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Feasibility Report

2021 Street & Utility Improvements

City of Hayfield, Minnesota

December 2020

Submitted by:

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Certification

Feasibility Report

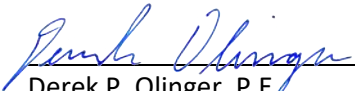
For

2021 Street & Utility Improvements

City of Hayfield, Minnesota
BMI Project No: OH1.123135

December 2020

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision, and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

By:  _____
Derek P. Olinger, P.E.
License No. 54287

Date: 12/17/2020 _____

Revised 12/21/2020, DPO

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I. PROJECT INTRODUCTION

This Feasibility Report is for various street and utility improvements to the following areas in Hayfield, Minnesota:

Table 1 - Project Area		
Improvement	Street	From / To
Street & Utility Reconstruction	1st Street NE	Center Ave N to 1st Ave NE
	1st Avenue NE	1st St NE to 2nd St NE
	2nd Avenue NE	Main St E to 2nd St NE
	Alley (Block 10)	Center Ave N to 1st Ave NE
Street Overlay & Surface Patching	5th Street NE	4th Ave NE to 6th Ave NE
	4th Street NE	4th Ave NE to 6th Ave NE
	3rd Street NE	5th Ave NE to 6th Ave NE
	4th Avenue NE	5th St NE to ½ block north
	5th Avenue NE	3rd St NE to ½ block south

A project location map is illustrated in *Figure 1* of *Appendix A*.

In 2020, the City authorized the preparation of an Infrastructure Management Plan and Capital Finance Plan. These plans were finalized and reviewed by the City council in November 2020. As it relates to this report, the Capital Finance plan identified an allowance for approximately \$1.5 million in improvements. The areas noted above were identified as high priority needs.

In accordance with Minnesota Statutes, Chapter 429, the City Council has authorized the preparation of a Feasibility Report to define the scope a feasibility of the proposed project. The specific objectives of this report include:

1. Evaluate the project need
2. Determine the necessary improvements
3. Provide preliminary cost estimates
4. Determine tentative project schedule
5. Determine the feasibility of the project

Additional details can be found in the remainder of this report.

II. EXISTING CONDITIONS

A. Street and Surface – Reconstruction Area

The existing streets within the reconstruction area consist of bituminous pavements with concrete curb and gutter. The platted Right-of-Way throughout the project area is 66-feet. In November of 2020, an Infrastructure Plan was created, and pavement ratings were conducted. See the table below for street ratings and other details.

Table 2 - Existing Street and Sidewalk Conditions				
Street	Street Width ⁽¹⁾ (feet)	Pavement Rating (1-10)	Concrete Curb & Gutter	Public Sidewalks
1 st Street NE	40	2 -very poor	x	x
1 st Avenue NE	50	3 - poor	x	x
2 nd Avenue NE	48-42	3 - poor	x	

Notes: (1) Width measured from face of curb to face of curb.

The existing pavement shows noticeable signs of fatigue, block cracking, and alligator cracking. Transverse and longitudinal cracks show signs of crack erosion. Based on these characteristics and signs of failure a full reconstruction is necessary. Concrete curb and gutter, sidewalks, and driveway aprons vary in condition for good to poor.



Exhibit 1 – Street Condition, 1st Street NE



Exhibit 2 – Street Condition, 2nd Avenue NE

B. Street and Surface – Alley

The existing parking area adjacent to the alley is mostly paved with bituminous pavement with partial areas of gravel surfacing. Portions of the pavement appear to be heavily raveled, which is likely a result of improper drainage.



Exhibit 3 – Street Condition, Alley (Block 10)

C. Street and Surface – Mill & Overlay Area

The existing streets within the mill and overlay area consist of bituminous pavements with concrete curb and gutter. The street widths measure 36-feet between faces of curb and the

platted Right-of-Way throughout the project area is 60-feet. According to the Infrastructure Plan (November 2020), the pavement conditional ratings of 3rd Street NE, 4th Street NE, and 5th Street NE ranges from 5 to 6 (fair to good). Some localized areas appear to contain alligator cracking, which is an indicator of inadequate subgrade soil strength.

The concrete curb and gutters are in fair to poor condition, with areas of localized settlement.



Exhibit 4 – Street Condition, 5th Street NE

D. Storm Sewer/Drainage

Throughout the reconstruction project area, storm runoff is conveyed via concrete curb and gutter to catch basins located on adjacent streets. 1st Street NE drains to the west to catch basins located at the intersection of Center Ave N and 1st Street NE.

The drainage of 1st Ave NE is split midblock between 1st and 2nd Street NE, and drains north and south to 2nd St NE and Main St, respectively. The drainage of 2nd Ave NE is also split, with a high point located at the intersection of 1st Street NE, storm runoff drains north to 2nd Street NE and south to Main Street. As we understand, there are no major issues with flooding within the reconstruction area.

In the alley, storm runoff from the adjacent building is collected and discharged through roof drains and downspouts onto the bituminous pavement between the alley and the building. The existing parking lot pavement generally drains from southeast to northwest onto the adjacent alley pavement and ultimately to a catch basin located on Center Avenue south of the alley entrance. Due to lack of slope, water appears to pond along the edge of the parking near the buildings and other low areas throughout the parking lot. This moisture on and below the pavement can reduce the durability of the pavement and may result in moisture entering adjacent the building foundations.

Other than some minor low spots in curb or some deterioration on storm sewer structures within the mill & overlay area, storm sewer and drainage was not evaluated in detail for this area and there are no major issues with drainage known.

The existing storm sewer system is shown on *Figure 2 and 3* of *Appendix A*.

E. Sanitary Sewer

According to record drawings from 1958, the existing sanitary sewer throughout the proposed

reconstruction area consists of 8-inch vitrified clay pipe, with depths ranging from 8 to 10-feet. Sanitary sewer of this material is susceptible to cracks and offset joints resulting in infiltration and root intrusion. In most cases, sanitary services are of the same material and are of similar or worse condition than the mainline pipe. These issues can increase treatment and maintenance costs and can ultimately lead to failure of the sanitary sewer.

Sanitary sewer within the alley is also clay pipe which is likely part of the original sanitary collection system; however, the project scope for the alley only includes only surface drainage improvements for the parking area outside of the alley and sanitary sewer is outside of the project scope.

The existing sanitary collection system within the mill & overlay area appears to have been installed in the 1970's and is believed to be in good condition.

The existing sanitary sewer system is shown on **Figure 2 and 3 of Appendix A**.

F. Watermain

The existing water distribution system within the 2nd Avenue NE and 1st Street NE consists of 4-inch and 6-inch cast iron pipe. The exact age of watermain in this area is unknown; however, watermain of this material is commonly brittle (susceptible to breaks) and corroded (reduced hydraulic capacity). Currently, there is no watermain along 1st Avenue NE between 1st and 2nd Street NE. As a result, there are several service lines “snaked” through private property.

There is no watermain within the alley. Within the mill & overlay areas, the existing main is believed to be ductile iron pipe and was installed in the 1970s. As we understand, there are no major issues with these distribution lines.

The existing water distribution system is shown on the **Figure 2 and 3 of Appendix A**.

G. Other Utilities

Other non-municipal utilities are present in the right-of-way. These include natural gas, electric, and telecommunications.

III. PROPOSED IMPROVEMENTS

A. Street and Surface Improvements – Reconstruction Areas

The streets in the project area proposed for reconstruction as bituminous streets with curb & gutter design B618 on both sides. The typical bituminous pavement structure will consist of 4-inch thick bituminous pavement, 8-inches of aggregate base, and 10-inches of select granular borrow over a geotextile fabric. To account for a higher volume traffic within 1st Avenue NE, bituminous thickness within this area will be increased to 5 inches. Pending the results of the geotechnical investigation, pavement sections are subject to change prior to the completion of final construction plans. The following table summarizes the proposed street widths and improvements within the project area.

Table 3 – Proposed Street and Sidewalk Conditions				
Street	Street Width (1) (feet)	Concrete Curb & Gutter	Public Sidewalks	Pedestrian Ramp Replacement
1 st Street NE	36	X	X	X
1 st Avenue NE	50	X	X	X (2)
2 nd Avenue NE	40	X	X (3)	X

- Notes:
- (1) Width measured from face of curb to face of curb.
 - (2) Pedestrian ramps at intersection 1st Avenue NE & 2nd Street NE (TH 30) meet ADA Standards
 - (3) The extension of sidewalk on both sides of 2nd Avenue NE is included as project options.

