of _____, 2020, by _____, and _____, the Mayor and City Clerk respectively of the City of Hermantown on behalf of the City.

_____

Notary Public

ACCEPTANCE OF CONDITIONS

Applicant hereby acknowledges and accepts the conditions specified on the foregoing Special Use Permit and covenants and agrees to comply with each and every such situation.

Applicant acknowledges that the failure to comply with all of the conditions shall constitute a violation of the Hermantown Zoning Ordinance and that the City of Hermantown may, in such event, in addition to other remedies, institute any appropriate action or proceeding to prevent, restrain, correct or abate the violation.

IN WITNESS WHEREAS, Applicant has executed this acceptance the ___ day of _____ 2020.

By _____

Triple J Holdings of Duluth, LLC

STATE OF MINNESOTA)
)ss.

COUNTY OF ST. LOUIS)

The foregoing instrument was acknowledged before me this ___ day of _____, 2020, by _____.

_____

Notary Public

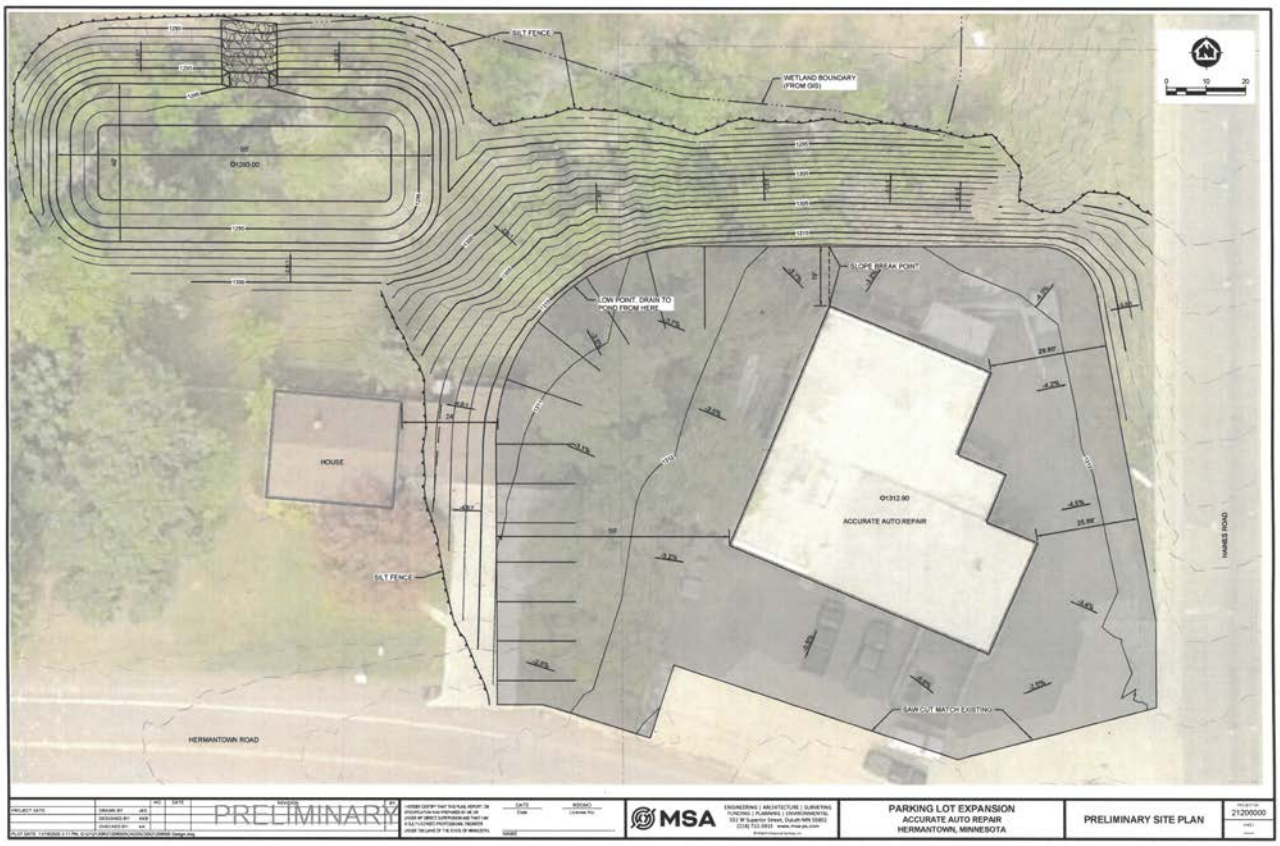
EXHIBIT A

Parcel A, Cert No. 348882
E1/2 of SE1/4 of SE1/4 of NE1/4 of NE1/4 Section 25 Township 50 North Range 15 West of the Fourth Principal Meridian, EXCEPT the North 128.00 feet thereof. EXCEPT minerals. AND That part of the NE1/4 of SE1/4 of NE1/4 Section 25 Township 50 Range 15 lying North of the centerline of Hermantown Road described as follows: Beginning at the NE corner of said NE1/4 of SE1/4 of NE1/4; thence on an assumed bearing of North 89 degrees 27 minutes 42 seconds West along the North line of said NE1/4 of SE1/4 of NE1/4 a distance of 130.95 feet to the intersection with the centerline of Hermantown Road; thence SE'ly a distance of 149.55 feet along a curve concave to the SW having a central angle of 17 degrees 54 minutes 51 seconds a radius of 478.33 feet, a chord bearing of South 61 degrees 29 minutes East and a chord distance of 148.95 feet to the East line of said NE1/4 of SE1/4 of NE1/4; thence North 00 degrees 03 minutes 37 seconds East along the East line of said NE1/4 of SE1/4 of NE1/4 a distance of 69.88 feet to the point of beginning. EXCEPT minerals, and SUBJECT to such rights in the surface as are created in favor of the owners of minerals; and SUBJECT to an Easement in favor of Salem Evangelical Lutheran Church of Hermantown for purposes of construction and maintenance of a sewer line, filed in the office of the County Recorder on March 13, 1997, as Document No. 698441; and SUBJECT to a Lease in favor of Jim Perrault Construction, a division of A-1 Construction, Inc., a Minnesota corporation, filed in the office of the County Recorder on July 25, 2003, as Document No. 907505; and SUBJECT to an Amendment to Lease in favor of Jim Perrault Construction, a division of A-1 Construction Inc., a Minnesota corporation, filed in the office of the County Recorder on February 7, 2006, as Document No. 1009493

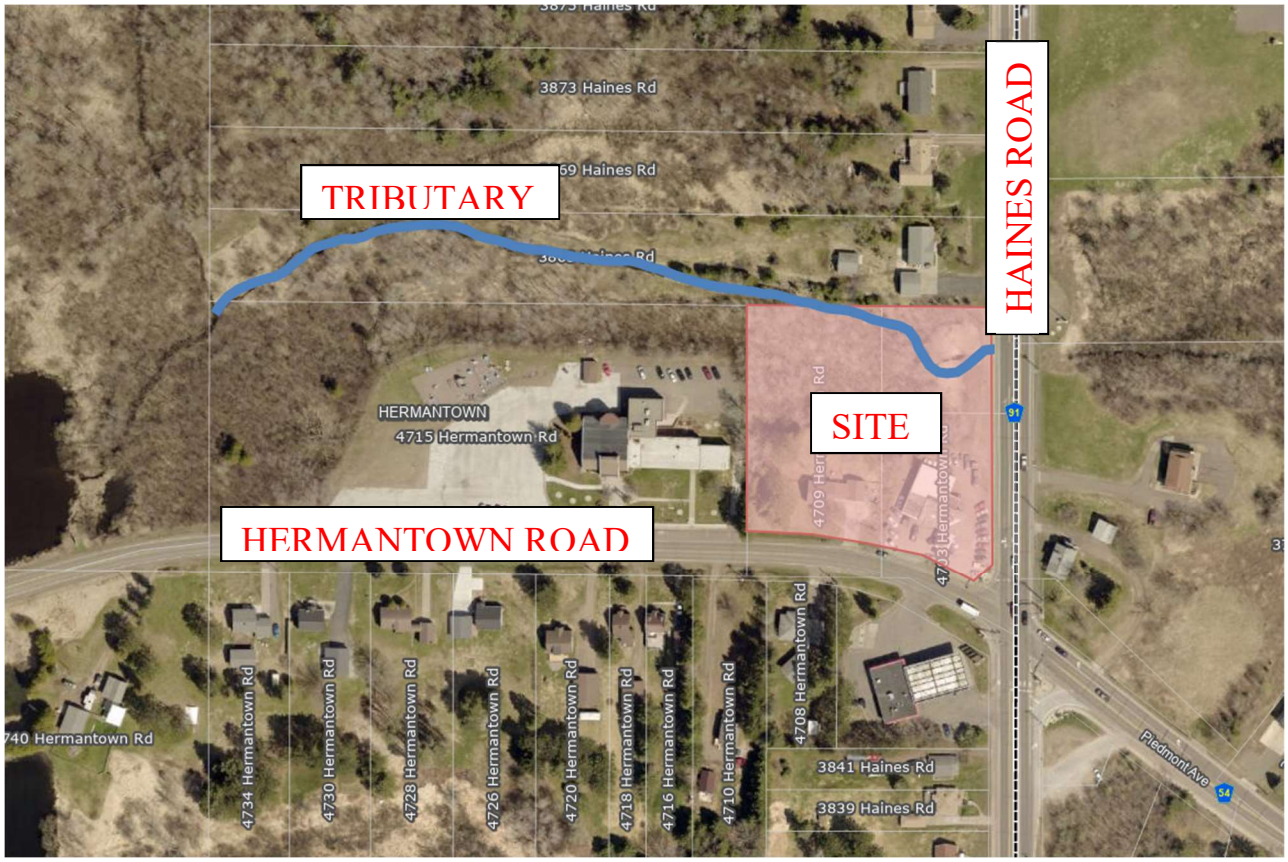
Parcel B, Cert No. 348881
North 128.00 feet of E1/2 of SE1/4 of SE1/4 of NE1/4 of NE1/4 Section 25 Township 50 North Range 15 West of the Fourth Principal Meridian

PARCEL TWO: W 1/2 OF SE 1/4 OF SE 1/4 OF NE 1/4 OF NE 1/4, SECTION 25, TOWNSHIP 50 RANGE 15

Proposed Site Plan



Location Map



		NO.	DATE	REVISION	BY
PROJECT DATE: .	DRAWN BY: JAS	.	.	PRELIMINARY	.
	DESIGNED BY: AKB	.	.		.
	CHECKED BY: Init	.	.		.

PLOT DATE: 11/16/2020 3:11 PM, G:\21\21206\21206000\CADD\C3D\21206000 Design.dwg

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION 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.

DATE: Date

REGNO: License No.

NAME

MSA

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PARKING LOT EXPANSION
ACCURATE AUTO REPAIR
HERMANTOWN, MINNESOTA

PRELIMINARY SITE PLAN

PROJECT NO. 21206000

SHEET ----

TO:	Mayor & City Council		
FROM:	Eric Johnson, Community Development Director		
DATE:	**December 9, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Application to the MNDOT for Transportation Alternatives Grant**	**Agenda Item: 12-E**	**Resolution 2020-175**

REQUESTED ACTION

Approve a grant funding request to the Minnesota Department of Transportation (MNDOT) in order to construct a 0.85 mile, ADA accessible trail from Hermantown Road (Engwall's) to Morris Thomas Road where it would intersect the Keene Creek Trail segment.

BACKGROUND

The City has been working on the Munger Trail Spur project during the past two years in order to identify trail segments and potential funding sources. The City has made prior funding requests with a successful award from the Greater Minnesota Regional Parks and Trails Commission (GMRPTC) and from St. Louis County for a Community Development Block Grant (CDBG). This new application is to MNDOT for a Transportation Alternatives grant program in order to construct the 0.85 mile, ADA accessible trail from Hermantown Road (Engwall's) to Morris Thomas Road where it would intersect the Keene Creek Trail segment.

The grant application is for the 2025 funding season and is for $600,000. The grant requires a 20% City match in the amount of $120,000 and is anticipated to utilize park dedication fees as a source of funds. The City match does not need to be spent until the 2025 funding year, assuming a successful award. If the City is awarded the grant, we would then be required to enter into an operations and maintenance agreement associated with this trail segment at the time of the grant award.

SOURCE OF FUNDS (if applicable)

Funds available through the Federal Highway Administration (FHWA) Transportation Alternatives Grant
Park Dedication Fund

ATTACHMENTS

Trail Maps

Resolution No. 2020-175

RESOLUTION AUTHORIZING THE CITY OF HERMANTOWN TO SPONSOR A GRANT FUNDING REQUEST ASSOCIATED WITH THE CONSTRUCTION OF AN ACCESSIBLE TRAIL FROM HERMANTOWN ROAD (ENGWALL'S) TO MORRIS THOMAS ROAD AND THE KEENE CREEK TRAIL SEGMENT

BE IT RESOLVED by the city council of the City of Hermantown, Minnesota, as follows:

WHEREAS, the City of Hermantown has the legal authority to sponsor a grant funding request to Minnesota Department of Transportation for a Northeast Minnesota Transportation Alternatives Grant (STATE) for the Accessible Trail Project (PROJECT), in order to provide an accessible trail surface from Hermantown Road (Engwall's) to Morris Thomas Road where it would intersect the Keene Creek Trail segment; and

WHEREAS, the City is fully aware of the information provided in the funding request, including any non-state match and any other long-term commitments as defined in the funding request as submitted; and

WHEREAS, that, if selected for funding by the STATE, the City shall act as a legal sponsor for the PROJECT as funded by the MN Department of Transportation and that the Community Development Director is hereby authorized to apply to the STATE for funding of this project on behalf of the City; and

WHEREAS, the City of Hermantown has not incurred any development costs; and

WHEREAS, that upon approval of its application by the STATE, the City may enter into an agreement with the STATE for the above referenced project, and that the City certifies that it will comply with all applicable laws and regulations as stated in the grant contract

NOW, THEREFORE BE IT RESOLVED that the City Administrator is hereby authorized to execute such agreements as are necessary to implement the project on behalf of the City of Hermantown.

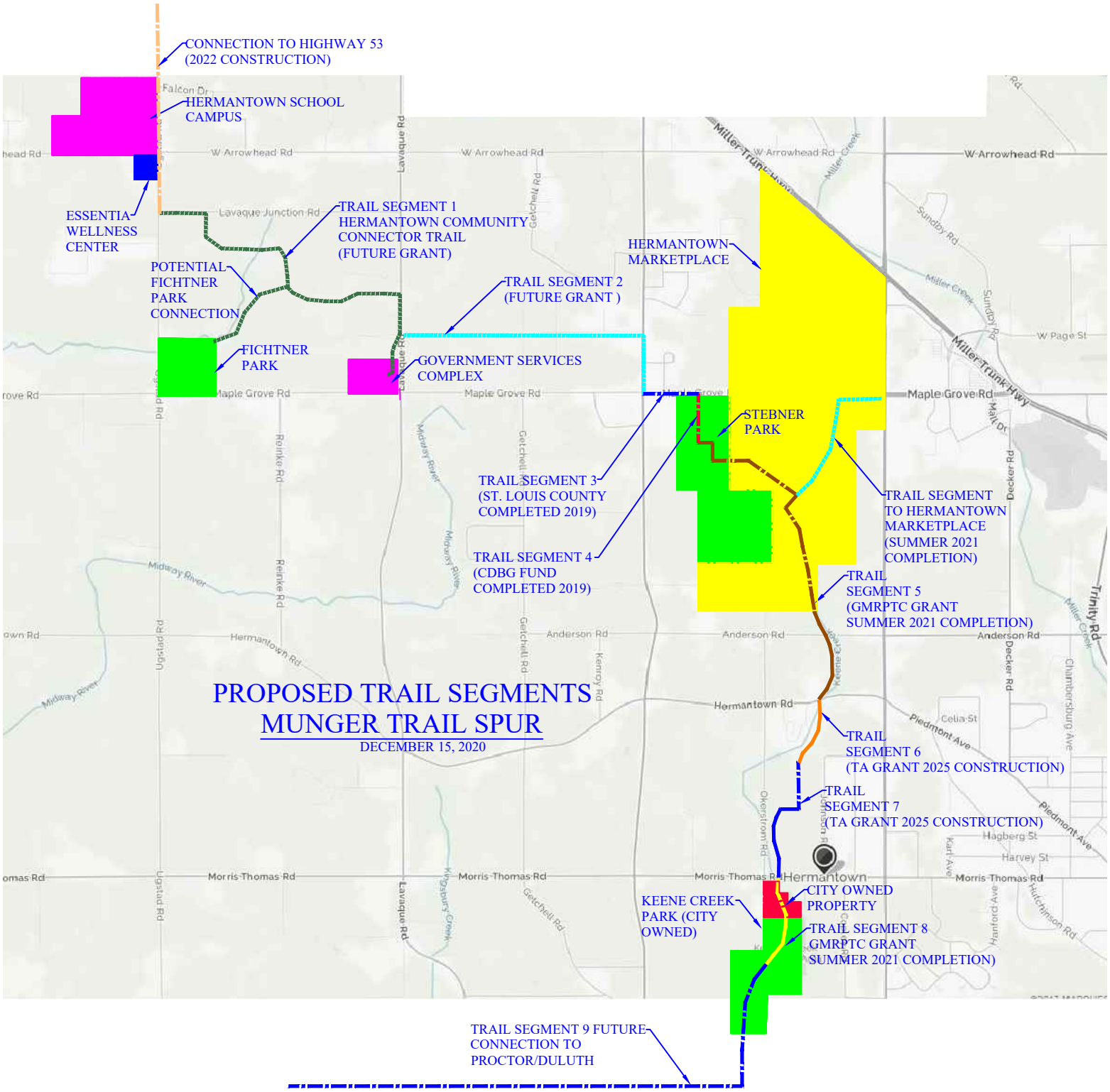
Councilor ____ introduced the foregoing resolution and moved its adoption.

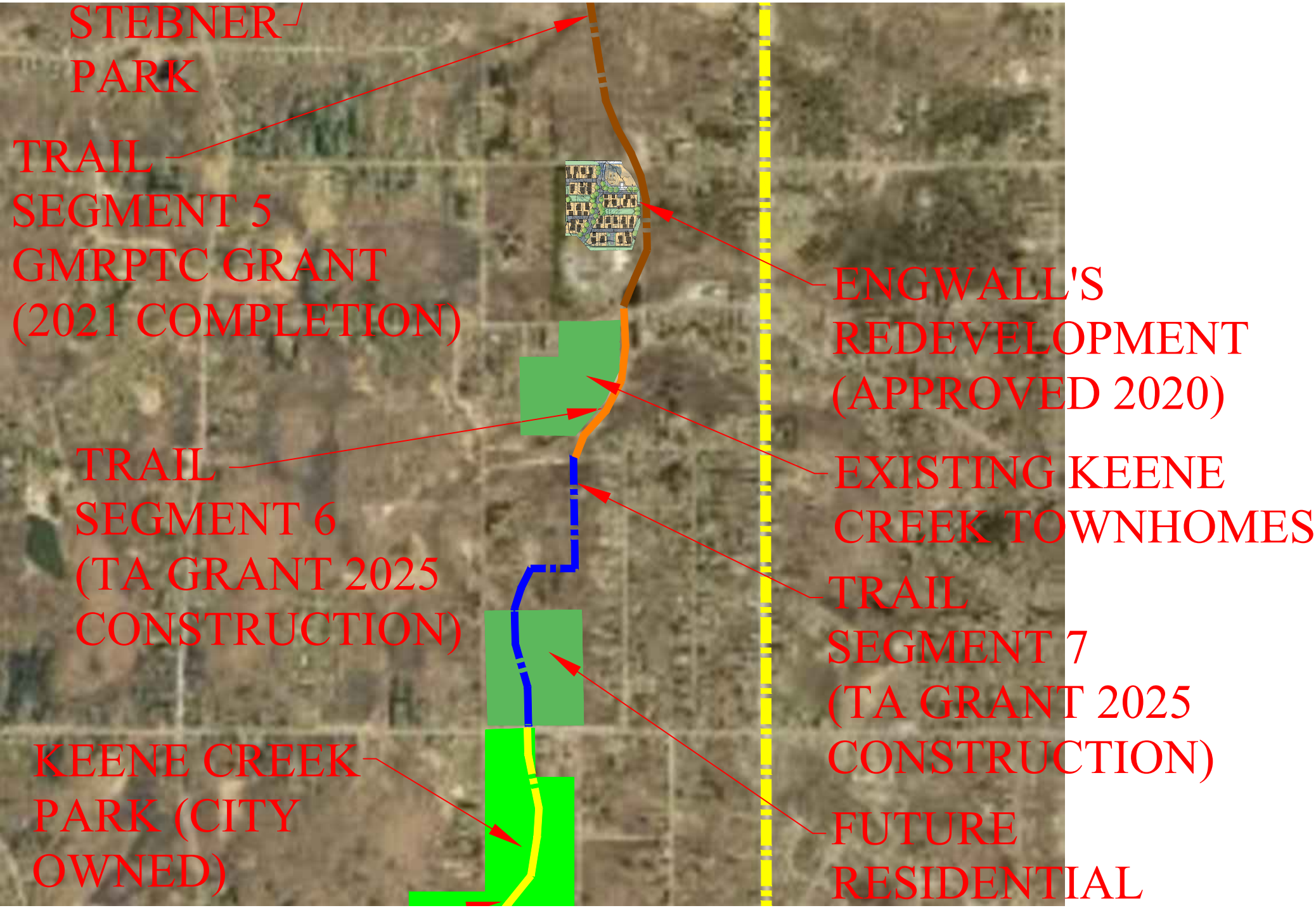
The motion for the adoption of such resolution was seconded by Councilor ___ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.


CONNECTION TO HIGHWAY 53
(2022 CONSTRUCTION)
HERMANTOWN SCHOOL
CAMPUS
ESSENTIA
WELLNESS
CENTER
TRAIL SEGMENT 1
HERMANTOWN COMMUNITY
CONNECTOR TRAIL
(FUTURE GRANT)
POTENTIAL
FICHTNER
PARK
CONNECTION
FICHTNER
PARK
TRAIL SEGMENT 2
(FUTURE GRANT)
GOVERNMENT SERVICES
COMPLEX
HERMANTOWN
MARKETPLACE
STEBNER
PARK
TRAIL SEGMENT 3
(ST. LOUIS COUNTY
COMPLETED 2019)
TRAIL SEGMENT 4
(CDBG FUND
COMPLETED 2019)
TRAIL SEGMENT
TO HERMANTOWN
MARKETPLACE
(SUMMER 2021
COMPLETION)
TRAIL
SEGMENT 5
(GMRPTC GRANT
SUMMER 2021 COMPLETION)
TRAIL
SEGMENT 6
(TA GRANT 2025 CONSTRUCTION)
TRAIL
SEGMENT 7
(TA GRANT 2025 CONSTRUCTION)
CITY OWNED
PROPERTY
KEENE CREEK
PARK (CITY
OWNED)
TRAIL SEGMENT 8
GMRPTC GRANT
SUMMER 2021 COMPLETION)
TRAIL SEGMENT 9 FUTURE
CONNECTION TO
PROCTOR/DULUTH
PROPOSED TRAIL SEGMENTS
MUNGER TRAIL SPUR
DECEMBER 15, 2020
W Arrowhead Rd
Lavaque Junction Rd
Maple Grove Rd
Hermantown Rd
Anderson Rd
Morris Thomas Rd
Miller Trunk Hwy
Hermantown


STEBNER PARK
TRAIL SEGMENT 5 GMRPTC GRANT (2021 COMPLETION)
TRAIL SEGMENT 6 (TA GRANT 2025 CONSTRUCTION)
KEENE CREEK PARK (CITY OWNED)
ENGWALL'S REDEVELOPMENT (APPROVED 2020)
EXISTING KEENE CREEK TOWNHOMES
TRAIL SEGMENT 7 (TA GRANT 2025 CONSTRUCTION)
FUTURE RESIDENTIAL

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Ugstad Road – Accept Traffic Study & Order Feasibility Study**	**Agenda Item: 12-F**	**Resolution 2020-176**

REQUESTED ACTION

Accept the Traffic Study from S.E.H, and authorize NCE to conduct a feasibility study for road improvements on Ugstad Road from Maple Grove to Hwy 53

BACKGROUND

Improvements to Ugstad Road from Maple Grove to Hwy 53, and improvements on Arrowhead Road from Hawk Circle to Thielke Circle are part of the City's Road Improvement Plan for 2022.

The Municipal State Aid project consists of the reconstruction of a municipal state aid street (Ugstad Road MSA 101) and Arrowhead Road (MSA104) From Hawk Circle and Thielke Circle. The total mileage of the scheduled reconstruction is 12,600 linear feet. Work will include, but not be limited to, reclaim and overlay, full road reconstruction, ditching, shoulder widening and culvert replacements. Work will also include 10 foot paved trail in the existing right of way along Ugstad from Hwy 53 to the intersection of Lavaque Junction and Ugstad

The City had applied and been approved for federal funds through the Metropolitan Interstate Commission (MIC) for this project. These improvements are scheduled to be made in 2022. Before beginning the project, the City must have a feasibility report conducted. The attached diagram shows the various steps in the process.

SOURCE OF FUNDS (if applicable)

402-431130-550

ATTACHMENTS

Road Improvement Process Diagram**.**
Traffic Study Report

Resolution No. 2020-176

RESOLUTION ACCEPTING TRAFFIC STUDY AND DIRECTING PREPARATION OF PRELIMINARY ENGINEERING FEASIBILITY REPORT FOR ROAD IMPROVEMENT DISTRICT NO. 534 (UGSTAD ROAD)

WHEREAS, a Traffic Study has been prepared by Short Elliot Hendrickson with reference to the Road Improvement District No. 534 (Ugstad Road) ("Project") and this Study was received by the Council on December 21, 2020; and

WHEREAS, the City Council of the City of Hermantown desires a Feasibility Report for the Road Improvement District No. 534 (Ugstad Road); and

WHEREAS, Section 429.031 of the Minnesota Statutes requires that the City Council obtain a preliminary report from the City's consulting engineer before it establishes a date for a public hearing on such improvements.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Hermantown, Minnesota, as follows:

1. The proposed improvement is hereby referred to Northland Consulting Engineers ("City Engineer") for study and the City Engineer is instructed to report to the Council with all convenient speed advising the Council in a preliminary way as to whether the proposed Road Improvement District No. 534 (Ugstad Road) is necessary, cost-effective and feasible and as to whether it should best be made as proposed or in connection with some other improvement and the estimated cost of the improvement as recommended.

2. The City reasonably expects to finance the Project from an issue of tax-exempt bonds. In advance of issuance of the bonds it will be necessary for the City to temporarily finance certain costs of the Project by using either working capital or cash reserves, which are needed for other purposes. The City reasonably expects to reimburse itself from the proceeds of the bonds within eighteen (18) months after the date the Project is paid from such working capital or cash reserves.

3. The cost of the preparation of the Feasibility Report will not exceed $4,430.00 charged to 402-431130-550.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

2022

March 4, 2019
City Council approved city's Financial Management Plan

→

Dec 21, 2020
City Council orders feasibility study & consultant RFP, accepts traffic study

→

Jan. 4, 2021
City Council accepts feasibility study

→

Jan. 21, 2021
1st Public Information Meeting for 2021 Roads

→

Feb. 1, 2021
Public Hearing, select consultant, authorize plans & specs

ROAD IMPROVEMENT

June of 2021
2nd Public Information Meeting for Ugstad Road at 30% plans

→

September of 2021
3rd Public Information Meeting for Ugstad Road at 60% plans

→

January of 2022
City Council approves plans and specs for bidding purposes

→

February of 2022
Project bids reviewed

→

March of 2022
City Council awards construction contract

Spring of 2022
Weather-dependent estimated road construction start date

→

Autumn of 2022
Weather-dependent estimated road construction completion date

→

October of 2022
Public Hearing on individual property owner assessments

→

November of 2022
City Council approves the final assessments for 2022 tax purposes

Ugstad Road - Maple Grove to Hwy 53

City of Hermantown Minnesota

Traffic Study Report

Ugstad Road and Arrowhead Road Traffic Study

Hermantown, Minnesota

HERMT 155050 | December 15, 2020

SEH

Building a Better World for All of Us®

Engineers | Architects | Planners | Scientists

Traffic Study Report

Ugstad Road and Arrowhead Road Traffic Study
Hermantown, Minnesota

December 15, 2020

I hereby certify that this 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.

Graham Johnson, PE (MN, SD, IA), PTOE

Date: 12/15/2020 License No.: 45429

Short Elliott Hendrickson Inc.
3535 Vadnais Center Drive
St. Paul, MN 55110-3507
651.490.2000

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Appendix D ..... Cost Estimates and Layouts

Traffic Study Report

Ugstad Road and Arrowhead Road Traffic Study

Prepared for City of Hermantown, Minnesota.

1 Background and Purpose

The City of Hermantown is planning to initiate the design of corridor improvement projects along Ugstad Road, including the intersection with Arrowhead Road. The design is slated to be done in 2021, with construction occurring in 2022.

The planned improvements on Ugstad Road include reclaim and overlay from Trunk Highway (TH) 53 to Maple Grove Road; approximately 2-miles. Along Arrowhead Road, the design project would extend to accommodate the necessary recommended improvements at the study intersections.

In the northwest quadrant of Ugstad Road at Arrowhead Road, the Hermantown school district operates three schools that all access Hawk Circle Drive. The elementary school, middle school, and high school all are in this area and generate a significant amount of traffic during the AM peak hour and school dismissal peak hour.

The Ugstad Road and Arrowhead Road intersection currently has operational issues during the school peak times. The intersection of Ugstad Road at Hawk Circle Drive also experiences operational issues during the same school peak times. Recent developments and changes to the land uses have increased traffic in the area, which has contributed to the poor operations during the peak hours.

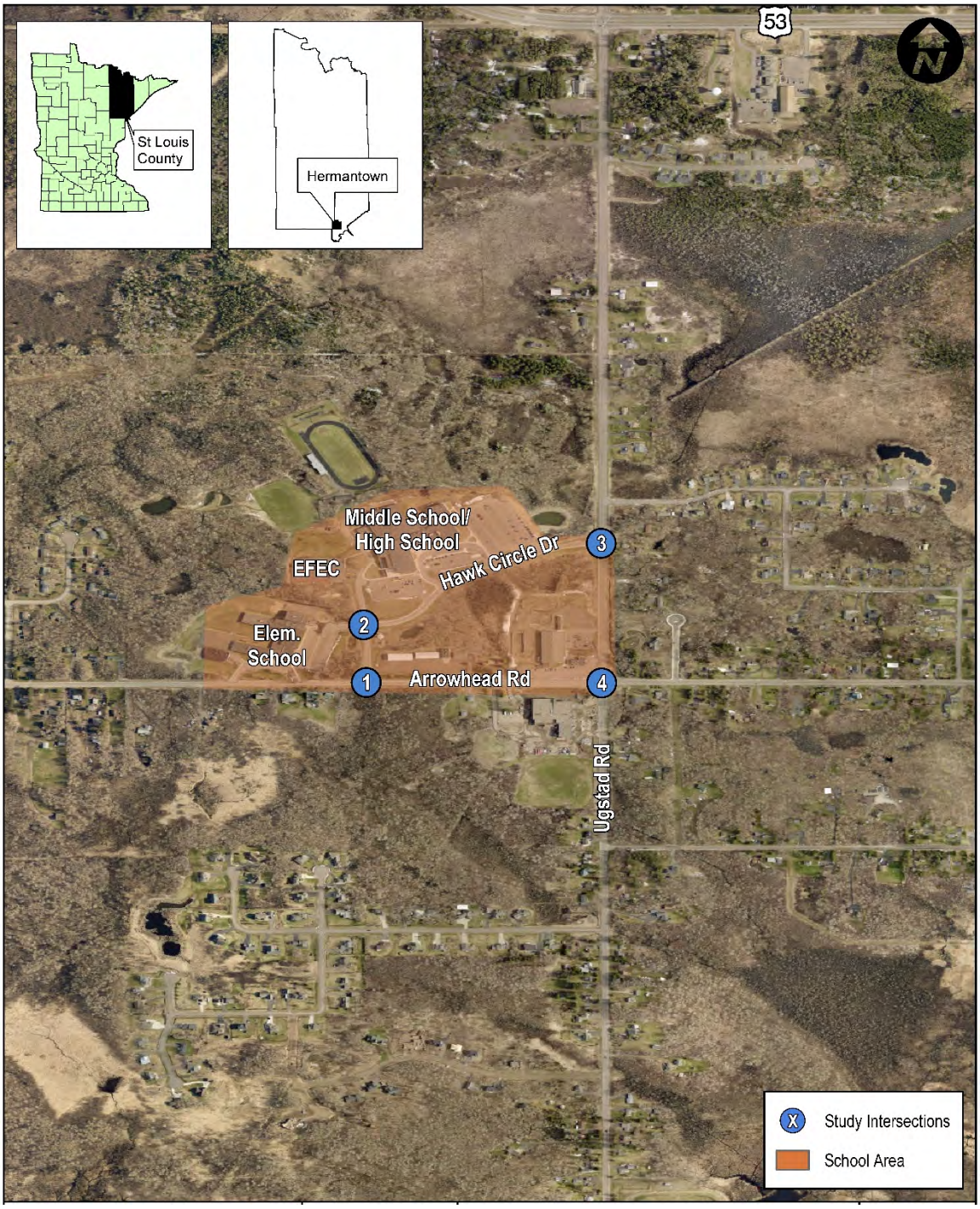
There are additional residential developments that are currently planned, and some under construction, to occur in the immediate project area as well as the surrounding roadway network.

The purpose of this study is to determine any appropriate intersection improvements along each corridor in the study area. The focus for traffic operations analysis will occur surrounding the main intersection of Ugstad Road and Arrowhead Road. There are four study intersections included in the traffic analysis, these include:

- #1 - Arrowhead Road at Hawk Circle Drive
- #2 - Hawk Circle Drive at Elementary School Access (Internal school intersection)
- #3 - Ugstad Road at Hawk Circle Drive
- #4 - Ugstad Road at Arrowhead Road (Main Study Intersection)

Figure 1 represents the study intersections within the project area.

Figure 1 – Project Location



1.1 Previous Project Information

The study area has seen changes to the land uses, as well as new developments, within the last 5-years. The following changes, and corresponding studies, have been completed.

1.1.1 Hermantown Middle School Changes

In the fall of 2016, the middle school was relocated to a combined building with the existing high school building located along Hawk Circle Drive, west of Ugstad. The previous middle school building was in the southwest quadrant of Ugstad Road and Arrowhead Road.

The changes to the schools were studied in 2014/2015 as part of a traffic study for the proposed middle school. The traffic study recommended intersection improvements at Ugstad Road at both the Hawk Circle Drive and Arrowhead Road intersections.

The study recommended the following improvements:

- Ugstad Road at Hawk Circle Drive
  - Eastbound Left Turn Lane (125') – **a 125' Right Turn Lane was constructed**.
  - Southbound Right Turn Lane (200') – not implemented.
  - Norhtbound Left Turn Lane (300') – not implemented.
- Ugstad Road at Arrowhead Road
  - Southbound Left Turn Lane (300') – not implemented.

1.1.2 Essentia Wellness Center –

In the fall of 2019, the Essentia Wellness Center (EWC) opened in the southwest quadrant of Ugstad Road and Arrowhead Road; this was the previous site of the old middle school.

The changes to the site were studied in 2015 as part of a traffic study. This study began prior to the middle school shifting locations, so assumptions on school traffic shifting for this study was similar to the middle school study.

The study recommended the following improvements:

- Arrowhead Road at Hawk Circle Drive
  - Southbound Right Turn Lane (150') – **currently in-place**.
- Ugstad Road at Hawk Circle Drive
  - Eastbound Right Turn Lane (250') – **a 125' Right Turn Lane was constructed**.
  - Southbound Right Turn Lane (250') – not implemented.
- Ugstad Road at Arrowhead Road
  - Southbound Left Turn Lane – not implemented.
  - Northbound Left Turn Lane – not implemented
  - Optional roundabout intersection conversion – not implemented.

1.1.3 Early Childhood Family Education Center –

In the fall of 2019, the Early Childhood Family Education (ECFE) Center opened in the northwest quadrant of the internal Hawk Circle Drive intersection; located north of the elementary school.

Due to the low number of staff and children, no traffic study was performed for this development.

1.1.4 Current Conditions

With the previously planned changes, as well as additional development, the existing operational issues have exceeded the expected delays.

Since the completion of the surrounding land use changes, only a couple recommendations have been implemented. Queuing and delay issues stemming from the school traffic have created the need to initiate improvements in the project area.

1.2 Project Team

The project team for this study included the consultant team and city staff. City staff directly involved in the study included the City Engineer and the Public Works Director. Additional city staff, including the City Administration and City Council, provided input throughout the project.

2 Existing Conditions

Currently, the intersection of Ugstad Road and Arrowhead Road operates under all-way stop control. There are marked crosswalks on the west and north legs of the intersection. With no sidewalk connections in the southeast quadrant, no crosswalks are provided on the east and south legs of the intersection.

Ugstad Road is a Minor Collector roadway through the project area and extends approximately 4-miles to the south and 1-mile to the north, including access to Highway 2 and TH 53. Through the project area, Ugstad Road is a 2-lane undivided roadway with a posted speed of 45-mph to the north, to the south it transitions to a 30-mph posted speed approximately ¼-mile south of Arrowhead Road. Turn lanes are only provided at the Arrowhead Road intersection.

Arrowhead Road is a Major Collector roadway through the project area and extends approximately 3-miles to the west and approximately 8-miles to the east, including access to TH 53. Through the project area, Arrowhead Road is a 2-lane undivided roadway with a posted speed of 40-mph; there is a 20-mph school zone west of Ugstad Road. There are no existing turn lanes provided along the corridor except for the westbound right turn lane at the Ugstad Road intersection.

Hawk Circle Drive connects to both Arrowhead Road and Ugstad Road, providing access to all the school facilities.

2.1 Health Pandemic

The current health pandemic surrounding COVID-19 has impacts on the project data collection; both commuter and school traffic has been impacted by the situation.

The school is impacted with students “distance learning” at home either full-time or partially a few days a week. Commuter traffic is also impacted with many jobs working from home as well as some jobs potentially being eliminated. Adjustments were included on all traffic data collected as part of this study.

2.2 Hermantown Schools

As previously mentioned, the Hermantown School District operates three schools in the immediate project area, including the elementary school, the middle school, and the high school. The school district includes a total of approximately 2,120 students.

While the schools have varying start and end times, the middle and high schools time interact with each other to create increased vehicle traffic. The elementary school times occur after the other two schools and don’t have the same impact on the surrounding roadway network.

