



GOODHUE COUNTY MINNESOTA

TO EFFECTIVELY PROMOTE THE SAFETY, HEALTH, AND WELL-BEING OF OUR RESIDENTS

BOARD OF COMMISSIONERS AGENDA

**COUNTY BOARD ROOM
GOVERNMENT CENTER, RED WING**

**MARCH 24, 2021
9:00 A.M.**

SPECIAL SESSION

**BEFORE THE GOODHUE COUNTY BOARD OF COMMISSIONERS
ACTING DRAINAGE AUTHORITY
FOR GOODHUE COUNTY DITCH 1**

VIRTUAL MEETING NOTICE

Due to concerns surrounding the spread of COVID-19, it has been determined that in-person meetings or meetings conducted under Minn. Stat. 13D.02 are not practical or prudent. Therefore, meetings that are governed by the Open Meeting Law will temporarily be conducted by telephone or other electronic means pursuant to Minn. Stat. 13D.021.

The Goodhue County Board of Commissioners will be conducting a Special Session county board meeting pursuant to this section on March 24, 2021 at 9:00 a.m. in the County Board Room. The County Administrator and/or County Attorney will be present at the meeting location. All County Commissioners attending will appear by telephone or other electronic means. The public may monitor the meeting from a remote site by logging into <https://global.gotomeeting.com/join/757409389> or calling [1 866 899 4679](tel:18668994679) OR [1 571 317 3116](tel:15713173116) any time during the meeting. Access Code: [757-409-389](tel:757409389)

INTRODUCTION

1. Opening of Public Hearings
2. Purpose of Hearings
3. Overview of Notice Requirements

Documents:

[Ditch1-PH-RedeterminationRepair.pdf](#)

CD 1 REDETERMINATION OF BENEFITS

1. Viewers' Report

Documents:

[ViewersReportMarch2021.pdf](#)

2. Public Comment Concerning Viewers' Report

3. Board Action

Documents:

[Final Order Confirming Redetermined Benefits \(002\).pdf](#)

CD 1 REPAIR

1. Engineer's Repair Report

Documents:

[Final_Goodhue CD1 Repair Report_1-15-2020.pdf](#)
[Branch A C D Cost Technical Memo.pdf](#)

2. Public Comment Concerning Engineer's Report

3. Board Action

Documents:

[Draft Order for Repair.pdf](#)

4. Construction Assistance Agreement

Documents:

[ditch repair ClientServicesAgreement.pdf](#)

adjourn

Goodhue County Land Use Management

Goodhue County Government Center | 509 West Fifth Street | Red Wing, Minnesota 55066

Building | Planning | Zoning
Telephone: 651.385.3104
Fax: 651.385.3106



Environmental Health | Land Surveying | GIS
Telephone: 651.385.3223
Fax: 651.385.3098

TO: Goodhue County Board of Commissioners
FROM: Lisa M. Hanni, LUM Director / County Surveyor / County Recorder
DATE: March 24, 2021 Special County Board meeting
RE: Public Hearings:
1) In the Matter of the Redetermination of Benefits of Goodhue County Ditch 1;
2) In the Matter of the Repair of Goodhue County Ditch 1

Summary:

As the Drainage Authority, the County Board is holding Public Hearings for Goodhue County Ditch 1.

Engineer: Chris Otterness, Houston Engineering, Inc.
Viewers: Bryan Murphy, H2Over Viewers, LLC
Attorney: Kale Van Bruggen, Rinke-Noonan

Background:

The County has received the Engineer's Report and the Viewer's Report for the County Ditch 1 project. Viewer's packets outlining benefits and damages were mailed to each individual land owner within the County Ditch drainage area.

The County Board set the hearing for the Redetermination of Benefits of Goodhue County Ditch 1 for 9am March 24, 2021 at their February 16, 2021 regular Board meeting; and set the hearing for the Repair of Goodhue County Ditch public hearing date for March 24, 2021 immediately after the Redetermination hearing at their March 2, 2021 regular Board meeting.

Notices to the land owners concerning the Repair public hearing were mailed on March 3, 2021.

Notice of the hearings was posted on the Government Center door on March 3, 2021.

Newspaper notices were published in the Kenyon Leader on March 3, 10, 17, 2021; the Post Bulletin on March 6, 2021; and the Republican Eagle on March 13, 20, 2021.



**Benefits and Damage Statement for the Redetermination of Benefits
Goodhue County CD 1 Amendment 2**

In accordance with Minnesota Statute (MS) 103E.351, we the viewers, submit the following Viewers' Report:

The fundamental principle for the determination of benefits and damages is based upon a comparison of the conditions prior to the construction of the ditch system with the conditions that exist after the implementation of the ditch system or proposed drainage project.

The undersigned viewers, pursuant to the order of the Goodhue County Drainage Authority, did meet prior to commencing duties on the 6th day of October 2020 at the Goodhue Watershed office in Red Wing, Minnesota. Having taken the oath as required by MS 103E.305, did view, all lands affected by said proposed drainage system and further, we did determine the damages to lands affected by establishment of a grass strip, permanent and temporary damages.

We were able to determine the boundaries of the benefited area by processing and analyzing maps using "Light Detection and Ranging" (LiDAR) along with visually viewing the project area. Meetings were held with landowners, and Goodhue staff. We viewed each County Assessors' records to determine the number of acres of land in each parcel of each 40-acre tract of land. Other sources of information used were USDA-Natural Resources Conservation Service Web Soil Survey, 12 years of USDA satellite imagery, US Fish and Wildlife Service National Wetland Inventory (NWI) maps, and Goodhue County Assessors' sales data and annual report.