Throughout the project area, concrete driveway aprons will be reconstructed from the back of the new curb to the extent necessary to adequately match into the existing driveways. Existing approach sidewalks will be removed and replaced from the new back of curb to the Right-of-Way. Existing public sidewalk and pedestrian ramps within the project area will be replaced in kind with ADA compliant surfaces.

Perforated subsurface drain piping is proposed along the back of the curb lines on each street. These drains are proposed to be 6-inch diameter perforated PVC. The new subsurface drains will be connected to existing downstream catch basins. The purpose of these drains is to remove subsurface water from the pavement section and underlying soils. This will help keep the underlying soils stable and help to preserve the life of the street.

All disturbed turf will be restored with topsoil borrow, seeding and hydromulch. Trees and or bushes located within the street right of way may need to be removed to facilitate underground utility reconstruction. Attempts will be made to reduce impacts to existing trees, however some tree removals should be expected.

The alley parking area will be regraded and paved with bituminous following the installation of storm sewer and inlets to this area.

The proposed street and surface improvements are shown on **Figure 4 of Appendix A**.

B. Street and Surface Improvements – Mill & Overlay Areas

The proposed improvements along 3rd, 4th, and 5th Street NE along with sections of 4th and 5th Avenue NE, include milling 2 inches of the existing bituminous pavement and paving a 2-inch overlay on the milled surface. This work will also include patching bituminous pavement, repairing concrete curb and gutter, repairing manholes and catch basins, and adjusting manholes, catch basins, and valve boxes to a new surface elevation.

Sanitary sewer manholes and valve will also be adjusted to the new surface elevation after paving. Prior to paving, deteriorated concrete adjusting rings, broken manhole castings and broken valve boxes will be replaced.

The proposed mill and overlay improvements are shown on **Figure 5 of Appendix A**.

C. Storm Sewer Improvements

Under the proposed conditions, drainage will continue to be conveyed along the concrete curb and gutter to existing catch basins near the project limits. Subsurface drain pipes will be connected to the existing catch basins at the intersection of 1st Street NE and Center Avenue N, and at the intersection of 2nd Avenue NE and 2nd Street NE. Any necessary repairs will be made to the structures and the castings will be adjusted to match new concrete curb and gutter.

Within the alley, the proposed storm sewer improvements will include two new inlet structures and 12-inch diameter storm sewer pipe. Stubs for existing and future roof drain outlets will be provided for each building. The new storm sewer will be connected to the existing storm sewer within Center Ave N.

Within the mill & overlay areas, no drainage improvements are proposed other than minor repairs to curb and gutter and existing inlet structures and castings.

The proposed storm sewer system is shown on **Figure 4 of Appendix A**.

D. Sanitary Sewer Improvements

Existing sanitary mains within 1st Ave NE and 2nd Ave NE will be replaced with new gasketed-joint, 8-inch diameter, PVC pipe and precast concrete manholes. Manholes will be spaced at a maximum of 400-foot intervals to facilitate maintenance and cleaning.

New, gasketed PVC sanitary sewer services will be constructed from the sewer main to the

right-of-way line. Residential connections generally require a 4-inch diameter service and commercial or multi-unit residential connection generally require a 6-inch diameter service. The new services will be connected to the existing services by watertight means, typically a rubber coupling.

No major sanitary improvements are proposed within 1st Street NE (no existing main here), the alley, or the proposed mill & overlay areas.

The proposed sanitary sewer improvements are shown on **Figure 4 of Appendix A**.

E. Watermain Improvements

The existing watermain within the reconstruction area will be replaced with new 8-inch diameter, ductile iron or PVC pipe. The extension of new 8-inch watermain within 1st Ave NE is also proposed. This extension of new main is warranted to eliminate the snaked water service lines that currently exist for buildings at 119 1st Ave NE and 105 2nd St NE. Hydrants with dedicated valves will be installed at appropriate intervals and main line valves will be installed to properly isolate the system for flushing, repair, and maintenance.

Service lines will also be replaced between the new main and property line. Single family residential and small commercial building services will be replaced with a 1-inch service line. Multi-family buildings will receive a 2-inch line. Larger buildings with fire suppression systems will receive a 6-inch service. Service line replacement will also include the installation of a new curb stop or other exterior shut-off valve near the property line.

No major water system improvements are proposed as part of the alley or mill & overlay areas of the project.

The proposed water system improvements are shown on **Figure 4 of Appendix A**.

F. Other Utilities

The design of the proposed improvements will be coordinated with the owners of other utilities such as natural gas, electric, and communications. A design coordination meeting will be held with all private utility companies to identify those utilities that are in conflict with the proposed improvements. Private utility companies will be requested to submit proposed designs and construction schedules for any relocation. The construction schedule for the proposed improvements will be coordinated with the utility relocation schedule to avoid unnecessary delays.

G. Right-of-Way and Easements

Although the project will be designed to limit construction of the proposed improvements to within the existing right-of-way, it is possible that minor disturbances on private property will occur during construction of sidewalks, driveways, and sewer and water services. Therefore, temporary construction easements may be necessary along the project frontage to accommodate these minor disturbances, if the city feels this is necessary.

In order to construct and maintain the proposed storm sewer and drainage improvements for the Alley (Block 10) between Center Avenue N and 1st Avenue NE, acquiring permanent drainage and utility easements for any pipe or structures outside of the alley right-of-way is highly recommended.

IV. APPROVALS AND PERMITS

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

- Minnesota Pollution Control Agency (MPCA) General Construction Storm Water Permit
- Minnesota Department of Health (MDH) Plan Review for watermain construction
- Minnesota Department of Transportation (MnDOT) Miscellaneous Work on Trunk Highway Right-of-Way and Utility Accommodation on Trunk Highway Right-of-Way Permits
- Dodge County Work in the Right-of-Way and Utility Permit

V. PROJECT COST ESTIMATE AND FINANCING

The following table summarizes the estimated project costs.

Table 4 – Preliminary Cost Estimate			
Project Component	Estimated Construction Cost	Estimated Engineering, Administration, and Financing Cost	Total Estimated Project Cost
Street & Utility Reconstruction: 1 st Street NE, 1 st Avenue NE and 2 nd Avenue NE	\$ 943,656	\$ 236,000	\$ 1,179,656
Alley Drainage Improvements: Block 10	\$ 50,060	\$ 12,600	\$ 62,660
Mill & Overlay (Base): 4 th & 5 th Street NE and 4 th Avenue NE	\$ 202,820	\$ 50,800	\$ 253,620
Total without Options:	\$ 1,196,536	\$ 299,400	\$ 1,495,936
Option 1: Add Sidewalk to West Side of 2 nd Ave NE	\$ 16,660	\$ 4,200	\$ 20,680
Option 2: Add Sidewalk to East Side of 2 nd Ave NE	\$ 28,610	\$ 7,200	\$ 35,810
Option 3: Mill & Overlay 3 rd St NE & 5 th Ave NE	\$ 54,525	\$ 13,700	\$ 68,225
Total Including Options 1-3	\$ 1,296,331	\$ 324,500	\$ 1,620,831

Detailed cost estimates are included in *Appendix B*.

These cost estimates are based on public construction cost information from other recent projects which are similar in scope. Since the cost estimates are dependent on the cost of labor, materials, competitive bidding process, weather conditions, and other factors affecting the cost of construction, all cost estimates are opinions for general information and no warranty or guarantee as to the accuracy of construction cost is made. Therefore, financing for this project should be based upon actual competitive bid prices with reasonable contingencies.

A. Financing

Funding for the proposed 1st Street NE, 1st Avenue NE, and 2nd Ave NE reconstruction improvements is proposed to come from the sale of bond(s). These bonds are repaid through enterprise funds or tax levy. A portion of the reconstruction costs for 1st St NE, 1st Ave NE and 2nd Ave NE, and drainage costs within the alley will be through special assessments to benefitting adjacent property owners.

B. Special Assessments

The City plans to fund a portion of the reconstruction and drainage improvement costs through special assessments to benefitting property owners, in accordance with Chapter 429 of the Minnesota State Statutes.