The following includes information about each school, including number of students and start end times:

- **Elementary School** - Start: 9:10am End: 3:25pm
  - Approximate Students: 740
  - Currently operating under the hybrid model with 50% of students coming each day and no school on Mondays
- **Middle School** - Start: 8:00am End: 2:35pm
  - Approximate Students: 695
  - Approximately 100 “distance learning” full time (15%)
- **High School** - Start: 8:00am End: 2:45pm
  - Approximate Students: 685
  - Approximately 130 “distance learning” full time (18.5%)

2.3 Existing Crashes

Crash data from January 1st, 2015 through December 31st, 2019 was collected from the Minnesota Crash Mapping Analysis Tool (MnCMAT2). The type and severity of the crashes were reviewed, and crash rates and critical rates were calculated for the study intersection.

Crash rates are expressed as the number of crashes per million entering vehicles at an intersection or along a segment. Crash severity is comprised of 5 separate types including fatal, an incapacitating injury (Severity A), a non-incapacitating injury (Severity B), a possible injury (Severity C), or a property damage crash.

The critical crash rate is a statistical value that is unique to each intersection based on vehicular exposure and the statewide average crash rate for similar intersections; an intersection with a crash or severity rate higher than the critical rates indicates a sustained crash problem at the intersection.

Twelve crashes occurred at three of the study intersections, the internal intersection of Hawk Circle Drive and the elementary access did not have a crash during the 5-year period. None of the intersections are approaching or above the calculated critical rates.

Ugstad Road at Arrowhead Road had the most crashes with 8 during the 5-year period. 5 of the 8 crashes occurred around the school peak drop off and pick up times.

The crash information is summarized in **Table 1**. A more detailed crash summary, including crash diagrams, is provided in **Appendix C**.

Table 1 – Crash History 2015-2019

Intersection:	Crash Severity						Crash Rates	
	Fatal	Sev A	Sev B	Sev C	Property Damage	Total	Int. Rate	Critical
Arrowhead Rd at Hawk Circle Dr	0	0	0	1	1	2	0.24	0.63
Ugstad Rd at Hawk Circle Dr	0	0	0	0	2	2	0.29	0.68
Ugstad Rd at Arrowhead Rd	0	0	0	1	7	8	0.66	0.83

2.4 Existing Traffic Volumes

As part of this intersection study, 13-hour intersection turning movement counts were performed in September of 2020 at three of the four study intersections. Data was collected from 6:00 am to 7:00 pm for use in both the traffic operations analysis and traffic control warrant analysis. An additional traffic count was conducted on the same day at the internal Hawk Circle Drive intersection; this count was only performed during the AM and school dismissal peak hours.

As traffic volumes in this area have experienced significant fluctuations with the pandemic and with the development, historical Average Annual Daily Traffic (AADT) volumes are not representative of the current daily traffic demands collected.

To estimate daily volumes for the study intersection, the 2020 13-hour traffic data was extrapolated to a 24-hour daily number based on a Minnesota Department of Transportation (MnDOT) 24-hour distribution, which suggests that approximately 81% of all trips occur within the 13-hour turning movement data.

The following **Table 2** represents the MnDOT AADT information compared to the raw 24-hr estimation from the 2020 intersection count. It should be noted that the location of the MnDOT count data is directly at the intersection for the north and west leg; however, the south and east leg count locations are approximately 1-mile away from the intersection.

Table 2 – 2019 Daily Traffic Volumes

Intersection:	Intersection Leg	2019 MnDOT AADT	2020 24-Hr Estimate
Ugstad Road at Arrowhead Road	North Leg	2,850	2,910
	South Leg	2,200	3,000
	East Leg	3,750	3,470
	West Leg	4,450	4,120

While some of the daily traffic volumes are relatively close to the AADT, the pandemic has shifted the hourly distribution of traffic in the area. There are less vehicles commuting in the AM peak period, and an increase in PM and off-peak period trips. To account for this information a slight adjustment was done along Arrowhead Road to adjust the volumes throughout the day; the volumes along Ugstad Road were similar to historical data and no adjustments were necessary.

In addition, the school trips are currently lower than a typical day. An adjustment to number of trips to and from the middle school and high school was made to account for the students currently distance learning. Based on the current student information, volumes into and out of the school site, and the previous school traffic studies, an additional increase of 225 students was included in the existing volume data; assumed 175 parking and 50 drop off.

The ECFE is currently open but occupied by only 20 children. With the full capacity at 70 children, additional trips were added to the site.

<u>Both the ECFE and additional students were added based on the distribution described in the following Trip Generation section.</u>

2.5 Trip Generation

With pending development in both the immediate and surrounding project area, the traffic volumes along both Ugstad Road and Arrowhead Road will increase as development occurs.

The Institute of Transportation Engineers (ITE) Trip Generation Manual 10th Edition was used to estimate new development trips for the various land uses. Trip distribution to the roadway network followed the previous EWC traffic study with the following information:

- Arrowhead Road To/From the East: 35%
- Arrowhead Road To/From the West: 25%
- Ugstad Road To/From the North: 20%
- Ugstad Road To/From the South: 20%

There are four sites that will generate new trips once complete. The following is a description of each of the sites, with notes on the impact to this project area:

- ITE Land Use Code 210-Single Family Housing: Square37 development project. This is a group of nine single family homes located in the northeast quadrant of Ugstad Road and Arrowhead Road. Majority of traffic will use the main study intersection.
- ITE Land Use Code 210-Single Family Housing: Jackson Estates development project. This is a group of twenty single family homes located along Ugstad Road, south of Arrowhead Road. This development is closer to Maple Grove Road; therefore, it was assumed that most of the traffic would likely not use the main study intersection; however, 40% was routed through the study area.
- ITE Land Use Code 220-Multi-Family Housing: 96-unit townhome complex located along Ugstad Road near TH 53. This development is closer to TH 53; therefore, it was assumed that most of the traffic would likely not use the main study intersection; however, 40% was routed through the study area.
- ITE Land Use Code 221-Multi-Family Housing: 148-unit apartment complex located along Ugstad Road near TH 53. This development is closer to TH 53; therefore, it was assumed that most of the traffic would likely not use the main study intersection; however, 40% was routed through the study area.

Table 3 represents the trip generation for each land use as well as the total new trips expected to use the surrounding roadway network.

Table 3 – ITE Trip Generation

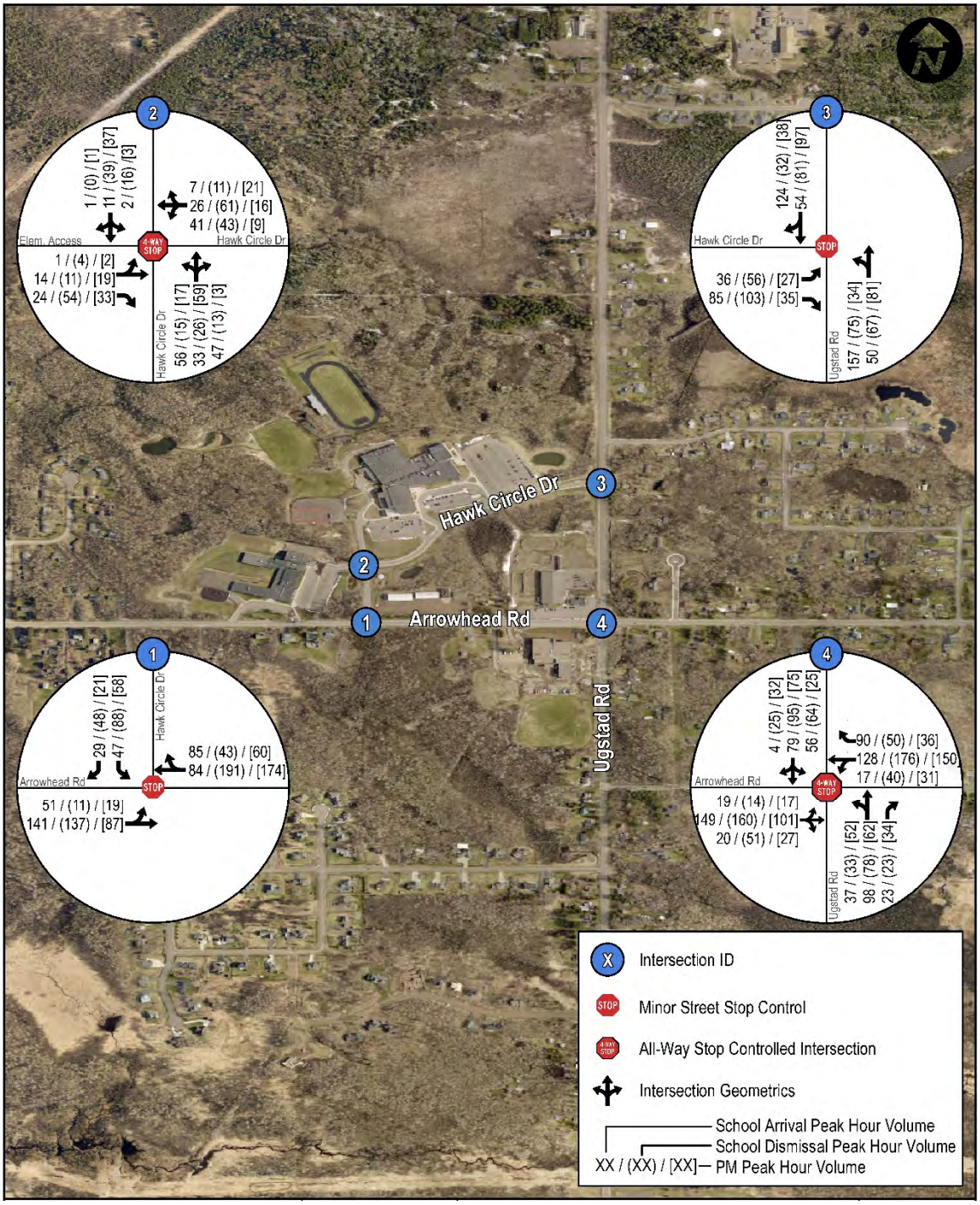
ITE Code	Units (1)	AM Peak			SD Peak (2)			PM Peak		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
210	9 Units	2	5	7	4	2	5	6	3	9
210	20 Units	4	11	15	8	4	12	13	7	20
220	96 Units	10	34	44	20	12	32	34	20	54
221	148 Units	14	39	53	24	15	39	40	25	65
TOTAL		**30**	**89**	**119**	**56**	**33**	**88**	**93**	**55**	**148**

(1) Units – number of dwelling units

(2) School Dismissal (SD) Peak was estimated at 60% of the PM peak.

Figure 2 represents the base existing, 2020 peak hour traffic data collected and adjusted as part of this project, including the imminent trip generation.

Figure 2 – Existing (2020) Traffic



2.6 Field Observations

Field observations were conducted to better understand existing operating conditions at the study intersections. Observations were conducted on two separate days, one in-person and one with drone footage obtained as part of the data collection task.

While both the drone footage and in person observations were similar, the current conditions do not match what has been observed historically since all three schools were in the same location. Current conditions under the pandemic impacts have significantly reduced the volumes.

In the AM peak hour, there are two distinct school peaks. The middle school and high school have the same start time, while the elementary school starts an hour later. Between 7:40am and 8:00am there is congestion at the middle school due to the drop off location. It was observed that this queue would extend out onto Hawk Circle Drive and impact Ugstad Road as well. However, after discussion with project team members, it was noted that in previous years this queue has significantly impacted Ugstad Road with traffic queue in both the northbound and southbound directions.

The AM peak hour for the elementary school included significant queues developing at drop off as students can't be dropped off early; this queue extended to include approximately 60 vehicles. This occurred around 9:00am, after the other schools start and the commuter peak. The queue is also contained within the Hawk Circle Drive roadways and does not impact the surrounding roadways.

In the afternoon, there are two distinct school peaks. The middle school and high school have roughly the same end time, while the elementary school ends 40 minutes later. Between 2:40pm and 3:00pm there is congestion at the middle school due to the drop off location. It was observed that this queue would extend out onto Hawk Circle Drive and impact Ugstad Road as well. Some traffic would enter the high school lot and do a pickup from the parking area. Like the AM peak, project team members indicate in previous years this queue has significantly impacted Ugstad Road with traffic queue in both the northbound and southbound directions.

The afternoon for the elementary school included queues developing at pickup. Vehicle are queued in the high school lot prior to school let out, then a rolling queue travels to the pickup site; this queue was dissipated within 10 minutes. This occurred around 3:30pm, after the other two schools let out, and before the commuter peak around 4:30pm. The queue is also contained within the Hawk Circle Drive roadways and does not impact the surrounding roadways.

Figure 3 shows the queue during the AM drop off at the middle school from the drone footage. **Figure 4** shows the queue during the pickup time at the middle school. **Figure 5** shows the elementary school AM drop off and **Figure 6** shows the elementary school pick up queue.

Based on the observations, the elementary school start and end times are contained within the Hawk Circle Drive area and do not impact Arrowhead Road or Ugstad Road; therefore, the start and end times for this school will not be analyzed further.

It should also be noted that traffic operations along both Ugstad Road and Arrowhead Road typically ran smooth in both the AM and PM peaks when not interfered with from the school traffic spilling out onto the roadways.

Figure 3 – AM Peak – Drop Off Queuing MS/HS

Figure 4 – PM Peak – Pick Up Queuing MS/HS

Figure 5 – AM Peak – Drop Off Queuing Elementary

Figure 6 – PM Peak – Pick Up Queuing Elementary

3 Future Conditions

This study includes evaluation of the study intersections in a future condition to determine the impacts of increased growth along the corridors. A design year condition was evaluated for 2040 conditions.

3.1 Traffic Forecasts

Historical AADT data in the project area were reviewed as well as historical population growth in the area.

A linear regression analysis of the surrounding corridor AADT results in growth on many of the roadways that fluctuates. A 20-year historical analysis shows the two AADT's adjacent to the main study intersection are trending between 1.3% to 1.6%; the two AADT's further away are trending between a negative growth to 1.9%.

MnDOT's Office of State Aid maintains current 20-year growth factors for all counties in Minnesota. The current growth factor for St. Louis County is 1.1, which equates to a linear growth rate of 0.5% per year over a 20-year projection. However, it should be noted this is for the entire county area.

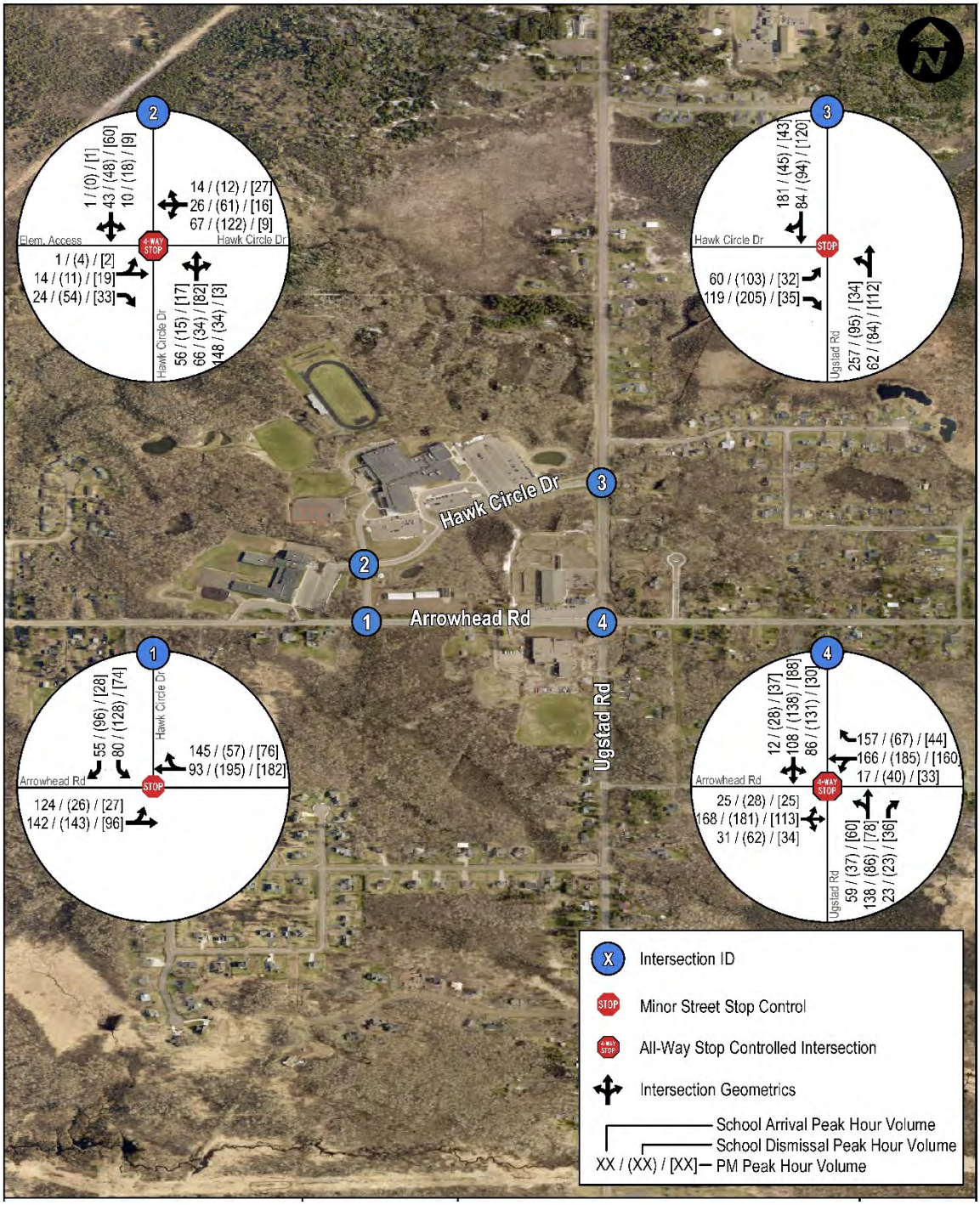
Based on the previous 50 years of census data, St. Louis County has had ups and downs for growth. Between 2000 and 2010 a steep increase with a growth of over 2.5% per year was observed; however, the change from 2010 to the current 2019 census estimate is at only 0.25% growth per year. The Duluth-Superior Transportation Plan has a projected growth of approximately 1.0% per year out to 2040.

Based on the linear regression analysis, historical population growth, and input from the project team, a linear growth rate of 1.5% per year was selected and utilized to develop the 2040 forecast traffic volumes.

As student growth is based on the capacity of the school facilities, a more moderate growth was used for school traffic entering and exiting Hawk Circle Drive. For this traffic, a growth rate of 0.5% was used to bring the student demand up to the 2040 design year.

The resulting 2040 forecasted turning movement volumes can be found in **Figure 7**.

Figure 7 – Future (2040) Traffic



4 Capacity Analysis

An existing and future intersection capacity analysis was completed using Synchro/SimTraffic software (Version 9). To address previous study recommendations of possible traffic control changes at Ugstad Road and Arrowhead Road, an intersection control warrant analysis was also conducted.

4.1 Warrant Analysis

The Minnesota Manual of Uniform Traffic Control Devices (MnMUTCD) provides guidance on when it may be appropriate to use all-way stop or signal control at an intersection. This MnMUTCD guidance is provided in the form of “warrants”, or criteria, for when all-way stop or signal control may be justified. Though all-way stop or signal control should not be installed at an intersection unless a MnMUTCD warrant is met, meeting a warrant at an intersection does not in itself require the installation of that particular type of control. Roundabouts are typically considered to be warranted if traffic volumes meet the criteria for either all-way stops or traffic signals.

For traffic signal installation, MnDOT typically requires volume thresholds for Warrant 1 to be satisfied, which requires 8-hours of combined major approach volumes and the highest minor street approach volume to meet MnMUTCD thresholds. These thresholds vary with the number of approach lanes on the major and minor street. Other warrants may be used as indicators of a need to consider traffic control change; an engineering study that considers factors, including warrants, should be performed to determine the optimum type of control at an intersection.

4.1.1 Warrant Analysis Assumptions

MnDOT guidelines for the traffic signal warrant suggests removing 100% of right turning traffic from the minor leg since this movement typically can enter the traffic stream with minimal conflict; not applicable with all-way stop warrant. Therefore, a traffic signal would not be needed to reduce delay or improve safety for this right turn movement. In certain circumstances (i.e. high right turn volume, minimum mainline gaps etc.), MnDOT allows for the inclusion of 50% of the minor street right turning traffic in the analysis. The MnDOT guidance states if “right turning volume exceeds 70% of its potential capacity for any hour for each approach, 50% of the right turning volume for all hours should be added back in.”

Based upon MnDOT guidance, the analysis for this study intersection includes the removal of 100% of the right turning traffic from the minor approaches for the signal warrant analysis.

MnMUTCD guidelines suggest that the warrant thresholds may also be reduced based on the roadway speeds and population of the city the intersection is within. If either major approach to the intersection has a posted speed, or 85th percentile speed, that exceeds 40 mph, then a reduction to 70% threshold volumes is allowed in both all-way stop warrant and traffic signal warrant. If the population of the city is less than 10,000 people, a reduction to 70% threshold volumes is allowed in the traffic signal warrant, but not the all-way stop warrants.

--Based upon MnMUTCD guidance, the analysis of the study intersection does not include a reduction for the all-way stop as the major roadway is Arrowhead Road with a speed limit of 40mph. The traffic signal warrants do include a reduction to 70% thresholds based on the population of Hermantown being less than 10,000.

4.1.2 Warrant Results Summary

The existing 2020 traffic volumes, both the raw and increased base counts, at the study intersection currently do not meet either the All-Way Stop warrant or the traffic signal warrants.

The forecast 2040 traffic demands, with background growth, at the study intersection meet both the all-way stop thresholds and traffic signal thresholds from the MnMUTCD. It should be noted that the traffic signal Warrant 1, the 8-hour volume warrant, is not met in any timeframe.

Table 4 provides both the all-way stop warrant and the traffic signal warrant summary for both the existing 2020 and 2040 conditions. The full all-way stop warrant analysis and the traffic signal warrant analysis can be found in **Appendix A**.

Table 4 – Warrant Analysis Results

Traffic Year	Description	All-way stop Warrant	Traffic Signal Warrants		
			8-Hour Warrant	4-Hour Warrant	Peak Hour Warrant
2020	Existing (raw count)	Not Met 3/8 Hours	Not Met 0/8 Hours	Not Met 0/4 Hours	Not Met 0/1 Hours
2020	Exist Base Count	Not Met 6/8 Hours	Not Met 4/8 Hours	Not Met 0/4 Hours	Not Met 0/1 Hours
2040	Future	**Met 11/8 Hours**	Not Met 6/8 Hours	**Met 4/4 Hours**	**Met 1/1 Hours**
Notes: X/Y infers X hours met / Y hours required.					

It should be noted, if the all-way stop warrant was reduced to 70% thresholds based on the speeds along Arrowhead Road (85th percentile would have to be above 40 mph), the 2020 existing volumes would meet the warrant thresholds under the base volume data. The existing raw count collected in 2020 would still only meet for 6 of 8 hours.

4.2 Safety

Future crash estimates were developed for reference information on various traffic control options. Estimates were developed by applying existing and MnDOT statewide average (5-year) crash rates to the 2040 projected traffic volumes for the main study intersection of Ugstad Road at Arrowhead Road.

The following crash rates were utilized in this analysis:

- The existing crash rate is higher than the MnDOT average for all-way stops, with a crash rate of 0.66 crashes per million vehicles entering the intersection.
- The MnDOT statewide average crash rate for all-way stop controlled intersections is 0.35 crashes per million vehicles entering the intersection.
- Signalized intersection rates are based on the MnDOT statewide average crash rates for a low speed (<45 mph), low volume (<15,000 vph on highest volume leg) signalized intersections; the average crash rate is 0.52 crashes per million vehicles entering the intersection.

- Roundabout crash estimation was done using MnDOT's *A Study of the Traffic Safety at Roundabouts in Minnesota*. This study concluded that single lane roundabouts have a crash rate of 0.32 crashes per million vehicles entering the intersection.

Table 5 shows the projected number of total yearly crashes for each traffic control type analyzed for the projected 2040 traffic conditions.

Table 5 – Projected 2040 Annual Crash Frequency Estimates

Study Intersection	Annual Crash Estimates by Control Type			
	All-Way Stop[1]	All-Way Stop[2]	Traffic Signal[2]	Single Lane Roundabout[3]
Ugstad Road at Arrowhead Road	2.1	1.1	1.6	1.0

Notes:1: Based on Existing intersection crash rate.
2. Based on MnDOT Statewide average crash rates for control type (2011-2015 Data).
3: Based on MnDOT's A Study of the Traffic Safety at Roundabouts in Minnesota.

The existing all-way stop control, with no changes to the intersection, would have the highest number of projected crashes if the current crash rate continued.

MnDOT's average all-way stop controlled intersection has a crash rate that is almost half of the current intersection rate. This indicates that the existing lane configuration is creating a negative impact to the safety of the intersection. With improved lane configurations, it can be expected that the intersection safety would improve to align more closely with MnDOT's statewide average rate.

A signalized intersection, while not warranted, would have more projected crashes than all other control using MnDOT statewide average rates; not comparing to the existing all-way stop rate. A traffic signal typically has an increase in the number of rear end collisions as the major through traffic must stop when the minor approach has the green phase.

A roundabout controlled intersection would incur the lowest number of crashes at the study intersection due to the single circulating lane. These crashes would typically be less severe than the other control types due to the reduced speeds approaching and departing the intersection. Roundabouts require a low travel speed through the intersection and eliminate left turn and crossing crashes. This greatly reduces the potential for the most severe types of crashes that result in personal injury or fatality.

4.3 Traffic Operations

Traffic operations analyses were conducted to determine the level of service (LOS), delay, and queueing information for the AM, school dismissal, and PM peak hour conditions.

LOS is a qualitative rating system used to describe the efficiency of traffic operations at an intersection. Six LOS are defined, designated by letters A through F. LOS A represents the best operating conditions (no congestion), and LOS F represents the worst operating conditions (severe congestion). For the study intersection it was assumed that a LOS C or better, for all approaches and the overall intersection, represents acceptable operating conditions.

LOS for intersections is determined by the average control delay per vehicle. The range of control delay for each LOS is different for signalized and unsignalized intersections. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will experience greater delays than an unsignalized intersection; driver tolerance for delay is greater at a signal than at a stop sign. Therefore, the LOS thresholds for each LOS category are lower for unsignalized intersections than for signalized intersections

Traffic operations analyses were performed using Synchro/SimTraffic software at the four study intersections. Additional analysis was conducted using the Highway Capacity Software (HCS 7); which is a faithful implementation of the Highway Capacity Manual calculations.

Based on the traffic data and field observations, the following three peak periods were evaluated:

- AM Peak Hour: 7:15 to 8:15 am
- School Dismissal (SD) Peak Hour: 2:45 to 3:45 pm
- PM Peak Hour: 4:30 to 5:30 pm

School traffic typically peaks in a short amount of time, 15 to 20 minutes. As this study was directed towards corridor improvements, a peak hour (60 minutes) was conducted to ensure improvements are not overbuilt based on short bursts of traffic. However, it should be noted that maximum queues during these bursts will still be present in the hourly analysis.

The attached **Appendix B** includes all relevant operational tables and results for the existing and future 2040 scenarios that follow.

4.3.1 Existing 2020 Conditions

The existing conditions traffic model was developed based on the existing base volumes as well as the field observations conducted and input from the project team.

Overall, most intersections operate under acceptable conditions in each peak hour. The school traffic issues along Hawk Circle Drive develop queues that interact with the surrounding roadway network.

In all three peak periods, the following two intersections had acceptable operations and maximum queues of less than 100 feet (approximately 4 to 5 vehicles).

- Arrowhead Road at Hawk Circle Drive.
  - It should be noted, mainline vehicles queue behind yielding turning vehicles.
- Hawk Circle Drive at Elementary Access (internal intersection).

In the PM peak hour, all four study intersections in the study area operate at a LOS A, with minimal queuing and no delay issues. Therefore, the following discussion will only refer to the AM peak and school dismissal peak hours.

4.3.1.1 Ugstad Road and Hawk Circle Drive

In the AM peak hour, the northbound approach operates at a LOS E. The traffic queues along Ugstad Road due to downstream congestion along Hawk Circle Drive at the middle school drop off location. The queue for the northbound left turning traffic waiting to enter the school site extends almost 600’ to the south, this blocks through traffic destined north of the school. The southbound right turn is also delayed trying to enter Hawk Circle Drive, the queue extends

approximately 200 feet; this traffic typically queues on the shoulder of Ugstad Road to allow through traffic to bypass. Due to the standing queues at school arrival, the departing traffic that dropped off students has a tough time finding gaps to enter Ugstad Road.

During the school dismissal, the queues from the pickup traffic at the school are less impactful to Ugstad Road; the modeling did not show any major concerns except for a few vehicles queuing along Ugstad Road. Most of the congestion issues observed during the field observations were along Hawk Circle Drive and not impacting Ugstad Road.

4.3.1.2 Ugstad Road and Arrowhead Road

In the AM peak hour, the all-way stop controlled intersection of Ugstad Road and Arrowhead Road operates acceptably. The overall LOS for each approach is a LOS B or better; the maximum queues on all approaches are all approximately 150 feet or less. Without interaction from the school queue along Ugstad Road, which has been stated to reach Arrowhead Road, the intersection operates well.

During the school dismissal peak, the southbound approach operates at a LOS D. The maximum queue extends almost 500 feet when the school traffic overloads the intersection; the other three approaches operate acceptably during this time.

Table 6 shows the approach LOS and total intersection LOS for all study intersections during the 2020 AM peak, school dismissal peak, and PM peak hours.

Table 6 – Existing 2020 Traffic Operations (Synchro)

Intersection:	Approach	AM Peak		SD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Arrowhead Rd at Hawk Circle Dr	EB	3.7 / A	4.5 / A	1.4 / A	4.0 / A	1.0 / A	3.3 / A
	WB	4.1 / A		3.8 / A		3.5 / A	
	SB	6.7 / A		6.0 / A		5.5 / A	
Hawk Circle Dr at Elementary Access	EB	3.4 / A	4.3 / A	3.3 / A	4.7 / A	3.2 / A	3.7 / A
	WB	5.2 / A		5.8 / A		3.5 / A	
	NB	4.1 / A		3.4 / A		3.9 / A	
	SB	4.3 / A		4.7 / A		4.0 / A	
Ugstad Rd at Hawk Circle Dr	EB	16.0 / C	23.2 / C	6.8 / A	4.7 / A	4.2 / A	2.3 / A
	NB	**40.1 / E**		3.6 / A		2.7 / A	
	SB	7.2 / A		1.6 / A		1.1 / A	
Ugstad Rd at Arrowhead Rd	EB	10.6 / B	11 / B	13.4 / B	16.8 / C	7.7 / A	7.3 / A
	WB	8.9 / A		9.4 / A		7.8 / A	
	NB	11.6 / B		7.8 / A		6.2 / A	
	SB	14.3 / B		**30.9 / D**		7.4 / A	

Notes: (1) Minor street stop control intersection LOS is typically defined as the worst approach LOS; however, the overall intersection delay is shown.

4.3.2 Future No Build 2040 Conditions

With a background growth that results with an approximate 30% growth in total traffic volumes, the existing issues are exacerbated.

In all three peak periods, the following two intersections still had acceptable operations and maximum queues of less than 125 feet (approximately 5 to 6 vehicles).

- Arrowhead Road at Hawk Circle Drive.
  - It should be noted, mainline vehicles queue behind yielding turning vehicles.
- Hawk Circle Drive at Elementary Access (internal intersection).

In the PM peak hour, all four study intersections in the study area would still operate at a LOS A, with minimal queuing and no delay issues. Therefore, the following discussion will only refer to the AM peak and school dismissal peak hours.

4.3.2.1 Ugstad Road and Hawk Circle Drive

In both school arrival and dismissal peaks, the drop off and pickup area overwhelms Hawk Circle Drive and the queue spills onto Ugstad Road.

In the AM peak hour, the minimal increase in school traffic interacts poorly with the more significant increase in through traffic along Ugstad Road, which creates considerable delays for all users. The drop off and parking traffic spills onto Ugstad for a longer period as traffic arrives at school; this results in the entire intersection operating at a failing LOS F. The southbound right turning traffic creates a queue that can extend 600 feet, and the northbound left turning queue will spill onto Arrowhead Road and add delays for all movements trying to head north. Due to the standing queues at school arrival, the departing traffic that dropped off students has a tough time finding gaps to enter Ugstad Road.

During the school dismissal, the queues from the pickup traffic at the school are less impactful to Ugstad Road; the modeling did not show any major concerns except for a few vehicles queuing along Ugstad Road. The eastbound approach does have failing delays during this time frame; however, these delays are caused by the downstream issues at Arrowhead Road.

4.3.2.2 Ugstad Road and Arrowhead Road

In the AM peak hour, the all-way stop controlled intersection of Ugstad Road and Arrowhead Road operates with unacceptable delays. The queues from the downstream intersection of Ugstad Road and Hawk Circle Drive spill into this intersection and create queues and delays that result in the intersection failing. The three movements to head north on Ugstad Road are delayed due to the queue along Ugstad, this creates long queues on the eastbound, westbound, and northbound approaches of approximately 265’, 375’, and 475’ respectively.

The southbound approach operates at a LOS F due to capacity issues on the approach, the single lane is unable to serve the full demand reasonably and the maximum queue will extend over 600 feet to the north.

During the school dismissal peak, the southbound approach operates at a severe LOS F; with an average delay for all vehicles over 2.5 minutes during the hour. The maximum queue extends upstream through the Hawk Circle Drive intersection when the school traffic overloads the intersection; this creates the added eastbound delay at that intersection previously mentioned.

The eastbound approach will also operate at a LOS E with a maximum queue that extends almost 500 feet.

The single approach lanes for both the southbound and eastbound approaches are not able to handle the burst in traffic demands during the school dismissal peak.

Table 7 shows the approach LOS and total intersection LOS for both intersections during the future No Build 2040 AM peak, school dismissal peak, and PM peak hours.

Table 7 – Future No Build 2040 Traffic Operations (Synchro)

Intersection:	Approach	AM Peak		SD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Arrowhead Rd at Hawk Circle Dr	EB	4.2 / A	5.0 / A	1.7 / A	4.6 / A	1.4 / A	3.6 / A
	WB	4.4 / A		4.1 / A		3.8 / A	
	SB	8.0 / A		7.7 / A		6.3 / A	
Hawk Circle Dr at Elementary Access	EB	3.4 / A	4.4 / A	3.4 / A	4.9 / A	3.3 / A	3.8 / A
	WB	5.6 / A		5.9 / A		3.7 / A	
	NB	4.1 / A		3.6 / A		3.9 / A	
	SB	4.4 / A		5.0 / A		4.1 / A	
Ugstad Rd at Hawk Circle Dr	EB	**40.7 / E**	**56.8 / F**	**73.6 / F**	**38.4 / E**	4.7 / A	2.4 / A
	NB	**87.3 / F**		4.5 / A		2.8 / A	
	SB	**29.6 / D**		16.9 / C		1.2 / A	
Ugstad Rd at Arrowhead Rd	EB	24.9 / C	**33.8 / D**	**41.7 / E**	**62.5 / F**	8.9 / A	8.5 / A
	WB	24.1 / C		13.6 / B		9.2 / A	
	NB	**37.2 / E**		10.1 / B		7.1 / A	
	SB	**55.4 / F**		**150.6 / F**		8.6 / A	

Notes: (1) Minor street stop control intersection LOS is typically defined as the worst approach LOS; however, the overall intersection delay is shown.

4.3.3 Capacity Constraints and Mitigations

Based on the operational results of this study, as well as previous studies in the project area, there are problems at some study intersections caused by capacity issues as well as downstream constraints.

The intersection of Ugstad Road and Arrowhead Road has a limited number of lanes on two of the approaches; southbound and eastbound. The control type, all-way stop control, may not be the best suited to handle future traffic demands. For this intersection, the following mitigations will be reviewed:

- Capacity Improvements – add turn lanes.
    - Add southbound left turn lane.
        - Due to lane alignment issues, it is best to modify the northbound approach to include a left turn lane and a shared through-right to match southbound.
    - Add eastbound right turn lane.
    - Extend westbound right turn lane.
- Roundabout Control – construct a single lane roundabout at the intersection.

The intersection of Ugstad Road and Hawk Circle Drive is significantly impacted by the school drop off and pickup issues that queue onto Ugstad Road. However, the high number of turning traffic from Ugstad Road are a concern with a high-speed (>45 mph) roadway and no turn lanes.

- Improve school drop off and pickup issues.
    - While not directly a part of this study, improved circulation and reducing queues from the school would provide a major benefit to Ugstad Road.
    - Some improvement ideas will be addressed in the **Section 5** of this report.
- Capacity Improvements – add turn lanes.
    - Add southbound right turn lane.
        - Separates slow moving right turn volume.
        - Provides storage for school traffic, separate from high speed through volume.
    - Add northbound left turn lane.
        - Separates yielding left turning traffic.
        - Provides storage for school traffic, separate from high speed through volume.
    - These turn lanes meet the MnDOT criteria for turn lane warrants due to the school access and high speed along Ugstad road; see **Section 5** for more detail.

The intersection of Arrowhead Road and Hawk Circle Drive does not have an existing operational problem; however due to the high number of vehicles turning from the through lanes at this intersection, it is recommended to consider turn lanes along Arrowhead Road. During the field visit, it was observed many through vehicles slowing down and stopping behind turning traffic.

These issues will be partially addressed in the following mitigation scenarios.

4.3.4 Future 2040 Mitigation Conditions

To improve the operations and safety of the project area to handle the increase in traffic growth, mitigations were evaluated to determine the improvement.

As described in Section 4.3.3, the mitigations have differing magnitudes and therefore three separate build scenarios were analyzed.

Based on the warrant analysis, the main study intersection meets all-way stop control warrant, but not the 8-hour traffic signal control warrant (Warrant 1) in the forecast year 2040. The existing all-way stop and a roundabout control will be evaluated; however, traffic signal control will not.

4.3.4.1 Build Alternative 1 Conditions

The following mitigations were included in the Build Alternative 1 scenario.

- Ugstad Road at Arrowhead Road
  - Modify southbound approach with left turn lane and shared through-right.
  - Modify northbound approach with left turn lane and shared through-right.
  - Restripe eastbound approach with shared left through and right turn lane.
- Ugstad Road at Hawk Circle Drive
  - Add northbound left turn lane.
  - Add southbound right turn lane.
- No other changes to the roadway network.

The roadway improvements were considered to improve the operational issues observed in the AM and school dismissal peak hours. **Figure 1** in **Appendix D** represents the above changes.

The improvements to the Hawk Circle Drive intersection would provide a safe space for vehicles to queue, separate from through traffic, at the intersection as the school drop off and pickup queue's out to Ugstad Road. The separated lanes allow the through movement to safely get through the intersection without the delay from the school site.

As the queueing from the school can vary day to day, the turn lanes should be extended to capture the long queues. The southbound right turning movement does not yield to other traffic along Ugstad Road, therefore, the storage lane should be between 200' and 300' to contain the queued vehicles. The northbound left turn can queue into the Arrowhead Road intersection at times; however, the average queue is significantly less than the maximum. Between Hawk Circle Drive and Arrowhead Road, there are three residential accesses and three commercial driveways, to accommodate the access locations as well as the school queue, a Two-Way Left Turn Lane (TWLTL) should be constructed. This continuous left turn lane will accommodate both new left turn lanes as well as the access between the intersections, the center turn lane can also be used during the peak queuing at the school.