As a general rule, 20% of the applicable project costs funded through a general obligation bond should be assessed to avoid the need for an election. If this 20% threshold is not met, the City should consult its financial advisor and bond counsel.

An assessment policy is currently under development. For the purposes of this report, assessments were calculated by applying 20% of reconstruction and drainage improvement costs. The costs associated with bituminous mill & overlay improvements were not considered assessable.

Street and sidewalk improvements are assessed on a “frontage” basis. A 50% deduction is applied to lots with assessable side or rear lot lengths. Sanitary sewer, water, and alley drainage improvements are assessed on a per lot basis. The following table provides a breakdown of assessable costs associated with the project, using the 20% assessment rate.

Table 5 – Proposed Assessment Summary (Revised 12/21/20)					
Project Component	Estimated Project Cost	Assessable Rate	Total Assessable Cost	Assessable Cost Per Lot (2)	Assessable Cost Per Foot (3)
Street & Site (1)(4)	\$ 796,861.91	20%	\$ 159,372.38	N/A	\$ 77.02
Sidewalk	\$ 165,720.10	20%	\$ 33,144.02	N/A	\$ 23.66
San Sewer & Service	\$ 74,171.81	20%	\$ 14,834.36	\$ 2,472.39	N/A
Watermain & 1” Serv.	\$ 130,911.03	20%	\$ 26,182.21	\$ 1,870.16	N/A
Watermain & Oversized Serv.	\$ 68,661.15	20%	\$ 13,732.23	\$ 3,433.06	N/A
Alley Improvements	\$ 62,660.00	20%	\$ 12,532.00	\$ 2,088.67	N/A
Mill & Overlay (Base)	\$ 253,620.00	0%	\$ 0.00	N/A	N/A
Mill & Overlay (Opt 3)	\$ 68,225.00	0%	\$ 0.00	N/A	N/A

- Notes:
- (1) Minor storm sewer & drainage costs included in street & site totals
 - (2) Includes main and service costs
 - (3) A 50% reduction of assessable frontage will be made to side and rear lot frontage
 - (4) Includes option 1 and 2 sidewalk extensions within 2nd Ave NE

A detailed preliminary assessment role is included in *Appendix C*.

Assessment proceedings (hearings, notices, etc.) for the project would follow the requirements of Chapter 429. Special assessments and the pending special assessment policy will be discussed in additional detail during upcoming meetings. **The assessment estimates included in this report are subject to change.**

VI. PROPOSED SCHEDULE

The following table shows the proposed schedule for the project. The schedule provided is based on summer 2021 construction and is subject to change.

Table 6 – Project Schedule (Revised 12/21/20)	
Council Authorize Feasibility Report	11/19/2020
Prepare Feasibility Report	11/19/2020 – 12/20/2020
Resolution Receiving Report and Calling for Hearing on Improvement	12/21/2020
Published Notice of Hearing on Improvement	1/7/2021
	1/14/2021
Mailed Notice of Hearing on Improvement	1/7/2021
Improvement Hearing	1/18/2021
Resolution Ordering Improvement and Preparation of Plans and Specifications	1/18/2021
Prepare Plans and Specifications	1/19/2021 – 3/29/2021
Resolution Approving Plans and Specifications and Ordering Advertisement for Bids	4/5/2021
Advertise for Bids	4/8/2021
	4/15/2021
	4/22/2021
Open Bids	4/30/2021
Accept Bids & Call for Assessment Hearing	5/3/2021
Published Notice for Assessment Hearing	5/6/2021
Mailed Notice for Assessment Hearing	5/6/2021
Assessment Hearing	5/17/2021
Resolution Approving Final Assessment Roll, Awarding Contract	
Begin Construction	June 2021
Substantial Completion of Construction	Fall 2021
Final Completion of Construction	Spring 2022