During both the AM and school dismissal peak hours, the southbound approach of Ugstad Road to Arrowhead Road has existing and future operational problems. To improve the southbound approach, a separate left turn lane is recommended to serve the vehicles more efficiently. To accommodate the new southbound left turn lane, the northbound approach should be reconfigured to include a separate left turn lane and a shared through-right lane to match southbound.

The eastbound approach of Arrowhead to Ugstad Road has operational issues during the school dismissal peak hour. Currently there is enough space on the approach to stripe a right turn lane to match the westbound approach.

With these improvements, the overall roadway network is improved over the existing and no build conditions. **Table 8** shows the approach LOS and total intersection LOS for both intersections during the future 2040 AM peak, school dismissal peak, and PM peak hours.

Table 8 – 2040 Build Alternative 1 Traffic Operations (Synchro)

Intersection:	Approach	AM Peak		SD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Arrowhead Rd at Hawk Circle Dr	EB	4.3 / A	5.1 / A	1.8 / A	4.9 / A	1.3 / A	3.6 / A
	WB	4.4 / A		4.0 / A		3.8 / A	
	SB	8.2 / A		8.6 / A		6.2 / A	
Hawk Circle Dr at Elementary Access	EB	3.4 / A	4.4 / A	3.5 / A	5.1 / A	3.3 / A	3.8 / A
	WB	5.6 / A		6.3 / A		3.7 / A	
	NB	4.1 / A		3.8 / A		3.9 / A	
	SB	4.3 / A		4.9 / A		4.1 / A	
Ugstad Rd at Hawk Circle Dr	EB	19.7 / C	**39.6 / E**	11.3 / B	6.2 / A	4.4 / A	1.9 / A
	NB	**68.9 / F**		3.3 / A		2.5 / A	
	SB	15.7 / C		1.3 / A		0.6 / A	
Ugstad Rd at Arrowhead Rd	EB	17.1 / C	17.1 / C	**31.7 / D**	19.7 / C	8.5 / A	8.3 / A
	WB	15.6 / C		14.5 / B		9.4 / A	
	NB	20.3 / C		10.2 / B		6.8 / A	
	SB	16.1 / C		18.8 / C		8.0 / A	

Notes: (1) Minor street stop control intersection LOS is typically defined as the worst approach LOS; however, the overall intersection delay is shown.

The AM school drop off is still a major issue that will continue to queue onto Ugstad Road if no improvements are made at the school site. However, the mitigations provide separation and the overall intersection delays are improved as non-school traffic can move more freely.

There are still some locations of concern with this mitigation.

- Ugstad Road at Arrowhead Road.
  - Westbound right turn lane is short and blocks through traffic.
- Arrowhead Road at Hawk Circle Drive
  - Eastbound and westbound approaches have queued traffic for free movements; turning traffic queues the through movement traffic in shared lanes.
- Hawk Circle Drive Approaches (these are not on City Streets and were not improved):
  - Eastbound approach to Ugstad Road left turn queue blocks right turn lane.
  - Southbound approach to Arrowhead Road right turn queue blocks left turn lane.

4.3.4.2 Build Alternative 2 Conditions

The following mitigations were included in the Build Alternative 2 scenario.

- All improvements from Build Alternative 1
- Ugstad Road at Arrowhead Road
  - Extend westbound right turn lane to 250 feet.
- Arrowhead Road at Hawk Circle Drive
  - Add eastbound left turn lane.
  - Add westbound right turn lane.

The roadway improvements were considered to improve the operational issues observed in the AM and school dismissal peak hours. **Figure 2** in **Appendix D** represents the above changes.

Extending the westbound right turn lane at Ugstad Road and Arrowhead Road provides enough storage so the right turn does not spill out of the lane nor does the through movement block access to the turn lane.

The additional turn lanes along Arrowhead Road at Hawk Circle drive separate the turning vehicles from the through movements and the are no longer queues in the through lane.

The AM school drop off is still a major issue that will continue to queue onto Ugstad Road. **Table 9** shows the approach LOS and total intersection LOS for both intersections during the future 2040 AM peak, school dismissal peak, and PM peak hours.

Table 9 – 2040 Build Alternative 2 Traffic Operations (Synchro)

Intersection:	Approach	AM Peak		SD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Arrowhead Rd at Hawk Circle Dr	EB	2.8 / A	3.9 / A	1.5 / A	4.5 / A	1.0 / A	3.1 / A
	WB	3.7 / A		3.5 / A		3.1 / A	
	SB	6.9 / A		8.2 / A		6.0 / A	
Hawk Circle Dr at Elementary Access	EB	3.4 / A	4.5 / A	3.5 / A	5.1 / A	3.3 / A	3.8 / A
	WB	5.7 / A		6.3 / A		3.8 / A	
	NB	4.2 / A		3.7 / A		3.9 / A	
	SB	4.3 / A		4.9 / A		4.1 / A	
Ugstad Rd at Hawk Circle Dr	EB	19.1 / C	**39.4 / E**	11.2 / B	6.2 / A	4.3 / A	1.9 / A
	NB	**68.8 / F**		3.3 / A		2.5 / A	
	SB	15.8 / C		1.3 / A		0.6 / A	
Ugstad Rd at Arrowhead Rd	EB	17.0 / C	17.2 / C	**32.3 / D**	20.0 / C	8.4 / A	8.2 / A
	WB	15.4 / C		15.0 / C		9.2 / A	
	NB	20.7 / C		10.2 / B		6.9 / A	
	SB	16.8 / C		18.7 / C		8.0 / A	

Notes: (1) Minor street stop control intersection LOS is typically defined as the worst approach LOS; however, the overall intersection delay is shown.

4.3.4.3 Build Alternative 3 Conditions

The following mitigations were included in the Build Alternative 3 scenario.

- Ugstad Road at Arrowhead Road converted to single lane roundabout.
  - All turn lanes previously described are removed with single lane approaches.
- Ugstad Road at Hawk Circle Drive
  - Add northbound left turn lane.
  - Add southbound right turn lane.
- Arrowhead Road at Hawk Circle Drive
  - Add eastbound left turn lane.
  - Add westbound right turn lane.

The roadway improvements were considered to improve the operational issues observed in the AM and school dismissal peak hours. **Figure 3** in **Appendix D** represents the above changes.

The roundabout control was analyzed in Synchro/SimTraffic as well as in the Highway Capacity Software (HCS) to ensure the operations would be acceptable; HCS is typically a more conservative evaluation. A roundabout was considered as the all-way stop warrant is met, roundabouts have the following pros and cons:

Advantages	Disadvantages
- Provides orderly flow for all traffic	- Construction costs
- Reduced crash severity	- Driver Familiarity
- Performs acceptably long term	

A single lane roundabout at Ugstad Road and Arrowhead Road will operate acceptable through the 2040 design year. The following are the HCS results, which only analyze the single intersection:

Table 10 – Future 2040– Roundabout Control (HCS)

Intersection:	Approach	AM Peak		MD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Ugstad Rd at Arrowhead Rd	NB	13.2 / B	14.4 / B	10.8 / B	15.3 / C	5.5 / A	5.8 / A
	SB	10.8 / B		18.2 / C		6.1 / A	
	EB	10.4 / B		19.4 / C		5.3 / A	
	WB	20.1 / C		10.8 / B		6.3 / A	
Notes: HCS – Highway Capacity Software.							

The Synchro/SimTraffic model was updated to include the roundabout intersection as well as improvements considered at both Hawk Circle Drive intersections. **Table 11** shows the approach LOS and total intersection LOS for both intersections during the future 2040 AM peak, school dismissal peak, and PM peak hours.

Table 11 – 2040 Build Alternative 3 Traffic Operations (Synchro)

Intersection:	Approach	AM Peak		SD Peak		PM Peak	
		Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)	Approach Delay (sec/veh / LOS)	Intersection Delay (sec/veh / LOS)
Arrowhead Rd at Hawk Circle Dr	EB	2.8 / A	3.3 / A	1.4 / A	3.8 / A	1.0 / A	1.9 / A
	WB	1.9 / A		1.6 / A		1.0 / A	
	SB	7.0 / A		8.3 / A		6.0 / A	
Hawk Circle Dr at Elementary Access	EB	3.3 / A	4.5 / A	3.5 / A	5.1 / A	3.3 / A	3.8 / A
	WB	5.7 / A		6.2 / A		3.7 / A	
	NB	4.2 / A		3.7 / A		4.0 / A	
	SB	4.3 / A		5.0 / A		4.1 / A	
Ugstad Rd at Hawk Circle Dr	EB	19.8 / C	40.2 / E	11.7 / B	6.0 / A	4.3 / A	1.3 / A
	NB	71.4 / F		2.0 / A		0.9 / A	
	SB	14.5 / B		1.3 / A		0.6 / A	
Ugstad Rd at Arrowhead Rd	EB	6.8 / A	10.1 / B	11.8 / B	12 / B	5.3 / A	5.2 / A
	WB	14.1 / B		6.3 / A		5.9 / A	
	NB	8.7 / A		5.2 / A		4.1 / A	
	SB	8.4 / A		20.8 / C		5.2 / A	

Notes: (1) Minor street stop control intersection LOS is typically defined as the worst approach LOS; however, the overall intersection delay is shown.

The AM school drop off is still a major issue that will continue to queue onto Ugstad Road if no improvements are made at the school site.

4.3.4.3.1 Mini-Roundabout

In the previous traffic study for the Essentia Wellness Center (EWC), a mini roundabout was put forward as an option for the Ugstad Road and Arrowhead Road intersection. This analysis only considered a short-term year of opening (2018) and did not consider traffic growth out to 2040.

Mini roundabout control was considered for the study intersection. Federal Highway Administration (FHWA) and MnDOT have developed thresholds to use as guidance for consideration of a mini roundabout.

A threshold of 15,000 daily entering vehicles is a high-level capacity. The study intersection has significantly less than this daily volume; however, the school demands control the operations.

Peak hour guidance suggests that demands of 1,000 to 1,200 vph can operate well, with some intersections having as high as 1,500 vph entering. The capacity is impacted by the number is impacted by the left turn volumes on each approach. The existing traffic demands at the intersection during the school peaks is approximately 1,000 vph and the forecasted volumes are approximately 1,300; the left turning demands account for approximately 20% of the volume.

A mini roundabout would likely operate well at the study intersection for many years; however, the 2040 design year volumes would be above the current recommended guidance.

5 Additional Considerations

The project area experiences congestion in short burst that are related directly to school traffic. The following considerations address issues off the roadway network, turn lane warrants, trail considerations, other roadway improvements, construction costs, and an Evaluations Matrix.

5.1 School Circulation Issues

With three schools using Hawk Circle Drive to access the roadway network, traffic overwhelms the internal functions and queues on to the arterial roadway network.

Due to the offset start and end times, the elementary school does not create impacts that extend onto the roadway network. Rather the queues are contained within the Hawk Circle Drive roadway.

The combined start and end times of the middle school and high school create the existing storage issues and queue spillback onto the arterial roadway network. Both schools start at 8:00 am and both end between 2:35 and 2:45 pm. Many of the vehicles entering the school site use enter off of Ugstad Road.

The following **Figure 8** represents the current school area. The elementary school is in the western most building along Arrowhead Road. Both the middle and high school students located in the northern building. The three main parking lots are marked, each has a different function.

Figure 8 – School Sites

The first parking lot, #1, has limited parked cars, but is used for the bus drop off location, buses enter from Hawk Circle Drive and park adjacent to the northern curb area; they depart on the west side of the lot.

Parking lot #2 is the main drop off and pick up location for both schools, it also provides staff and visitor parking. This is the area of congestion that extends out onto Ugstad Road; the area provides approximately 200 feet of curbside for drop off and pickup. When the queue is longer, other vehicles have a tough time getting into and out of the larger parking lot.

Parking lot #3 is the main high school parking area for students. Access to and from Hawk Circle Drive is blocked by the middle school queue which results in added delays for users. This lot is also used by some vehicles as a drop off and pick up area trying to bypass the queue.

5.1.1 Potential Considerations

Hawk Circle Drive is not a public roadway, it is owned by the school district and provides access to the three schools in the project area. The following considerations are only provided to help relieve the queues that spill onto the arterial roadway network and create an unsafe condition for non-school related traffic.

- Stager the middle school and high school start and end times:
  - The current volume of students starting and ending at the same time results in an overloading of traffic. Staggering the start and end times would spread out the volume of students entering the school site.
- Provide more storage for queued vehicles within school site:
  - Use Lot #1 as a second drop off location
    - Provide a second drop off path with vehicles entering from Arrowhead Road and dropping off in Lot #1. The secondary path would split the queue and be able to store vehicles on the school site.
    - Buses would have to be rerouted to another location to allow this vehicle drop off location.
  - Use Lot #3 as drop off location
    - Routing traffic on the outside of the large high school parking lot would allow for a greater queue storage distance. The additional storage could be as much as 400 feet, which could improve the queue issues spilling onto Ugstad Road.

5.2 Turn Lane Warrants

MnDOT provides intersection turn lane warrant criteria in their access management manual. While these are not mandatory criteria to install turn lanes, they provide guidance on when a decision about turn lanes should be considered. There are nine warrant criteria in total; however, only two apply to this project area, warrant 6 and warrant 9.

- Warrant 6: School Entrances – At public and private school driveways on high-speed highways (posted speed ≥ 45 mph) used by school traffic
- Warrant 9: Vehicular Volume Warrant – At high-volume driveways (>100 trips per day) and all public street connections on high-speed highways (posted speed ≥ 45 mph) that satisfy the criteria in Figures 3.40 and 3.41 below. (**See Figure 9**)

Based on Warrant 6, turn lanes should be provided on Ugstad Road at Hawk Circle Drive. The intersection is located on a high speed (posted at 45 mph) road that intersects with a school entrance; both left and right turn lanes on Ugstad Road are warranted.

Ugstad Road at Hawk Circle Drive also meets the volume Warrant 9 for both left and right turn lanes. The ADT on Ugstad Road is currently 2,850, and based on the 13-hr traffic count, Hawk Circle carries over 1,500 vehicles per day. Based on these volumes both a left and right turn lane are warranted on the 45-mph roadway.

Ugstad Road at Arrowhead Road meets the Warrant 9 volume thresholds for left and right turn lanes; this warrant can be considered as the north leg is posted at 45-mph.

Arrowhead Road is posted at 40-mph; therefore, the warrants do not technically apply along the corridor. The intersection at Hawk Circle Drive for instance would meet Warrant 6 if the posted speed was 45-mph as well as Warrant 9 based on the volumes criteria. Though warrants are not met, turn lanes may still be considered for the improved safety and operations at the intersection.

Figure 9 – MnDOT Turn Lane Warrant Thresholds

Figure 3.40: Warrant 9 for Left-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
1500 to 2999	3000 to 5999	> 1500	Left-turn lane warranted
3000 to 3999	6000 to 7999	> 1200	Left-turn lane warranted
4000 to 4999	8000 to 9999	> 1000	Left-turn lane warranted
5000 to 6499	10,000 to 12,999	> 800	Left-turn lane warranted
≥ 6500 AADT	≥ 13,000 AADT	101 to 400 > 400	Left-turn lane or bypass lane Left-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

Figure 3.41: Warrant 9 for Right-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
≥ 1500 AADT	≥ 3000 AADT	> 100	Right-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

5.3 Trail Considerations

A multi-use trail is presently being planned along Ugstad Road. Currently there are two alignment options that have been evaluated.

Trail Alternative 1 has been explored along the east side of Ugstad Road. This alignment was only approximately 3,000 feet extending from north of Twin Pines Street to Falcon Drive.

Trail Alternative 2 was explored along the west side of Ugstad Road. This alignment extends approximately 1.25 miles from TH 53 down to Lavaque Junction Road.

Based on a high-level overview of each trail option and input from the project team, the following rationales provide reasons to select Trail Alternative 2:

- A west side alignment would improve access into and out of the school site.
- A west side alignment would have less access/driveway crossings.
- Extended alignment length would improve users experience.

5.4 Other Roadway Considerations

The overall project area includes approximately 2-miles of roadway improvements along Ugstad Road, as well as any necessary improvements along Arrowhead Road.

- Along Ugstad Road, the project limits extend from TH 53 to Maple Grove Road, approximately 1-mile north and south of Arrowhead Road.
- Along Arrowhead Road, the project limits vary under each alternative.

The intersections included in this traffic study report include the highest volume intersections along both corridors. Outside of the immediate traffic study area, there are no other high-volume intersections; most of the access locations on both corridors are residential driveways.

There are some city street connections to both corridors that have limited residential homes connecting to the corridors, these range from between 10 to 40 homes. Based on standard trip generation estimates, a single-family home generates approximately 10 trips per day; therefore, these minor streets would have a low daily traffic demand of less than 400 vehicles. These estimated volumes to do not in themselves warrant intersection improvements; however right turn lanes could be considered if a safety problem arose.

Based on the volume, access, and potential impacts, it is recommended to maintain the current undivided, 2-lane roadway along the segments of Ugstad Road that are outside of the traffic study intersections.

Appendix D includes the preliminary cost estimates and layouts; all three options near the main study intersections are included.

5.5 Construction Costs

Based on the layouts of the three build alternatives, included in **Appendix D**, cost estimates were developed for the entire corridor improvements for each.

Alternative 1, which includes turn lane improvements at two study intersections along Ugstad Road at both Arrowhead Road and Hawk Circle Drive, has a total construction cost of $2,710,598 dollars.

Alternative 2, which includes the same Alternative 1 improvements and the addition of turn lanes at the Arrowhead Road and Hawk Circle Drive intersection, has a total construction cost of $3,119,214 dollars.

Alternative 3, which includes turn lane improvements at Ugstad Road and Hawk Circle Drive and a single lane roundabout at Ugstad Road and Arrowhead Road, has a total construction cost of $3,747,357 dollars.

5.6 Evaluations Matrix

To compare the three alternatives to each other, an evaluations matrix was developed. The following table includes a generalized assessment of the alternatives.

Table 12 – Evaluation Matrix

Alternative	Evaluation Criteria			
	Operations	Safety	Cost	Right of Way (acres)
No Build	Poor	Poor	n/a	n/a
Alt #1	Good	Good	Low ($2.71)	Low (0.80)
Alt #2	Better	Good	Mid ($3.12)	Low (1.05)
Alt #3	Better	Good	High ($3.75)	Mid (1.60)

For the operations assessment, the No Build condition will have significant failing operations at multiple intersections. All three build options will improve intersection operations at Ugstad Road and Arrowhead, with Alternative 2 and Alternative 3 providing the best overall results.

For the safety assessment, while there is not an existing safety issue, the failing operational performance of the no build condition will create safety concerns on both corridors. All three build alternatives will provide relatively the same safety benefit. All-way stop control and roundabout control have approximately the same crash rate when comparing Minnesota data. While a roundabout typically would have less severe crashes that other control options, the existing all-way stop control has experienced no severe crashes in the last 5-years so the difference is considered negligible.

For construction costs and right away, Alternative 1 has the least cost and impacts, Alternative 2 is in the middle, and Alternative 3 has the highest cost and right of way impacts.

6 Conclusion

The existing project area experiences congestion at two of the four study intersections; the congestion is related to the middle school and high school arrivals and departures that occur off the roadway network.

Queues from the school site spill along Hawk Circle Drive and onto Ugstad Road; this is worse in the morning as more vehicles arrive is a short timeframe. The queue along Ugstad Road has been known to spill back and begin to impact the Arrowhead Road intersection.

With the increased traffic volumes, the intersections will see significant increases in delay through the future 2040 forecast year; this includes background growth as well as planned development trips.

Mitigations were considered at three of the four study intersections; they were split up into three different mitigation options to be considered.

To improve operations directly at the intersections of Ugstad Road at Hawk Circle Drive, and at Ugstad Road and Arrowhead Road, additional turn lanes were considered in Alternative 1.

Alternative 1 includes:

- Ugstad Road at Arrowhead Road
  - Modify southbound approach with left turn lane and shared through-right.
  - Modify northbound approach with left turn lane and shared through-right.
  - Restripe eastbound approach with shared left through and right turn lane.
- Ugstad Road at Hawk Circle Drive
  - Add northbound left turn lane.
  - Add southbound right turn lane.
- Construction Cost Estimate: $2.71 million.

These roadway improvements provide acceptable operations at Ugstad Road and Arrowhead Road; however, the westbound queue spills out of the right turn lane. The turn lanes at Ugstad Road and Hawk Circle Drive provide storage for the queued vehicles waiting to enter the school site; the northbound Two-Way Left Turn Lane (TWLTL) provides ample storage along northbound Ugstad Road. These improvements did not improve the on-site school operations which are still poor.

Alternative 2 builds on the previous options but improves additional queueing issues. Alternative 2 includes:

- All improvements from Build Alternative 1
- Ugstad Road at Arrowhead Road
  - Extend westbound right turn lane to 250 feet.
- Arrowhead Road at Hawk Circle Drive
  - Add eastbound left turn lane.
  - Add westbound right turn lane.
- Construction Cost Estimate: $3.12 million.

The extended westbound right turn at Ugstad Road and Arrowhead Road provides the storage needed to ensure queued vehicles do not block access. The additional turn lanes along Arrowhead Road at Hawk Circle Drive provide storage for turning traffic entering the school; while this operated acceptably, the separate lanes provide safer operations.

Alternative 3 would modify the traffic control at Ugstad Road and Arrowhead Road. The intersection did not meet traffic signal warrants but meeting the all-way stop warrants allows for roundabout control to be considered. The following mitigations were included in the Build Alternative 3 scenario.

- All improvements from Build Alternative 2
- Ugstad Road at Arrowhead Road converted to single lane roundabout.
  - All turn lanes previously described are removed with single lane approaches.
- Construction Cost Estimate: $3.75 million.

A single lane roundabout would provide the best overall operations through the 2040 forecast year with the AM, school dismissal, and PM peak hours operating with a LOS B or better.

A roundabout would provide a safety benefit at the intersection. MnDOT average crash rates at an all-way stop controlled intersection is 0.35 crashes per million vehicles entering the intersections; the average crash rates at a single lane roundabout is 0.32 crashes per million vehicles entering the intersections. Of the crashes that do occur, typically roundabout crashes are less severe due to the low entering speeds.

6.1 Recommendation

Based on the conclusions found in this report and input from the project team, including City staff, it is recommended to construct **Alternative 2**. This alternative provides an operational and safety benefit over the existing conditions.

- The additional capacity improvements to the Ugstad Road and Arrowhead Road intersection will operate safely and efficiently through the 2040 design year under all-way stop control.
- The turn lane improvements to the Arrowhead Road at Hawk Circle Drive will operate safely and efficiently by separating the slow-moving turning traffic from the through trips.
- The improvements to the Ugstad Road and Hawk Circle Drive intersection will provide a safety and operational benefit during throughout the day, but particularly during the school peak periods.

It should be noted, the intersection of Ugstad Road at Hawk Circle Drive will continue to have operational problems in the AM peak hour. The City of Hermantown should work with the school district to help improve on site school circulation issues that impact the external roadway network.

Appendix A

All-way stop Control and Traffic Signal Warrants

SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Raw - Ugstad Rd at Arrowhead Rd
ALL WAY STOP
WARRANT ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/26/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach Total
40	Major App1:	Arrowhead Rd EB	1	1413
40	Major App3:	Arrowhead Rd WB	2	1681
30	Minor App2:	Ugstad Rd NB	2	1221
45	Minor App4:	Ugstad Rd SB	1	1161

0.70 SPEED FACTOR USED? **No**

Minimum Volume Requirement
300 **200**

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MINOR APPROACH TOTAL Σ (APP.2 + APP. 4)	WARRANT MET MAJOR / MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO
6:00 - 7:00	61	48	59	25	109	84	NO / NO
7:00 - 8:00	119	172	157	124	291	281	NO / YES
8:00 - 9:00	103	123	97	67	226	164	NO / NO
9:00 - 10:00	131	101	66	65	232	131	NO / NO
10:00 - 11:00	69	89	58	73	158	131	NO / NO
11:00 - 12:00	87	104	79	75	191	154	NO / NO
12:00 - 13:00	75	115	67	49	190	116	NO / NO
13:00 - 14:00	94	106	73	74	200	147	NO / NO
14:00 - 15:00	132	196	120	193	328	313	**YES / YES**
15:00 - 16:00	175	179	121	128	354	249	**YES / YES**
16:00 - 17:00	163	183	140	140	346	280	**YES / YES**
17:00 - 18:00	96	177	129	84	273	213	NO / YES
18:00 - 19:00	108	88	55	64	196	119	NO / NO
19:00 - 20:00	0	0	0	0	0	0	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO
Daily	**1413**	**1681**	**1221**	**1161**			

	Met (Hr)	Required (Hr)
Hours met for warrant:	**3**	**8**

All-way Stop Warrant: **Not satisfied**

REMARKS:

C:\TSIS6 Projects\Hermantown\Analysis\Warrant Analysis\[Ugstad Rd at Arrowhead Rd - ExistRaw 2020 Warrant Worksheet - 10142020.xlsx]AllWayStop

SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Raw - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/26/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
40	Major App1:	Arrowhead Rd EB	1	1413
40	Major App3:	Arrowhead Rd WB	2	1681
30	Minor App2:	Ugstad Rd NB	2	905
45	Minor App4:	Ugstad Rd SB	1	996

40 MPH OR FASTER?	NO
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**
CORRECTABLE CRASHES: (12-month period)	0

	Minimum Volume Requirement		
	1A	1B	1A&B (80%)
Major Total	420	630	504
Minor Approach	140	70	112

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MAX MINOR APPROACH (APP. 2 or 4)	WARRANT 1A - 8 hr MAJOR/MINOR	WARRANT 1B - 8 hr MAJOR/MINOR	WARRANT 1A & B MAJOR/MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
6:00 - 7:00	61	48	35	19	109	35	NO / NO	NO / NO	NO / NO
7:00 - 8:00	119	172	134	119	291	134	NO / NO	NO / YES	NO / YES
8:00 - 9:00	103	123	79	52	226	79	NO / NO	NO / YES	NO / NO
9:00 - 10:00	131	101	47	58	232	58	NO / NO	NO / NO	NO / NO
10:00 - 11:00	69	89	33	62	158	62	NO / NO	NO / NO	NO / NO
11:00 - 12:00	87	104	58	69	191	69	NO / NO	NO / NO	NO / NO
12:00 - 13:00	75	115	47	40	190	47	NO / NO	NO / NO	NO / NO
13:00 - 14:00	94	106	52	66	200	66	NO / NO	NO / NO	NO / NO
14:00 - 15:00	132	196	93	172	328	172	NO / YES	NO / YES	NO / YES
15:00 - 16:00	175	179	94	106	354	106	NO / NO	NO / YES	NO / NO
16:00 - 17:00	163	183	98	109	346	109	NO / NO	NO / YES	NO / NO
17:00 - 18:00	96	177	101	68	273	101	NO / NO	NO / YES	NO / NO
18:00 - 19:00	108	88	34	56	196	56	NO / NO	NO / NO	NO / NO
19:00 - 20:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
Daily	**1413**	**1681**	**905**	**996**					

		Met (Hr)	Required (Hr)	WARRANT MET:
Warrant 1	**Eight Hour Volumes**	0	8	Not satisfied
Warrant 1A	Minimum Vehicular Volume	0	8	Not satisfied
Warrant 1B	Interruption of Continuous Flow	0	8	Not satisfied
1A & 1B	Combination of Warrants	0	8	Not satisfied
Warrant 2	**Four Hour Volumes**	0	4	Not satisfied
Warrant 3	**Peak Hour Volumes**	0	1	Not satisfied
Warrant 7	**Crash Experience**	0	8	Not satisfied

COMMENTS:

C:\TSIS6 Projects\Hermantown\Analysis\Warrant Analysis\[Ugstad Rd at Arrowhead Rd - ExistRaw 2020 Warrant Worksheet - 10142020.xlsx]AllWayStop

SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Raw - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/26/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
40	Major App1:	Arrowhead Rd EB	1	1413
40	Major App3:	Arrowhead Rd WB	2	1681
30	Minor App2:	Ugstad Rd NB	2	905
45	Minor App4:	Ugstad Rd SB	1	996

40 MPH OR FASTER?	YES
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**

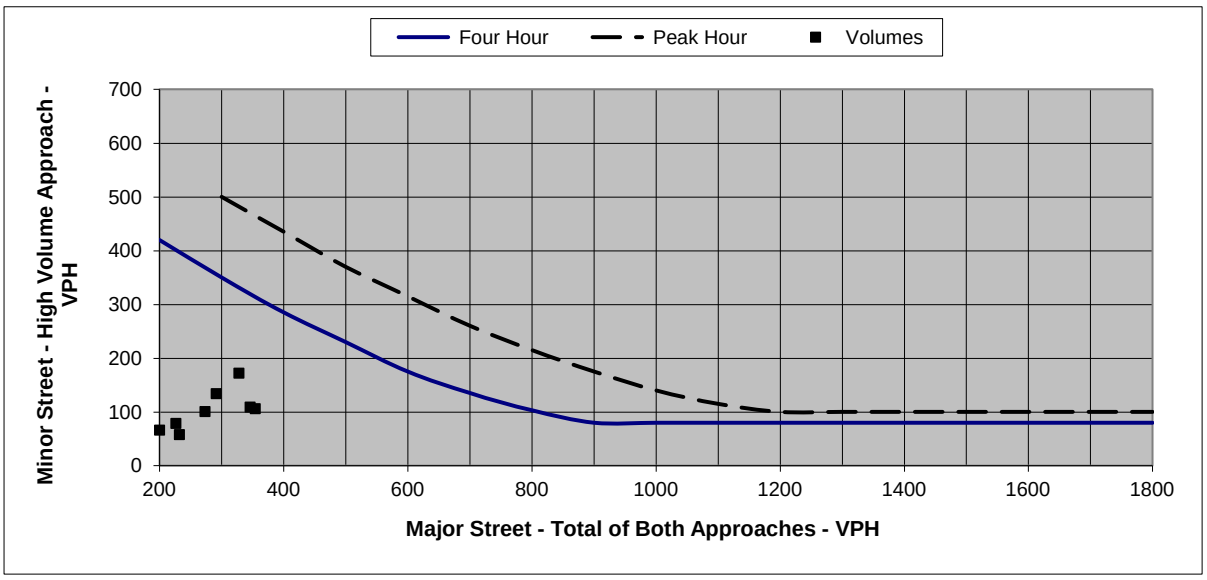


Figure 1. Four Hour and Peak Hour Warrant Analysis

Note: For data points outside the graph range, check the minor street volume against the lower thresholds

Warrant Criteria (Graph)		
Major	Minor App.	Minor App.
Approach	Four Hour	Peak Hour
200	420	
300	350	500
400	285	435
500	230	370
600	175	315
700	135	260
800	103	215
900	80	175
1000	80	140
1100	80	115
1200	80	100
1300	80	100
1400	80	100
1500	80	100
1600	80	100
1700	80	100
1800	80	100

Actual Hourly Count			Warrants Met:	
			Warrant 2	Warrant 3
HOUR	Sum Major App.	Max Minor App.	Four Hour	Peak Hour
0:00 - 1:00	0	0	NO	NO
1:00 - 2:00	0	0	NO	NO
2:00 - 3:00	0	0	NO	NO
3:00 - 4:00	0	0	NO	NO
4:00 - 5:00	0	0	NO	NO
5:00 - 6:00	0	0	NO	NO
6:00 - 7:00	109	35	NO	NO
7:00 - 8:00	291	134	NO	NO
8:00 - 9:00	226	79	NO	NO
9:00 - 10:00	232	58	NO	NO
10:00 - 11:00	158	62	NO	NO
11:00 - 12:00	191	69	NO	NO
12:00 - 13:00	190	47	NO	NO
13:00 - 14:00	200	66	NO	NO
14:00 - 15:00	328	172	NO	NO
15:00 - 16:00	354	106	NO	NO
16:00 - 17:00	346	109	NO	NO
17:00 - 18:00	273	101	NO	NO
18:00 - 19:00	196	56	NO	NO
19:00 - 20:00	0	0	NO	NO
20:00 - 21:00	0	0	NO	NO
21:00 - 22:00	0	0	NO	NO
22:00 - 23:00	0	0	NO	NO
23:00 - 24:00	0	0	NO	NO

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SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Base - Ugstad Rd at Arrowhead Rd
ALL WAY STOP
WARRANT ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach Total
40	Major App1:	Arrowhead Rd EB	1	2415
40	Major App3:	Arrowhead Rd WB	2	2695
30	Minor App2:	Ugstad Rd NB	2	1513
45	Minor App4:	Ugstad Rd SB	1	1446

0.70 SPEED FACTOR USED? **No**

Minimum Volume Requirement
300 **200**

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MINOR APPROACH TOTAL Σ (APP.2 + APP. 4)	WARRANT MET MAJOR / MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO
6:00 - 7:00	128	91	76	32	219	108	NO / NO
7:00 - 8:00	234	285	201	163	519	364	**YES / YES**
8:00 - 9:00	200	215	118	85	415	203	**YES / YES**
9:00 - 10:00	227	165	82	82	392	164	YES / NO
10:00 - 11:00	126	151	73	86	277	159	NO / NO
11:00 - 12:00	150	174	98	96	324	194	YES / NO
12:00 - 13:00	133	190	83	57	323	140	YES / NO
13:00 - 14:00	162	174	86	99	336	185	YES / NO
14:00 - 15:00	227	308	149	237	535	386	**YES / YES**
15:00 - 16:00	289	294	156	153	583	309	**YES / YES**
16:00 - 17:00	248	269	165	164	517	329	**YES / YES**
17:00 - 18:00	138	253	158	106	391	264	**YES / YES**
18:00 - 19:00	153	126	68	86	279	154	NO / NO
19:00 - 20:00	0	0	0	0	0	0	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO
Daily	**2415**	**2695**	**1513**	**1446**			

	Met (Hr)	Required (Hr)
Hours met for warrant:	**6**	**8**

All-way Stop Warrant: **Not satisfied**

REMARKS:

C:\TSIS6 Projects\Hermantown\Analysis\Warrant Analysis\[Ugstad Rd at Arrowhead Rd - ExistBASE 2020 Warrant Worksheet - 10212020.xlsx]AllWayStop

SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Base - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
40	Major App1:	Arrowhead Rd EB	1	2415
40	Major App3:	Arrowhead Rd WB	2	2695
30	Minor App2:	Ugstad Rd NB	2	1115
45	Minor App4:	Ugstad Rd SB	1	1234

40 MPH OR FASTER?	NO
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**
CORRECTABLE CRASHES: (12-month period)	0

	Minimum Volume Requirement		
	1A	1B	1A&B (80%)
Major Total	420	630	504
Minor Approach	140	70	112

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MAX MINOR APPROACH (APP. 2 or 4)	WARRANT 1A - 8 hr MAJOR/MINOR	WARRANT 1B - 8 hr MAJOR/MINOR	WARRANT 1A & B MAJOR/MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
6:00 - 7:00	128	91	46	25	219	46	NO / NO	NO / NO	NO / NO
7:00 - 8:00	234	285	173	157	519	173	**YES / YES**	NO / YES	**YES / YES**
8:00 - 9:00	200	215	95	65	415	95	NO / NO	NO / YES	NO / NO
9:00 - 10:00	227	165	59	73	392	73	NO / NO	NO / YES	NO / NO
10:00 - 11:00	126	151	42	72	277	72	NO / NO	NO / YES	NO / NO
11:00 - 12:00	150	174	71	88	324	88	NO / NO	NO / YES	NO / NO
12:00 - 13:00	133	190	58	45	323	58	NO / NO	NO / NO	NO / NO
13:00 - 14:00	162	174	60	88	336	88	NO / NO	NO / YES	NO / NO
14:00 - 15:00	227	308	115	210	535	210	**YES / YES**	NO / YES	**YES / YES**
15:00 - 16:00	289	294	121	125	583	125	YES / NO	NO / YES	**YES / YES**
16:00 - 17:00	248	269	112	125	517	125	YES / NO	NO / YES	**YES / YES**
17:00 - 18:00	138	253	122	86	391	122	NO / NO	NO / YES	NO / YES
18:00 - 19:00	153	126	41	75	279	75	NO / NO	NO / YES	NO / NO
19:00 - 20:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
Daily	**2415**	**2695**	**1115**	**1234**					

		Met (Hr)	Required (Hr)	WARRANT MET:
Warrant 1	**Eight Hour Volumes**	4	8	Not satisfied
Warrant 1A	Minimum Vehicular Volume	2	8	Not satisfied
Warrant 1B	Interruption of Continuous Flow	0	8	Not satisfied
1A & 1B	Combination of Warrants	4	8	Not satisfied
Warrant 2	**Four Hour Volumes**	0	4	Not satisfied
Warrant 3	**Peak Hour Volumes**	0	1	Not satisfied
Warrant 7	**Crash Experience**	2	8	Not satisfied

COMMENTS:

C:\TSIS6 Projects\Hermantown\Analysis\Warrant Analysis\[Ugstad Rd at Arrowhead Rd - ExistBASE 2020 Warrant Worksheet - 10212020.xlsx]AllWayStop

SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2020 Exist Base - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
40	Major App1:	Arrowhead Rd EB	1	2415
40	Major App3:	Arrowhead Rd WB	2	2695
30	Minor App2:	Ugstad Rd NB	2	1115
45	Minor App4:	Ugstad Rd SB	1	1234

40 MPH OR FASTER?	YES
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**

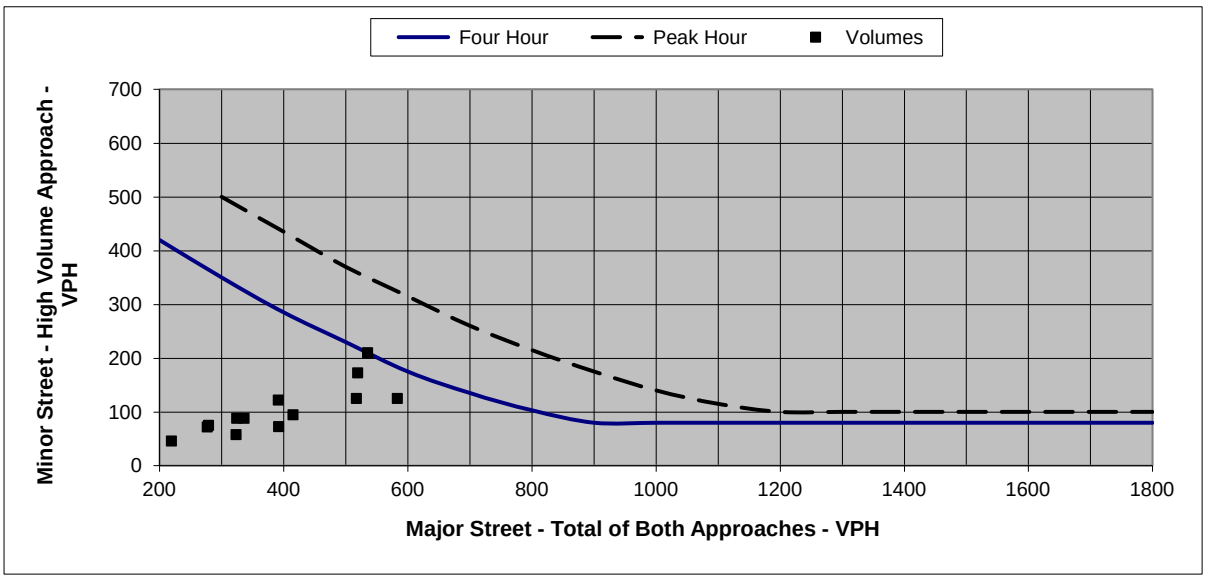

Figure 1. Four Hour and Peak Hour Warrant Analysis

Note: For data points outside the graph range, check the minor street volume against the lower thresholds

Warrant Criteria (Graph)		
Major	Minor App.	Minor App.
Approach	Four Hour	Peak Hour
200	420	
300	350	500
400	285	435
500	230	370
600	175	315
700	135	260
800	103	215
900	80	175
1000	80	140
1100	80	115
1200	80	100
1300	80	100
1400	80	100
1500	80	100
1600	80	100
1700	80	100
1800	80	100

Actual Hourly Count			Warrants Met:	
			Warrant 2	Warrant 3
HOUR	Sum Major App.	Max Minor App.	Four Hour	Peak Hour
0:00 - 1:00	0	0	NO	NO
1:00 - 2:00	0	0	NO	NO
2:00 - 3:00	0	0	NO	NO
3:00 - 4:00	0	0	NO	NO
4:00 - 5:00	0	0	NO	NO
5:00 - 6:00	0	0	NO	NO
6:00 - 7:00	219	46	NO	NO
7:00 - 8:00	519	173	NO	NO
8:00 - 9:00	415	95	NO	NO
9:00 - 10:00	392	73	NO	NO
10:00 - 11:00	277	72	NO	NO
11:00 - 12:00	324	88	NO	NO
12:00 - 13:00	323	58	NO	NO
13:00 - 14:00	336	88	NO	NO
14:00 - 15:00	535	210	NO	NO
15:00 - 16:00	583	125	NO	NO
16:00 - 17:00	517	125	NO	NO
17:00 - 18:00	391	122	NO	NO
18:00 - 19:00	279	75	NO	NO
19:00 - 20:00	0	0	NO	NO
20:00 - 21:00	0	0	NO	NO
21:00 - 22:00	0	0	NO	NO
22:00 - 23:00	0	0	NO	NO
23:00 - 24:00	0	0	NO	NO

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SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2040 Future - Ugstad Rd at Arrowhead Rd
ALL WAY STOP
WARRANT ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach Total
40	Major App1:	Arrowhead Rd EB	1	3142
40	Major App3:	Arrowhead Rd WB	2	3506
30	Minor App2:	Ugstad Rd NB	2	1970
45	Minor App4:	Ugstad Rd SB	1	1884

0.70 SPEED FACTOR USED? **No**

Minimum Volume Requirement
300 **200**

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MINOR APPROACH TOTAL Σ (APP.2 + APP. 4)	WARRANT MET MAJOR / MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO
6:00 - 7:00	166	119	99	42	285	141	NO / NO
7:00 - 8:00	304	371	261	212	675	473	**YES / YES**
8:00 - 9:00	260	280	154	110	540	264	**YES / YES**
9:00 - 10:00	296	214	107	108	510	215	**YES / YES**
10:00 - 11:00	164	196	94	112	360	206	**YES / YES**
11:00 - 12:00	195	227	128	125	422	253	**YES / YES**
12:00 - 13:00	173	247	109	74	420	183	YES / NO
13:00 - 14:00	211	226	112	129	437	241	**YES / YES**
14:00 - 15:00	295	401	194	309	696	503	**YES / YES**
15:00 - 16:00	376	382	203	199	758	402	**YES / YES**
16:00 - 17:00	323	350	215	214	673	429	**YES / YES**
17:00 - 18:00	180	329	205	138	509	343	**YES / YES**
18:00 - 19:00	199	164	89	112	363	201	**YES / YES**
19:00 - 20:00	0	0	0	0	0	0	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO
Daily	**3142**	**3506**	**1970**	**1884**			

	Met (Hr)	Required (Hr)
Hours met for warrant:	**11**	**8**

All-way Stop Warrant: **Satisfied**

REMARKS:

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SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2040 Future - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
40	Major App1:	Arrowhead Rd EB	1	3142
40	Major App3:	Arrowhead Rd WB	2	3506
30	Minor App2:	Ugstad Rd NB	2	1453
45	Minor App4:	Ugstad Rd SB	1	1610

40 MPH OR FASTER?	NO
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**
CORRECTABLE CRASHES: (12-month period)	0

	Minimum Volume Requirement		
	1A	1B	1A&B (80%)
Major Total	420	630	504
Minor Approach	140	70	112

HOUR	MAJOR APP. 1	MAJOR APP. 3	MINOR APP. 2	MINOR APP. 4	MAJOR APPROACH TOTAL Σ (APP.1 + APP. 3)	MAX MINOR APPROACH (APP. 2 or 4)	WARRANT 1A - 8 hr MAJOR/MINOR	WARRANT 1B - 8 hr MAJOR/MINOR	WARRANT 1A & B MAJOR/MINOR
0:00 - 1:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
1:00 - 2:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
2:00 - 3:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
3:00 - 4:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
4:00 - 5:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
5:00 - 6:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
6:00 - 7:00	166	119	61	34	285	61	NO / NO	NO / NO	NO / NO
7:00 - 8:00	304	371	225	204	675	225	**YES / YES**	**YES / YES**	**YES / YES**
8:00 - 9:00	260	280	124	85	540	124	YES / NO	NO / YES	**YES / YES**
9:00 - 10:00	296	214	77	95	510	95	YES / NO	NO / YES	YES / NO
10:00 - 11:00	164	196	54	95	360	95	NO / NO	NO / YES	NO / NO
11:00 - 12:00	195	227	92	115	422	115	YES / NO	NO / YES	NO / YES
12:00 - 13:00	173	247	76	59	420	76	YES / NO	NO / YES	NO / NO
13:00 - 14:00	211	226	79	114	437	114	YES / NO	NO / YES	NO / YES
14:00 - 15:00	295	401	149	273	696	273	**YES / YES**	**YES / YES**	**YES / YES**
15:00 - 16:00	376	382	158	163	758	163	**YES / YES**	**YES / YES**	**YES / YES**
16:00 - 17:00	323	350	146	163	673	163	**YES / YES**	**YES / YES**	**YES / YES**
17:00 - 18:00	180	329	159	112	509	159	**YES / YES**	NO / YES	**YES / YES**
18:00 - 19:00	199	164	53	98	363	98	NO / NO	NO / YES	NO / NO
19:00 - 20:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
20:00 - 21:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
21:00 - 22:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
22:00 - 23:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
23:00 - 24:00	0	0	0	0	0	0	NO / NO	NO / NO	NO / NO
Daily	**3142**	**3506**	**1453**	**1610**					

		Met (Hr)	Required (Hr)	WARRANT MET:
Warrant 1	**Eight Hour Volumes**	6	8	Not satisfied
Warrant 1A	Minimum Vehicular Volume	5	8	Not satisfied
Warrant 1B	Interruption of Continuous Flow	4	8	Not satisfied
1A & 1B	Combination of Warrants	6	8	Not satisfied
Warrant 2	**Four Hour Volumes**	**4**	4	**Satisfied**
Warrant 3	**Peak Hour Volumes**	**1**	1	**Satisfied**
Warrant 7	**Crash Experience**	4	8	Not satisfied

COMMENTS:

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SHORT ELLIOTT HENDRICKSON INC.

10901 Red Circle Drive, Suite 200
Minnetonka, MN 55343

2040 Future - Ugstad Rd at Arrowhead Rd
SIGNAL WARRANT
ANALYSIS

LOCATION: Ugstad Rd at Arrowhead Rd
COUNTY: Saint Louis
REF. POINT: 0
DATE: 10/22/2020

OPERATOR: LJ

85th% Speed	Approach Description		Lanes	Approach
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40	Major App3:	Arrowhead Rd WB	2	3506
30	Minor App2:	Ugstad Rd NB	2	1453
45	Minor App4:	Ugstad Rd SB	1	1610

40 MPH OR FASTER?	YES
POPULATION < 10,000?	YES
VOLUME REQ. AT 70%?	**YES**

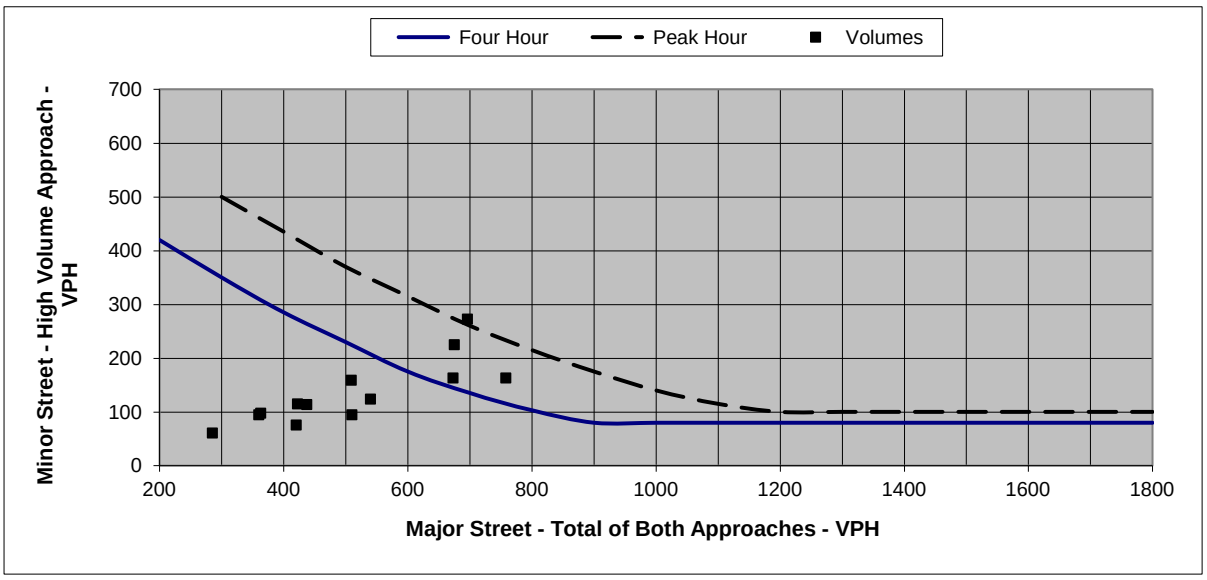

Figure 1. Four Hour and Peak Hour Warrant Analysis

Note: For data points outside the graph range, check the minor street volume against the lower thresholds

Warrant Criteria (Graph)		
Major	Minor App.	Minor App.
Approach	Four Hour	Peak Hour
200	420	
300	350	500
400	285	435
500	230	370
600	175	315
700	135	260
800	103	215
900	80	175
1000	80	140
1100	80	115
1200	80	100
1300	80	100
1400	80	100
1500	80	100
1600	80	100
1700	80	100
1800	80	100

Actual Hourly Count			Warrants Met:	
			Warrant 2	Warrant 3
HOUR	Sum Major App.	Max Minor App.	Four Hour	Peak Hour
0:00 - 1:00	0	0	NO	NO
1:00 - 2:00	0	0	NO	NO
2:00 - 3:00	0	0	NO	NO
3:00 - 4:00	0	0	NO	NO
4:00 - 5:00	0	0	NO	NO
5:00 - 6:00	0	0	NO	NO
6:00 - 7:00	285	61	NO	NO
7:00 - 8:00	675	225	**YES**	NO
8:00 - 9:00	540	124	NO	NO
9:00 - 10:00	510	95	NO	NO
10:00 - 11:00	360	95	NO	NO
11:00 - 12:00	422	115	NO	NO
12:00 - 13:00	420	76	NO	NO
13:00 - 14:00	437	114	NO	NO
14:00 - 15:00	696	273	**YES**	**YES**
15:00 - 16:00	758	163	**YES**	NO
16:00 - 17:00	673	163	**YES**	NO
17:00 - 18:00	509	159	NO	NO
18:00 - 19:00	363	98	NO	NO
19:00 - 20:00	0	0	NO	NO
20:00 - 21:00	0	0	NO	NO
21:00 - 22:00	0	0	NO	NO
22:00 - 23:00	0	0	NO	NO
23:00 - 24:00	0	0	NO	NO

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Appendix B

Intersection Operations Measures of Effectiveness Tables

Table B1
Ugstad Rd at Arrowhead Rd
Existing BASE Conditions (2020) Factored + Development
AM / SD / PM Peak Hours

	Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queing Information (feet)												
																	Left Turn Lane				Through Lane (s)					Right Turn Lane			
			L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Thru [(2)] ---->	% Block Left [(2)] <----	Link Length (feet)	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Right [(2)] ---->	% Block Thru [(2)] <----	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]
AM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	124	143		267	4.6	A	3.0	A			3.7	A	4.5	A						1921	28	102					
		WB		93	145	238			4.8	A	3.6	A	4.1	A								1232	20	24					
		SB	80		54	134	9.2	A	1.0	A	3.9	A	6.7	A			380	33	92								100	22	69
	Hawk Circle Dr at Elementary Access	EB	1	14	24	39	0.0	A	4.3	A	2.8	A	3.4	A	4.3	A						570	20	38			105	20	47
		WB	67	26	15	108	5.5	A	5.4	A	3.4	A	5.2	A								1207	33	92					
		NB	56	65	148	269	5.1	A	4.2	A	3.7	A	4.1	A								381	38	88					
		SB	10	43	1	54	3.8	A	4.5	A	2.2	A	4.3	A								440	20	59					
	Ugstad Rd at Hawk Circle Dr	EB	59		119	178	32.9	D			7.3	A	16.0	C	23.2	C	950	47	226								120	38	138
		NB	257	62		319	41.6	E	34.0	D			40.1	E								1060	131	573					
		SB		84	182	266			7.0	A	7.3	A	7.2	A								1471	24	182					
	Ugstad Rd at Arrowhead Rd	EB	24	168	31	223	9.3	A	11.5	B	6.6	A	10.6	B	11.0	B						1232	50	115					
		WB	18	167	157	342	7.7	A	11.6	B	5.9	A	8.9	A								1536	41	91			120	32	83
		NB	60	138	24	222	11.4	B	12.8	B	4.1	A	11.6	B								1451	58	149	3 %		100	20	40
		SB	85	107	11	203	14.4	B	15.1	C	7.4	A	14.3	B								1060	44	162					
SD Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	27	143		170	2.4	A	1.2	A			1.4	A	4.0	A						1921	20	52					
		WB		195	57	252			4.0	A	3.3	A	3.8	A								1232		20					
		SB	128		96	224	8.3	A	0.8	A	4.9	A	6.0	A			380	40	123								100	33	97
	Hawk Circle Dr at Elementary Access	EB	4	11	54	69	5.0	A	3.8	A	3.1	A	3.3	A	4.7	A						570	20	38			105	20	62
		WB	122	61	13	196	6.5	A	4.6	A	4.8	A	5.8	A								1207	48	108					
		NB	15	35	34	84	3.7	A	4.0	A	2.5	A	3.4	A								381	20	47					
		SB	18	48		66	4.2	A	4.9	A			4.7	A								440	24	72					
	Ugstad Rd at Hawk Circle Dr	EB	103		204	307	7.9	A	0.0	A	6.3	A	6.8	A	4.7	A	950	39	109							1 %	120	57	154
		NB	95	85		180	3.7	A	3.5	A			3.6	A								1060	20	49					
		SB		94	44	138			2.1	A	0.6	A	1.6	A								1471		20					
	Ugstad Rd at Arrowhead Rd	EB	27	181	63	271	10.5	B	15.2	C	9.6	A	13.4	B	16.8	C						1232	60	203					
		WB	41	186	67	294	8.5	A	11.5	B	4.1	A	9.4	A								1536	45	100			120	20	49
		NB	38	86	23	147	7.5	A	8.8	A	4.6	A	7.8	A								1451	42	88			100	20	47
		SB	131	139	28	298	32.9	D	31.4	D	20.9	C	30.9	D								1060	101	472					
PM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	26	96		122	2.3	A	0.7	A			1.0	A	3.3	A						1921	20	39					
		WB		181	76	257			3.6	A	3.1	A	3.5	A															
		SB	74		28	102	6.1	A	1.0	A	3.9	A	5.5	A			380	30	60								100	20	49
	Hawk Circle Dr at Elementary Access	EB	2	19	33	54	4.0	A	4.1	A	2.7	A	3.2	A	3.7	A						570	20	43			105	22	51
		WB	9	16	27	52	4.2	A	4.0	A	3.0	A	3.5	A								1207	25	53					
		NB	17	82	3	102	3.5	A	4.0	A	1.9	A	3.9	A								381	20	46					
		SB	9	60	1	70	4.0	A	4.0	A	3.8	A	4.0	A								440	22	49					
	Ugstad Rd at Hawk Circle Dr	EB	33		35	68	5.3	A	0.1	A	3.4	A	4.2	A	2.3	A	950	20	58								120	21	67
		NB	34	112		146	3.1	A	2.6	A			2.7	A								1060	20	31					
		SB		120	44	164			1.2	A	0.6	A	1.1	A															
	Ugstad Rd at Arrowhead Rd	EB	24	112	34	170	5.9	A	9.1	A	3.9	A	7.7	A	7.3	A						1232	39	69					
		WB	33	161	44	238	6.0	A	9.6	A	3.2	A	7.8	A								1536	37	73			120	20	44
		NB	59	78	36	173	6.2	A	7.4	A	3.8	A	6.2	A								1451	41	76			100	23	57
		SB	31	87	37	155	5.4	A	9.6	A	3.7	A	7.4	A								1060	30	65					

NOTES:

NOTES
1. If the reported queue is greater than zero (0), but less than ft, a minimum of ft is reported.
2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.
3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.

Table B2
Ugstad Rd at Arrowhead Rd
2040 BASE Conditions
AM / SD / PM Peak Hours

	Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queing Information (feet)												
																	Left Turn Lane				Through Lane (s)					Right Turn Lane			
			L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Thru [2] ---->	% Block Left [2] <----	Link Length (feet)	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Right [2] ---->	% Block Thru [2] <----	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]
AM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	136	202		338	5.4	A	3.4	A			4.2	A	5.0	A						1921	36	125					
		WB		150	159	309			5.1	A	3.8	A	4.4	A								1232	20	28					
		SB	88		60	148	11.2	B	0.9	A	4.2	A	8.0	A			380	36	96								100	24	81
	Hawk Circle Dr a Elementary Access	EB	1	15	27	43	3.5	A	4.3	A	2.8	A	3.4	A	4.4	A						570	20	38			105	20	49
		WB	74	28	15	117	5.9	A	5.8	A	4.1	A	5.6	A								1207	37	101					
		NB	62	72	162	296	5.0	A	4.3	A	3.7	A	4.1	A								381	39	87					
		SB	12	47	1	60	4.0	A	4.5	A	2.3	A	4.4	A								440	21	57					
	Ugstad Rd at Hawk Circle Dr	EB	67		131	198	75.9	F	0.1	A	23.6	C	40.7	E	56.8	F	950	89	398							1 %	120	50	163
		NB	283	132		415	91.4	F	78.5	F			87.3	F								1060	323	1066					
		SB		138	200	338			31.5	D	28.3	D	29.6	D								1471	102	598					
	Ugstad Rd at Arrowhead Rd	EB	32	218	40	290	28.5	D	24.9	C	22.2	C	24.9	C	33.8	D						1232	89	265					
		WB	22	216	204	442	19.1	C	21.1	C	27.6	D	24.1	C								1536	94	372	1 %	6 %	120	58	185
		NB	77	179	31	287	35.1	E	42.4	E	13.9	B	37.2	E								1451	119	476	21 %		100	36	177
		SB	113	140	16	269	63.2	F	50.6	F	40.9	E	55.4	F								1060	146	640					
SD Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	28	210		238	3.3	A	1.5	A			1.7	A	4.6	A						1921	20	61					
		WB		262	63	325			4.2	A	3.4	A	4.1	A								1232		20					
		SB	141		106	247	11.3	B	0.8	A	5.5	A	7.7	A			380	46	147								100	36	92
	Hawk Circle Dr a Elementary Access	EB	4	12	59	75	3.8	A	4.6	A	3.2	A	3.4	A	4.9	A						570	20	43			105	20	66
		WB	134	67	13	214	6.6	A	4.6	A	4.8	A	5.9	A								1207	50	111					
		NB	16	39	38	93	4.0	A	4.3	A	2.6	A	3.6	A								381	20	48					
		SB	20	53		73	4.6	A	5.2	A			5.0	A								440	26	69					
	Ugstad Rd at Hawk Circle Dr	EB	114		226	340	52.1	F	13.1	B	84.2	F	73.6	F	38.4	E	950	237	920							28 %	120	96	185
		NB	104	131		235	4.9	A	4.2	A			4.5	A								1060	21	75					
		SB		162	50	212			16.9	C	16.9	C	16.9	C								1471	37	250					
	Ugstad Rd at Arrowhead Rd	EB	36	235	80	351	38.4	E	44.1	E	35.8	E	41.7	E	62.5	F						1232	149	489					
		WB	52	240	87	379	15.0	C	16.3	C	5.6	A	13.6	B								1536	67	170	2 %		120	25	60
		NB	48	112	30	190	10.1	B	11.2	B	5.7	A	10.1	B								1451	51	115	1 %		100	22	73
		SB	171	180	37	388	158.0	F	150.9	F	118.2	F	150.6	F								1060	481	1069					
PM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	30	141		171	2.8	A	1.1	A			1.4	A	3.6	A						1921	20	46					
		WB		250	84	334			4.0	A	3.3	A	3.8	A								1232		20					
		SB	82		30	112	7.5	A	1.0	A	4.0	A	6.3	A			380	32	78								100	20	57
	Hawk Circle Dr a Elementary Access	EB	2	21	37	60	4.7	A	4.0	A	2.8	A	3.3	A	3.8	A						570	20	46			105	24	54
		WB	10	18	30	58	4.3	A	4.5	A	3.1	A	3.7	A								1207	26	58					
		NB	19	90	3	112	3.8	A	4.0	A	2.9	A	3.9	A								381	21	53					
		SB	10	67	1	78	4.1	A	4.1	A	2.4	A	4.1	A								440	25	60					
	Ugstad Rd at Hawk Circle Dr	EB	36		38	74	6.1	A	0.0	A	3.5	A	4.7	A	2.4	A	950	21	57								120	21	61
		NB	38	154		192	3.5	A	2.7	A			2.8	A								1060	20	40					
		SB		165	47	212			1.4	A	0.6	A	1.2	A								1471		20					
	Ugstad Rd at Arrowhead Rd	EB	33	146	44	223	7.6	A	10.3	B	5.1	A	8.9	A	8.5	A						1232	47	94					
		WB	43	208	58	309	7.9	A	11.0	B	4.0	A	9.2	A								1536	46	102			120	20	50
		NB	78	101	47	226	7.3	A	8.3	A	4.2	A	7.1	A								1451	48	90			100	25	60
		SB	40	115	48	203	6.6	A	10.9	B	4.8	A	8.6	A								1060	36	77					

NOTES:

NOTES
1. If the reported queue is greater than zero (0), but less than ft, a minimum of ft is reported.
2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.
3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.

Table B3
Ugstad Rd at Arrowhead Rd
2040 BASE Conditions + Mitigations
AM / SD / PM Peak Hours

Turn Lane Additions:
NB LT/SB RT at Ugstad/Hawk Circle
SB LT/NB LT at Ugstad/Arrowhead
EB RT at Ugstad/Arrowhead

	Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queing Information (feet)												
																	Left Turn Lane				Through Lane (s)					Right Turn Lane			
			L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Thru [2] ---->	% Block Left [2] <----	Link Length (feet)	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Right [2] ---->	% Block Thru [2] <----	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]
AM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	136	202		338	5.5	A	3.5	A			4.3	A	5.1	A						1921	36	137					
		WB		150	159	309			5.1	A	3.8	A	4.4	A								1226	20	31					
		SB	88		60	148	11.5	B	1.0	A	4.1	A	8.2	A			380	37	92								100	23	70
	Hawk Circle Dr a Elementary Access	EB	1	15	27	43	4.2	A	4.3	A	2.8	A	3.4	A	4.4	A						570	20	41			105	20	48
		WB	74	28	15	117	5.9	A	5.7	A	4.3	A	5.6	A								1207	37	93					
		NB	62	72	162	296	5.1	A	4.3	A	3.7	A	4.1	A								381	40	85					
		SB	12	47	1	60	3.7	A	4.5	A	2.3	A	4.3	A								440	21	56					
	Ugstad Rd at Hawk Circle Dr	EB	67		131	198	43.2	E	0.1	A	8.5	A	19.7	C	39.6	E	930	53	242								120	37	151
		NB	283	132		415	96.0	F	11.5	B			68.9	F			700	213	710		1 %	1061	138	966	1 %				
		SB		138	200	338			10.8	B	19.0	C	15.7	C							2 %	1471	33	315	2 %	1 %	300	36	197
	Ugstad Rd at Arrowhead Rd	EB	32	218	40	290	18.5	C	18.9	C	6.9	A	17.1	C	17.1	C						1226	70	191	1 %		200	24	67
		WB	22	216	204	442	13.9	B	16.6	C	14.8	B	15.6	C								1543	68	201	2 %	4 %	120	63	187
		NB	77	179	31	287	10.9	B	25.0	D	16.7	C	20.3	C			200	34	132		3 %	1438	69	252					
		SB	113	140	16	269	19.3	C	14.6	B	5.8	A	16.1	C			300	39	163			1061	37	113					
SD Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	28	210		238	3.4	A	1.6	A			1.8	A	4.9	A						1921	20	70					
		WB		262	63	325			4.2	A	3.3	A	4.0	A								1226		20					
		SB	141		106	247	12.6	B	0.8	A	6.0	A	8.6	A			380	50	159								100	36	112
	Hawk Circle Dr a Elementary Access	EB	4	12	59	75	4.4	A	4.4	A	3.2	A	3.5	A	5.1	A						570	20	43			105	20	66
		WB	134	67	13	214	7.2	A	4.6	A	5.2	A	6.3	A								1207	52	123					
		NB	16	39	38	93	4.5	A	4.5	A	2.7	A	3.8	A								381	21	54					
		SB	20	53		73	4.4	A	5.1	A			4.9	A								440	25	61					
	Ugstad Rd at Hawk Circle Dr	EB	114		226	340	12.1	B	0.5	A	11.0	B	11.3	B	6.2	A	930	52	201							4 %	120	58	176
		NB	104	131		235	4.3	A	2.5	A			3.3	A			700	20	54										
		SB		162	50	212			1.6	A	0.5	A	1.3	A													300		20
	Ugstad Rd at Arrowhead Rd	EB	36	235	80	351	29.0	D	37.5	E	15.2	C	31.7	D	19.7	C						1226	115	420	11 %		200	54	191
		WB	52	240	87	379	17.3	C	17.0	C	6.4	A	14.5	B								1543	75	181	4 %		120	36	90
		NB	48	112	30	190	8.4	A	11.7	B	7.6	A	10.2	B			200	22	52			1438	40	98					
		SB	171	180	37	388	19.2	C	20.3	C	9.9	A	18.8	C			300	55	216			1061	55	186					
PM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	30	141		171	2.8	A	1.0	A			1.3	A	3.6	A						1921	20	45					
		WB		250	84	334			4.0	A	3.3	A	3.8	A								1226		20					
		SB	82		30	112	7.3	A	1.0	A	4.0	A	6.2	A			380	32	78								100	20	48
	Hawk Circle Dr a Elementary Access	EB	2	21	37	60	4.8	A	4.0	A	2.8	A	3.3	A	3.8	A						570	20	44			105	24	54
		WB	10	18	30	58	4.3	A	4.6	A	3.0	A	3.7	A								1207	26	58					
		NB	19	90	3	112	3.7	A	4.0	A	2.9	A	3.9	A								381	21	50					
		SB	10	67	1	78	4.1	A	4.1	A	2.4	A	4.1	A								440	25	60					
	Ugstad Rd at Hawk Circle Dr	EB	36		38	74	5.9	A	0.0	A	3.0	A	4.4	A	1.9	A	930	20	52								120	20	56
		NB	38	154		192	3.4	A	2.3	A			2.5	A			700	20	35										
		SB		165	47	212			0.7	A	0.4	A	0.6	A															
	Ugstad Rd at Arrowhead Rd	EB	33	146	44	223	7.2	A	10.0	B	4.4	A	8.5	A	8.3	A						1226	43	80			200	25	63
		WB	43	208	58	309	8.1	A	11.0	B	4.6	A	9.4	A								1543	52	99			120	27	60
		NB	78	101	47	226	6.7	A	8.0	A	4.4	A	6.8	A			200	27	59			1438	32	64					
		SB	40	115	48	203	5.6	A	10.3	B	4.3	A	8.0	A			300	20	41			1061	32	68					

NOTES:

NOTES
1. If the reported queue is greater than zero (0), but less than ft, a minimum of ft is reported.
2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.
3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.

Table B4
Ugstad Rd at Arrowhead Rd
2040 BASE Conditions + Mitigations Ver2
AM / SD / PM Peak Hours

Turn Lane Additions:
NB LT/SB RT at Ugstad/Hawk Circle
SB LT/NB LT at Ugstad/Arrowhead
EB RT / WB RT Extend at Ugstad/Arrowhead

	Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queing Information (feet)													
																	Left Turn Lane				Through Lane (s)					Right Turn Lane			
			L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Thru [2] ---->	% Block Left [2] <----	Link Length (feet)	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Right [2] ---->	% Block Thru [2] <----	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]
AM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	136	202		338	4.7	A	1.5	A			2.8	A	3.9	A	200	27	92										
		WB		150	159	309			3.6	A	3.7	A	3.7	A								1227		20			200	20	31
		SB	88		60	148	9.3	A	0.9	A	3.9	A	6.9	A			365	33	89								100	20	62
	Hawk Circle Dr a Elementary Access	EB	1	15	27	43	4.2	A	4.3	A	2.8	A	3.4	A	4.5	A						570	20	38			105	20	48
		WB	74	28	15	117	6.0	A	5.7	A	4.2	A	5.7	A								1207	36	95					
		NB	62	72	162	296	5.2	A	4.2	A	3.8	A	4.2	A								366	41	87					
		SB	12	47	1	60	3.8	A	4.5	A	2.4	A	4.3	A								440	21	56					
	Ugstad Rd at Hawk Circle Dr	EB	67		131	198	42.5	E	0.1	A	7.9	A	19.1	C	39.4	E	930	51	240								120	37	143
		NB	283	132		415	95.8	F	11.8	B			68.8	F			700	212	704		1 %	1061	142	941	1 %				
		SB		138	200	338			10.9	B	19.1	C	15.8	C							2 %	1471	35	332	2 %	1 %	300	37	194
	Ugstad Rd at Arrowhead Rd	EB	32	218	40	290	18.4	C	18.8	C	6.5	A	17.0	C	17.2	C						1227	69	192	2 %		200	24	65
		WB	22	216	204	442	13.9	B	16.1	C	14.7	B	15.4	C								1543	66	181		1 %	250	62	195
		NB	77	179	31	287	10.8	B	25.6	D	17.1	C	20.7	C			200	35	136		3 %	1438	69	245					
		SB	113	140	16	269	20.5	C	14.9	B	5.7	A	16.8	C			300	40	167			1061	38	113					
SD Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	28	210		238	3.5	A	1.2	A			1.5	A	4.5	A	200	20	42										
		WB		262	63	325			3.6	A	3.3	A	3.5	A								1227		20			200		20
		SB	141		106	247	12.1	B	0.8	A	5.5	A	8.2	A			365	47	143								100	30	105
	Hawk Circle Dr a Elementary Access	EB	4	12	59	75	4.4	A	4.4	A	3.2	A	3.5	A	5.1	A						570	20	43			105	20	66
		WB	134	67	13	214	7.2	A	4.6	A	5.1	A	6.3	A								1207	52	122					
		NB	16	39	38	93	4.3	A	4.4	A	2.6	A	3.7	A								366	21	48					
		SB	20	53		73	4.3	A	5.2	A			4.9	A								440	25	62					
	Ugstad Rd at Hawk Circle Dr	EB	114		226	340	12.0	B	0.5	A	10.9	B	11.2	B	6.2	A	930	52	194							4 %	120	58	176
		NB	104	131		235	4.3	A	2.5	A			3.3	A			700	20	58										
		SB		162	50	212			1.6	A	0.5	A	1.3	A													300	20	20
	Ugstad Rd at Arrowhead Rd	EB	36	235	80	351	29.4	D	38.2	E	15.5	C	32.3	D	20.0	C						1227	117	429	11 %		200	52	159
		WB	52	240	87	379	18.4	C	17.9	C	5.4	A	15.0	C								1543	77	194			250	33	71
		NB	48	112	30	190	8.6	A	11.6	B	7.6	A	10.2	B			200	22	60			1438	39	94					
		SB	171	180	37	388	19.5	C	19.9	C	9.6	A	18.7	C			300	55	194		1 %	1061	55	187					
PM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	30	141		171	2.6	A	0.7	A			1.0	A	3.1	A	200	20	36										
		WB		250	84	334			3.1	A	3.2	A	3.1	A													200		20
		SB	82		30	112	7.2	A	1.0	A	3.6	A	6.0	A			365	30	77								100	20	42
	Hawk Circle Dr a Elementary Access	EB	2	21	37	60	4.8	A	4.1	A	2.8	A	3.3	A	3.8	A						570	20	46			105	24	54
		WB	10	18	30	58	4.3	A	4.6	A	3.1	A	3.8	A								1207	26	58					
		NB	19	90	3	112	3.8	A	4.0	A	3.0	A	3.9	A								366	21	47					
		SB	10	67	1	78	4.1	A	4.1	A	2.4	A	4.1	A								440	25	60					
	Ugstad Rd at Hawk Circle Dr	EB	36		38	74	5.8	A	0.0	A	3.0	A	4.3	A	1.9	A	930	20	52								120	20	56
		NB	38	154		192	3.4	A	2.3	A			2.5	A			700	20	36										
		SB		165	47	212			0.7	A	0.4	A	0.6	A													300		20
	Ugstad Rd at Arrowhead Rd	EB	33	146	44	223	7.1	A	9.9	A	4.3	A	8.4	A	8.2	A						1227	42	74			200	25	62
		WB	43	208	58	309	8.0	A	10.9	B	3.9	A	9.2	A								1543	52	98			250	26	59
		NB	78	101	47	226	6.7	A	8.2	A	4.3	A	6.9	A			200	27	59			1438	32	70					
		SB	40	115	48	203	5.5	A	10.4	B	4.2	A	8.0	A			300	20	41			1061	32	68					

NOTES:

NOTES
1. If the reported queue is greater than zero (0), but less than ft, a minimum of ft is reported.
2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.
3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.

Table B5
Ugstad Rd at Arrowhead Rd
2040 BASE Conditions + Mitigations
AM / SD / PM Peak Hours

Turn Lane Additions:
NB LT/SB RT at Ugstad/Hawk Circle
Roundabout at Ugstad/Arrowhead

	Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queing Information (feet): Left Turn Lane				Through Lane (s)					Right Turn Lane			
			L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Thru [2] ---->	% Block Left [2] <----	Link Length (feet)	Avg. Queue (feet) [1]	Max Queue (feet) [1]	% Block Right [2] ---->	% Block Thru [2] <----	Storage (feet) [3]	Avg. Queue (feet) [1]	Max Queue (feet) [1]
AM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	136	202		338	4.7	A	1.5	A			2.8	A	3.3	A	200	27	84										
		WB		150	159	309			1.7	A	2.1	A	1.9	A													200	20	32
		SB	88		60	148	9.6	A	1.0	A	3.9	A	7.0	A			365	33	100								100	20	67
	Hawk Circle Dr a Elementary Access	EB	1	15	27	43	4.1	A	4.2	A	2.8	A	3.3	A	4.5	A						570	20	41			105	20	48
		WB	74	28	15	117	6.0	A	5.7	A	4.3	A	5.7	A								1207	37	103					
		NB	62	72	162	296	5.2	A	4.2	A	3.8	A	4.2	A								366	41	84					
		SB	12	47	1	60	3.8	A	4.5	A	2.4	A	4.3	A								440	21	56					
	Ugstad Rd at Hawk Circle Dr	EB	67		131	198	42.7	E	0.1	A	8.8	A	19.8	C	40.2	E	930	51	242							1 %	120	36	134
		NB	283	132		415	101.1	F	8.8	A			71.4	F			900	235	859		1 %	1029	107	860	1 %				
		SB		138	200	338			10.2	B	17.4	C	14.5	B							2 %	1471	32	287	2 %	1 %	300	35	183
	Ugstad Rd at Arrowhead Rd	EB	32	218	40	290	6.1	A	7.1	A	5.6	A	6.8	A	10.1	B						1186	27	97					
		WB	22	216	204	442	13.6	B	14.7	B	13.6	B	14.1	B								1502	70	341					
		NB	77	179	31	287	8.5	A	9.2	A	6.4	A	8.7	A								1406	46	174					
		SB	113	140	16	269	7.9	A	9.2	A	5.2	A	8.4	A								1029	32	136					
SD Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	28	210		238	3.3	A	1.2	A			1.4	A	3.8	A	200	20	42										
		WB		262	63	325			1.6	A	1.6	A	1.6	A													200		20
		SB	141		106	247	12.1	B	0.8	A	5.8	A	8.3	A			365	48	157								100	30	97
	Hawk Circle Dr a Elementary Access	EB	4	12	59	75	4.4	A	4.4	A	3.2	A	3.5	A	5.1	A						570	20	43			105	20	66
		WB	134	67	13	214	7.1	A	4.6	A	5.1	A	6.2	A								1207	52	119					
		NB	16	39	38	93	4.2	A	4.4	A	2.7	A	3.7	A								366	21	55					
		SB	20	53		73	4.4	A	5.2	A			5.0	A								440	25	63					
	Ugstad Rd at Hawk Circle Dr	EB	114		226	340	12.7	B	0.5	A	11.3	B	11.7	B	6.0	A	930	55	214							5 %	120	58	177
		NB	104	131		235	3.1	A	1.2	A			2.0	A			900	20	58										
		SB		162	50	212			1.6	A	0.5	A	1.3	A													300	20	20
	Ugstad Rd at Arrowhead Rd	EB	36	235	80	351	9.3	A	12.8	B	9.7	A	11.8	B	12.0	B						1186	52	205					
		WB	52	240	87	379	5.6	A	6.9	A	5.2	A	6.3	A								1502	26	84					
		NB	48	112	30	190	5.1	A	5.4	A	4.9	A	5.2	A								1406	31	90					
		SB	171	180	37	388	22.3	C	21.2	C	12.7	B	20.8	C								1029	89	426					
PM Peak Hour	Arrowhead Rd at Hawk Circle Dr	EB	30	141		171	2.4	A	0.7	A			1.0	A	1.9	A	200	20	36										
		WB		250	84	334			1.0	A	1.1	A	1.0	A													200		20
		SB	82		30	112	7.1	A	1.0	A	3.8	A	6.0	A			365	30	76								100	20	44
	Hawk Circle Dr a Elementary Access	EB	2	21	37	60	4.6	A	4.1	A	2.8	A	3.3	A	3.8	A						570	20	44			105	24	54
		WB	10	18	30	58	4.2	A	4.5	A	3.0	A	3.7	A								1207	26	58					
		NB	19	90	3	112	3.9	A	4.1	A	2.7	A	4.0	A								366	21	48					
		SB	10	67	1	78	4.2	A	4.1	A	2.4	A	4.1	A								440	25	60					
	Ugstad Rd at Hawk Circle Dr	EB	36		38	74	5.7	A	0.0	A	3.0	A	4.3	A	1.3	A	930	20	50								120	20	56
		NB	38	154		192	1.9	A	0.7	A			0.9	A			900	20	33										
		SB		165	47	212			0.7	A	0.4	A	0.6	A													300		20
	Ugstad Rd at Arrowhead Rd	EB	33	146	44	223	4.3	A	5.9	A	4.1	A	5.3	A	5.2	A						1186	20	52					
		WB	43	208	58	309	4.7	A	6.5	A	4.8	A	5.9	A								1502	25	85					
		NB	78	101	47	226	3.9	A	4.4	A	3.7	A	4.1	A								1406	21	61					
		SB	40	115	48	203	3.8	A	6.2	A	4.0	A	5.2	A								1029	22	60					

NOTES:

NOTES
1. If the reported queue is greater than zero (0), but less than ft, a minimum of ft is reported.
2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.
3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.