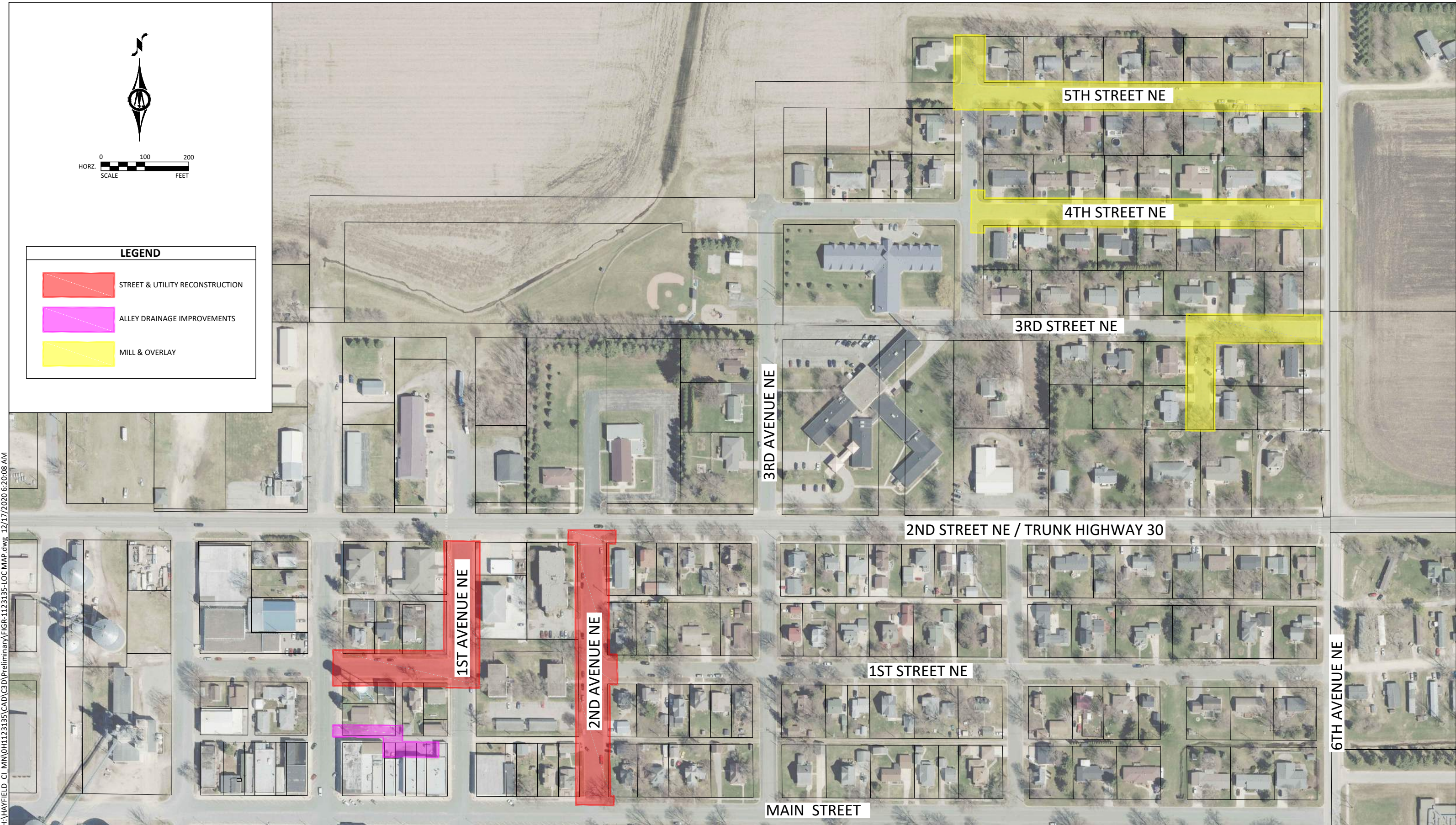
VII. CONCLUSION AND RECOMENDATIONS

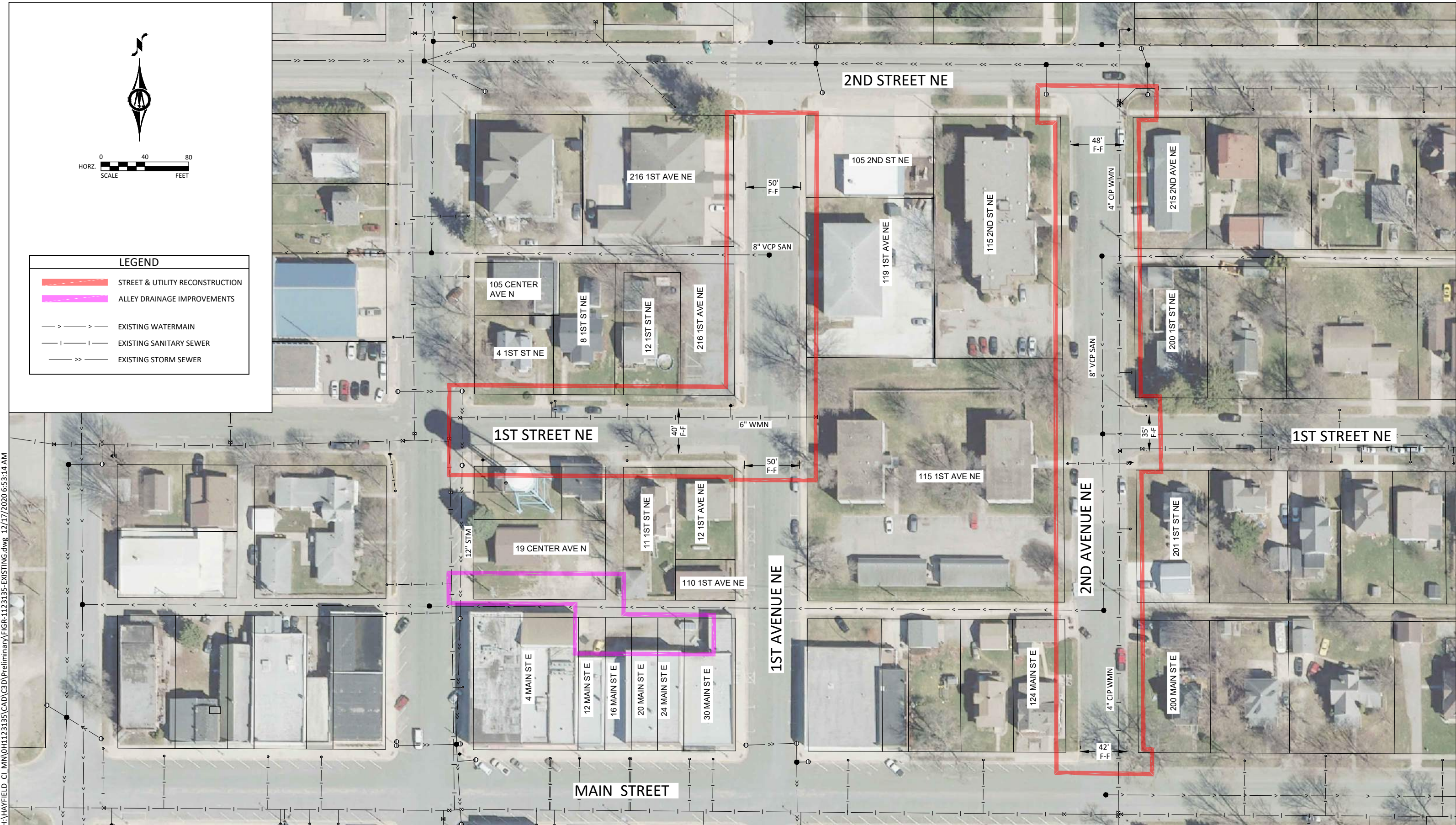
The existing streets and utilities within the project area are deteriorated and in need of repair. Without replacement, maintenance costs will continue to rise, and the infrastructure will ultimately fail. From an engineering standpoint, this project is feasible, cost effective, necessary, and can be best accomplished by letting competitive bids for the work.

We recommend that the Council accept this report and set a date for an improvement hearing for the project.

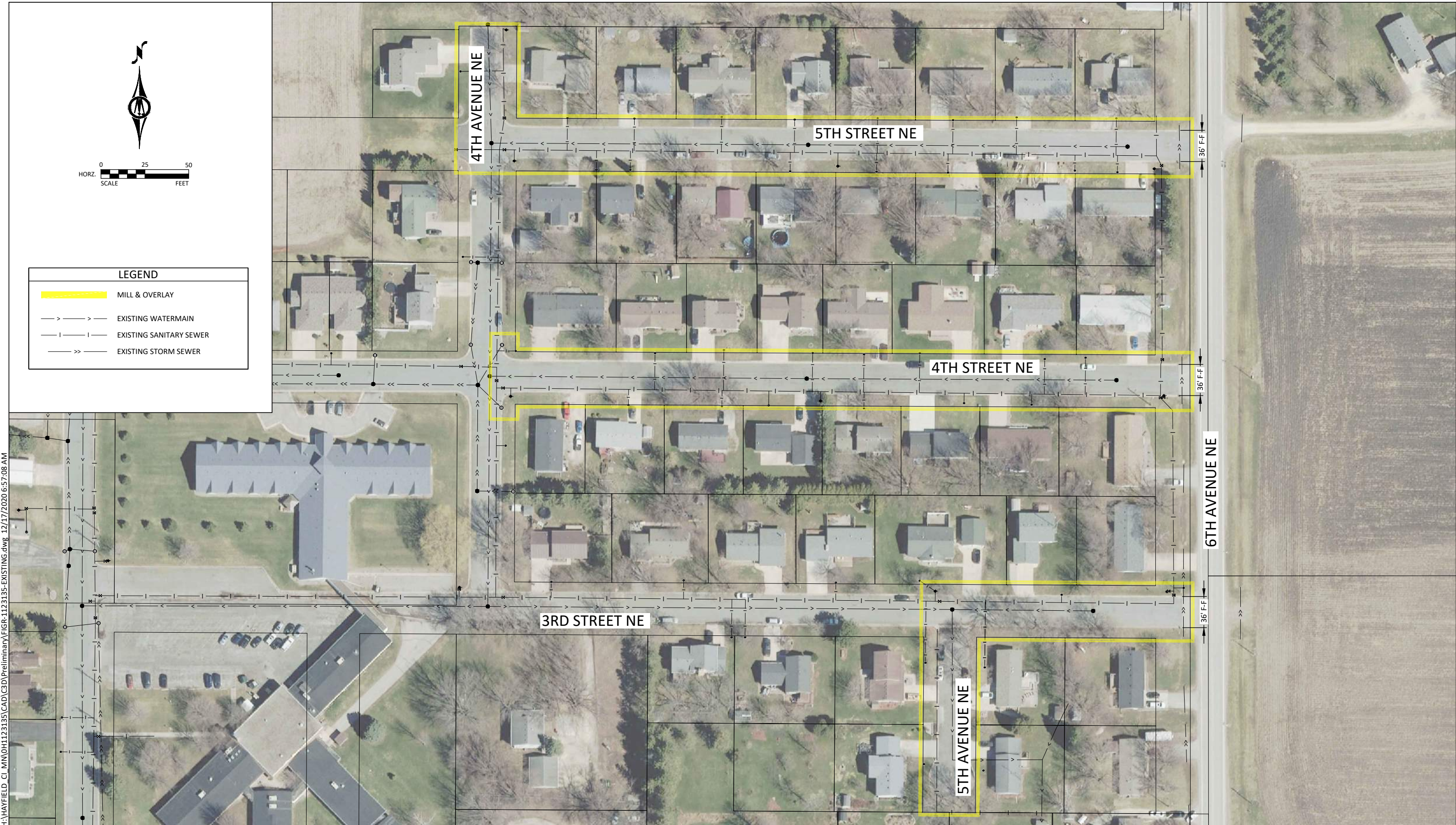
Prior to the hearing, we recommend the Council discuss and approve a special assessment policy.

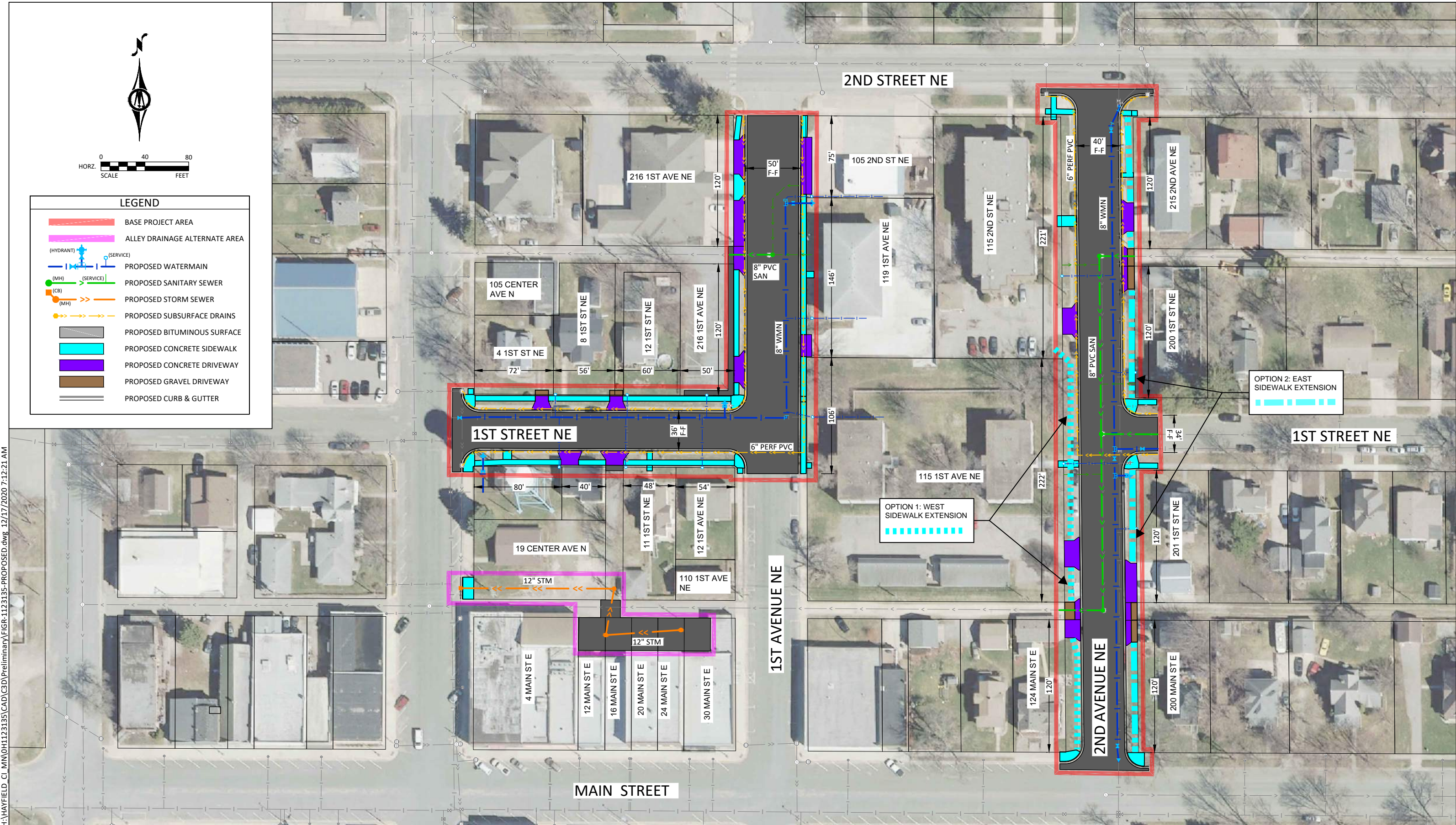
Appendix A: Figures



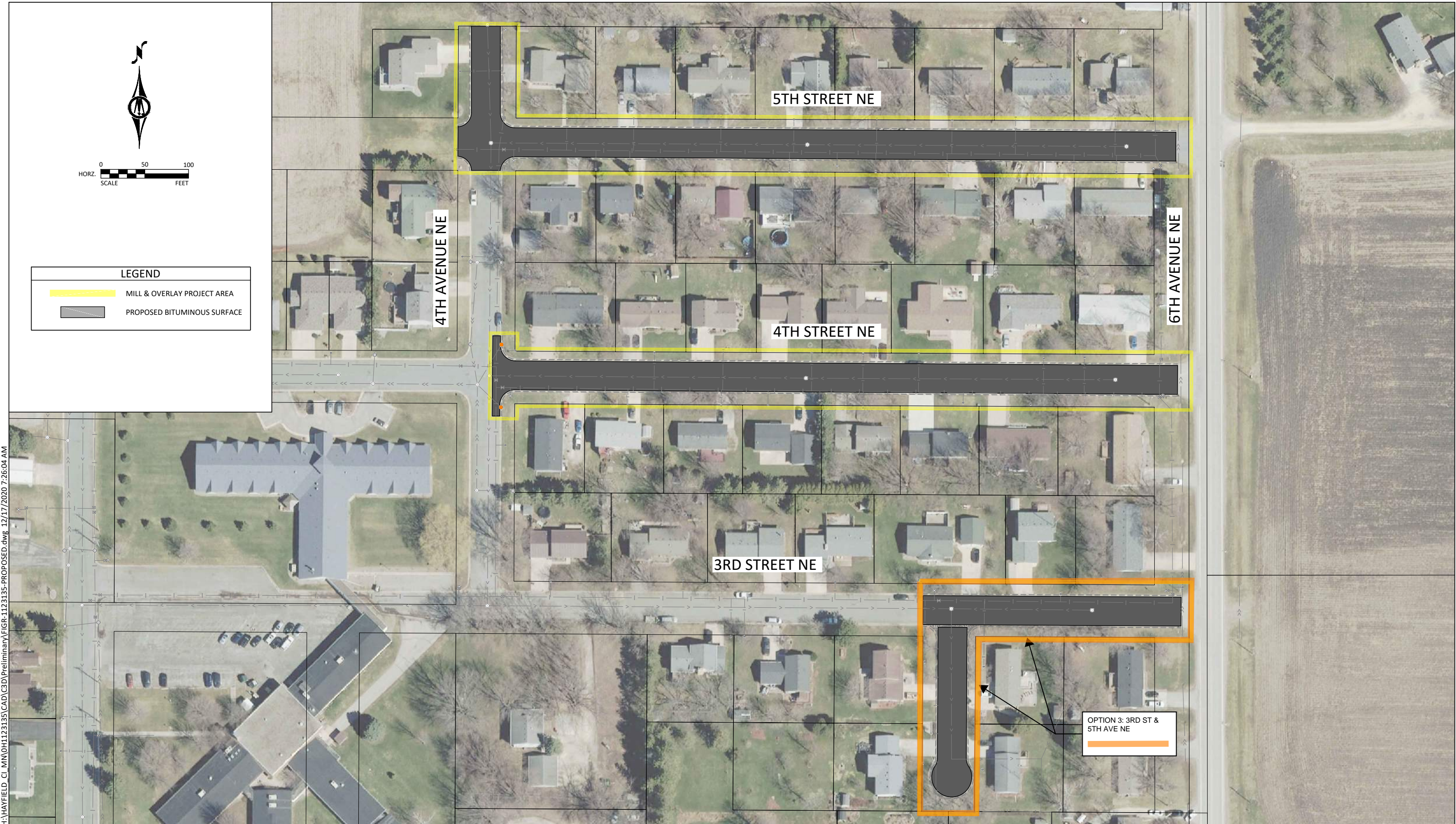


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Appendix B: Preliminary Cost Estimates