Appendix C

Crash History/Diagrams

Table C1
Hermantown Ugstad at Arrowhead Traffic Study
Sept 2015 to Sept 2020 Crash Data
MnDOT Crash Mapping Software Information

Study Intersections			Crash Severity						INTERSECTION CRASH RATE INFORMATION				FATAL AND SEV A RATE INFORMATION		
									Crash Rate	Critical Rates	Critical Index	MnDOT Average	FAR Rate	Critical Rates	MnDOT Average
Intersection	Control Type	Entering ADT	Fatal	A	B	C	Property	Total	Crash Rate	Crash Rate	Critical Index	Crash Rate	FAR Rate	FAR Rate	FAR Rate
Arrowhead Rd at Hawk Circle Dr	Thru/Stop (U)	4,520	0	0	0	1	1	2	0.24	0.63	0.38	**0.18**	0.00	8.94	0.33
Hawk Circle Drive at Elementary Access	All Way	3,010	0	0	0	0	0	0	0.00	1.09	0.00	0.35	0.00	13.81	0.57
Ugstad Rd at Hawk Circle Dr	Thru/Stop (U)	3,790	0	0	0	0	2	2	0.29	0.68	0.43	**0.18**	0.00	10.34	0.33
Ugstad Rd at Arrowhead Rd	All Way	6,630	0	0	0	1	7	8	0.66	0.83	0.79	**0.35**	0.00	7.49	0.57
TOTAL			**0**	**0**	**0**	**2**	**10**	**12**							
			0%	**0%**	**0%**	**17%**	**83%**	**100%**							

Critical Rate Exceeded	Critical Index ≥ 1	Average Rate Exceeded
	Critical Index ≥ 0.85	

Critical FAR Rate Exceeded	Average FAR Rate Exceeded

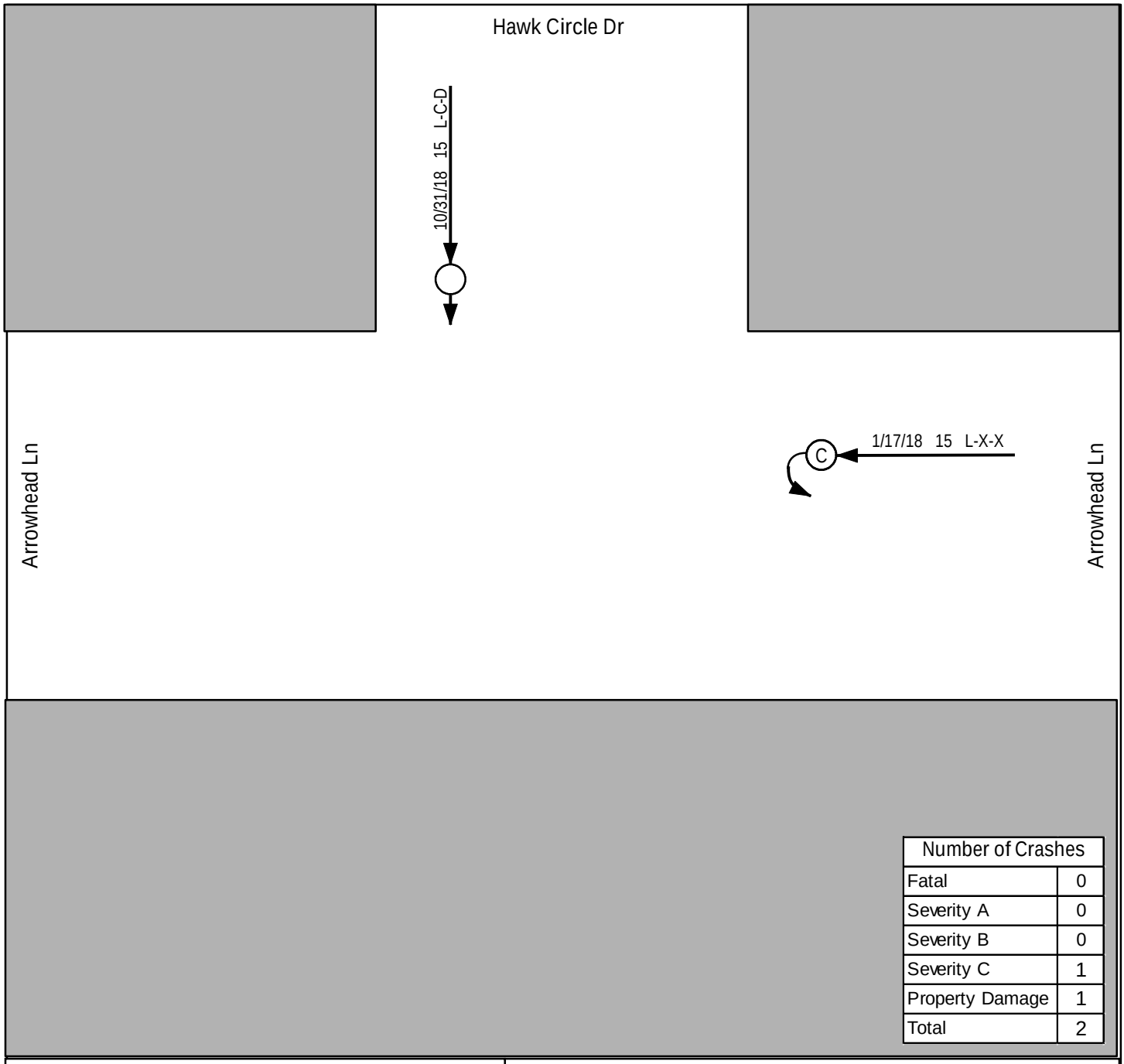
NOTES:
**Signalized Intersections
Crash Rates - Number of crashes per million entering vehicles
FAR Rates - Number of Fatal and Severity A crashes per 100 million entering vehicles
Exceeding the Calculated Critical Rates indicated a sustained crash problem.
Control Type - Thru/Sop (U) - Urban
Control Type - Thru/Sop (R) - Rural

MnDOT Statewide Average Rates (2015 Data; 5-Year)*	
Intersection Type	Crash Rate
Urban Thru/Stop	0.18
Rural Thru/Stop	0.25
Signal (3) - High Volume, Low Speed	0.70
Signal (4) - High Volume, High Speed	0.45
Other	0.16

Table C2
Hermantown Ugstad at Arrowhead Traffic Study
Sept 2015 to Sept 2020 Crash Data
MnDOT Crash Mapping Software Information

Study Intersections	Diagram - Crash Type							Pedestrian / Bicycle Crashes	
Intersection	Rear End	Right Angle	Sideswipe	Head On	Single Vehicle	Other	Total	Pedestrian	Bicycle
Arrowhead Rd at Hawk Circle Dr	1	1	0	0	0	0	2	0	0
Hawk Circle Drive at Elementary Access	0	0	0	0	0	0	0	0	0
Ugstad Rd at Hawk Circle Dr	0	2	0	0	0	0	2	0	0
Ugstad Rd at Arrowhead Rd	3	5	0	0	0	0	8	0	0
TOTAL	**4**	**8**	**0**	**0**	**0**	**0**	**12**	**0**	**0**
	33%	**67%**	**0%**	**0%**	**0%**	**0%**	**100%**		

NOTES:
**Signalized Intersections



Number of Crashes	
Fatal	0
Severity A	0
Severity B	0
Severity C	1
Property Damage	1
Total	2

Passenger Vehicle
Heavy Vehicle
Bus
Motorcycle
Fixed Object
Pedestrian
Bicycle

Fatal
Severity A
Severity B
Severity C
Property Damage Only
Vehicle Out of Control

Notes:

Light
L = Daylight
Dn = Dawn
Du = Dusk
Dl = Dark, Lighted
Do = Dark, Lights Off
D = Dark, Unlighted
X = Unkown

Weather
C = Clear or Cloudy
R = Rain
S = Snow/Sleet/Hail/Freexing Rain
F = Fog/Smog/Smoke
B = Blowing Sand/Dust/Snow
W = Severe Cross Winds
X = Other or Unknown

Surface
D = Dry
W = Wet or Water
S = Snow/Slush/Ice
M = Muddy
Db = Debris
O = Oily
X = Other or Unkown

Date Time(Hr) Light-Weather-Surface → Injury Type → Other Vehicle(s)

Path: X:\FJ\H\HERMT\1550500\8-planning\Analysis\Crash Analysis\Crash Diagrams\C1_Arrowhead Rd at Hawk Circle Dr_Crash Diagrams.mxd

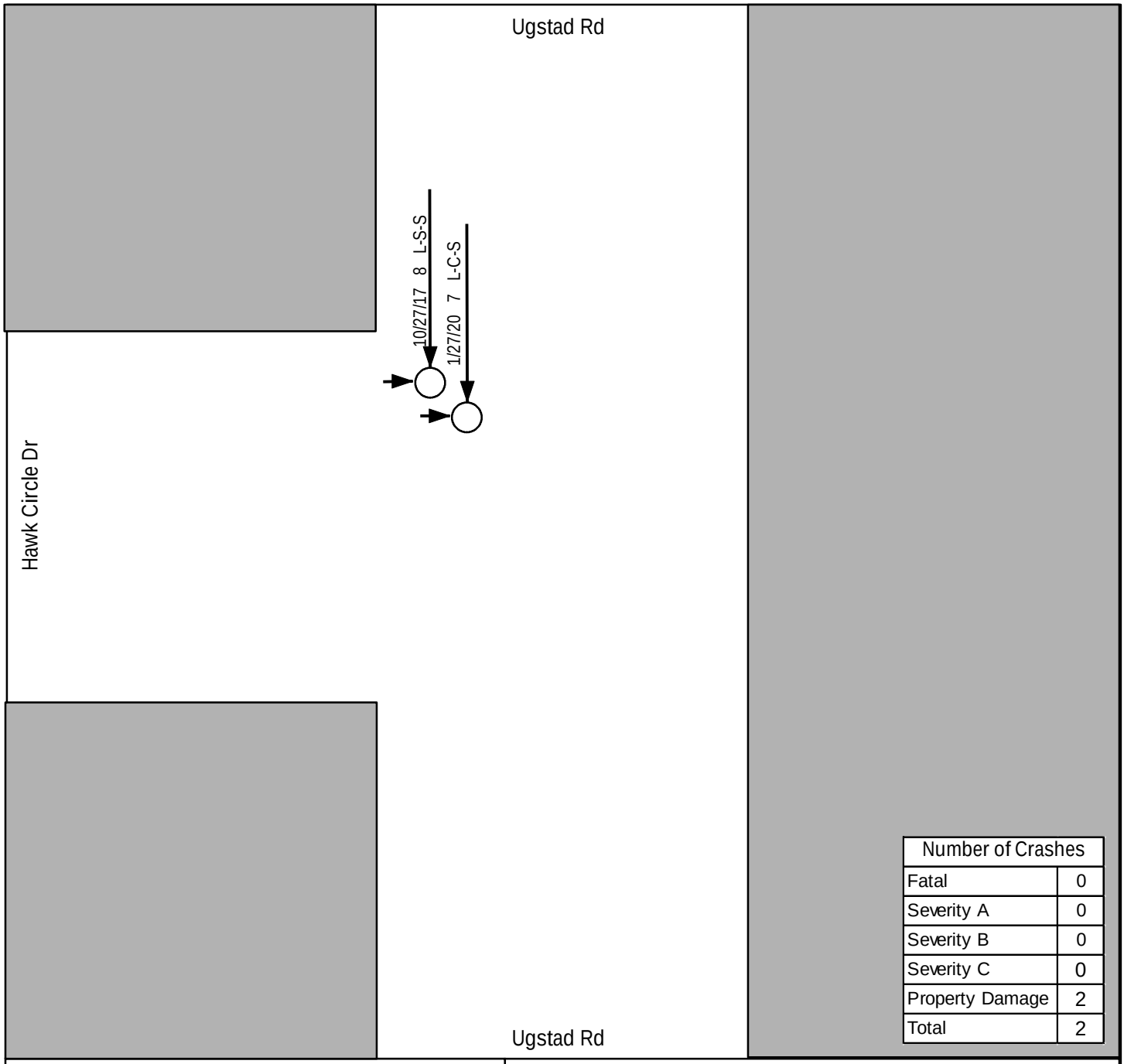
SEH

Project: MNT03 152201
Print Date: 12/14/2020

Map by: ljohnson
Projection:
Source:

Crash Diagrams (2015-2019)
Arrowhead Rd at Hawk Circle Dr
Ugstad & Arrowhead Road Corridor Traffic Study
Hermantown, MN

Figure C1



Number of Crashes	
Fatal	0
Severity A	0
Severity B	0
Severity C	0
Property Damage	2
Total	2

Passenger Vehicle
Heavy Vehicle
Bus
Motorcycle
Fixed Object
Pedestrian
Bicycle

Fatal
Severity A
Severity B
Severity C
Property Damage Only
Vehicle Out of Control

Notes:

Light
L = Daylight
Dn = Dawn
Du = Dusk
Dl = Dark, Lighted
Do = Dark, Lights Off
D = Dark, Unlighted
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C = Clear or Cloudy
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F = Fog/Smog/Smoke
B = Blowing Sand/Dust/Snow
W = Severe Cross Winds
X = Other or Unknown

Surface
D = Dry
W = Wet or Water
S = Snow/Slush/Ice
M = Muddy
Db = Debris
O = Oily
X = Other or Unkown

Date Time(Hr) Light-Weather-Surface → Injury Type → Other Vehicle(s)

Path: X:\FJ\H\HERMT\1550508-planning\Analysis\Crash Analysis\Crash Diagrams\C2_Ugstad Rd at Hawk Circle Dr_Crash Diagrams.mxd

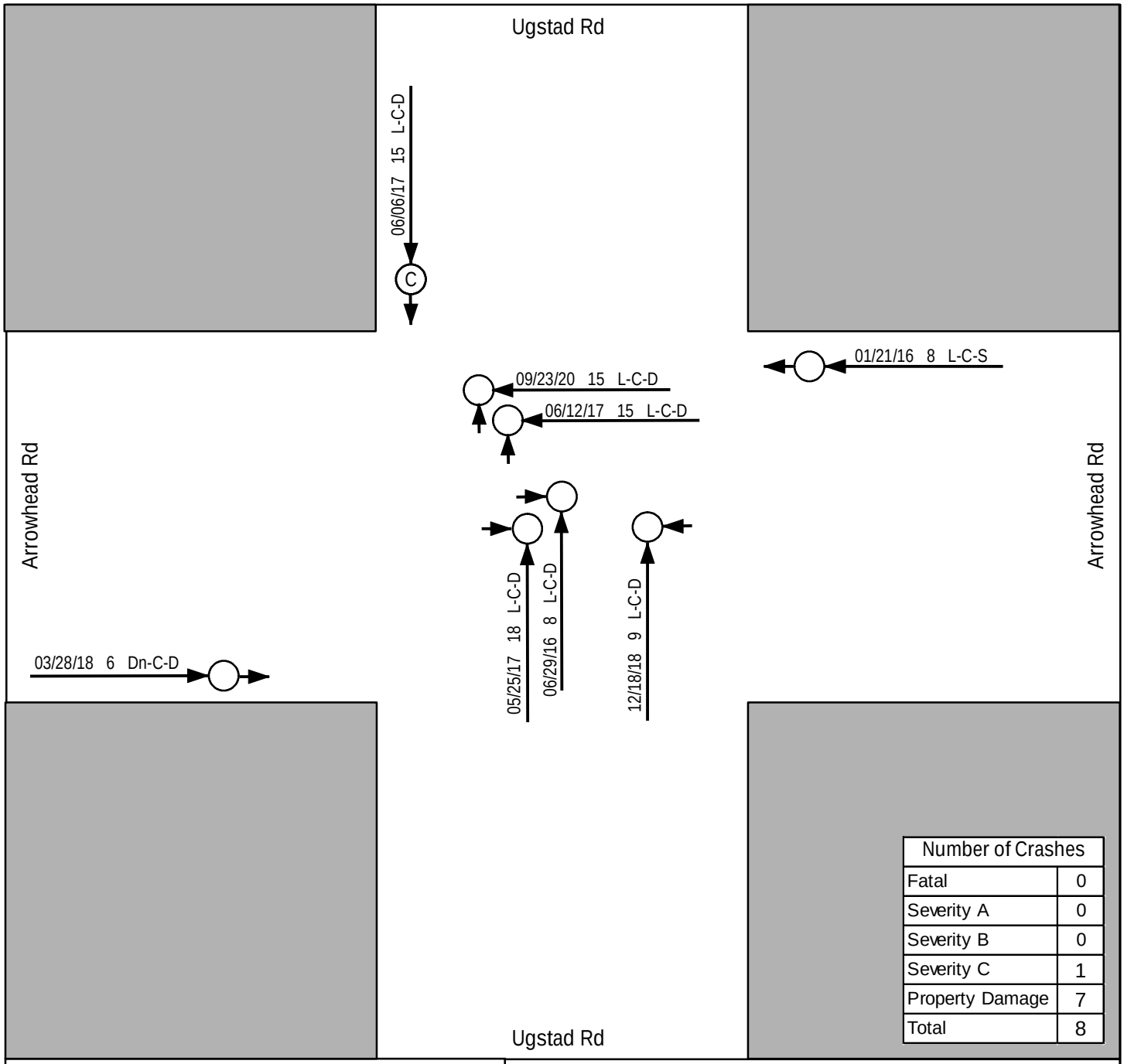
SEH

Project: MNT03 152201
Print Date: 12/14/2020

Map by: ljohnson
Projection:
Source:

Crash Diagrams (2015-2019)
Ugstad Rd at Hawk Circle Dr
Ugstad & Arrowhead Road Corridor Traffic Study
Hermantown, MN

Figure C2



Number of Crashes	
Fatal	0
Severity A	0
Severity B	0
Severity C	1
Property Damage	7
Total	8

Passenger Vehicle
Heavy Vehicle
Bus
Motorcycle
Fixed Object
Pedestrian
Bicycle

Fatal
Severity A
Severity B
Severity C
Property Damage Only
Vehicle Out of Control

Notes:

Light
L = Daylight
Dn = Dawn
Du = Dusk
Dl = Dark, Lighted
Do = Dark, Lights Off
D = Dark, Unlighted
X = Unkown

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F = Fog/Smog/Smoke
B = Blowing Sand/Dust/Snow
W = Severe Cross Winds
X = Other or Unknown

Surface
D = Dry
W = Wet or Water
S = Snow/Slush/Ice
M = Muddy
Db = Debris
O = Oily
X = Other or Unkown

Date Time(Hr) Light-Weather-Surface → Injury Type → Other Vehicle(s)

Path: X:\FJ\HHERMT\1550508-planning\Analysis\Crash Analysis\Crash Diagrams\C3_Ugstad Rd at Arrowhead Rd_Crash Diagrams.mxd

SEH

Project: MNT03 152201
Print Date: 12/14/2020

Map by: ljohnson
Projection:
Source:

Crash Diagrams (2015-2019)
Ugstad Rd at Arrowhead Rd
Ugstad & Arrowhead Road Corridor Traffic Study
Hermantown, MN

Figure C3

Appendix D

Cost Estimates and Layouts

Construction Cost Estimate

Alternative 1

Item Description	Units	Unit Cost	Quantity	Total
PAVING AND GRADING (P & G) COSTS				
Bituminous Pavement	ton	$75.00	2,675	$ 200,594
4" Concrete Walk	sq ft	$4.25	7,322	$ 31,119
Concrete pavement	sq yd	$70.00	0	$ -
Class 5 Aggregate Base	cu yd	$32.00	2,559	$ 81,882
Subgrade Excavation	cu yd	$10.00	1,775	$ 17,748
Common Excavation	cu yd	$10.00	7,676	$ 76,764
Common Borrow	cu yd	$5.00	5,118	$ 25,588
Select Granular Borrow	cu yd	$20.00	1,775	$ 35,496
Curb and Gutter Design B624	lin ft	$15.00	9,368	$ 140,520
Lighting Units	each	$7,000.00	10	$ 70,000
ADA Ramps	each	$3,000.00	6	$ 18,000
(a) Subtotal Paving and Grading				**$ 697,711**
UTILITIES, REMOVALS, DRAINAGE, ETC.				
Removals/Clear and Grub		5.0%		$ 34,886
Minor City Utilities		5.0%		$ 34,886
Signing, Striping, Traffic Control		5.0%		$ 34,886
Erosion Control and Turf Establishment		5.0%		$ 34,886
(b) Subtotal Utilities, Removals, Drainage, Etc.				**$ 139,542**
DRAINAGE				
Storm Sewer		10.0%		$ 69,771
(c) Subtotal Drainage				**$ 69,771**
RECLAIM				
Reclaim	sq yd	$1.00	33,780	$ 33,780
Bituminous Pavement (1)	ton	$ 75.00	7,634	$ 572,600
				$ -
(d) Subtotal Structural				**$ 606,380**
(a+b+c+d) Subtotal Construction				**$ 1,513,404**
Risk & Contingency		20.0%		$ 302,681
Traffic Management Plan		5.0%		$ 75,670
Mobilization		5.0%		$ 75,670
(e) Subtotal Miscellaneous				**$ 454,021**
(a+b+c+d+e) Total Construction				**$ 1,967,425**
Inflation Adjusted Construction Cost for 2022 (1.16 factor)				**$ 2,282,213**
Administrative & Engineering		20.0%		$ 393,485
RW Cost				
Total RW	sq ft	$1	34900	$ 34,900
Total RW				**$ 34,900**
Total Estimated Cost				**$ 2,710,598**

Construction Cost Estimate

Alternative 2

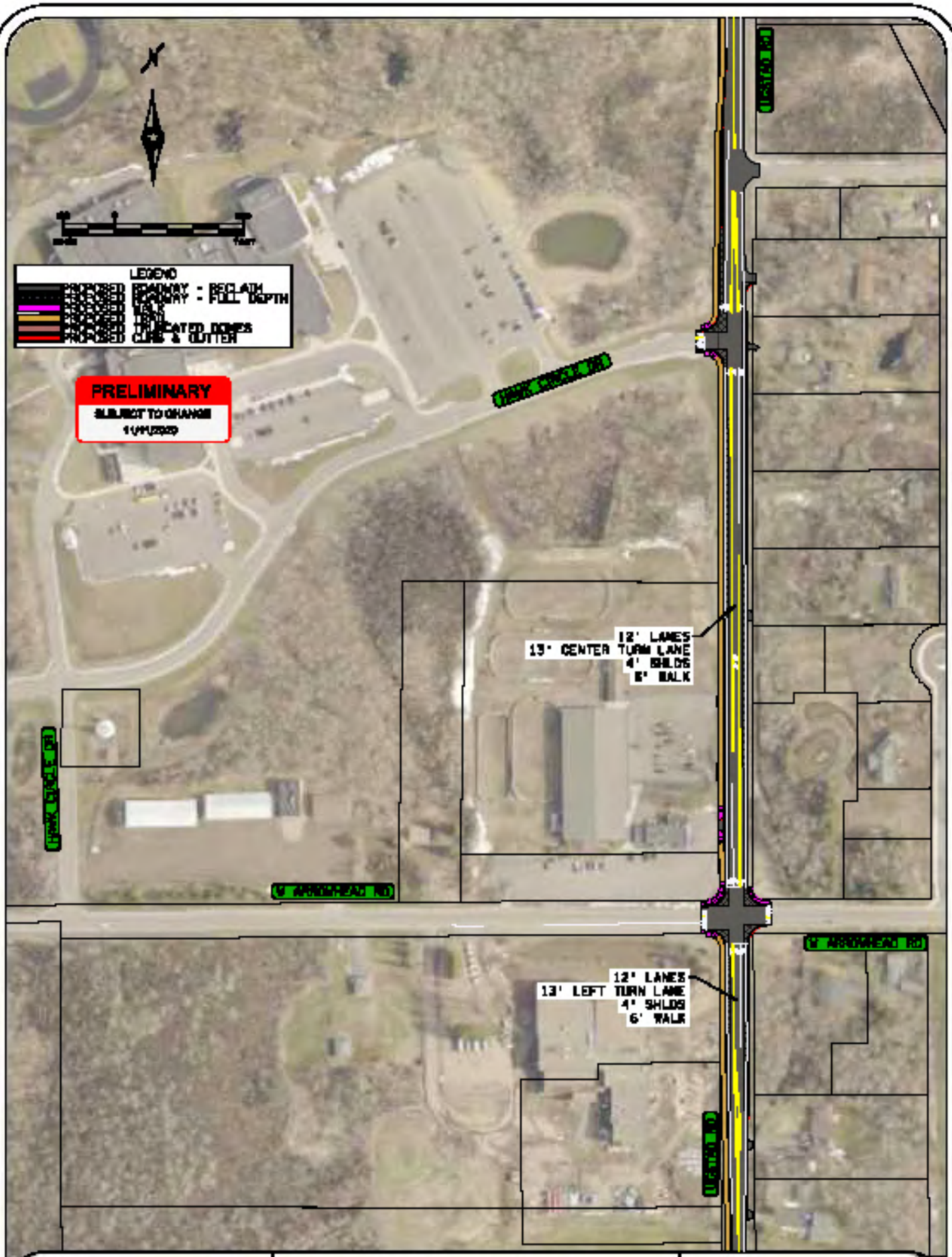
Item Description	Units	Unit Cost	Quantity	Total
PAVING AND GRADING (P & G) COSTS				
Bituminous Pavement (1)	ton	$75.00	2,791	$ 209,305
4" Concrete Walk	sq ft	$4.25	14,399	$ 61,196
Concrete pavement	sq yd	$70.00	0	$ -
Class 5 Aggregate Base (1)	cu yd	$32.00	2,826	$ 90,427
Subgrade Excavation (1)	cu yd	$10.00	2,175	$ 21,749
Common Excavation	cu yd	$10.00	8,478	$ 84,776
Common Borrow	cu yd	$5.00	5,652	$ 28,259
Select Granular Borrow	cu yd	$20.00	2,175	$ 43,498
Curb and Gutter Design B624	lin ft	$15.00	11,438	$ 171,570
Lighting Units	each	$7,000.00	12	$ 84,000
ADA Ramps	each	$3,000.00	8	$ 24,000
(a) Subtotal Paving and Grading				**$ 818,779**
UTILITIES, REMOVALS, DRAINAGE, ETC.				
Removals/Clear and Grub		5.0%		$ 40,939
Minor City Utilities		5.0%		$ 40,939
Signing, Striping, Traffic Control		5.0%		$ 40,939
Erosion Control and Turf Establishment		5.0%		$ 40,939
(b) Subtotal Utilities, Removals, Drainage, Etc.				**$ 163,756**
DRAINAGE				
Storm Sewer		10.0%		$ 81,878
(c) Subtotal Drainage				**$ 81,878**
RECLAIM				
Reclaim	sq yd	$1.00	37,544	$ 37,544
Bituminous Pavement (1)	ton	$ 75.00	8,485	$ 636,400
				$ -
(d) Subtotal Structural				**$ 673,944**
(a+b+c+d) Subtotal Construction				**$ 1,738,356**
Risk & Contingency		20.0%		$ 347,671
Traffic Management Plan		5.0%		$ 86,918
Mobilization		5.0%		$ 86,918
(e) Subtotal Miscellaneous				**$ 521,507**
(a+b+c+d+e) Total Construction				**$ 2,259,863**
Inflation Adjusted Construction Cost for 2022 (1.16 factor)				**$ 2,621,441**
Administrative & Engineering		20.0%		$ 451,973
RW Cost				
Total RW	sq ft	$1	45800	$ 45,800
Total RW				**$ 45,800**

Total Estimated Cost	**$ 3,119,214**

Construction Cost Estimate

Alternative 3

Item Description	Units	Unit Cost	Quantity	Total
PAVING AND GRADING (P & G) COSTS				
Bituminous Pavement (1)	ton	$75.00	3,349	$ 251,155
4" Concrete Walk	sq ft	$4.25	28,546	$ 121,321
Concrete pavement	sq yd	$70.00	245	$ 17,181
Class 5 Aggregate Base (1)	cu yd	$32.00	3,775	$ 120,792
Subgrade Excavation (1)	cu yd	$10.00	3,083	$ 30,825
Common Excavation	cu yd	$10.00	11,324	$ 113,243
Common Borrow	cu yd	$5.00	7,550	$ 37,748
Select Granular Borrow	cu yd	$20.00	3,083	$ 61,650
Curb and Gutter Design B624	lin ft	$15.00	14,372	$ 215,580
Lighting Units	each	$7,000.00	14	$ 98,000
ADA Ramps	each	$3,000.00	16	$ 48,000
(a) Subtotal Paving and Grading				**$ 1,115,496**
UTILITIES, REMOVALS, DRAINAGE, ETC.				
Removals/Clear and Grub		5.0%		$ 55,775
Minor City Utilities		5.0%		$ 55,775
Signing, Striping, Traffic Control		5.0%		$ 55,775
Erosion Control and Turf Establishment		5.0%		$ 55,775
(b) Subtotal Utilities, Removals, Drainage, Etc.				**$ 223,099**
DRAINAGE				
Storm Sewer		10.0%		$ 111,550
(c) Subtotal Drainage				**$ 111,550**
RECLAIM				
Reclaim	sq yd	$1.00	35,093	$ 35,093
Bituminous Pavement (1)	ton	$ 75.00	7,931	$ 594,800
				$ -
(d) Subtotal Structural				**$ 629,893**
(a+b+c+d) Subtotal Construction				**$ 2,080,038**
Risk & Contingency		20.0%		$ 416,008
Traffic Management Plan		5.0%		$ 104,002
Mobilization		5.0%		$ 104,002
(e) Subtotal Miscellaneous				**$ 624,011**
(a+b+c+d+e) Total Construction				**$ 2,704,049**
Inflation Adjusted Construction Cost for 2022 (1.16 factor)				**$ 3,136,697**
Administrative & Engineering		20.0%		$ 540,810
RW Cost				
Total RW	sq ft	$1	69850	$ 69,850
Total RW				**$ 69,850**
Total Estimated Cost				**$ 3,747,357**

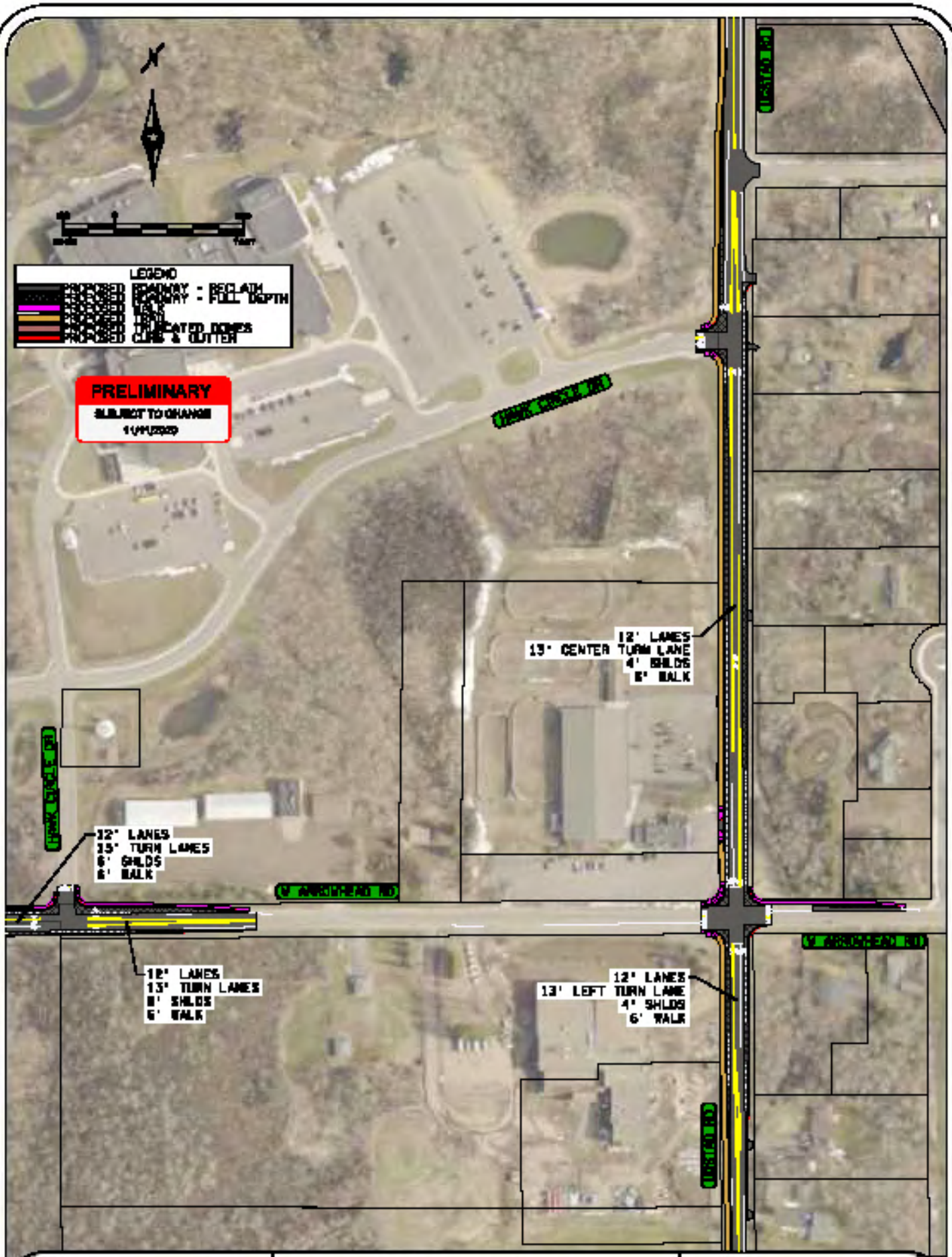


SEH
PHONE: 651-490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CONCEPT LAYOUT

UGSTAD RD & ARROWHEAD RD

ALTERNATIVE 1



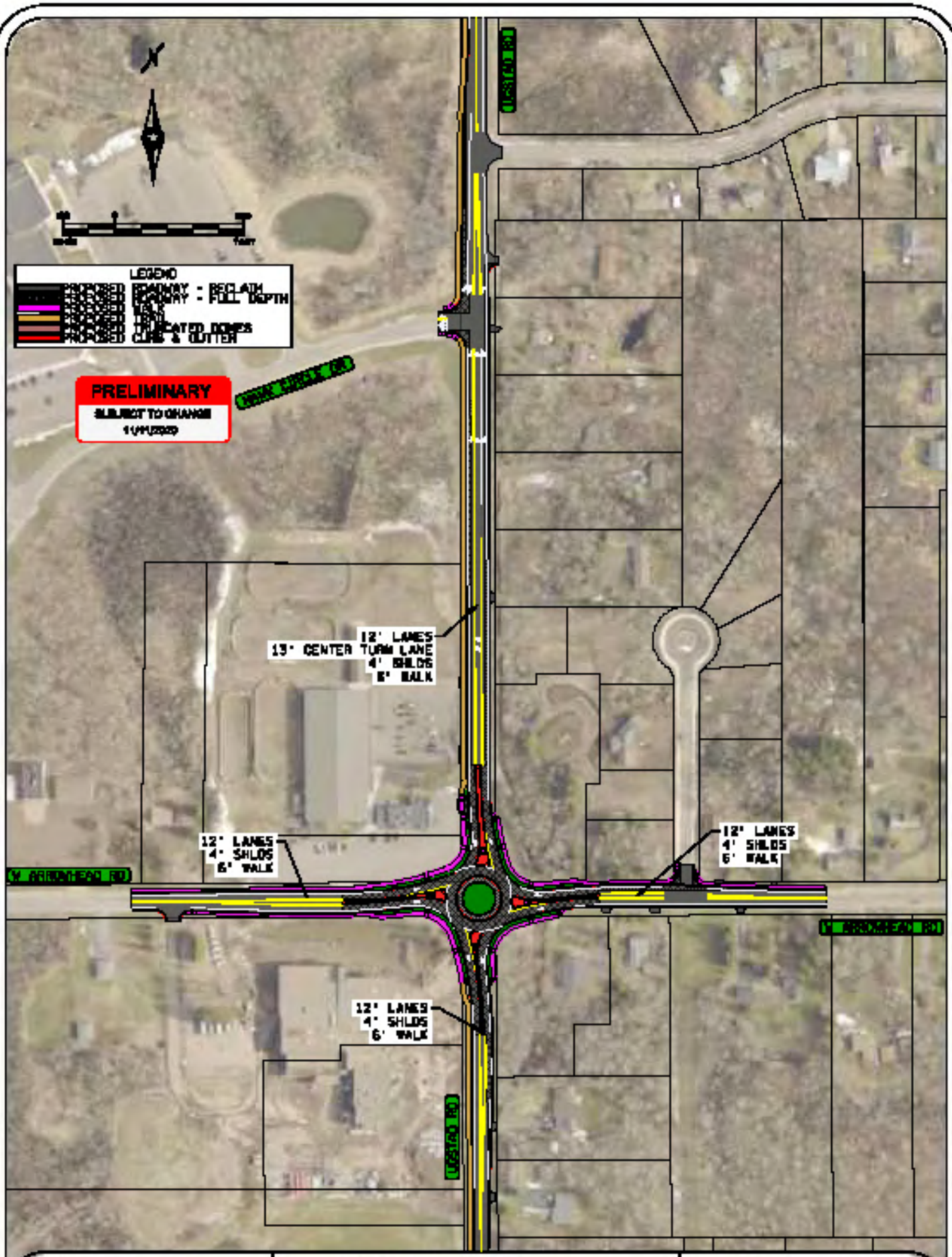
SEH

PHONE: 651-490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

CONCEPT LAYOUT

UGSTAD RD & ARROWHEAD RD

ALTERNATIVE 2



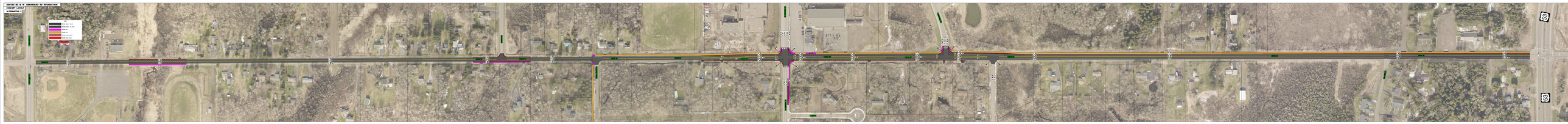
SEH
PHONE: (651) 490-2000
3535 VADNAIS CENTER DR.
ST. PAUL, MN 55110

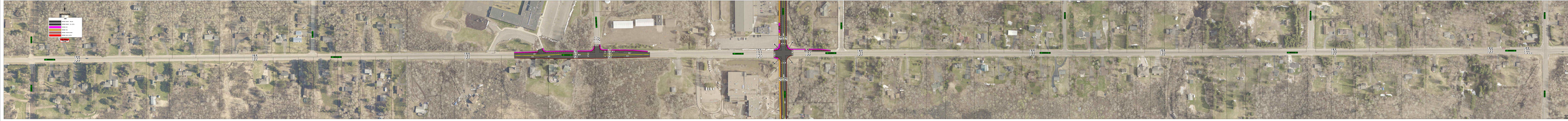
CONCEPT LAYOUT

UGSTAD RD & ARROWHEAD RD

ALTERNATIVE 3

UDSTAD RD & W ARROWHEAD RD INTERSECTION
CONCEPT LAYOUT
ALTERNATIVE 1
LEGEND
PROPOSED ROADWAY - RECLAIM
PROPOSED ROADWAY - FULL DEPTH
PROPOSED WALK
PROPOSED TRAIL
PROPOSED TRUNCATED DOMES
PROPOSED CURB & GUTTER
PRELIMINARY
SUBJECT TO CHANGE
MAPLE GROVE RD
4' SHLD


NOTICE TO U.S. HARDWARE OF INFORMATION
CONCEPT LAYOUT
ALTERNATIVE 2
CURB LINE
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
PROPOSED CURB
PROPOSED RIGHT-OF-WAY
PROPOSED CURB
53
53


CURB LINE
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
PROPOSED CURB
PROPOSED RIGHT-OF-WAY
PROPOSED CURB

UDSTAD RD & W ARROWHEAD RD INTERSECTION
CONCEPT LAYOUT
ALTERNATIVE 3
53

Building a Better World for All of Us®

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We're confident in our ability to balance these requirements.

Join Our Social Communities

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Ugstad Road – Engineering Request for Proposals**	**Agenda Item: 12-G**	**Resolution 2020-177**

REQUESTED ACTION

Approve a Request for Proposals for Design and Construction Engineering for the 2022 Road Improvement Project 534 Ugstad Road

BACKGROUND

Improvements to Ugstad Road from Maple Grove to Hwy 53, and improvements on Arrowhead Road from Hawk Circle to Thielke Circle are part of the City's Road Improvement Plan for 2022.

The City Engineer will be preparing a feasibility report for the project, and if the Council determines to order the project, then a Project Engineer will be needed. The City Engineer will not be submitting a proposal on this project and will assist in reviewing the proposals. Proposal will be due in January, and a recommendation will be made to the City Council in February assuming the Council orders the project.

SOURCE OF FUNDS (if applicable)

402-431130-550

ATTACHMENTS

Request for Proposals

Resolution No. 2020-177

RESOLUTION APPROVING A REQUEST FOR PROPOSALS FOR DESIGN AND CONSTRUCTION ENGINEERING FOR ROAD IMPROVEMENT DISTRICT NO. 534 (UGSTAD ROAD)

WHEREAS, the City of Hermantown ("City") desires to obtain design and construction engineering services with respect to Road Improvement District No. 534 (Ugstad Road) ("Project"); and

WHEREAS, City Administrator has prepared a Request for Proposals (RFP) for engineering services for the "Project" and

WHEREAS, the City Council believes that it is in the best interests of the City of Hermantown to approve the Request for Proposals as shown on Exhibit A attached hereto and authorize and direct the City Administrator to advertise and seek proposals per the RFP.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota as follows:

1. The Request for Proposals is approved, and

2. The City Administrator is hereby authorized and directed to advertise and seek proposals for design and construction engineering for Road Improvement District No. 534 (Ugstad Road) substantially in the form attached hereto as Exhibit A.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

REQUEST FOR PROPOSAL
CITY OF HERMANTOWN, MN

December 23, 2020

MUNICIPAL STATE AID PROJECT

UGSTAD ROAD FROM MAPLE GROVE ROAD
TO MILLER TRUNK HIGHWAY

SP 202-101-014

PROJECT OVERVIEW

The City of Hermantown is interested in retaining an Engineering "Consultant" to provide design and Construction Engineering services for the completion of a Federal Aid Municipal State Aid Project, scheduled for construction in 2022.

The street improvement project consists of the rehabilitation of Ugstad Road from Maple Grove Road to Highway 53 and Arrowhead Road from Hawk Circle Drive to Thielke Circle. The total length of the scheduled rehabilitation is approximately 12,600 linear feet. Work will include, but not be limited to, reclaim and overlay, full road reconstruction, , ditching, shoulder widening and culvert replacements.

Construction funding for the project is through the Federal Aid, Municipal State Aid, Property Assessments, and the City of Hermantown Utility Funds (Sanitary, Water & Storm).

Complete services are desired to review existing streets and infrastructure, gather preliminary design data, perform engineering surveys and preliminary engineering, hydraulics, assist in the delegated contract process, prepare project memorandum, complete final design including construction plans and specifications for roadway and utilities, and perform construction services. Construction services would include construction staking and inspection, utility coordination, and complete contract project management, including record drawings.

The Municipal State Aid project consists of the reconstruction of a municipal state aid street (Ugstad Road MSA 101) and Arrowhead Road (MSA104) From Hawk Circle and Thielke Circle. The total mileage of the scheduled reconstruction is 12,600 linear feet. Work will include, but not be limited to, reclaim and overlay, full road reconstruction, water main extension, ditching, shoulder widening and culvert replacements. Work will also include 10 foot paved trail in the existing right of way along Ugstad from Hwy 53 to the intersection of Lavaque Junction and Ugstad

Design shall be 10 ton. Detours and access will be necessary during construction.

Construction funding for the project is through Federal ISTEA funds, the City of Hermantown MSAS account, and the City of Hermantown utility funds. The total estimated project costs is $3,430,000 and will be funded with $1,480,000 in FHWA funding with the balance funded by Municipal Stated, and local funds/assessments. A map showing the scheduled project area is attached to this RFP.

The City is committed to providing the following:

1. Previous reports and studies; surveys and aerial photography, if available.
2. All available street and utility record drawings for the scheduled project.
3. Assistance in obtaining other related information in City files pertaining to the project if needed.
4. A traffic study of the Ugstad/Arrowhead Intersection prepared by Short Elliot & Hendrickson (SEH) dated 12/13/22020 is attached.

It is the City's intent to hire a geotechnical firm directly for both geotechnical design recommendations and construction material testing. The successful engineering Consultant will work directly with the geotechnical engineer.

PROJECT SCOPE

The Consulting Engineering Services include the following:

1. Initial Site Visit and Consultations
    a. The Consultant shall meet with City of Hermantown representatives to review project scope and complexity, design criteria, related requirements, view existing conditions, and gather data from the City engineering files. Additional consultations shall, where necessary, clarify the technical requirements and objectives of the contract and may be in the form of letters and/or telephone conversations.
    b. The Consultant shall provide documentation of meetings and data provided.
    c. The Consultant shall ascertain the applicability of information provided, review data for completeness, and notify the City of any additional data required. It shall be the responsibility of the Consultant to determine, by site inspection procedures, the reliability of all the drawings and information which they choose as reference.

2. Data Collection, Wetland Delineation and Permitting and Field Surveys
    a. The Consultant shall perform all necessary field surveying and data collection as needed. The Consultant shall tie out all monumentation and reset after construction is complete.
    b. Consultation with State and local regulatory agencies to determine required information for permit applications as it relates to the design and execution of the entire project will be required. The Consultant shall be responsible for permit applications that may be required of the City.
    c. It is anticipated that a wetland permit will be necessary to construct the right turn lanes; Consultant shall be responsible for obtaining any required wetland permits.

3. Recommendations and Costs
    The Consultant shall analyze all available records, record drawings, inspection reports and all other appropriate data, and prepare recommendations and a cost estimate prior to preparing plans and specifications. The Consultant shall work with City staff to provide design and cost alternatives to assist the City in meeting the City's desired objectives and budget constraints.

4. Preliminary Design
    The Consultant shall perform preliminary design and layouts based upon the data and information collected. Preliminary layouts shall be produced for engineering staff review. Consultant shall submit 30%, 60%, 90% and final plans for City review.

5. Plans and Specifications
    a. The Consultant shall prepare construction drawings as necessary to provide for the complete reconstruct of 2 mile section of Ugstad Road and Arrowhead Road from Thielke Circle to Hawk Circle. These drawings shall include all details, plans and specifications necessary for all work as required by state aid and federal aid standards, and all other appropriate approval agencies.
    b. The specification preparation shall also include appropriate sections for bidding, bonding, agreements, general and special provisions, and other appropriate contract provisions as well. These sections shall be developed in accordance with the City's standards, state aid standards and federal aid standards.
    c. The drawings shall include all necessary site maps, plans, elevations, sections, details, and notes as needed or necessary to adequately show, explain or describe all features of the Project. The contract drawing sequence shall follow the standard state aid format and required federal approvals.

d. Any record drawings shall be prepared using Civil3D Version 2012 or later. Upon completion of the Project, record drawings shall be provided to the City in both hard copies and a digital format compatible with Civil3D Version 2012 or later.

6. Cost Estimates
   Cost estimates shall be submitted along with the plans at 30%, 60%, 90 and final plans. The cost estimate shall be broken down into the different funding sources.

7. Public Participation
   Consultant shall be required to attend (2) public meetings, (1) council meeting and (1) public hearing, and other meetings as required.

8. Construction (Project) Management
   Upon completion of plans and specifications, the Consultant shall provide all documents and services to provide for bidding, award, construction, inspection, and project management for final completion and acceptance of the Project.

   Project Management Services provided by the Consultant shall include but not be limited to the following: contract management, inspection, progress and inspection reports, and project management, including the completed record drawing and final records by December 31,2022. The Consultant shall base inspection services on a 22 week construction period.

PROPOSAL CONTENTS

Your submission must include the following:

1. Title Page - Show the proposal subject, the name of the proposer's firm, address, name of the primary contact person, telephone number, e-mail address and the date.

2. A restatement of the goals, objectives and project tasks to demonstrate Consultants understanding of project.

3. Identification and Qualification of Firm and Assigned Personnel
   Identify personnel to conduct the project and detail their training and work experience.
   a. Firm – Provide a firm overview and relevant State and Federal Aid Experience
   b. Project Manager - The name of the person who will be responsible for the management and administration of engineering services with the City together with a resume describing that person's experience and qualifications.
   c. Project Inspector - The name of the person who will be responsible for the construction inspection with a resume describing that person's experience and qualifications.

4. A detailed work plan identifying the work tasks associated with both the design and construction engineering, with budget hours to be expended on each task and subtask. An anticipated work schedule shall also be provided. The work plan shall also identify the deliverables at key milestones in the Project as well as any other services to be provided by the City. The City staff intends to be actively involved with the Project, and a maximum of three (3) status meetings are to be contained in the work plan in addition to any data collection or input/review meetings.

5. A listing of names, addresses and telephone numbers of at least three (3) references for whom the respondent has performed similar State and Federal Aid Projects for.

6. Provide, in separate document, the cost proposal, clearly marked identified by the file name' along with the responder's official business name and address. Terms of the proposal as stated must be valid for the project length of time.

   The responder must include a "not to exceed" total project cost, as well as subtotals for a) design services through bidding and b) construction inspection and management, and any subconsultant fees, along with the following information:

   - A breakdown of the hours by task for each employee
   - Identification of anticipated direct expenses
   - Identification of any assumption made while developing this cost proposal
   - Identification of any cost information related to additional services or tasks
   - Include this in the cost proposal, but identify it as additional costs and do not make it part of the total project cost
   - Responder must have the cost proposal signed in ink by an authorized member of the firm. The responder must not include any cost information within the body of the RFP technical proposal response.

7. Prior to entering into an agreement with the city, the Consultant shall furnish proof that it has met all legal requirements for transacting business in the State of Minnesota and is not disbarred from participating in a state aid or federal aid project.

8. Disclosures and Assurances
   a. Applicant Authority – Assurance that the signatory making representations in the proposal on behalf of the proposer has the authority to do so.
   b. Insurance Coverage – Documentation of current insurance coverage and limits, including professional liability insurance shall be provided with the proposal.
   c. Insurance requirements or Errors and Omissions: (as included per attached) See Exhibit B.

DESIGN FAMILIARITY

The Consultant selected will be required to demonstrate and provide proof of competency in the following areas:

- State Aid Street Design and Construction
- Project Management experience and dealing effectively with contractors
- Cost estimating and cost control
- Construction Management and Construction Inspection
- Quality Control
- Experienced in administration of Federal Aid Projects

The following additional qualifications and provisions of the Consultant are also required:

A Professional Engineer (registered in the State of Minnesota with experience in engineering, preparation of state aid plans and specifications, and inspection services) must supervise all work.

The inspectors assigned to the work in the field are required to have experience in street and utility inspection work, and hold all MN/DOT and Federal certifications as required.

FEES AND EXPENSES REIMBURSEMENT

The proposal shall state, not to exceed, the fee based on the total estimated hourly rates included in the proposal, as well as subtotals for a) design services through bidding, b) construction inspection and management. Include any subconsultant costs. Also to be included is an itemized breakdown of specific tasks for all design, inspection, and management services proposed by the Consultant in response to the City's Request for Proposal. Design services shall be considered complete upon award of contract for the project. The proposal should also include a schedule of hourly billing rates for each employee who may be involved in design and construction engineering services (construction administration and construction observation). Include rates of miscellaneous charges, such as copies and mileage.

As stated in the Project Overview, the RFP is for the complete roadway reconstruction Ugstad Road. The proposal shall be for a) design services through bidding, b) construction inspection and management. Proposal shall be organized as thus:

1. Street Reconstruction. The project length is approximately 12,600 lineal feet. Street reconstruction will include, but is not limited to, common excavation, perforated pipe, geotextile, select granular, aggregate base class 5, construction of turn lanes, pedestrian enhancements, curb and gutter, sidewalk, bituminous, turf establishment and striping.

2. Sanitary Sewer. – No planned improvements at this time.

3. Watermain. – No planned improvements at this time.

4. Storm Sewer Replacement. Spot repairs.

SELECTION

The City has a review committee comprised of staff members and the City Engineer. The intent of the selection process is to review the proposals and make an award based upon the qualifications as described herein. A 100-point scale will be used to create the final evaluation recommendations. The factors and weighting on which the proposals will be judged are as follows:

- Goals & Objectives 10%
- Experience 20%
- Knowledge of Hermantown requirements 10%
- Work Plan/Schedule 20%
- Project Cost 40%

Proposals will be evaluated on the “Best Value” basis with 60% qualifications and 40% cost consideration. The review committee will not open the cost proposal until after the qualification points have been awarded. The City of Hermantown anticipates that the evaluation and selection will be made by February 1, 2021.

The City reserves the right to reject proposals, in whole or in part, that do not comply with the provisions of this RFP. The Proposer must also provide a completed Tennessen warning in the form attached hereto as Exhibit A, along with its proposal.

PROJECT COMPLETION DATES

- December 21,2020 City Solicits Engineering Services
- January 21, 2021 Proposals Due 2:00 pm CST
- January 26, 2021 Selection Complete
- February 1, 2021 City Council Awards Contract to Consultant
- February 2021 Contract prepared, signed, and Notice to Proceed
- June 18, 2021 30% Plan completed – Public Information meeting
- August 13, 2021 60% Plans Completed
- November 20, 2021 90% Plans Completed
- December 3, 2021 Plans Submitted for Final Review
- January 7, 2022 Final Plans, Specs and other necessary documents submitted to State Aid
- February 7, 2022 Approval to advertise for bids
- March 21, 2022 Award Construction Contract
- May 16, 2022 Construction Begins
- October 15, 2022 Construction Complete
- December 31,2022 Record Drawings and Final Project Documentation submitted to the City

PROPOSAL SUBMITTAL

Proposers are required to e-mail a copy of the proposal to the City Administrator at jmulder@hermantownmn.com on or before Thursday January 21, 2021. Proposals received after the deadline will not be considered. An official authorized to bind the Proposer must sign the proposal. By submitting a proposal, the Proposer agrees and accepts the terms and conditions of this RFP.

Proposals are to be sent to:
John Mulder, City Administrator
jmulder@hermantownmn.com
City of Hermantown
5105 Maple Grove Road
Hermantown, MN 55811

RFP Questions
David Bolf P.E. – City Engineer
Northland Consulting Engineers, LLP
Phone: 218.727.5995
Email: david@nce-duluth.com

INSTRUCTIONS TO PROPOSERS

Any questions on the RFP must be submitted to David Bolf by email (david@nce-duluth.com) and must be received no later than 3:00 p.m. on January 14, 2021. An email response will be provided to all proposers to whom the City sent a copy of this RFP and other proposers who have contacted the City by that date, by noon on Tuesday January 19, 2021.

The proposal shall be limited to a maximum of 10 pages, which includes cover letter, printed on one side, including all supporting documentation. Additional material, other than that requested by the City of Hermantown, will be disregarded.

The City will review the proposals and may schedule interviews for any proposer selected for an interview.

Proposers are prohibited from contacting any representative of the City Council regarding this proposal.

CITY ENGINEER PARTICIPATION IN RFP REVIEW

As noted elsewhere in this RFP, David Bolf, P.E., who is the City Engineer for the City of Hermantown, will participate in the review of RFP proposals.

David Bolf is the brother of Matt Bolf who works for Short Elliot Hendricksen, Inc., which is expected to submit a proposal.

David Bolf also previously worked for Salo Engineering, Inc., which is now Toltz, King, Duvall, Anderson and Associates, Incorporated.

David Bolf also has personal and professional relationships with other engineers who are expected to submit proposals.

David Bolf has consulted with the City Council of the City, the City Attorney of the City and the City Administration for the City and all have determined that he does not have an impermissible conflict of interest that would preclude him from fully participating in the RFP review process.

Notwithstanding the foregoing, the City desires to determine if its views are shared by Responders to the RFP. Accordingly, please check one of the boxes below and sign it and submit this form with your response to the RFP.

☐ The undersigned Responder consents to David Bolf participating in the RFP review process.

☐ The undersigned Responder objects to David Bolf participating in the RFP review process.

This page will not count against the ten (10) page maximum number of pages allowed for a proposal.

_____
Name of Responder

_____
Signature and Title

_____
Date

EXHIBIT A

TENNESSEN WARNING

Data Practices Advisory

The information that you are asked to provide is classified by state law as either public, private or confidential. Public data is information that can be given to the public. Private data is information that generally cannot be given to the public but can be given to the subject of the data. Confidential data is information that generally cannot be given to either the public or the subject of the data.

Our purpose and intended use of this information is to consider your proposal in response to a Request for Proposal.

You are not legally required to provide this information.

You may refuse to provide this information.

The consequences of supplying or refusing to supply data are that your proposal may not be considered or it may be denied.

Other persons or entities may be authorized by law to receive this information. The identity of those persons or entities, if known, are as follows:_____

_____.

The undersigned has read this advisory and understands it.

Dated this _____ day of _____, 20__.

_____

Print Name

_____

Signature and Title (if signing on behalf of an entity)

EXHIBIT B

Standard Municipal/Government Entity
Consultant Agreement Insurance Requirements

1. Standard of Performance and Insurance; Indemnity. All services to be performed by Consultant hereunder shall be performed in a skilled, professional and non-negligent manner. Consultant shall obtain and maintain at his/her/its cost and expense:

1.1. Comprehensive general liability insurance that covers the Consultant services performed by Consultant for Owner with a combined single limit of liability of at least One Million Dollars ($1,000,000.00).

1.2. Errors and omissions or equivalent insurance that covers the Consultant services performed by Consultant for Owner with a combined single limit of liability of at least One Million Dollars ($1,000,000.00).

1.3. Worker's compensation insurance covering Consultant (if an individual) all of Consultant's employees with coverages and limits of coverage required by law.

1.4. In addition to the coverages listed above, Consultant shall maintain a professional liability insurance policy in the amount of $2,000,000. Said policy need not name the City as an additional insured. It shall be Consultant's responsibility to pay any retention or deductible for the professional liability insurance. Consultant agrees to maintain the professional liability insurance for a minimum of two (2) years following termination of this Agreement.

Consultant shall indemnify and hold harmless Owner from and against all errors, omissions and/or negligent acts causing claims, damages, liabilities and damages arising out of the performance of his/her/its services hereunder.

Consultant certifies that Consultant is in compliance with all applicable worker's compensation laws, rules and regulations. Neither Consultant (if an individual) nor Consultant's employees and agents will be considered Owner employees. Any claims that may arise under any worker's compensation laws on behalf of any employee of Consultant and any claims made by any third party as a consequence of any act or omission on the part of Consultant or any employee of Consultant are in no way Owner's obligation or responsibility. By signing this Agreement, Consultant certifies that Consultant is in compliance with these laws and regulations.

Consultant shall deliver to Owner, concurrent with the execution of this Agreement, one or more certificate(s) of insurance evidencing that Consultant has the insurance required by this Agreement in full force and effect. Owner shall be named as additional insured under such Consultant's comprehensive general liability policy. The insurer will provide at least thirty (30) days prior written notice to Owner, without fail, of any cancellation, non-renewal, or modification of any of the Consultant's comprehensive general liability policy or coverage evidenced by said certificate(s) for any cause, except for nonpayment of premium. The insurer will provide at least ten (10) days prior written notice to Owner, without fail, of any

cancellation of any of the Consultant's comprehensive general liability policy or coverage evidenced by said certificate(s) for nonpayment of premium. Consultant shall provide Owner with appropriate endorsements to Consultant's comprehensive general liability policy reflecting the status of Owner as an additional insured and requiring that the foregoing required notice of cancellation, material alteration or non-renewal be provided Owner by the insurance company providing such insurance policy to Consultant.

The Consultant shall require any subcontractor permitted by Owner to perform work for Consultant on the Project to have in full force and effect the insurance coverage required of the Consultant under this Agreement before any subcontractor(s) begin(s) work on the Project. Consultant shall require any such subcontractor to provide to Consultant a Certificate of Insurance evidencing that such subcontractor has the insurance required by this Agreement in full force and effect. The Consultant and Owner shall be named as additional insureds under such policies. The insurer will provide 30 day written notice to Owner and Consultant, without fail, of any cancellation, non-renewal, or modification of the subcontractor's comprehensive general liability policy or coverage evidenced by said certificate(s) for any cause, except for nonpayment of premium. The insurer will provide at least ten (10) days prior written notice to Owner, without fail, of any cancellation of any of the subcontractor's comprehensive general liability policy or coverage evidenced by said certificate(s) for nonpayment of premium. Owner shall also be provided with appropriate endorsements to subcontractor's comprehensive general liability policy reflecting the status of Owner as an additional insured and requiring that the foregoing required notice of cancellation, material alteration or non-renewal be provided Owner by the insurance company providing subcontractor's comprehensive general liability policy.

Project Map

T.H. 53
Project Termini
Project Termini
W. ARROWHEAD ROAD
Project Termini
UGSTAD ROAD
LAVAQUE ROAD
Project Termini
MAPLE GROVE ROAD

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Ugstad Road – Geo Tech Agreement**	**Agenda Item: 12-H**	**Resolution 2020-178**

REQUESTED ACTION

Approve agreement for professional services for Geotechnical evaluation Services by Braun Intertec Corporation for Road Improvement District No. 534

BACKGROUND

As we begin the planning process for Road Improvement District No. 534 (Ugstad Road from Maple Grove to Hwy 53), we need to have soil boring and other geotechnical evaluations completed prior to hiring a project engineer. We solicited proposals from the two firms that have Master Service agreements with for geotechnical work. Braun was the low proposal. It is recommended that the City enter into an agreement with Braun Intertec Corporation for this work.

SOURCE OF FUNDS (if applicable)

402-431130-550

ATTACHMENTS

Braun Proposal

Resolution No. 2020-178

RESOLUTION APPROVING AUTHORIZATION FOR PROFESSIONAL SERVICES FOR GEOTECHNICAL EVALUATION SERVICES BY BRAUN INTERTEC CORPORATION

WHEREAS, the City of Hermantown ("City") obtained a proposal from Braun Intertec Corporation ("Braun") dated December 8, 2020 for geotechnical evaluation services for the Road Improvement District No. 534 (Ugstad Road) project in Hermantown, Minnesota ("Project"); and

WHEREAS, such proposal ("Proposal") is attached hereto as Exhibit B; and

WHEREAS, City has a Master Services Agreement dated March 11, 2020 ("Master Services Agreement") with Braun that would cover the services described in the Proposal; and

WHEREAS, the Master Services Agreement provides for the issuance of an Authorization for Professional Services upon acceptance of a Proposal; and

WHEREAS, the City Council has duly considered this matter and believes it to be in the best interests of the City to approve an Authorization for Professional Services with Braun to provide the services described in the Proposal and authorize and direct the Mayor and City Clerk to execute and deliver it on behalf of the City of Hermantown.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota as follows:

1. The Proposal attached hereto as Exhibit B is hereby approved.

2. The Mayor and City Clerk are hereby authorized and directed to execute and deliver the Authorization for Professional Services substantially in the form attached hereto as Exhibit A.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

EXHIBIT A

CITY OF HERMANTOWN, MINNESOTA

AUTHORIZATION FOR PROFESSIONAL SERVICES

TO: Braun Intertec Corporation ("Consultant")

Pursuant to our Master Services Agreement for Professional Services ("Agreement") dated _____, 20__, you are hereby authorized to proceed with the Professional Services described in the Proposal attached hereto.

I. PROJECT DESCRIPTION

The City of Hermantown ("City") has requested Consultant perform geotechnical evaluations services for the 2022 Street Improvements projects in Hermantown, Minnesota.

II. SERVICES TO BE PROVIDED

Consultant has agreed to provide the services described in the Proposal attached hereto.

A. ADDITIONAL SERVICES

If the need for additional services ("Additional Services") is determined, and the fee for the Additional Services is agreeable and the City authorizes the Additional Services in writing, Consultant shall furnish or obtain from others services of the types listed below. These Additional Services shall be compensated for on an Hourly Rate basis as defined in the Agreement and such compensation shall be over and above any maximum amounts set forth in this Authorization.

A. _____

B. _____

III. PERIOD OF SERVICE

Consultant's services will be completed within _____ from the date of this Authorization.

IV. COMPENSATION

Compensation to Consultant for services provided as described shall be on an hourly rate basis as defined in the Proposal, in a not to exceed the amount of $15,825.00.

During the course of the Project if this amount is found to be insufficient, Consultant agrees not perform services or incur costs which result in billings in excess of such amount until advised that additional funds are available and services can continue and City approves the additional services and the additional compensation in writing.

Approved at a _____ meeting of the _____ on _____, 20__.

By _____ Attest_____
Mayor City Clerk

OR

Approved by _____, _____ , 20__.
Authorized City Representative

Consultant Acceptance by_____ _____ , 20__.
Authorized Consultant Representative

EXHIBIT B

PROJECT PROPOSAL

Braun Intertec Corporation
4511 West First Street, Suite 4
Duluth, MN 55807

Phone: 218.624.4967
Fax: 218.624.0196
Web: braunintertec.com

December 8, 2020 Proposal QTB130730

City of Hermantown
c/o Mr. David Bolf, P.E.
Northland Consulting Engineers, LLP
102 South 21st Avenue West, Suite 1
Duluth, MN 55806

Re: Proposal for a Geotechnical Evaluation
Proposed Street Improvement Project
Ugstad Road and Arrowhead Road
Hermantown, Minnesota

Dear Mr. Bolf:

Braun Intertec Corporation respectfully submits this proposal to complete a geotechnical evaluation for the proposed street and utility improvement project of Ugstad Road and Arrowhead Road.

Project Information

The street improvement project consists of the rehabilitation of Ugstad Road from Maple Grove Road to Highway 53 and Arrowhead Road from Hawk Circle Drive to Thielke Circle. The total length of the scheduled rehabilitation is 12,260 linear feet. Work will include, but not be limited to, reclaim and overlay, full road reconstruction, water main extension, ditching, shoulder widening and culvert replacements.

Construction funding for the project is through the Federal Aid, Municipal State Aid, Property Assessments, and the City of Hermantown Utility Funds (Sanitary, Water & Storm).

Purpose

The purpose of our geotechnical evaluation will be to characterize subsurface geologic conditions at selected boring locations, evaluate their impact on the project, and provide geotechnical recommendations for the design and construction of the proposed roadway and utilities improvements.

Scope of Services

We propose the following tasks to help achieve the stated purpose. If we encounter unfavorable or unforeseen conditions during the completion of our tasks that lead us to recommend an expanded scope of services, we will contact you to discuss the conditions before resuming our services.

Site Access

The desired borings will be within the existing roadway and will be accessible to a floatation tire drill rig. We assume there will be no cause for delays in accessing the boring locations. We are not including tree clearing, debris or obstruction removal, grading of navigable paths, or snow plowing.

Depending on access requirements, ground conditions or potential utility conflicts, our field crew may alter the boring locations from those proposed to facilitate accessibility.

Our drilling activities may also impact the vegetation and may rut the surface to access boring locations. Restoration of vegetation and turf is not part of our scope of services.

Staking

We understand the boring locations will be marked in the field by others, prior to our mobilization. We have assumed the borings will be surveyed by others after our field work.

Utility Clearance

Prior to drilling or excavating, we will contact Gopher State One Call and arrange for notification of the appropriate utility vendors to mark and clear the boring locations of public underground utilities. You, or your authorized representative, are responsible to notify us before we begin our work of the presence and location of any underground objects or private utilities that are not the responsibility of public agencies.

Traffic Control

The Average Daily Traffic (ADT) for this portion of Ugstad Road ranges from 2,200 to 2,800, while this portion of Arrowhead Road is 4,450 The current MnDOT traffic control manual indicates that two flaggers and road work signs are required for work within the driving lane. We will provide two flaggers and applicable signage for the duration of our work in the road right-of-way.

Penetration Test Borings

As requested, we will drill thirty-six (36) standard penetration test borings for the project, extending them to 10 feet or refusal, whichever is shallower. We will perform standard penetration tests at 2 1/2-foot vertical intervals to the termination depth of the borings.

If the borings encounter groundwater during or immediately after drilling of each boring, we will record the observed depth on the boring logs.

If the intended boring depths do not extend through unsuitable material, we will extend the borings at least 5 feet into suitable material at greater depths. If we identify a need for deeper (or additional) borings, we will contact you prior to increasing our total estimated drilled footage and submit a Change Order summarizing the anticipated additional effort and the associated cost, for your review and authorization.

MDH Notification and Sealing Record

Since our planned boring will be less than 15 feet in depth, the Minnesota Statutes will not require that we complete any notifications or sealing records. If we extend any of the borings to a depth of 15 feet or greater, the Statutes requires that we seal the boreholes and complete a Sealing Record. If 25 feet or greater, the Statutes also require us to complete a Sealing Notification Form. If the Record or Form are required, we will contact you to discuss the additional fees and sealing requirements.

Borehole Abandonment

We will backfill our boring locations immediately after completing the drilling at each location. Minnesota Statutes require sealing temporary borings that are 15 feet deep or deeper.
We currently do not anticipate having to seal any of the borings.

Upon backfilling or sealing boring locations, we will fill holes in pavements with a temporary patch.

Over time, subsidence of borehole backfill may occur, requiring releveling of surface grades or replacing bituminous or concrete patches. We are not assuming responsibility for re-leveling or re-patching after we complete our fieldwork.

Sample Review and Laboratory Testing

We will return recovered samples to our laboratory, where a geotechnical engineer will visually classify and log them. To help classify the materials encountered and estimate the engineering properties necessary to our analyses, we anticipate performing 4 mechanical analyses (through a #200 sieve only). We will adjust the actual number and type of tests based on the results of our borings.

Engineering Analyses

We will use data obtained from the boring and laboratory tests to evaluate the subsurface profile and groundwater conditions, and to perform engineering analyses related to structure and pavement design and performance.

Report

We will prepare a report including:

- A sketch showing the boring locations.
- Logs of the borings describing the materials encountered and presenting the results of our groundwater measurements and laboratory tests.
- A summary of the subsurface profile and groundwater conditions.
- Discussion identifying the subsurface conditions that will impact design and construction.
- Discussion regarding the reuse of on-site materials during construction.
- Recommendations for preparing utility and pavement subgrades, and the selection, placement and compaction of fill.
- Recommendations for the design and construction of the proposed roadway and utilities.

We will only submit an electronic copy of our report to you unless you request otherwise. At your request, we can also send the report to additional project team members.

Schedule

We anticipate performing our work according to the following schedule.

- Drill rig mobilization – within about 3 weeks following receipt of written authorization
- Field exploration – 4 days on site to complete the work
- Classification and laboratory testing – within 1 to 2 weeks after completion of field exploration

- Preliminary results – within 8 days after completion of field exploration
- Draft report submittal – within about 8 weeks of authorization
- Final report submittal – within 2 days of receiving comments on the draft report. By February 26, 2021, as requested.

If we cannot complete our proposed scope of services according to this schedule due to circumstances beyond our control, we may need to revise this proposal prior to completing the remaining tasks.

Fees

We will furnish the services described in this proposal for a lump sum fee of $15,825, which includes up to 1 hour of post deliverable consulting time. Additional requests for meetings, consulting or modifications to the report will be billed at a rate of $150 per hour.

Our work may extend over several invoicing periods. As such, we will submit partial progress invoices for work we perform during each invoicing period.

Additional Services

Our fees do not include potential costs due to the need for snow plowing, towing, stand-by time or work that is not included in the above Scope of Services. We will charge costs for snow plowing or towing (if necessary) at a rate of 1.15 times the actual cost. For stand-by time (defined as time spent by our field crew due to circumstances that are beyond the control of our field crew or its equipment, or beyond the scope of services indicated above), we will charge a rate of $250 per hour.

General Remarks

We will be happy to meet with you to discuss our proposed scope of services further and clarify the various scope components.

We appreciate the opportunity to present this proposal to you. Please sign and return a copy to us in its entirety.

We based the proposed fee on the scope of services described and the assumptions that you will authorize our services within 30 days and that others will not delay us beyond our proposed schedule.

We will provide our services under the terms of the Master Services Agreement between the City of Hermantown and Braun Intertec Corporation.

To have questions answered or schedule a time to meet and discuss our approach to this project further, please contact Joe Butler at 218.624.4967 or jbutler@braunintertec.com.

Sincerely,

BRAUN INTERTEC CORPORATION

David E. Morrison, PE
Project Engineer

Joseph C. Butler, PE
Business Unit Manager, Senior Engineer

The proposal is accepted, and you are authorized to proceed.

Authorizer's Firm

Authorizer's Signature

Authorizer's Name (please print or type)

Authorizer's Title

Date

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Old Hwy 2 – Accept Plans & Specs & Advertise for Bids**	**Agenda Item: 12-I**	**Resolution 2020-179**

REQUESTED ACTION

Approve final plans and specifications and order advertisement for bids for 2021 Road Improvement project (Old Hwy 2)

BACKGROUND

As part of the City's 2021 Road Improvement program, the City will be milling the bituminous surface on Old Hwy 2 south of the current Hwy 2. This road will then be maintained as a gravel road. Bids for this work will be solicited, and presented to the City Council at later date for the award of the construction contract.

We have not provided a full set of the plans, but they are available at City Hall if you wish to review them.

SOURCE OF FUNDS (if applicable)

475-431150-305

ATTACHMENTS

Excerpt from Final Plans

Resolution No. 2020-179

RESOLUTION APPROVING FINAL PLANS AND SPECIFICATIONS AND ORDERING ADVERTISEMENT FOR BIDS FOR 2021 ROAD IMPROVEMENT PLAN (OLD HWY 2)

WHEREAS, Northland Consulting Engineers LLP prepared final plans and specifications for sewer extension for 2021 Road Improvement Plan (Old Hwy 2) ("Project"); and

WHEREAS, such final plans and specifications have been presented to the City Council; and

WHEREAS, the City Council has reviewed such final plans and specifications and believes it to be in the best interest of the City of Hermantown to approve such final plans and specifications; and

WHEREAS, the City may finance the Project from an issue of tax-exempt bonds; and

WHEREAS, by law the City of Hermantown is obligated to advertise for bids for construction of the improvements described in such final plans and specifications; and

WHEREAS, the City Council believes that it is in the best interest of the City of Hermantown that such bids be advertised for at the earliest possible time.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota, as follows:

1. The final plans and specifications prepared by Northland Consulting Engineers LLP are hereby approved and ordered placed on file in the office of the City Clerk.

2. The City may finance the Project from an issue of tax-exempt bonds.

3. The City Clerk is hereby directed to file such final plans and specifications in the permanent records of the City.

4. The City Clerk is hereby further authorized and directed to prepare and cause to be inserted in the Hermantown Star, the official newspaper, and in the Construction Bulletin an advertisement for bids for 2021 Road Improvement Plan (Old Hwy 2) in accordance with the plans and specifications approved by the City Council. The advertisement for bids shall be published in the Hermantown Star on **December 31, 2020, January 7, 2021, and January 14, 2021** and published in the Construction Bulletin.

5. Such advertisement shall specify the work to be done, shall state that the bids will be publicly opened and tabulated by the Consulting Engineer and the City Clerk on **Thursday, January 21, 2021**, at **10:00 a.m.**, that the tabulated bids will be considered at the City Council meeting on **February 1, 2021** at **6:30 p.m.,** and shall state that no bids will be considered unless sealed and filed with the City Clerk and accompanied by a cash deposit, cashier's check, bid bond or certified check payable to the City of Hermantown for five percent (5%) of the amount bid.

6. The notice to be published shall be substantially in the form of the one attached hereto as Exhibit A.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

ADVERTISEMENT FOR BIDS

NOTICE IS HEREBY GIVEN that the City Council of the City of Hermantown, Minnesota, will receive bids at the office of the City Clerk until **10:00 a.m. Local Time, Thursday, January 21, 2021** for the construction of Old Highway 2. The project takes place in the City of Hermantown in accordance with the plans and specifications on file in the office of the City Clerk, the Duluth Builders Exchange, Minnesota Builders Exchange and QuestCDN. Major work items include: bituminous pavement reclamation; replace signs and mailbox; traffic control.