PRELIMINARY ENGINEER'S ESTIMATE

2021 STREET & UTILITY IMPROVEMENTS
CITY OF HAYFIELD, MN
BMI PROJECT NO.: 0H1.123135

Updated: 12/17/2020

ITEM NO.	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
STREET & UTILITY RECONSTRUCTION					
STREET AND SITE					
1	MOBILIZATION	1	LS	\$80,000.00	\$80,000.00
2	TRAFFIC CONTROL	1	LS	\$10,000.00	\$10,000.00
3	TREE TRIMMING / CLEAR & GRUB	18	EA	\$800.00	\$14,400.00
4	REMOVE CURB & GUTTER	2480	LF	\$3.00	\$7,440.00
5	REMOVE CONCRETE DRIVEWAY	580	SY	\$10.00	\$5,800.00
6	REMOVE BITUMINOUS DRIVEWAY	107	SY	\$3.00	\$321.00
7	REMOVE CONC WALK	7185	SF	\$2.00	\$14,370.00
8	COMMON EXCAVATION (INCLUDING BITUMINOUS) (P)	4630	CY	\$13.00	\$60,190.00
9	SUBGRADE EXCAVATION	610	CY	\$12.00	\$7,320.00
10	STABILIZING AGGREGATE	610	CY	\$30.00	\$18,300.00
11	GEOTEXTILE FABRIC	6340	SY	\$2.00	\$12,680.00
12	SELECT GRANULAR BORROW (12") (CV, P)	1780	CY	\$20.00	\$35,600.00
13	AGGREGATE BASE CLASS 5 (8") (CV,P)	1420	CY	\$30.00	\$42,600.00
14	BITUMINOUS NON WEAR COURSE (2.5")	900	TON	\$92.00	\$82,800.00
15	BITUMINOUS WEAR COURSE (1.5")	540	TON	\$90.00	\$48,600.00
15	CONSTRUCT BITUMINOUS DRIVEWAY (4")	107	SY	\$40.00	\$4,280.00
16	CONSTRUCT CONCRETE DRIVEWAY (6")	610	SY	\$73.00	\$44,530.00
17	B618 CONCRETE CURB & GUTTER	2480	LF	\$18.00	\$44,640.00
18	4" CONC WALK	5630	SF	\$7.00	\$39,410.00
19	6" CONC WALK	1535	SF	\$11.00	\$16,885.00
20	TRUNCATED DOMES	300	SF	\$55.00	\$16,500.00
21	6" PVC UNDERDRAIN	1900	LF	\$14.00	\$26,600.00
22	6" UNDERDRAIN CLEANOUT	10	EA	\$200.00	\$2,000.00
23	6"X4" SUMP TEE (INCLUDES 12 LF OF 4" PIPE)	14	EA	\$750.00	\$10,500.00
24	AMENDED TOPSOIL BORROW (LV)	370	CY	\$30.00	\$11,100.00
25	SEED, FERTILIZE & MULCH (25-151)	2210	SY	\$3.00	\$6,630.00
26	STABILIZED CONSTRUCTION EXIT/ENTRANCE	1	LS	\$1,500.00	\$1,500.00
27	EROSION & SEDIMENT CONTROL	1	LS	\$15,000.00	\$15,000.00
54	CONNECT TO EXISTING STORM SEWER	4	EA	\$800.00	\$3,200.00
55	STORM SEWER CASTING ASSEMBLY	4	EA	\$750.00	\$3,000.00
56	ADJUST CASTING & GROUT STRUCTURE	4	EA	\$1,000.00	\$4,000.00
				SUBTOTAL:	\$690,196.00
SANITARY SEWER					
28	REMOVE SANITARY MANHOLE	4	EA	\$450.00	\$1,800.00
29	CONSTRUCT SANITARY MANHOLE DES 4007C	36	LF	\$375.00	\$13,500.00
30	ADJUST SANITARY MANHOLE	4	EA	\$300.00	\$1,200.00
31	SANITARY SEWER CASTING ASSEMBLY	4	EA	\$750.00	\$3,000.00
32	CONNECT TO EXIST SANITARY	4	EA	\$700.00	\$2,800.00
33	8" SANITARY SEWER	485	LF	\$46.00	\$22,310.00
34	8" X 6" SANITARY WYE	5	EA	\$300.00	\$1,500.00
35	6" SANITARY SEWER	260	LF	\$40.00	\$10,400.00
				SUBTOTAL:	\$56,510.00
WATERMAIN					
36	TEMPORARY WATER SERVICE	1	LS	\$5,000.00	\$5,000.00
37	REMOVE WATERMAIN PIPE	1050	LF	\$5.00	\$5,250.00
38	REMOVE GATE VALVE & BOX	6	EA	\$250.00	\$1,500.00
39	REMOVE & SALVAGE HYDRANT	3	EA	\$300.00	\$900.00
40	CONNECT TO EXIST WATERMAIN	4	EA	\$1,000.00	\$4,000.00
41	HYDRANT	4	EA	\$4,500.00	\$18,000.00
42	6" GATE VALVE & BOX	5	EA	\$1,500.00	\$7,500.00
43	8" GATE VALVE & BOX	5	EA	\$1,800.00	\$9,000.00
44	6" WATERMAIN	70	LF	\$50.00	\$3,500.00
45	8" WATERMAIN	1180	LF	\$50.00	\$59,000.00
46	1" CURB STOP	9	EA	\$350.00	\$3,150.00
47	1" CORPORATION STOP	9	EA	\$400.00	\$3,600.00
48	1" WATER SERVICE PIPE	350	LF	\$30.00	\$10,500.00
49	2" CURB STOP	3	EA	\$400.00	\$1,200.00
50	2" CORPORATION STOP	3	EA	\$450.00	\$1,350.00
51	2" WATER SERVICE PIPE	260	LF	\$35.00	\$9,100.00
52	6" WATER SERVICE PIPE	50	LF	\$50.00	\$2,500.00
53	WATERMAIN FITTINGS	700	LB	\$10.00	\$7,000.00
				SUBTOTAL:	\$152,050.00
CONSTRUCTION SUBTOTAL:					\$898,756.00
CONSTRUCTION CONTINGENCIES (5%):					\$44,900.00
CONSTRUCTION COST:					\$943,656.00
ESTIMATED ENGINEERING, ADMIN & FINANCING:					\$236,000.00
ESTIMATED RECONSTRUCTION PROJECT TOTAL:					\$1,179,656.00



PRELIMINARY ENGINEER'S ESTIMATE

2021 STREET & UTILITY IMPROVEMENTS
CITY OF HAYFIELD, MN
BMI PROJECT NO.: 0H1.123135

Updated: 12/17/2020

ITEM NO.	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
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ALLEY DRAINAGE IMPROVEMENTS

STREET AND SITE

1	REMOVE CURB & GUTTER	20	LF	\$3.00	\$60.00
2	REMOVE BITUMINOUS DRIVEWAY	440	SY	\$3.00	\$1,320.00
3	REMOVE CONC WALK	200	SY	\$2.00	\$400.00
4	COMMON EXCAVATION (P)	210	CY	\$13.00	\$2,730.00
5	GEOTEXTILE FABRIC	440	SY	\$2.00	\$880.00
6	AGGREGATE BASE CLASS 5 (10") (CV,P)	130	CY	\$30.00	\$3,900.00
7	BITUMINOUS NON WEAR COURSE (1.5")	40	TON	\$92.00	\$3,680.00
8	BITUMINOUS WEAR COURSE (2.5")	70	TON	\$90.00	\$6,300.00
9	B618 CONCRETE CURB & GUTTER	20	LF	\$18.00	\$360.00
10	6" CONC WALK	200	SF	\$11.00	\$2,200.00
11	TURF ESTABLISHMENT	1	LS	\$2,000.00	\$2,000.00
SUBTOTAL:					\$23,830.00

STORM SEWER

12	REMOVE STORM PIPE, ALL SIZES	10	LF	\$15.00	\$150.00
13	CONNECT TO EXISTING STORM	2	EA	\$800.00	\$1,600.00
14	CONSTRUCT DRAINAGE MANHOLE, DES 4020 - 48"	9	LF	\$600.00	\$5,400.00
15	CONSTRUCT DRAINAGE MANHOLE, DES G	9	LF	\$400.00	\$3,600.00
16	12" PIPE SEWER	252	LF	\$40.00	\$10,080.00
17	STORM SEWER CASTING ASSEMBLY	4	EA	\$750.00	\$3,000.00
SUBTOTAL:					\$23,830.00

ALLEY CONSTRUCTION SUBTOTAL:	\$47,660.00
CONSTRUCTION CONTINGENCIES (5%):	\$2,400.00
ALLEY CONSTRUCTION COST:	\$50,060.00
ESTIMATED ENGINEERING, ADMIN & FINANCING:	\$12,600.00
ESTIMATED ALLEY PROJECT TOTAL:	\$62,660.00

MILL & OVERLAY (4th St NE, 5th St NE, 4th Ave NE)