All bids shall be made on the proposal form contained in the specifications and shall be accompanied by a cashier's check, bid bond or certified check payable to the order of the City of Hermantown for not less than five percent (5%) of the amount bid.

Digital image copies of the Bidding Documents are available QuestCDN. These documents may be downloaded by selecting this project from the PROJECT BID INFORMATION on the SEARCH PROJECTS page. For assistance and free membership registration, contact QuestCDN at 952.233.1632 or info@questcdn.com.

Bids shall be mailed or delivered to the City Clerk, securely sealed and endorsed upon the outside wrapper with a brief statement or summary as to the work for which the bid is made.

The City Council reserves the right to reject all bids. All bids and the award of bid shall be subject to the Competitive Bidding Rules of the City of Hermantown.

Bids will be opened and compiled by the City Clerk and the City Engineer at **10:00 a.m. Local Time, Thursday, January 21, 2021** at the Hermantown Government Services Building. **The bid opening will not be a public meeting for bidders to attend. A bid abstract will be prepared and sent to all bidders via email by the end of the day of the opening.** Any questions regarding the project should be directed to the City Engineer, David Bolf, P.E. at 218-727-5995 or david@nce-duluth.com.

Authorized by the City Council.

BONNIE ENGSETH, CLERK
City of Hermantown

CITY OF HERMANTOWN

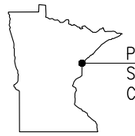
DEPARTMENT OF PUBLIC WORKS AND UTILITIES

CONSTRUCTION PLANS FOR:

OLD HWY 2

PAVEMENT RECLAMATION

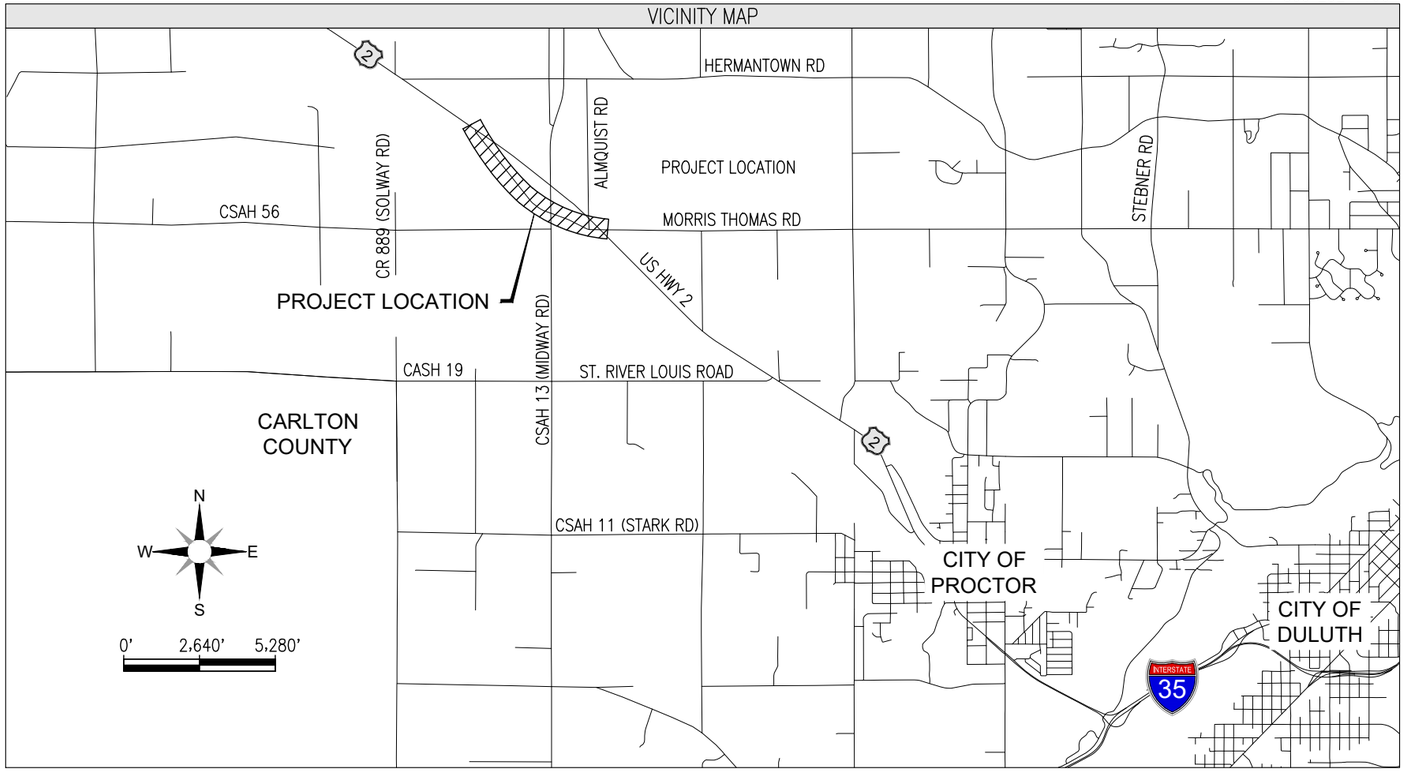
LOCATION: FROM US HWY 2 TO US HWY 2
LENGTH: 5,356.50 FEET 1.014 MILES



PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF HERMANTOWN

1-800-252-1166

VICINITY MAP



DEFINITIONS	
ABBREVIATION	DESCRIPTION
EG	EXISTING GRADE
FFE	FINISH FLOOR ELEVATION
FG	FINISH GRADE
N/A	NOT AVAILABLE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT

LEGEND		
DESCRIPTION	PROPOSED	EXISTING
SITE PROPERTY		
SECTION		
RIGHT OF WAY		
EASEMENT		
LOT		
BENCHMARK		
SURVEY MONUMENT		
CENTERLINE		
PAVEMENT		
PAVERS		
CONCRETE		
SIDEWALK		
GRAVEL		
RIP RAP		
CURB & GUTTER		
CURB & GUTTER		N/A
STRIPING		
ADA DOMES		
FLAG POLE		
MAIL BOX		
POST		
BOLLARD		
PARKING METER		
SIGN		
CHAIN LINK FNC		
BARB WIRE FNC		
FNC		
GUARD RAIL		
VEGETATION		
TREE		
WETLAND	N/A	
BUILDING		
WALL		
DOORS		
OVERHANG		
STOOP		N/A
FOOTING		
DOWN DRAIN		
MJR CONTOUR	500	500
MNR CONTOUR	499	499
TOP OF SLOPE	TOP	TOP
TOE OF SLOPE	TOE	TOE
DAYLIGHT FILL	F	N/A
DAYLIGHT CUT	C	N/A
FLOW LINE		
OVERHEAD	OH	OH
UTILITY POLE		
GUY WIRE		
VALVE		
UTILITY BOX	B	B
METER	M	M
CLEANOUT	C	C
STORM PIPE		
STORM MH	D	D
CB - SQUARE		
CB - ROUND		
APRON		
FORCEMAIN	FM	FM
SANITARY		
SANITARY MH	S	S
WATER LINE	W	W
WATER MH	W	W
HYDRANT		
WELL	W	W
GAS PIPE	G	G
GAS MH	G	G
REGULATOR	R	R
ELECTRICAL	E	E
ELEC MH	E	E
LIGHT POLE		
TRANSFORMER	X	X
OUTLET		
FIBER OPTIC	FO	FO
TELECOM	T	T
CABLE	CBL	CBL
COMM MH	T	T

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN. AVAILABLE AT: http://www.dot.state.mn.us/pre-letting/spec/

THE 2017 EDITION OF THE CITY OF HERMANTOWN STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY. AVAILABLE AT: GOVERNMENTAL SERVICES BUILDING

UTILITY DETAIL LEVEL

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

WARNING:
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1-800-252-1166 REQUIRED BY LAW.

BASIS OF BEARING/CONTROL

CONTROL BASED ON THE ST. LOUIS COUNTY TRANSVERSE MERCATOR COORDINATE SYSTEM OF 1996

POINT NAME:	NORTHING:	EASTING:	ELEVATION:

SHEET INDEX

SHEET NO	DESCRIPTION
1	TITLE
2	STATEMENT OF ESTIMATED QUANTITIES
3	TYPICAL SECTIONS
4	DETAILS
5	OVERALL VIEW
6-10	PLAN VIEW
11	TRAFFIC CONTROL

---THIS PLAN CONTAINS 11 SHEETS---

CITY APPROVAL

PRELIMINARY
NOT FOR CONSTRUCTION

APPROVED HERMANTOWN CITY ENGINEER DATE

Northland Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering Services
www.nce-engineers.com
Voice: (218)727-5995
Fax: (218)727-7779

OLD HWY 2
PAVEMENT RECLAMATION
STREET IMPROVEMENT DISTRICT #000

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.

PRELIMINARY
NOT FOR CONSTRUCTION

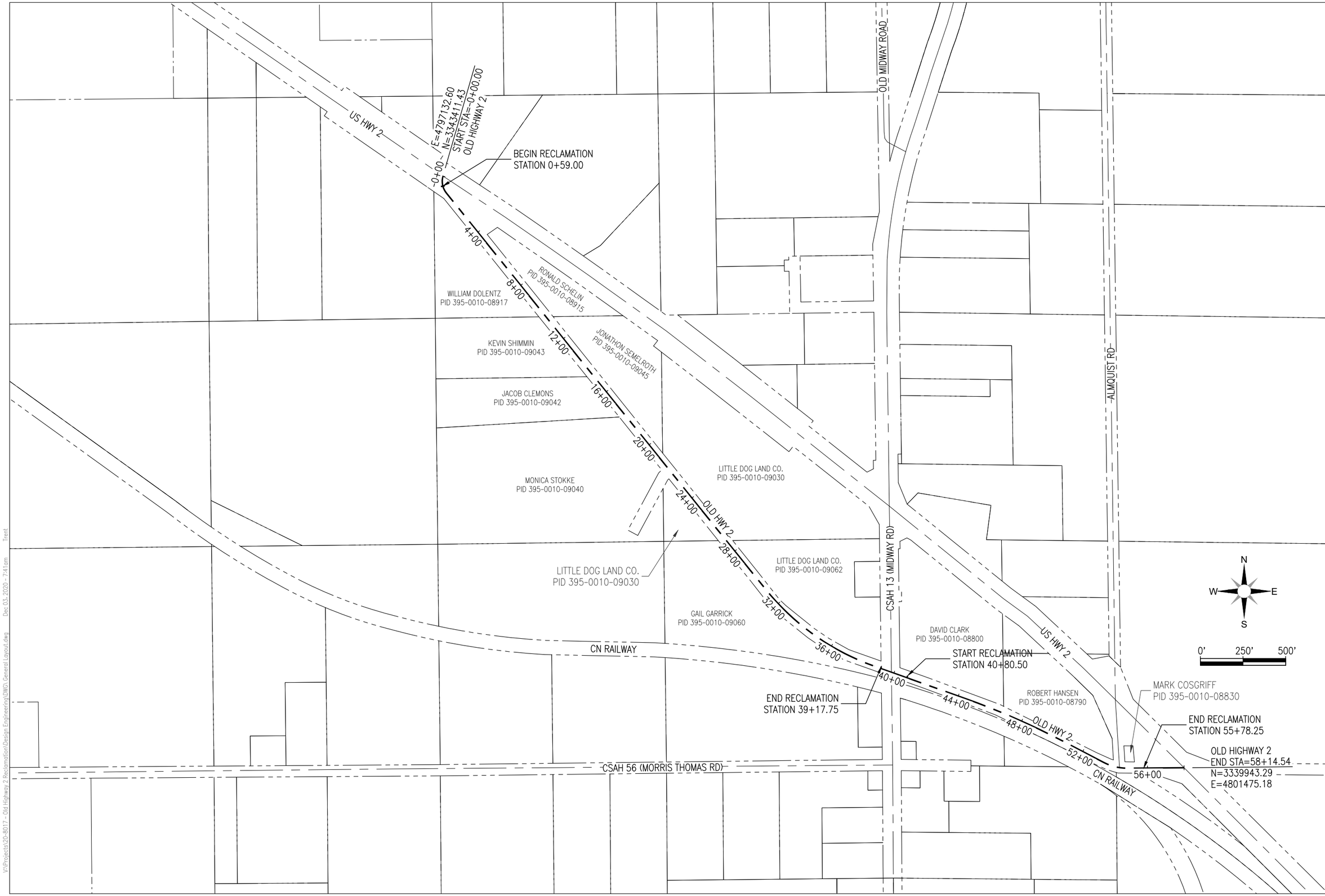
XX/XX/XX
Lic. No: 40926
Engineer: David G. Bolf

revision

Proj: 20-8017
Date: 12/03/20
Drawn: JDO
Checked: TTP

TITLE
Sheet Title
Sheet Number
1

V:\Projects\20-8017 - Old Highway 2 Reclamation\Design Engineering\DWGs Title.dwg Dec 03, 2020 - 7:40am Trent



V:\Projects\20-8017 - Old Highway 2 Reclamation\Design Engineering\DWGs General Layout.dwg Dec 03, 2020 - 7:41am Trent

Northland
Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering Services
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Voice: (218)727-5995
Fax: (218)727-7779

OLD HWY 2
PAVEMENT RECLAMATION
STREET IMPROVEMENT DISTRICT #000

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.

XX/XX/XX

PRELIMINARY
NOT FOR CONSTRUCTION

Lic. No: 40926

Engineer: David G. Bolf

revision

Proj: 20-8017
Date: 12/03/20
Drawn: JDO
Checked: TTP

GENERAL LAYOUT
Sheet Title

Sheet Number
5

TO:	Mayor & City Council		
FROM:	John Mulder, City Administrator		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Keene Creek Trail – Accept Feasibility Report & Order Preparation of Plans & Specs**	**Agenda Item: 12-J**	**Resolution 2020-180**

REQUESTED ACTION

Approve resolution receiving preliminary engineering report and ordering improvement and directing preparation of final plans & specifications for Keene Creek trail

BACKGROUND

Earlier this year, the Council directed that a preliminary engineering report be prepared to construction a paved trail from Morris Thomas south through City owned property to the Keene Creek Park parking lot. This trail would be one segment of the overall Munger Spur Trail.

The City has a grant from the Greater MN Parks and Trails Commission for the Section 24 segment, and this segment of trail. Matching money would be from the Park Dedication Fund. The Trail would start at the parking lot and proceed north across city owned park land and end at Morris Thomas. In the future, it would cross Morris Thomas and connect to the Section 24 trail.

The feasibility study was presented to the Park Board on Tuesday, December 15. The Park Board was supportive of the study as well as the use of park dedication fund as the project match.

Under the conditions of the grant, the work needs to be done by prior to June 30, 2021. However, we will be asking the State Legislature for an extension due to delays caused by the pandemic.

SOURCE OF FUNDS (if applicable)

Grant from the Greater MN Parks and Trails Commission
Park Dedication Funds

ATTACHMENTS

Preliminary Engineering Report

Resolution No. 2020-180

RESOLUTION RECEIVING PRELIMINARY ENGINEERING REPORT AND ORDERING IMPROVEMENT AND DIRECTING PREPARATION OF FINAL PLANS & SPECIFICATIONS FOR KEENE CREEK TRAIL

WHEREAS, pursuant to Resolution 2020-99 of the Council adopted on July 20, 2020 a preliminary engineering report ("Report") has been prepared by Northland Consulting Engineers, LLP with reference to Keene Creek Trail ("Project"); and

WHEREAS, the City Council has been advised by Northland Consulting Engineers, LLP, the consulting engineer for such project in the Report that the Project is feasible and should best be made as proposed; and

WHEREAS, the City Council believes that it is in the best interests of the City of Hermantown that further consideration be given to the construction of Keene Creek Trail in the City of Hermantown; and

WHEREAS, the City Council has received and approved a preliminary engineering report for the project ("Project") known as Keene Creek Trail; and

WHEREAS, the next step in the process is to prepare final plans and specifications for such project; and

WHEREAS, the City Council desires to proceed to prepare such plans and specifications, and

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota, as follows:

1. The City Council hereby receives and accepts the preliminary engineering report.

2. The City Engineer is hereby authorized and directed to complete final plans and specifications in the project known as Keene Creek Trail.

3. Upon completion of such final plans and specifications, Northland Consulting Engineers, LLP is requested to present them to the City Council for approval and authorization for bidding.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such motion was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

CITY OF HERMANTOWN

PRELIMINARY ENGINEERING REPORT
AND
FEASIBILITY STUDY

Prepared: November 11, 2020

KEENE CREEK TRAIL
(KEENE CREEK PARK TO MORRIS THOMAS RD.)

NCE JOB NO. 20-8013

RECOMMENDED: _____ 11/11/20

Hermantown City Engineer **Date**

TABLE OF CONTENTS

1. Report
2. Project Cost Estimate
3. Preliminary Plan & Exhibits

PURPOSE

The purpose of this report is to determine the necessity, cost effectiveness, and economic feasibility for the design and construction of a 2,400 linear foot trail corridor from Morris Thomas Road to Keene Creek Park.

DISCUSSION

In 2014 the City along with its consultants HKGI and MSA prepared a master plan for the Proctor Hermantown Munger Trail Spur. This master plan identified a trail system connecting the Essentia Wellness Center/Hermantown School Campus to the Munger Trail in Duluth. This master plan is the basis for the City's trail master plan which was prepared in November 2019.

The City's master plan identifies 9 trail segments covering 8.9 miles from the Essentia Wellness Center/Hermantown School Campus to the Proctor/Hermantown border. These trail segments provide access to the Government Services Complex, Stebner Park, Keene Creek Park with additional connections to the Hermantown Marketplace and potentially Fichtner Field Park. To date 0.4 miles have been completed and 1.74 miles are currently under construction. The 0.4 miles are from the Stebner Road/Maple Grove Road intersection to Stebner Park and the 1.74 miles are from Stebner Park to Hermantown Road.

Segments	Status
Stebner/Maple Grove Intersection thru Stebner Park	Constructed 2019
Stebner Park to Hermantown Road	Under Construction
Morris Thomas Road to Keene Creek Park	Potential 2021 Construction
Essentia Wellness Center to Lavaque Junction	To Be Determined

In 2018, the City received a $820,000 grant from the Greater MN Regional Park and Trails Commission for the purpose of designing and constructing two trail segments; the 1.74 mile segment currently under construction as well as the proposed segment from Morris Thomas Road to Keene Creek Park. The agreement includes language that a reduction in project scope may result in the reduction of grant funds.

The grant agreement identifies matching funds/in kind services of $535,000 for the grant funding. The existing 1.74 mile segment under construction is bid at $700,541.30 with approximately $440,246.00 of in kind services associated with the trunkline sanitary sewer/trail work. There is approximately $119,458.70 available through the grant as well as $100,000.00 identified in the City's Capital Improvement Projects (CIP) for 2021 for the Munger Trail/Keene Creek trail sections. Furthermore, the Capital Improvement Projects for 2024 identifies $50,000.00 for Keene Creek Park improvements associated with the trail. The use of the CIP money along with the in kind services will satisfy the conditions of the agreement pertaining to the City match.

The following funds are available for the proposed 2,400 trail segment proposed from Morris Thomas Road to Keene Creek Park:

$119,458.40 – GMRPTC Grant

$50,000.00 – CIP PK-18-002

$50,000.00 – CIP PK-20-2024

$50,000.00 – CIP PK-18-003 (identified in 2024 budget)

Total available funds: $269,458.70

PARK DEDICATION FUND

The above referenced CIP funds come out of the park dedication fund. As of today, there is $166,261 of available funds in this account. There are two approved projects currently under construction, three approved projects slated for 2021/2022 construction and one project in the City review phase which will be contributing to the park dedication fund within the next 3-24 months. These are the following projects:

Approved Projects Currently Under Construction - +/-$138,300

- Peyton Acres (6 lots): $6,600 park dedication plus $4,050 - $5,400 bedroom fees; +/-$11,100
- Hermantown Apartments (149 units): $80,800 park dedication plus $31,500 bedroom fees; $127,200

Approved Projects slated for 2021/2022 Construction - +/-$109,450

- The Pillars of Hermantown (110 units): $41,200 park dedication plus $15,450 bedroom fees; $56,650
- Engwalls Redevelopment: (26 lots) $28,600 park dedication plus $7,800 - $11,700 bedroom fees; +/- $38,400
- Jenny Farms (Shaine Stokke): (9 lots), $9,900 park dedication plus $4,050 - $5,400 bedroom fees; +/- $14,400

Future Projects Currently under review - +/-$63,000

- Maple Grove Townhomes: 72 apartment units townhome units +/- $46,800 park dedication plus +/- $16,200 bedroom fees; +/-$63,000

Total Approved and potential park dedication: +/- $310,750

These additional fees would bring the park dedication fund to approximately $477,011 within the next 3 to 24 months.

ALIGNMENT & EXISTING CONDITION REVIEW

NCE has reviewed the existing conditions of the area being evaluated for the trail segment from Morris Thomas Road to Keene Creek Park. NCE walked the area with Eric Johnson, Hermantown Community Development Director, evaluating the topography, wetland impacts, runoff management and constructability of a few different proposed alignments. See corresponding plan showing the (3) alignments being evaluated.

Alignment #1

The project will start at the east end of the parking area in Keene Creek Park. From the trail head the trail will swing to the west and then turn to the north and follow Okerstrom road along the east edge of the road to the intersection of Okerstrom and Morris Thomas. This alignment will encroach on Keene Creek mush of the length and will be less desirable as it will be along the public road. ROW acquisition should be considered as it was found that ROW was less than typical on the Okerstrom segment north of Morris Thomas.

Alignment #2

The project will start at the east end of the parking area in Keene Creek Park extend north along the ball field and continue through the woods and end at the Morris Thomas east of the culvert intersection. No culvert crossings would be necessary but encroachment along Keene Creek just south of Morris Thomas would be necessary. There is a possibility of needing an easement from the adjacent property owner to the east. The design phase will determine if that is necessary.

Alignment #3

The project will start at the east end of the parking area in Keene Creek Park extend north along the ball field and continue through the woods and end at the Morris Thomas and Okerstrom intersection. This alignment will require a crossing of Keene Creek. This also allows for an at grade crossing at the intersection of Okerstrom Road and Morris Thomas Road. The Keene Creek crossing adds significant cost and the DNR has stated this is an undesirable option and creek crossings should be avoided.

KEENE CREEK CROSSINGS

NCE has also evaluated alignment options with the DNR specifically focusing on Keene Creek crossings. If the trail crossing were located at the intersection of Morris Thomas and Okerstrom Road, depending on trail alignment to the north, another crossing could be necessary. The DNR does not support having (2) crossing and a culvert in such a short length along Keene Creek. St. Louis County will be replacing a large culvert carrying Keene Creek under Morris Thomas in 2021.

MORRIS THOMAS CROSSING

NCE has discussed roadway crossings for the trail with St. Louis County. Vic Lund of St. Louis County recommends signage along the trail as well as warning signs along each roadway identifying the trail crossings. It is the preference of St. Louis County to put the onus on the trail user to obey the signage as well as exercise caution in crossing roadways. NCE and St. Louis County agree that whether the crossing is at the intersection or to the east of the Keene Creek crossing Morris Thomas, that the sight lines will be sufficient for either location.

FUTURE DEVELOPMENT

City staff have been in preliminary discussions with a local developer who owns the 33 acres in the NE quadrant of Morris Thomas Road and Okerstrom Road. The property owner is looking at conceptual options for how this property could develop and could eventually be a Planned Unit Development or a series of single family homes fronting Morris Thomas Road and Okerstrom Road. The City has had initial discussions with the property owner about a trail easement running north/south on the property in order to connect to an existing trail easement the City has along the rear property lines of the homes from 3749 to 3789 Johnson Road. The City would continue to pursue trail easements in order to extend to Hermantown Road and connect with the Engwall's property and existing trail. This scenario would provide trail access from the Stebner Road/Maple Grove intersection to Keene Creek Park.

DESIGN

Trail Construction: Trail Typical Section will be a 10' wide bituminous top with 2' gravel shoulders on each side. The in slopes of the trail will be graded at 3H:1V.

Minimum Typical Trail Section Construction (Based on Previous Segments) – Geotech to recommend
3" Bituminous Pavement
12" Class 5 Aggregate
9" Select Granular Borrow
Geotextile Fabric, Type 5

Site Evaluation
Further study of the site conditions and drainage characteristics along the trail will need to be performed prior to final design of the plan. The additional data to be collected is listed below.

Topographic and Boundary Survey: A survey will need to be completed and will serve as the basis of the trail design for alignment and elevation.

Soils Investigation: It is recommended that multiple soil borings be completed to determine soil conditions to understand the subgrade that the trail will be constructed on.

Wetland Permitting: A wetland delineation has been completed in 2019 by WSP directly for the City. This delineation will need to be expanded to encompass the proposed extents of the project throughout the length of the project. Various low-lying areas and Keene Creeks stream bed exist near the alignments being considered. If required, the project will need to mitigate any disturbed wetlands that are above and beyond the allowed wetland de minimis exemption.

CONCLUSION & RECOMMENDATION

Northland Consulting Engineers believes the improvements above are beneficial to the City of Hermantown. The construction of this segment of trail will be another piece of the overall Parks Department Master Plan to extend the Munger Trail Connector through the City of Hermantown.

Alignment #2 is the most desirable option based on its route off the edge of a public road providing a wooded trail and having no creek crossings. This alignment meets the desired goals of being an off road trail while also presenting lesser costs and permitting due to avoidance of a Keene Creek crossing. Also, it is likely that the future segment to the north would avoid a creek crossing if this alignment is constructed, saving future costs as well.

This segment by itself and in in conjunction with the overall trail project will be a major benefit allowing for improved multiuse travel through the City by further extending to reach more distant areas of the city. Below is a summary of the projected cost for the improvements to the Trail Project.

PROJECTED COSTS

Cost Estimates for the Trail Improvements from Keene Creek Park to Morris Thomas Road have been developed and are attached. The estimated overall total costs are shown below. These costs are developed by looking at each alignment option. There is a funding gap based on current estimated project costs and current funding/grants available to the City. See attached Project Cost Estimates for detailed breakdown of cost of each alignment.

Estimated Construction Costs:

Alignment #1	**$346,537.35**
Alignment #2	**$336,545.45**
Alignment #3	**$433,491.40**

Available Funds as of November 10,2020

GMRPTC Grant	$119,458.40
CIP PK-20-2024	$50,000.00
CIP PK-20-2024	$50,000.00
CIP PK-18-003 (identified in 2024 budget)	$50,000.00
Total Available Funds	**$269,458.70**

Estimated Available Funds through 2022

Existing available funds	$269,458.70
Approved projects under construction	+/-$138,300.00
Approved projects slated for 2021/2022	+/-$109,450.00
Future projects under review	+/-$63,000
Estimated Available Funds through 2022	**$580,208.70**

CITY OF HERMANTOWN

DEPARTMENT OF PUBLIC WORKS AND UTILITIES

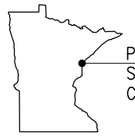
FEASIBILITY STUDY FOR:

KEENE CREEK PARK TRAIL

FEASIBILITY STUDY

KEENE CREEK PARK

LOCATION: FROM MORRIS THOMAS ROAD TO KEENE CREEK PARK
LENGTH: 2,435 FEET 0.461 MILES



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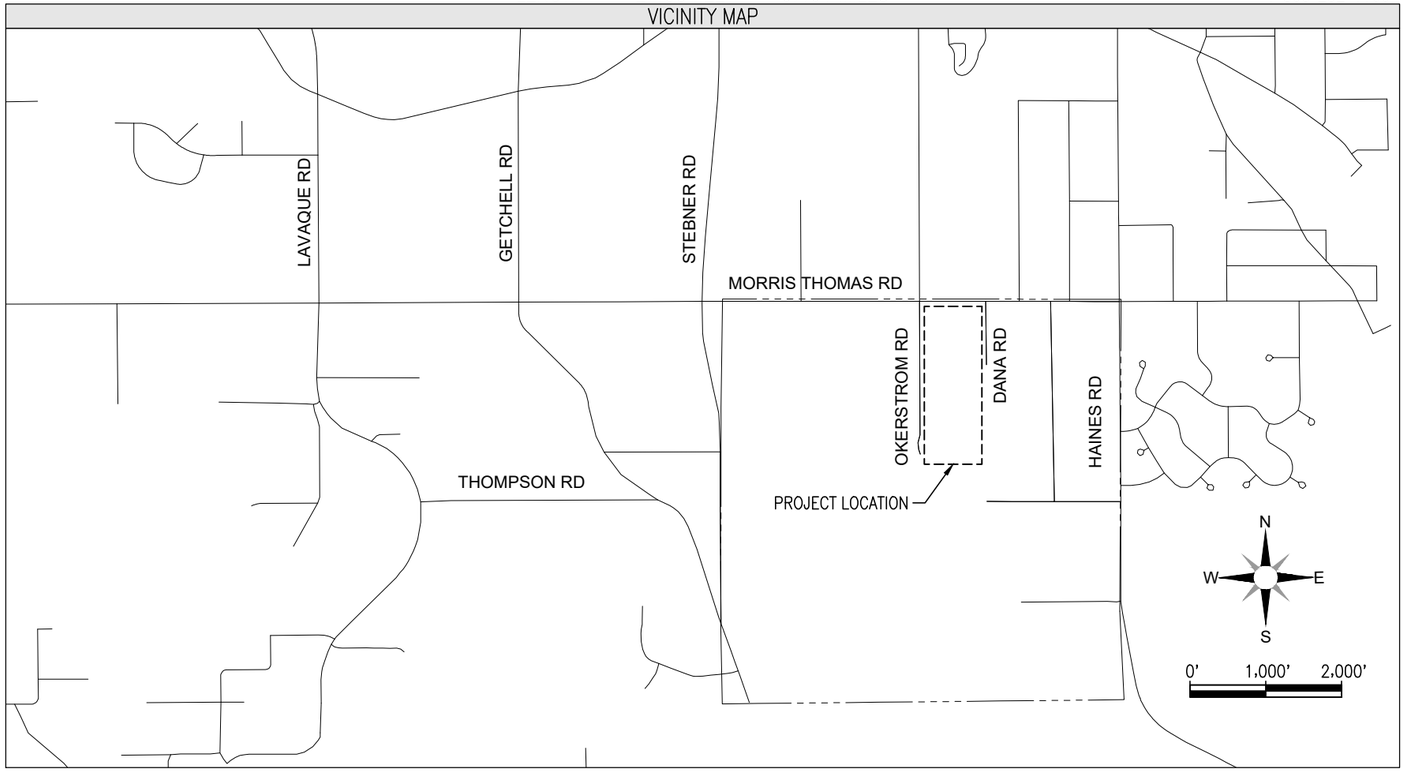
VICINITY MAP



LEGEND

DESCRIPTION	PROPOSED	EXISTING
SITE PROPERTY		
SECTION		
RIGHT OF WAY		
EASEMENT		
LOT		
BENCHMARK	△	△
SURVEY MONUMENT		
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TOE OF SLOPE	TOE	TOE
DAYLIGHT FILL	F	N/A
DAYLIGHT CUT	C	N/A
FLOW LINE		
OVERHEAD	OH	OH
UTILITY POLE		
GUY WIRE		
VALVE		
UTILITY BOX	B	B
METER	M	M
CLEANOUT	C	C
STORM PIPE		
STORM MH	D	D
CB - SQUARE		
CB - ROUND		
APRON		
FORCEMAIN	FM	FM
SANITARY		
SANITARY MH	S	S
WATER LINE	W	W
WATER MH	W	W
HYDRANT		
WELL	W	W
GAS PIPE	G	G
GAS MH	G	G
REGULATOR	R	R
ELECTRICAL	E	E
ELEC MH	E	E
LIGHT POLE		
TRANSFORMER	X	X
OUTLET		
FIBER OPTIC	FO	FO
TELECOM	T	T
CABLE	CBL	CBL
COMM MH	T	T

DEFINITIONS

ABBREVIATION	DESCRIPTION
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PI	POINT OF INTERSECTION
PT	POINT OF TANGENT

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION 'STANDARD SPECIFICATIONS FOR CONSTRUCTION' SHALL GOVERN. AVAILABLE AT: http://www.dot.state.mn.us/pre-letting/spec/

THE 2017 EDITION OF THE CITY OF HERMANTOWN STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY. AVAILABLE AT: GOVERNMENTAL SERVICES BUILDING

SHEET INDEX

SHEET NO	DESCRIPTION
1	TITLE
2	TYPICAL SECTION
3	OVERALL MAP

---THIS PLAN CONTAINS 3 SHEETS---

CITY APPROVAL

PRELIMINARY
NOT FOR CONSTRUCTION

APPROVED HERMANTOWN CITY ENGINEER DATE

Northland Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering Services
www.nce-engineers.com
Voice: (218)727-5995
Fax: (218)727-7779

KEENE CREEK PARK TRAIL
FEASIBILITY STUDY
KEENE CREEK PARK

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.

PRELIMINARY
NOT FOR CONSTRUCTION

XX/XX/XX

Lic. No: 40926

Engineer: David G. Bolf

revision

Proj: 20-8013
Date: 11/5/20
Drawn: JFM
Checked: ARZ

TITLE

Sheet Title

Sheet Number

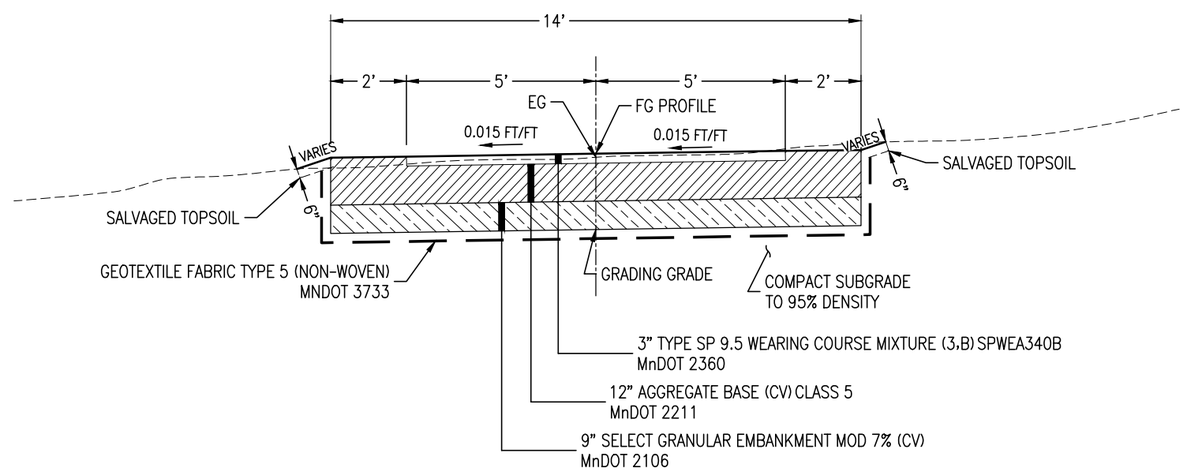
1

V:\City - Hermantown\Feasibility Studies\20-8013 - Keene Creek Park Trail\Design Engineering\DWG\ Title-Typ-Overall - Feasibility.dwg Nov 05, 2020 - 10:41am cdom

LEFT SIDE

TYPICAL TRAIL SECTION

RIGHT SIDE



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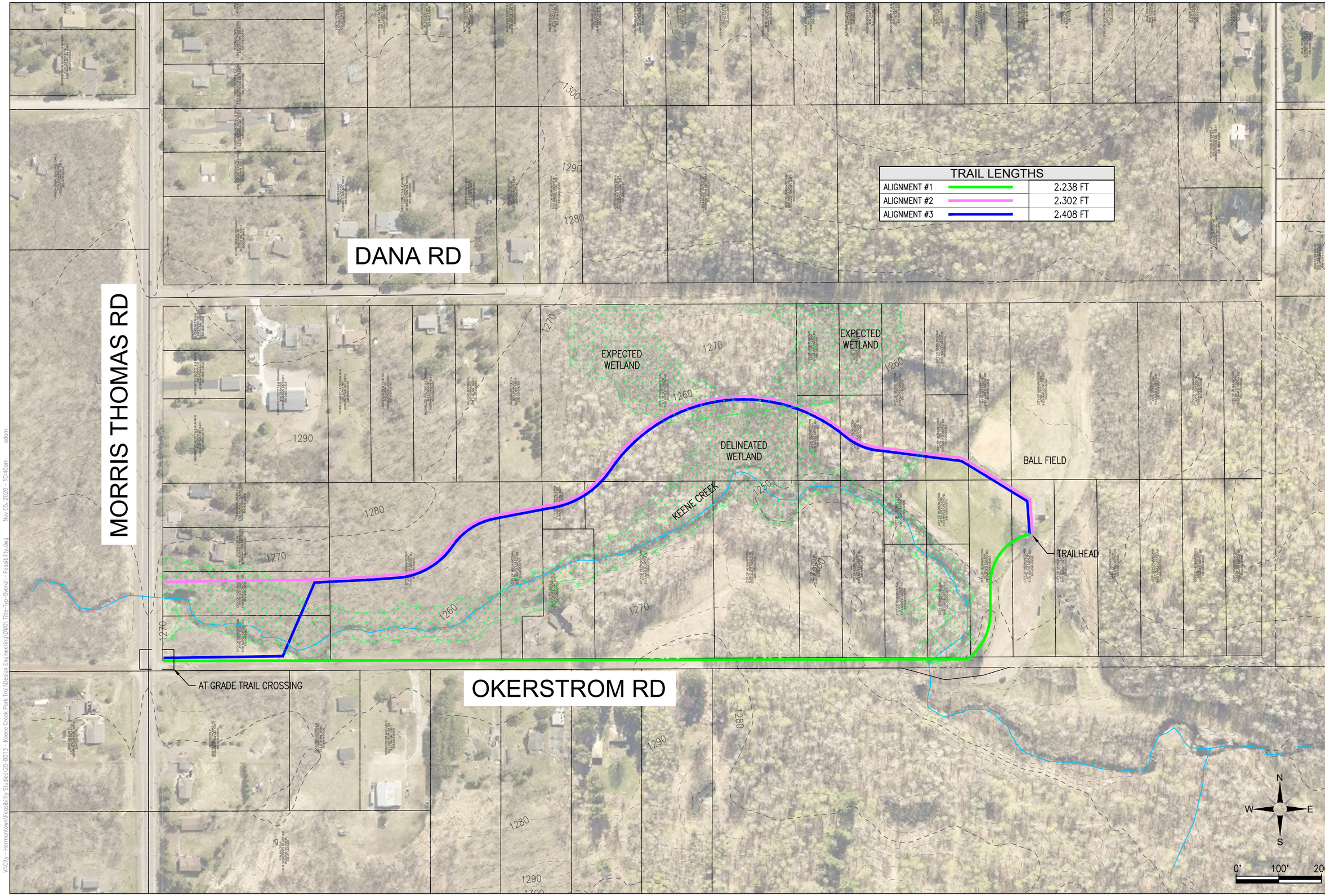
TYPICALS