STREET AND SITE

1	TRAFFIC CONTROL	1	LS	\$5,000.00	\$5,000.00
2	TREE TRIMMING / CLEAR & GRUB	3	EA	\$500.00	\$1,500.00
3	MILL BITUMINOUS PAVEMENT (2")	6780	SY	\$2.50	\$16,950.00
4	REMOVE CURB & GUTTER	350	LF	\$20.00	\$7,000.00
5	REMOVE CONCRETE DRIVEWAY	10	SY	\$20.00	\$200.00
6	REMOVE CONCRETE WALK	100	SF	\$5.00	\$500.00
7	SUBGRADE EXCAVATION	120	CY	\$20.00	\$2,400.00
8	STABILIZING AGGREGATE	120	CY	\$35.00	\$4,200.00
9	GEOTEXTILE FABRIC	340	SY	\$3.00	\$1,020.00
10	BITUMINOUS WEAR COURSE	820	TON	\$85.00	\$69,700.00
11	BITUMINOUS PATCH	1360	SY	\$40.00	\$54,400.00
12	B618 CONCRETE CURB & GUTTER	350	LF	\$30.00	\$10,500.00
13	CONSTRUCT CONCRETE DRIVEWAY (6")	10	SY	\$70.00	\$700.00
14	4" CONC WALK	100	SF	\$10.00	\$1,000.00
15	AMENDED TOPSOIL BORROW (LV)	30	CY	\$30.00	\$900.00
16	INLET PROTECTION	4	EA	\$250.00	\$1,000.00
17	SEED, FERTILIZE & MULCH (25-151)	200	SY	\$7.00	\$1,400.00
18	EROSION & SEDIMENT CONTROL	1	LS	\$2,000.00	\$2,000.00
19	ADJUST SANITARY MANHOLE	7	EA	\$800.00	\$5,600.00
20	ADJUST GATE VALVE BOX	7	EA	\$250.00	\$1,750.00
21	REMOVE CATCH BASIN	2	EA	\$200.00	\$400.00
22	CONNECT TO EXISTING STORM	2	EA	\$1,000.00	\$2,000.00
23	CONSTRUCT DRAINAGE MANHOLE, DES R-1	2	EA	\$800.00	\$1,600.00
24	STORM SEWER CASTING ASSEMBLY	2	EA	\$700.00	\$1,400.00
SUBTOTAL:					\$193,120.00

MILL & OVERLAY CONSTRUCTION SUBTOTAL:	\$193,120.00
CONSTRUCTION CONTINGENCIES (5%):	\$9,700.00
MILL & OVERLAY CONSTRUCTION COST:	\$202,820.00
ESTIMATED ENGINEERING, ADMIN & FINANCING:	\$50,800.00
ESTIMATED MILL & OVERLAY PROJECT TOTAL:	\$253,620.00



PRELIMINARY ENGINEER'S ESTIMATE

2021 STREET & UTILITY IMPROVEMENTS
CITY OF HAYFIELD, MN
BMI PROJECT NO.: 0H1.123135

Updated: 12/17/2020

ITEM NO.	ITEM	QTY	UNIT	UNIT PRICE	TOTAL
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OPTION 1: 2ND AVE NE WEST SIDEWALK EXTENSION

1	TREE TRIMMING / CLEAR & GRUB	3	EACH	\$800.00	\$2,400.00
2	COMMON EXCAVATION	60	CY	\$12.00	\$720.00
3	4" CONC WALK	1820	SF	\$7.00	\$12,740.00
				SUBTOTAL:	\$15,860.00

OPTION 1 CONSTRUCTION SUBTOTAL: \$15,860.00

CONSTRUCTION CONTINGENCIES (5%): \$800.00

OPTION 1 CONSTRUCTION COST: \$16,660.00

ESTIMATED ENGINEERING, ADMIN & FINANCING: \$4,200.00

ESTIMATED OPTION 1 PROJECT TOTAL: \$20,860.00**OPTION 2: 2ND AVE NE EAST SIDEWALK EXTENSION**

1	TREE TRIMMING / CLEAR & GRUB	6	EACH	\$800.00	\$4,800.00
2	COMMON EXCAVATION	100	CY	\$12.00	\$1,200.00
3	4" CONC WALK	3030	SF	\$7.00	\$21,210.00
				SUBTOTAL:	\$27,210.00

OPTION 2 CONSTRUCTION SUBTOTAL: \$27,210.00

CONSTRUCTION CONTINGENCIES (5%): \$1,400.00

OPTION 2 CONSTRUCTION COST: \$28,610.00

ESTIMATED ENGINEERING, ADMIN & FINANCING: \$7,200.00

ESTIMATED OPTION 2 PROJECT TOTAL: \$35,810.00**OPTION 3: 3RD ST & 5TH AVE NE MILL & OVERLAY**

1	MILL BITUMINOUS PAVEMENT (2")	1910	SY	\$2.50	\$4,775.00
2	REMOVE CURB & GUTTER	90	LF	\$20.00	\$1,800.00
3	SUBGRADE EXCAVATION	40	CY	\$20.00	\$800.00
4	STABILIZING AGGREGATE	40	CY	\$35.00	\$1,400.00
5	GEOTEXTILE FABRIC	100	SY	\$3.00	\$300.00
6	BITUMINOUS WEAR COURSE	230	TON	\$85.00	\$19,550.00
7	BITUMINOUS PATCH	390	SY	\$40.00	\$15,600.00
8	B618 CONCRETE CURB & GUTTER	90	LF	\$30.00	\$2,700.00
9	AMENDED TOPSOIL BORROW (LV)	10	CY	\$30.00	\$300.00
10	INLET PROTECTION	2	EA	\$250.00	\$500.00
11	SEED, FERTILIZE & MULCH (25-151)	50	SY	\$7.00	\$350.00
12	EROSION & SEDIMENT CONTROL	1	LS	\$2,000.00	\$2,000.00
13	ADJUST SANITARY MANHOLE	2	EA	\$800.00	\$1,600.00
14	ADJUST GATE VALVE BOX	1	EA	\$250.00	\$250.00
				SUBTOTAL:	\$51,925.00