Sheet Title

Sheet Number

2

V:\City - Hermantown\Feasibility Studies\20-8013 - Keene Creek Park Trail\Design Engineering\DWG\ Title-Typ-Overall - Feasibility.dwg Nov 05, 2020 - 10:40am adam



TRAIL LENGTHS	
ALIGNMENT #1	2,238 FT
ALIGNMENT #2	2,302 FT
ALIGNMENT #3	2,408 FT

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KEENE CREEK PARK

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PRELIMINARY NOT FOR CONSTRUCTION

XX/XX/XX

Engineer: David G. Bolf

Lic. No: 40926

revision

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Checked: ARZ

OVERALL MAP

Sheet Title

Sheet Number

3

W:\City - Hermantown\Feasibility Studies\20-8013 - Keene Creek Park Trail\Design Engineering\DWG Title Typ-Overall - Feasibility.dwg Nov 05, 2020 10:40am adam

Northland Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering

Keene Creek Park Trail Engineer's Estimate

Alignment #1

Date: 11/5/20

Item No.	Spec. No.	Item Description	Unit of Measure	Estimated Quantities	Unit Price	Total Cost
1	2021.501	MOBILIZATION	LS	1	$ 5,000.00	$ 5,000.00
2	2101.505	CLEARING	ACRE	0	$ 6,500.00	$ -
3	2101.505	GRUBBING	ACRE	0	$ 5,000.00	$ -
4	2105.507	COMMON EXCAVATION	CY	1,700	$ 15.00	$ 25,500.00
5	2105.507	COMMON BORROW (CV)	CY	1,500	$ 20.00	$ 30,000.00
6	2105.507	SELECT GRANULAR BORROW MOD 7% (CV)	CY	1,150	$ 30.00	$ 34,500.00
7	2105.604	GEOTEXTILE FABRIC TYPE V	SY	5,400	$ 3.00	$ 16,200.00
8	2211.507	AGGREGATE BASE (CV), CLASS 5	CY	1,330	$ 35.00	$ 46,550.00
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	430	$ 140.00	$ 60,200.00
10	2501.503	15" CAS PIPE CULVERT	EACH	0	$ 250.00	$ -
11	2501.503	15" CAS PIPE CULVERT	LF	0	$ 40.00	$ -
12	2501.601	CULVERT CROSSING OR LOOP ON ROAD	LS	1	$ 25,000.00	$ 25,000.00
13	2573.501	STABILIZED CONSTRUCTION EXIT	LS	1	$ 1,000.00	$ 1,000.00
14	2573.502	STORM DRAIN INLET PROTECTION	EACH	12	$ 250.00	$ 3,000.00
15	2573.503	SILT FENCE, TYPE MS	LF	2,300	$ 2.75	$ 6,325.00
16	2575.504	SOD, TYPE LAWN	SY	0	$ 10.00	$ -
17	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	SY	4,300	$ 3.00	$ 12,900.00
18	2575.505	SEEDING	ACRE	0.90	$ 500.00	$ 450.00
19	2575.508	SEED MIXTURE 36-311 (UPLAND)	LB	90	$ 15.00	$ 1,350.00

Estimate Construction Total:	**$ 267,975.00**
5% Contingency:	**$ 13,398.75**
Geotechnical Investigation	**$ 5,000.00**
Wetland Permitting	**$ 3,000.00**
Surveying & Construction Staking	**$ 10,000.00**
5% City Administrative Costs:	**$ 13,398.75**
12% Engineering Fees (Design & Const):	**$ 33,764.85**

Estimated Total Project Cost:	**$ 346,537.35**

Northland Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering

Keene Creek Park Trail Engineer's Estimate

Alignment #2

Date: 11/5/20

Item No.	Spec. No.	Item Description	Unit of Measure	Estimated Quantities	Unit Price	Total Cost
1	2021.501	MOBILIZATION	LS	1	$ 5,000.00	$ 5,000.00
2	2101.505	CLEARING	ACRE	1.4	$ 6,500.00	$ 9,100.00
3	2101.505	GRUBBING	ACRE	1.4	$ 5,000.00	$ 7,000.00
4	2105.507	COMMON EXCAVATION	CY	1,720	$ 15.00	$ 25,800.00
5	2105.507	COMMON BORROW (CV)	CY	200	$ 20.00	$ 4,000.00
6	2105.507	SELECT GRANULAR BORROW MOD 7% (CV)	CY	1,175	$ 30.00	$ 35,250.00
7	2105.604	GEOTEXTILE FABRIC TYPE V	SY	5,150	$ 3.00	$ 15,450.00
8	2211.507	AGGREGATE BASE (CV), CLASS 5	CY	1,475	$ 35.00	$ 51,625.00
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	445	$ 140.00	$ 62,300.00
10	2501.503	15" CAS PIPE CULVERT	EACH	12	$ 250.00	$ 3,000.00
11	2501.503	15" CAS PIPE CULVERT	LF	180	$ 40.00	$ 7,200.00
12	2573.501	STABILIZED CONSTRUCTION EXIT	LS	1	$ 1,000.00	$ 1,000.00
13	2573.502	STORM DRAIN INLET PROTECTION	EACH	12	$ 250.00	$ 3,000.00
14	2573.503	SILT FENCE, TYPE MS	LF	5,600	$ 2.75	$ 15,400.00
15	2575.504	SOD, TYPE LAWN	SY	0	$ 10.00	$ -
16	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	SY	4,300	$ 3.00	$ 12,900.00
17	2575.505	SEEDING	ACRE	0.90	$ 500.00	$ 450.00
18	2575.508	SEED MIXTURE 36-311 (UPLAND)	LB	90	$ 15.00	$ 1,350.00

Estimate Construction Total:	**$ 259,825.00**
5% Contingency:	**$ 12,991.25**
Geotechnical Investigation	**$ 5,000.00**
Wetland Permitting	**$ 3,000.00**
Surveying & Construction Staking	**$ 10,000.00**
5% City Administrative Costs:	**$ 12,991.25**
12% Engineering Fees (Design & Const):	**$ 32,737.95**

Estimated Total Project Cost:	**$ 336,545.45**

Northland Consulting Engineers L.L.P.
Structural, Civil and Forensic Engineering

Keene Creek Park Trail Engineer's Estimate

Alignment #3

Date: 11/5/20

Item No.	Spec. No.	Item Description	Unit of Measure	Estimated Quantities	Unit Price	Total Cost
1	2021.501	MOBILIZATION	LS	1	$ 5,000.00	$ 5,000.00
2	2101.505	CLEARING	ACRE	1.4	$ 6,500.00	$ 9,100.00
3	2101.505	GRUBBING	ACRE	1.4	$ 5,000.00	$ 7,000.00
4	2105.507	COMMON EXCAVATION	CY	1,800	$ 15.00	$ 27,000.00
5	2105.507	COMMON BORROW (CV)	CY	0	$ 15.00	$ -
6	2105.507	SELECT GRANULAR BORROW MOD 7% (CV)	CY	1,250	$ 30.00	$ 37,500.00
7	2105.604	GEOTEXTILE FABRIC TYPE V	SY	5,400	$ 3.00	$ 16,200.00
8	2211.507	AGGREGATE BASE (CV), CLASS 5	CY	1,450	$ 35.00	$ 50,750.00
9	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,B)	TON	475	$ 140.00	$ 66,500.00
10	2501.503	15" CAS PIPE CULVERT	EACH	12	$ 250.00	$ 3,000.00
11	2501.503	15" CAS PIPE CULVERT	LF	180	$ 40.00	$ 7,200.00
12	2501.601	BOX CULVERT/BRIDGE	LS	1	$ 75,000.00	$ 75,000.00
13	2573.501	STABILIZED CONSTRUCTION EXIT	LS	1	$ 1,000.00	$ 1,000.00
14	2573.502	STORM DRAIN INLET PROTECTION	EACH	12	$ 250.00	$ 3,000.00
15	2573.503	SILT FENCE, TYPE MS	LF	5,800	$ 2.75	$ 15,950.00
16	2575.504	SOD, TYPE LAWN	SY	0	$ 10.00	$ -
17	2575.504	EROSION CONTROL BLANKETS CATEGORY 3N	SY	4,300	$ 3.00	$ 12,900.00
18	2575.505	SEEDING	ACRE	0.90	$ 500.00	$ 450.00
19	2575.508	SEED MIXTURE 36-311 (UPLAND)	LB	90	$ 15.00	$ 1,350.00

Estimate Construction Total:	**$ 338,900.00**
5% Contingency:	**$ 16,945.00**
Geotechnical Investigation	**$ 5,000.00**
Wetland Permitting	**$ 3,000.00**
Surveying & Construction Staking	**$ 10,000.00**
5% City Administrative Costs:	**$ 16,945.00**
12% Engineering Fees (Design & Const):	**$ 42,701.40**

Estimated Total Project Cost:	**$ 433,491.40**

Resolution No. 2020-181

RESOLUTION AUTHORIZING AND DIRECTING THE MAYOR AND CITY CLERK TO EXECUTE AND DELIVER A COOPERATIVE AGREEMENT BETWEEN ST. LOUIS COUNTY AND THE CITY OF HERMANTOWN FOR 2021 ROAD STRIPING CP 0000-369585

WHEREAS, St. Louis County has prepared a maintenance striping project to maintain pavement markings on its county highways, identified further as CP 0000-369585; and

WHEREAS, St. Louis County has approved Hermantown to participate in this maintenance striping project, which work hereafter will be referred to as the "Project"; and

WHEREAS, St. Louis County and Hermantown have each determined the locations, quantities and types of pavement markings on their respective highways and streets; and

WHEREAS, St. Louis County and Hermantown have agreed to participate in the Project costs as hereinafter set forth; and

WHEREAS, the City Administrator and City Council have reviewed the Agreement and believe that it is in the best interest of the City of Hermantown to approve the Agreement and authorize and direct the Mayor and City Clerk to execute and deliver it on behalf of the City of Hermantown.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Hermantown, Minnesota as follows:

1. An Agreement substantially in the form of the one attached hereto as Exhibit A is hereby approved.

2. The Mayor and City Clerk are hereby authorized and directed to execute and deliver the Agreement on behalf of the City.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

<u>EXHIBIT A</u>
Cooperative Agreement

COOPERATIVE AGREEMENT
BETWEEN

COUNTY OF ST. LOUIS
AND
CITY OF HERMANTOWN

THIS AGREEMENT, hereinafter referred to as the "Agreement," is made and entered into between the COUNTY OF ST. LOUIS, a body politic and corporate existing under the laws of the State of Minnesota, hereinafter referred to as "St. Louis County", and the CITY OF HERMANTOWN, a body politic and corporate existing under the laws of the State of Minnesota, hereinafter referred to as "Hermantown".

WITNESSETH:

WHEREAS, St. Louis County has prepared a maintenance striping project to maintain pavement markings on its county highways, identified further as CP 0000-369585; and

WHEREAS, Hermantown has requested to participate in this maintenance striping project to maintain pavement markings on their city streets; and

WHEREAS, St. Louis County has approved Hermantown to participate in this maintenance striping project, which work hereafter will be referred to as the "Project"; and

WHEREAS, St. Louis County and Hermantown have each determined the locations, quantities and types of pavement markings on their respective streets and highways; and

WHEREAS, St. Louis County and Hermantown have agreed to participate in the Project costs as hereinafter set forth.

THEREFORE, with regard to the Project, the parties hereby agree to the following:

1. St. Louis County shall prepare the plan, specifications, proposal and engineer's estimate for said Project in accordance with the 2018 Edition of the Minnesota Department of Transportation "Standard Specifications for Construction".

2. Hermantown shall provide to St. Louis County with the required locations, quantities and types of pavement markings that will be placed within Hermantown. St. Louis County shall incorporate said information into the plan and proposal.

3. St. Louis County, acting through the St. Louis County Highway Engineer, shall award the contract for said Project to the lowest responsible bidder in accordance with current Minnesota Statutes.

4. St. Louis County shall perform all necessary contract administration, and shall administer the terms of the contract from contract award to the certification of final payment. Hermantown shall pay to St. Louis County a flat fee in the amount of $300.00 for contract administration services rendered by St. Louis County to Hermantown under this Agreement.

5. St. Louis County shall perform all record keeping and construction inspection for quantities associated with St. Louis County's portion of the Project in accordance with the plan and proposal.

6. Hermantown shall perform all record keeping and construction inspection for quantities associated with Hermantown's portion of the Project in accordance with the plan and proposal, and shall report any observed deficiencies or discrepancies to St. Louis County immediately.

7. St. Louis County's cost participation shall be 100 percent of St. Louis County's quantities as provided in the plan and proposal at the contract unit prices. St. Louis County shall also be responsible for 100 percent of the cost of overrun in St. Louis County's quantities or change orders applied to St. Louis County.

8. Hermantown's cost participation shall be 100 percent of Hermantown's quantities as provided in the plan and proposal at the contract unit prices. Hermantown shall also be responsible for 100 percent of the cost of overrun in Hermantown's quantities or change orders applied to Hermantown. Hermantown shall approve any change orders in writing.

9. Hermantown shall pay to St. Louis County upon award of the contract 95 percent of Hermantown's obligation as contained in the awarded contractor's bid, within 35 days of receipt of an invoice from St. Louis County.

10. Upon completion of the Project, Hermantown shall pay to St. Louis County the remaining balance of Hermantown's obligation of the Project, plus the contract administration fee, within 35 days of receipt of an invoice from St. Louis County. If any funds are received by St. Louis County in excess of the Project and administrative costs, they will be returned to Hermantown without interest.

11. St. Louis County shall require all contractors and subcontractors performing work for said Project to name Hermantown as an insured party in the amounts listed in the insurance requirements contained in the contract.

12. To the full extent permitted by law, actions by the Parties pursuant to this Agreement are intended to be and shall be construed as a "cooperative activity" and it is the intent of the Parties that they shall be deemed a "single governmental unit" for the purpose of liability, as set forth in Minnesota Statutes, Section 471.59, Subd. 1a.

13. Each party shall be liable for its own acts to the extent provided by law, and each party hereby agrees to indemnify, hold harmless and defend the others, their officers and employees against any and all liability, loss, costs, damages, expenses, claims or actions, including attorney's fees, which the others, their officers and employees may hereafter sustain, incur or be required to pay, arising out of or by reason of any act of omission of the party; its agents, servants or employees, in the execution, performance, or failure to adequately perform its obligations pursuant to this Agreement.

14. Any and all employees of Hermantown, while engaged in the performance of any work or service which Hermantown is specifically required to perform under this Agreement, shall be considered employees of Hermantown only and not of St. Louis County. Any and all claims that may or might arise under the Workers Compensation Act of the State of Minnesota on behalf of said employees while so engaged and any and all claims made by any third parties as a consequence of any act of said employees shall be the sole obligation of Hermantown.

15. Any and all employees of St. Louis County, while engaged in the performance of any work or service which St. Louis County is specifically required to perform under this Agreement, shall be considered employees of St. Louis County only and not of Hermantown. Any and all claims that may or might arise under the Workers Compensation Act of the State of Minnesota on behalf of said employees while so engaged and any and all claims made by any third parties as a consequence of any act, of said employees, shall be the sole obligation of St. Louis County.

St. Louis County
City of Hermantown
2021 Maintenance Striping Project
CP 0000-369585

CITY OF HERMANTOWN

_____
Mayor

_____
City Clerk

APPROVED AS TO FORM

_____
City Attorney

COUNTY OF ST. LOUIS

James T. Fulton

_____
Public Works Director/Highway Engineer

APPROVED AS TO FORM

_____
Assistant County Attorney

Damion No._____

TO:	Mayor & City Council		
FROM:	Paul Senst, Public Works Director		
DATE:	**December 15, 2020**	**Meeting Date:**	**12/21/20**
SUBJECT:	**Purchase of F-550 Truck Chassis**	**Agenda Item: 12-L**	**Resolution 2020-182**

REQUESTED ACTION

Approve Purchase of FORD F-550 truck chassis from Ford of Hibbing in the amount of $54,775.00

BACKGROUND

Included in the 2021 Capital improvement plan, is a new crane truck for the Public Works Department to replace Unit H21"Blue". H21 is 24 years old, has rust holes in the frame, is becoming a safety hazard to have on the streets, and is no longer reliable.

This is for the chassis only. The crane and box for this truck will be provided by a different supplier.

This is a purchase through Ford of Hibbing as part of the MN State Bid process.

SOURCE OF FUNDS (if applicable)

2021 CIP Plan

ATTACHMENTS

Ford of Hibbing Quote

Resolution No. 2020-182

RESOLUTION AWARDING CONTRACT FOR 2021 FORD F550 CHASSIS TO FORD OF HIBBING IN THE AMOUNT OF $54,775.00 PLUS APPLICABLE TAXES AND FEES

WHEREAS, the City of Hermantown desires to replace a utility truck and has included it in the 2021 Capital Improvement Plan; and

WHEREAS, the chassis for a 2021 Ford F550 desired by the City is available on the "State Contract" from Ford of Hibbing; and

WHEREAS, after fully considering this matter, the City Council of the City of Hermantown believes that it is in the best interest of the City of Hermantown to award the contract for the chassis to Ford of Hibbing

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Hermantown as follows:

1. Ford of Hibbing is hereby determined to be able to provide the chassis to the City pursuant to the State Contract.

2. The price of $54,775.00 plus applicable taxes and fees for the chassis in accordance with the State Contract is hereby accepted.

3. Per the CIP the funds for the payment of the chassis and truck body will be paid from Fund No. 601 and expensed to 601-494300-544.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution was declared duly passed and adopted December 21, 2020.

QUOTATION	FORD of HIBBING	CONTACT
CONTRACT # 169035	2627 13th AVE HIBBING, MN 55746 218-262-3881 800-894-7579	TIM CARRUTH timcarr33@yahoo.com BOB O'HARA 218-349-8955
EST DELIVERY TIME 90 - 120 ARO		rwohara01@aol.com

BASE MODEL	2021 FORD F550 SUPER CAB	X5H		$ 41,727.00
	CHASSIS CAB 4X4 84" CA XLT			
STD	Engine: 7.3L 2V DEVCT NA PFI V8 Gas (STD)	99N		-
8,486.00	*6.7L V8 DIESEL*	99T	X	$8,486.00
	10 SPEED AUTO	44G	X	STD
	AIR CONDITIONING		X	STD
255.00	Transmission Power Take-Off Provision -inc: transmission mounted live drive and stationary mode PTO	62R		-
195.00	Tires: 225/70Rx19.5G BSW MAX TRACTION (6)	TGM	X	$195.00
319.00	Spare Tire, Wheel & Jack -inc: Excludes carrier, 6-Ton Hydraulic Jack	512	X	$319.00
327.00	Limited Slip w/4.88 Axle Ratio	X8L	X	$327.00
(46.00)	CARPET DELETE	166	X	-$46.00
119.00	All-Weather Floor Mats w/o Carpet	16T	X	$119.00
INCL w/47A	397 Amp Alternator	67B	X	INCL w/47A
STD	Dual 78 AH Battery	86M		-
1,347.00	XLT Value Package -inc: SecuriCode Driver's Side Keyless Entry Keypad, Rear Underseat Storage, 8-Way Power Driver's Seat, Autolock/Auto Unlock	17V		-
91.00	Engine Block Heater	41H	X	$91.00
405.00	Platform Running Boards	18B	X	$405.00
104.00	Audible Lane Departure Warning	60C		-
269.00	Upfitter Interface Module	18A	X	$269.00
377.00	Rear View Camera & Prep Kit -inc: loose camera and wiring bundle	872	X	$377.00
109.00	Power-Adjustable Pedals	62M	X	$109.00

104.00	Pre-Collision Assist -inc: Automatic Emergency Braking (AEB), automatic high beam and forward collision warning	94P		-
41.00	Daytime Running Lamps (DRL) -inc: The non-controllable 942 Daytime Running Lamps (DRL) replace the standard Daytime Running Lamps (DRL) on/off cluster controllable	942		-
91.00	SKID PLATES	41P		-
228.00	Snow Plow Prep Package -inc: pre-selected springs (see Order Guide Supplemental Reference for springs/FGAWR of specific vehicle configurations)	473		-
255.00	PowerScope Trailer Tow Mirrors w/Heat inc: power-folding w/Autofold, telescoping, power glass, turn signal and high-intensity LED security approach lamps, Utility Lighting System, LED side-mirror spotlights	54F	X	$255.00
114.00	Extra Heavy-Service Suspension Package -inc: pre-selected extra heavy-service front springs (see Order Guide Supplemental Reference for springs/FGAWR of specific vehicle configurations), Recommended only on vehicles which will permanently utilize aftermarket equipment such as heavy-duty winches, brush guards or other apparatus which loads the front axle to the specified Gross Axle Weight Rating	67X	X	$114.00

260.00	Extra Heavy-Duty Front End Suspension - 7,500 GAWR -inc: upgraded front axle and max 7,500 lbs, Front springs/GAWR rating for configuration selected, Incomplete vehicle package	67P		-
528.00	Extra High Capacity Trailer Towing Package included upgraded rear axle	535	x	$528.00
1,051.00	GVWR: 19,500 lb Payload Plus Upgrade Package -inc: upgraded frame, rear-axle and low deflection/high capacity springs, Increases max RGAWR to 14, 706,	68M	X	$1,051.00
128.00	BACKUP ALARM	76C	X	$128.00
228.00	Rapid-Heat Supplemental Cab Heater -inc: 397 Amp Alternator	41A	X	$228.00
73.00	SPEED LIMITER 75 MPH	927	X	$73.00
		QTY		
212.00	ADDIDTIONAL KEY/FOB COMB	0		$ -
N/C	WHITE	Z1	X	N/C
N/C	Medium Earth Gray, Cloth 40/20/40 Front Seats	3S	X	N/C
	TOTAL			$ 54,755.00
3,559.08	6.5% SALES TAX			-
144.25	LICENCE TITLE & REG			-
20.00	TRANSIT TAX		x	$ 20.00
	TOTAL per UNIT			$ 54,775.00
	QTY	1		$ 54,775.00

purchase order number	
contact	PAUL
customer	CITY OF HERMANTOWN
phone	(218) 729-3640
email	-

billing address

delivery address

date ordered

order #

Resolution No. 2020-183

RESOLUTION APPROVING FINAL PAY REQUEST FOR 2020 ROAD IMPROVEMENT DISTRICT NO. 531 & NO. 532 TO ULLAND BROTHERS, INC. IN THE AMOUNT OF $30,000.00

WHEREAS, the City of Hermantown has contracted with Ulland Brothers, Inc. for construction of 2020 Road Improvement District No. 531 & No. 532 ("Project"); and

WHEREAS, Ulland Brothers, Inc. has performed the agreed upon work in said Project; and

WHEREAS, Ulland Brothers, Inc. has submitted Final Pay Request in the amount of $30,000.00; and

WHEREAS, Northland Consulting Engineers LLP has approved such Final Pay Request of the Project by the City of Hermantown.

WHEREAS, the necessary documentation for the pay request is on file and available for inspection.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Hermantown, Minnesota as follows:

1. Final Pay Request is hereby approved.
3. The City is hereby authorized and directed to pay to Ulland Brothers, Inc. the sum of $30,000.00 which is the amount represented on Final Pay Request.

Councilor ____ introduced the foregoing resolution and moved its adoption.

The motion for the adoption of such resolution was seconded by Councilor ____ and, upon a vote being taken thereon, the following voted in favor thereof:

Councilors

and the following voted in opposition thereto:

WHEREUPON, such resolution has been duly passed and adopted November 16, 2020.

December 16, 2020

John Mulder
City Administrator
City of Hermantown
5105 Maple Grove Road
Hermantown MN 55811

Re: Street Improvement Districts #531 and #532

Final Pay Estimate

Dear John:

Attached is the Final Pay Estimate for the work associated with Street Improvement District No's. 531 and 532. NCE and Ulland Brothers have reviewed the project progress and agreed upon the final quantities of work completed. The amount of Final Pay Application is **$30,000.00**. This releases the retainage that has been held.

I recommend final payment in the amount of **$30,000.00** be authorized at the December 21, 2020 City Council Meeting.

Please contact me with any questions you may have.

Thank you,

David Bolf, P.E. – City Engineer
Northland Consulting Engineers
218-727-5995
david@nce-duluth.com

CC: Bonnie Engseth
Ryan Swanson, Ulland Brothers

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

Contractor's Application for Payment No. FINAL

	Application Period: October 25, 2020 - November 30, 2020	Application Date: 12/9/2020
To (Owner): City of Hermantown	From (Contractor): Ulland Brothers, Inc	Via (Engineer): Northland Consulting Engineers, LLP
Project: Street Improvement Districts 531 & 532, MSA 202-102-005	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Application For Payment
Change Order Summary

Approved Change Orders		
Number	Additions	Deductions
1	$23,677.62	
2	$4,085.00	
3	N/A	
4- FC C/O	$78,212.22	
TOTALS	$105,974.84	
NET CHANGE BY CHANGE ORDERS	**$105,974.84**	

1. ORIGINAL CONTRACT PRICE	$	2,235,779.50
2. Net change by Change Orders	$	105,974.84
3. Current Contract Price (Line 1 ± 2)	$	2,341,754.34
4. TOTAL COMPLETED AND STORED TO DATE		
See attached Pay Application Summary	$	2,341,754.34
5. RETAINAGE:		
a. X $ 2,341,754.34 Work Completed	$	-
b. 5% X Stored Material	$	
c. Total Retainage (Line 5.a + Line 5.b)	$	-
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c)	$	2,341,754.34
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application)	$	2,311,754.34
8. AMOUNT DUE THIS APPLICATION	$	30,000.00
9. BALANCE TO FINISH, PLUS RETAINAGE (Line 3 - 4 + Line 5.c above)	$	-

Contractor's Certification

The undersigned Contractor certifies, to the best of its knowledge, the following:
(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;
(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and
(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Contractor Signature - Ulland Brothers, Inc

By: Date: 12-16-2020

Payment of: $ $30,000.00
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____ 12/9/2020
David Bolf, P.E. - City Engineer Date

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			PAY ESTIMATE FINAL - 12/9/20 CITY OF HERMANTOWN DISTRICTS 531 & 532, S.A.P. 202-102-005					
				ORIGINAL CONTRACT			CONSTRUCTION QUANTITIES	
ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	UNIT OF MEASURE	CONTRACT QUANTITIES	ULLAND UNIT COST	TOTAL CONTRACT COST	FINAL QUANTITIES	TOTAL CONSTRUCTION COST
1	2021.501	MOBILIZATION	LUMP SUM	1	$ 16,210.21	$ 16,210.21	1	$ 16,210.21
2	2101.501	CLEARING & GRUBBING	LUMP SUM	1	$ 30,000.00	$ 30,000.00	1	$ 30,000.00
3	2101.524	CLEARING	TREE	80	$ 250.00	$ 20,000.00	170	$ 42,500.00
4	2101.524	GRUBBING	TREE	80	$ 200.00	$ 16,000.00	156	$ 31,200.00
5	2104.502	REMOVE SIGN TYPE SPECIAL	EACH	100	$ 28.20	$ 2,820.00	100	$ 2,820.00
6	2104.502	SALVAGE SIGN TYPE SPECIAL	EACH	2	$ 56.40	$ 112.80	2	$ 112.80
7	2104.502	SALVAGE SIGN TYPE C	EACH	2	$ 56.40	$ 112.80	1	$ 56.40
8	2104.502	REMOVE SIGN TYPE C	EACH	24	$ 56.40	$ 1,353.60	24	$ 1,353.60
9	2104.502	REMOVE MAIL BOX SUPPORT	EACH	100	$ 50.50	$ 5,050.00	100	$ 5,050.00
10	2104.502	REMOVE HYDRANT	EACH	3	$ 600.00	$ 1,800.00	4	$ 2,400.00
11	2104.502	REMOVE GATE VALVE AND BOX	EACH	14	$ 300.00	$ 4,200.00	4	$ 1,200.00
12	2104.502	REMOVE CURB STOP AND BOX	EACH	9	$ 425.00	$ 3,825.00	8	$ 3,400.00
13	2104.503	REMOVE PIPE CULVERTS	LIN FT	3004	$ 17.00	$ 51,068.00	2991	$ 50,847.00
14	2104.503	REMOVE WATER MAIN	LIN FT	668	$ 14.00	$ 9,352.00	610	$ 8,540.00
15	2104.503	REMOVE WATER SERVICE	LIN FT	239	$ 17.00	$ 4,063.00	215	$ 3,655.00
16	2104.503	SAWING CONCRETE PAVEMENT (FULL DEPTH)	LIN FT	34	$ 4.00	$ 136.00	11	$ 44.00
17	2104.503	SAWING BITUMINOUS PAVEMENT (FULL DEPTH)	LIN FT	1245	$ 1.60	$ 1,992.00	1178	$ 1,884.80
18	2104.504	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	2741	$ 5.00	$ 13,705.00	2694	$ 13,470.00
19	2104.504	REMOVE BITUMINOUS PAVEMENT	SQ YD	8568	$ 4.00	$ 34,272.00	8489	$ 33,956.00
20	2104.504	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	132	$ 8.00	$ 1,056.00	17	$ 136.00
21	2105.504	GEOTEXTILE FABRIC TYPE 5	SQ YD	22994	$ 2.30	$ 52,886.20	22552	$ 51,869.60
22	2105.507	COMMON EXCAVATION (P)	CU YD	14708	$ 24.00	$ 352,992.00	14962	$ 359,088.00
23	2105.507	SELECT GRANULAR BORROW MOD 7% (CV)	CU YD	7188	$ 27.00	$ 194,076.00	7528	$ 203,256.00
24	2105.507	ROCK EXCAVATION	CU YD	50	$ 280.00	$ 14,000.00	77	$ 21,560.00
25	2118.507	AGGREGATE SURFACING (CV) CLASS 5	CU YD	934	$ 51.00	$ 47,634.00	934	$ 47,634.00
26	2211.507	AGGREGATE BASE (CV) CLASS 5	CU YD	2583	$ 43.00	$ 111,069.00	2583	$ 111,069.00
27	2215.504	FULL DEPTH RECLAMATION	SQ YD	14129	$ 1.50	$ 21,193.50	14129	$ 21,193.50
28	2357.606	BITUMINOUS MATERIAL FOR SHOULDER TACK	GAL	1072	$ 3.00	$ 3,216.00		$ -
29	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3;C)	TON	3220	$ 77.00	$ 247,940.00	3379	$ 260,183.00
30	2360.509	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3;C)	TON	3602	$ 65.00	$ 234,130.00	3594	$ 233,610.00
31	2501.502	15" RC PIPE APRON	EACH	16	$ 960.00	$ 15,360.00	18	$ 17,280.00
32	2501.502	24" RC PIPE APRON	EACH	4	$ 1,100.00	$ 4,400.00	4	$ 4,400.00
33	2501.502	30" RC PIPE APRON	EACH	2	$ 1,300.00	$ 2,600.00	2	$ 2,600.00
34	2501.502	36" RC PIPE APRON	EACH	2	$ 1,700.00	$ 3,400.00	2	$ 3,400.00
35	2501.502	44" SPAN RC PIPE APRON	EACH	2	$ 2,100.00	$ 4,200.00	2	$ 4,200.00
36	2501.503	15" RC PIPE CULVERT	LIN FT	340	$ 93.00	$ 31,620.00	372	$ 34,596.00
37	2501.503	24" RC PIPE CULVERT	LIN FT	97	$ 110.00	$ 10,670.00	70	$ 7,700.00
38	2501.503	30" RC PIPE CULVERT	LIN FT	48	$ 142.00	$ 6,816.00	48	$ 6,816.00
39	2501.503	36" RC PIPE CULVERT	LIN FT	56	$ 176.00	$ 9,856.00	48	$ 8,448.00
40	2501.503	44" SPAN RC PIPE CULVERT CL IIA	LIN FT	34	$ 262.00	$ 8,908.00	34	$ 8,908.00
41	2501.503	15" CS PIPE CULVERT	LIN FT	3745	$ 38.00	$ 142,310.00	3839	$ 145,882.00
42	2501.503	18" CS PIPE CULVERT	LIN FT	62	$ 43.00	$ 2,666.00	32	$ 1,376.00
43	2503.602	SANITARY SEWER SPOT REPAIRS	EACH	1	$ 7,500.00	$ 7,500.00		$ -
44	2504.601	TEMPORARY WATER SERVICE	LUMP SUM	1	$ 40,000.00	$ 40,000.00	1	$ 40,000.00
45	2504.602	CONNECT TO EXISTING WATER MAIN	EACH	14	$ 1,900.00	$ 26,600.00	5	$ 9,500.00
46	2504.602	RELOCATE HYDRANT & VALVE	EACH	12	$ 2,900.00	$ 34,800.00	1	$ 2,900.00
47	2504.602	HYDRANT	EACH	3	$ 5,400.00	$ 16,200.00	4	$ 21,600.00
48	2504.602	CURB STOP & BOX	EACH	8	$ 965.00	$ 7,720.00	8	$ 7,720.00
49	2504.602	6" GATE VALVE AND BOX	EACH	3	$ 2,800.00	$ 8,400.00	3	$ 8,400.00
50	2504.602	MAGNETIZED TRACER BOX	EACH	22	$ 340.00	$ 7,480.00	12	$ 4,080.00
51	2504.602	WATER SERVICE TAP & HOOKUP	EACH	8	$ 1,120.00	$ 8,960.00	8	$ 8,960.00
52	2504.603	8" HDPE WATER MAIN SDR 11	LIN FT	610	$ 114.00	$ 69,540.00	610	$ 69,540.00
53	2506.502	ADJUST FRAME AND RING CASTING	EACH	24	$ 1,700.00	$ 40,800.00	24	$ 40,800.00
54	2511.507	RANDOM RIPRAP CLASS III	CU YD	187	$ 98.00	$ 18,326.00	217	$ 21,266.00
55	2531.504	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	132	$ 95.00	$ 12,540.00		$ -
56	2540.602	MAIL BOX SUPPORT	EACH	102	$ 106.00	$ 10,812.00	101	$ 10,706.00
57	2563.601	TRAFFIC CONTROL	LUMP SUM	1	$ 4,000.00	$ 4,000.00	1	$ 4,000.00
58	2564.502	INSTALL SIGN TYPE SPECIAL	EACH	2	$ 225.00	$ 450.00	2	$ 450.00
59	2564.502	SIGN PANELS TYPE SPECIAL	EACH	102	$ 96.00	$ 9,792.00	102	$ 9,792.00
60	2564.518	SIGN PANELS TYPE C	SQ FT	150	$ 57.00	$ 8,550.00	150	$ 8,550.00
61	2573.501	EROSION CONTROL SUPERVISOR	LUMP SUM	1	$ 1,500.00	$ 1,500.00	1	$ 1,500.00
62	2573.503	SEDIMENT CONTROL LOG TYPE WOOD FIBER	LIN FT	16311	$ 3.00	$ 48,933.00	16997	$ 50,991.00
63	2574.507	COMMON TOPSOIL BORROW	CU YD	978	$ 26.00	$ 25,428.00	1292	$ 33,592.00
64	2574.508	FERTILIZER TYPE 1 (20-10-20)	POUND	534	$ 0.76	$ 405.84	526	$ 399.76
65	2575.504	EROSION CONTROL BLANKETS, CATEGORY 3N	SQ YD	7345	$ 1.70	$ 12,486.50	12281	$ 20,877.70
66	2575.504	SODDING TYPE LAWN	SQ YD	10278	$ 6.00	$ 61,668.00	15013	$ 90,078.00
67	2575.505	SEEDING	ACRE	2.0	$ 455.00	$ 910.00	2.7	$ 1,228.50
68	2575.508	SEED MIXTURE 25-151	POUND	183	$ 3.75	$ 686.25	292	$ 1,095.00
69	2580.503	INTERIM PAVEMENT MARKING	LIN FT	7638	$ 0.40	$ 3,055.20	7638	$ 3,055.20
70	2582.503	4" SOLID LINE MULTI-COMPONENT GROUND IN	LIN FT	5092	$ 0.90	$ 4,582.80	5092	$ 4,582.80
71	2582.503	4" DOUBLE SOLID LINE MULTI-COMPONENT GROUND	LIN FT	2546	$ 1.80	$ 4,582.80	2546	$ 4,582.80
72	C/O #1	ADDITIONAL SUBCUT ON PORTLAND	LUMP SUM	0	$ 23,677.62		1	$ 23,677.62

ITEM NO.	SPEC. NO.	ITEM DESCRIPTION	UNIT OF MEASURE	CONTRACT QUANTITIES	ULLAND UNIT COST	TOTAL CONTRACT COST	FINAL QUANTITIES	TOTAL CONSTRUCTION COST
73	C/O #2	CONCRETE FLUME AND PAVER DRIVEWAYS	LUMP SUM	0	$ 4,085.00		1	$ 4,085.00
74	C/O #3	CONTRACT EXTENSION	N/A	N/A	$ -		N/A	$ -
75	FC C/O	THREE PAVER DRIVEWAYS	LUMP SUM	0	$ 6,375.00		1	$ 6,375.00
76	FC C/O	TRIM RCP APRON	LUMP SUM	0	$ 850.00		1	$ 850.00
77	FC C/O	YTS MOBILIZATION	LUMP SUM	0	$ 6,000.00		1	$ 6,000.00
78	FC C/O	SIDEWALK 3799 ALEXANDER	LUMP SUM	0	$ 1,100.00		1	$ 1,100.00
79	FC C/O	INSTALL 36" CMP CULVERT	LUMP SUM	0	$ 3,308.80		1	$ 3,308.80
80	FC C/O	BUILD UP DITCH SLOPES (LABOR)	LUMP SUM	0	$ 12,206.25		1	$ 12,206.25

This is to certify that the items of work shown in this final pay application have been actually furnished and completed for this project in accordance with the plans and specifications.

12/9/20

David Bolf, PE, City Engineer, Northland Consulting Engineers, LLP — Date

12/16/2020

David Nelson, Project Manager, Ulland Brothers, Inc — Date

AMOUNT EARNED	$	2,341,754.34
RETAINAGE	$	-
LESS PAY EST. #1	$	342,115.41
LESS PAY EST. #2	$	226,719.92
LESS PAY EST. #3	$	533,834.16
LESS PAY EST. #4	$	456,777.67
LESS PAY EST. #5	$	459,192.23
LESS PAY EST. #6	$	293,114.95
PAYMENT THIS ESTIMATE	**$**	**30,000.00**
TOTAL PAYMENT FINAL	**$**	**2,341,754.34**

ORIGINAL CONTRACT AMOUNT	$	2,235,779.50
CHANGE ORDER 1	$	23,677.62
CHANGE ORDER 2	$	4,085.00
CHANGE ORDER 3	$	-
FINAL COMPENSATING CHANGE ORDER	$	78,212.22
TOTAL CHANGE ORDER AMOUNT	$	105,974.84
FINAL CONTRACT AMOUNT	$	2,341,754.34