OPTION 3 CONSTRUCTION SUBTOTAL: \$51,925.00

CONSTRUCTION CONTINGENCIES (5%): \$2,600.00

OPTION 3 CONSTRUCTION COST: \$54,525.00

ESTIMATED ENGINEERING, ADMIN & FINANCING: \$13,700.00

ESTIMATED OPTION 3 PROJECT TOTAL: \$68,225.00**TOTAL PROJECT COST SUMMARY**

ESTIMATED RECONSTRUCTION PROJECT TOTAL: \$1,179,656.00

ESTIMATED ALLEY PROJECT TOTAL: \$62,660.00

ESTIMATED MILL & OVERLAY PROJECT TOTAL: \$253,620.00

ESTIMATED OPTION 1 PROJECT TOTAL: \$20,860.00

ESTIMATED OPTION 2 PROJECT TOTAL: \$35,810.00

ESTIMATED OPTION 3 PROJECT TOTAL: \$68,225.00

TOTAL PROJECT COST WITHOUT OPTION 1,2 & 3: \$1,495,936.00**TOTAL PROJECT COST WITH OPTION 1,2 & 3: \$1,620,831.00**

Appendix C: Preliminary Assessment Role



PRELIMINARY ASSESSMENT ROLL REVISED 12/21/2020

2021 STREET & UTILITY IMPROVEMENTS
CITY OF HAYFIELD, MN
BMI PROJECT NO.: 0H1.123135

Updated: 12-21-2020

PROPERTY OWNER	PARCEL I.D.	ADDRESS	FRONTAGE	SIDE FRONTAGE	STREET & SITE				SIDEWALK		SANITARY SEWER		WATERMAIN		ALLEY		TOTAL PRELIMINARY ASSESSMENT	CITY COST
					EXCESS FRONTAGE	ASSESSABLE FRONTAGE	COST (CITY)	COST (PROP OWNER)	ASSESSABLE FRONTAGE	COST (PROP OWNER)	ASSESSABLE LOT	COST (PROP OWNER)	ASSESSABLE LOT	COST (PROP OWNER)	ASSESSABLE LOT	ALLEY ASSESSMENT		
					COST PER FOOT (1) = \$77.02				COST PER FOOT (2) = \$23.66		COST PER LOT (3) = \$2,472.39		COST PER LOT (3) (A)= \$1,870.16 COST PER LOT (3) (B)= \$3,433.06		PER LOT (4) = \$2,088.67			
CITIZENS STATE BANK CASEY C CATES ANGELA L CATES	231000100	216 1ST AVE NE	120.00	0	0.00	120.00	\$0.00	\$9,242.55	120.00	\$2,839.50	0	\$0.00	A	\$1,870.16			\$13,952.20	\$0.00
TRACY S ANDERSON RENAE BAKKE	231000120	4 1ST ST NE	72.00	0	0.00	72.00	\$0.00	\$5,545.53	72.00	\$1,703.70	0	\$0.00	0	\$0.00			\$7,249.23	\$0.00
ANA GODINEZ	231000190	8 1ST ST NE	56.00	0	0.00	56.00	\$0.00	\$4,313.19	56.00	\$1,325.10	0	\$0.00	A	\$1,870.16			\$7,508.45	\$0.00
CITIZENS STATE BANK	231000200	12 1ST ST NE	59.60	0	0.00	59.60	\$0.00	\$4,590.47	59.60	\$1,410.28	0	\$0.00	A	\$1,870.16			\$7,870.91	\$0.00
CITIZENS STATE BANK	231000100	216 1ST AVE NE	120.00	50	25.00	145.00	\$1,925.53	\$11,168.08	145.00	\$3,431.06	0	\$0.00	0	\$0.00			\$14,599.14	\$1,925.53
CITY OF HAYFIELD	231001850	1ST ST NE	0.00	80	40.00	40.00	\$3,080.85	\$3,080.85	40.00	\$946.50	0	\$0.00	0	\$0.00			\$4,027.35	\$3,080.85
RKD PROPERTIES LLC RANDY L & KATHY A DEMMER	231001860	1ST ST NE	40.00	0	0.00	40.00	\$0.00	\$3,080.85	40.00	\$946.50	0	\$0.00	A	\$1,870.16			\$5,897.51	\$0.00
CHARLES ROOT BARBARA ROOT	231001830	11 1ST ST NE	48.00	0	0.00	48.00	\$0.00	\$3,697.02	48.00	\$1,135.80	0	\$0.00	A	\$1,870.16			\$6,702.98	\$0.00
CITIZENS TELECOMMUNICATIONS CO FRONTIER COMMUNICATIONS FOR MN	231001810	12 1ST AVE NE	53.60	0	0.00	53.60	\$0.00	\$4,128.34	53.60	\$1,268.31	0	\$0.00	A	\$1,870.16			\$7,266.81	\$0.00
PERSPICA CORPORATION	231001811	110 1ST AVE NE		0	0.00	0.00	\$0.00	\$0.00	0.00	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	\$0.00	\$0.00
MICHAEL P STEVENS TAMERA K STEVENS	230220200	105 2ND ST NE	0.00	75	37.50	37.50	\$2,888.30	\$2,888.30	37.50	\$887.34	1	\$2,472.39	A	\$1,870.16			\$8,118.19	\$2,888.30
RIGHT AVENUE REAL ESTATE LLC	230220300	119 1ST AVE NE	146.00	0	0.00	146.00	\$0.00	\$11,245.10	146.00	\$3,454.72	1	\$2,472.39	B	\$3,433.06			\$20,605.27	\$0.00
HAYFIELD ELDERLY HOUSING INC PARAMARK REAL ESTATE SERVICES	230220100	115 2ND ST NE		221	110.50	110.50	\$8,510.85	\$8,510.85	0.00	\$0.00	1	\$2,472.39	B	\$3,433.06			\$14,416.30	\$8,510.85
HAYFIELD GREENS PARTNERSHIP THREE RIVERS COMMUNITY ACTION	230220400	115 1ST AVE NE	106.00	0	0.00	106.00	\$0.00	\$8,164.25	112.00	\$2,650.20		\$0.00	B	\$3,433.06			\$14,247.51	\$0.00
HAYFIELD GREENS PARTNERSHIP THREE RIVERS COMMUNITY ACTION	230220400	115 1ST AVE NE	0.00	222	111.00	111.00	\$8,549.36	\$8,549.36	111.00	\$2,626.53	1	\$2,472.39	B	\$3,433.06			\$17,081.34	\$8,549.36
JARED R HOLTAN LOWELL G BAKKEDAHL BARBARA A BAKKEDAHL	236760530	124 MAIN ST E	0.00	120	60.00	60.00	\$4,621.28	\$4,621.28	60.00	\$1,419.75	0	\$0.00	0	\$0.00			\$6,041.02	\$4,621.28
SETH SNELL ZACHARY WYANT ASHLEY WYANT	236760130	215 2ND AVE NE	120.00	0	0.00	120.00	\$0.00	\$9,242.55	120.00	\$2,839.50	0	\$0.00	0	\$0.00			\$12,082.05	\$0.00
RONALD RUD	236760150	200 1ST ST NE	0.00	120	60.00	60.00	\$4,621.28	\$4,621.28	60.00	\$1,419.75	1	\$2,472.39	A	\$1,870.16			\$10,383.57	\$4,621.28
CITY EXCESS FRONTAGE	N/A	N/A			0.00		\$0.00	\$0.00		\$0.00	1	\$2,472.39	A (5)	\$9,350.79			\$0.00	\$11,823.18
LAKESIDE PROPERTIES OF AUSTIN LLC	231001900	4 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
DJP PROPERTIES LLC	231001950	12 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
DOUGLAS A JAX REBECCA R JAX	231001960	16 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
RONALD L FJERSTAD KERRY L FJERSTAD RONALD L FJERSTAD	231001970	20 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
KERRY L FJERSTAD	231001980	24 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
CEDAR CREEK CHURCH	231002020	30 MAIN ST E			0.00	0.00	\$0.00	\$0.00							1	\$2,088.67	\$2,088.67	\$0.00
TOTALS			941	1128	564	1505	\$43,439.99	\$115,932.39	1401	\$33,144.02	6	\$14,834.36	18	\$39,914.44	6	\$12,532.00	\$204,534.03	\$55,263.17

ASSESSMENT SUMMARY									
ITEM	PERCENTAGE ASSESSED	TOTAL COST	OVERSIZING ADJUSTMENTS	ASSESSABLE COST	NON ASSESABLE COST	ASSESSABLE FRONTAGE	# ASSESABLE LOTS	COST PER FRONTAGE	COST PER LOT
STREET & SITE	20%	\$796,861.91		\$159,372.38	\$637,489.53	2069	N/A	\$77.02	N/A
SIDEWALK	20%	\$165,720.10		\$33,144.02	\$132,576.08	1401	N/A	\$23.66	N/A
SANITARY SEWER	20%	\$74,171.81		\$14,834.36	\$59,337.45	N/A	6	N/A	\$2,472.39
WATERMAIN & 1" SERVICE	20%	\$130,911.03		\$26,182.21	\$104,728.82	N/A	14	N/A	\$1,870.16
WATERMAIN & OVERSIZE SERVICE	20%	\$68,661.15		\$13,732.23	\$54,928.92	N/A	4	N/A	\$3,433.06
ALLEY DRAINAGE IMPROVEMENTS	20%	\$62,660.00		\$12,532.00	\$50,128.00	N/A	6	N/A	\$2,088.67
MILL & OVERLAY	0%	\$253,620.00		\$0.00	\$253,620.00	N/A	N/A	N/A	N/A
OPTION 3: 3RD ST & 5TH AVE NE	0%	\$68,225.00		\$0.00	\$68,225.00	N/A	N/A	N/A	N/A
PROJECT TOTALS	-	\$1,620,831.00		\$259,797.20	\$1,361,033.80	-	-	-	-

- NOTES:
- (1) Cost includes assessment per frontage for street & site, curb & gutter, outwalks , and storm sewer
 - (2) Cost includes assessment per frontage for public sidewalk including options 1 & 2.
 - (3) Cost noted includes assessment for utility main & service
 - (4) Alley Assessment includes surface and storm sewer improvements
- (A) Standard 1" water service line
(B) Oversized water service line

SUMMARY OF CITY COSTS	
ITEM	COST
NON-ASSESABLE STREET & SITE	\$637,489.53
NON-ASSESABLE SIDEWALK	\$132,576.08
NON-ASSESABLE SANITARY SEWER	\$59,337.45
NON ASSESABLE WATER	\$159,657.74
NON-ASSESABLE ALLEY IMPROVEMENTS	\$50,128.00
MILL & OVERLAY	\$253,620.00
OPTION 3: 3RD ST & 5TH AVE NE	\$68,225.00
EXCESS FRONTAGE	\$55,263.17
CITY-OWNED LOT ASSESSMENT	\$4,027.35
TOTAL CITY COSTS	\$1,420,324.32