We have determined the extent and basis of benefits and damages as prescribed under MS 103E.315 and MS 103E.321. We have indicated in tabular form, for each lot, 40-acre tract, and fraction of a lot or tract under separate ownership that is benefited or damaged (see Exhibit A).

An easement, in the form of an additional restriction on the use of real property adjacent to the open channel of the drainage system, will be acquired and, therefore, damages will be awarded for the establishment of a permanent strip of perennial vegetation approved by the drainage authority that will not impede future maintenance of the drainage system as required in MS 103E.021. We determined these damages at two separate values. Grass Strip damages "A" acres, lands which current land use will not change, but will still have permanent restrictions of future land use. Grass Strip damages "B" acres, lands demanding a higher value based on current land use. The value determined for "A" acres is \$3714 and the value for "B" acres is \$6190.

Right of way damages, having been determined and paid in the original proceedings for establishment of the drainage system, based on the area contemplated and included in the

proceeding for the establishment or subsequent improvement of the drainage system, were not considered.

We have determined the following direct drainage benefits and indirect (outlet) benefits on and related to the redetermination of benefits for Goodhue CD 1. Benefits were determined based on the drainage system operating in its as constructed condition.

Direct Benefits – Class 1 (Mapped as Red)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 1 lands, prior to the existence of the drainage system, had a value range of \$1369 to \$1541 per acre. They consisted mostly of lowlands that may have been farmed, but not without substantial risk. With the establishment of adequate drainage to these lands, the production value and/or market value has increased. These lands consist of soils that benefit greatly from good drainage. These lands are now more suitable for intense crop production.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 1 by the rate of \$3476 per acre.

Direct Benefits – Class 2 (Mapped as Yellow)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 2 lands, prior to the existence of the drainage system, had a value range of \$3140 to \$3471 per acre. Although some row crops were grown in this land class, it was not without substantial risk of loss to the grower. Now that adequate drainage has been established through these lands, the production value and/or market value has increased. These lands typically consist of soils that benefit from good drainage to increase crop production.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 2 by the rate of \$2456 per acre.

Direct Benefits – Class 3 (Mapped as Green)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 3 lands, prior to the existence of the drainage system, had a value range of \$5675 to \$6272 per acre. These lands were mostly utilized for the production of row crops, although over saturation of the soil and surrounding lands did not allow for these lands to realize their full production potential. Now that the drainage system has been established, the land is able to utilize the system as an outlet to drainage tile systems and increased the production potential. As a result, the production value and/or market value has increased.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 3 by the rate of \$1141 per acre.

Indirect Benefits – Class 4 (Mapped as Blue)

Class 4 lands are lands which have not had an increase in market value after the construction of the drainage system. However, they have been altered from their pre-settlement state in such a manner that they are now tilled and farmed. As a result, they burden the drainage system's capacity, thus increasing a sediment load and causing a need for increased maintenance. Taking into consideration the percentage of Class 4 acres in the watershed, regular ditch maintenance, and sediment loading, we determined the rate per acre that Goodhue CD 1 provides as an outlet or contribution benefit to these lands. Though this description may not describe your lands exactly, your lands fell broadly under this category. The viewers have determined the Class 4 outlet benefit rate to be \$342 per acre.

Example of how benefits were calculated:

Production and/or Market Value Before Project:	\$1,000
Production and/or Market Value After Project:	\$3,000
Increase in Production and/or Market Value:	\$2,000
Less Private Improvement Costs:	\$1,000
Net Benefits:	\$1,000

Road Benefits

The viewers have determined outlet as well as reduced maintenance cost benefits for all State, County, and Township roads located within the boundary of Goodhue CD 1 at a rate of \$1965 per acre.

Residential Land Benefits

Outlet benefits were applied to residential lands within the watershed of Goodhue CD 1. The outlet benefit was calculated based on runoff burden to the drainage system and use of the drainage system as an outlet. The viewers have determined the outlet benefits for residential lands at the rate of \$137 per acre.

Woodlot Benefits

Benefits were applied to woodlot lands within the watershed of Goodhue CD 1. These lands receive a benefit because the ditch conveys their water burden away from adjacent landowners and adds to the need for system capacity and system maintenance. The viewers have determined the benefit for woodlot lands at the rate of \$123 per acre.

Benefit Variables

Based on criteria used to determine the likelihood of future improvements, each sub catchment within the watershed of the public drainage system has been given a grade of its as constructed condition relative to its ability to utilize the public drainage system efficiently. This grading system varies the benefit amount according to the aforementioned ability within each sub catchment.

Non-benefiting Acres

Based on current land use and regulatory restrictions, permanent program restrictions (i.e. RIM or CREP) or other permanent restriction and restoration to pre-settlement landscape conditions or creation of wetland areas, we determined some areas to be non-benefited from the drainage system and restricted from taking future benefit from the drainage system. For example, we determined that lands restored to pre-settlement conditions and permanently restricted from future modification would not drain in any altered manner such that the drainage system would be burdened by the land other than such burden as nature would have provided. Further, for example, nonconverted wetlands that are so restricted from conversion by regulation that conversion is unlikely, were not determined to benefit from the system.

At the completion of our examination, we did sum up the total benefits for Goodhue CD 1. We found that the total benefits are \$4,164,125.44 and total damages are \$50,299.94. (See Exhibit A for tabular report of benefits.)

We recommend that the Goodhue County Drainage Authority hold a final hearing on the report and confirm the benefits and damages for Goodhue CD 1.

Dated this 24th day of February, 2021.

[Signature Page to Follow]

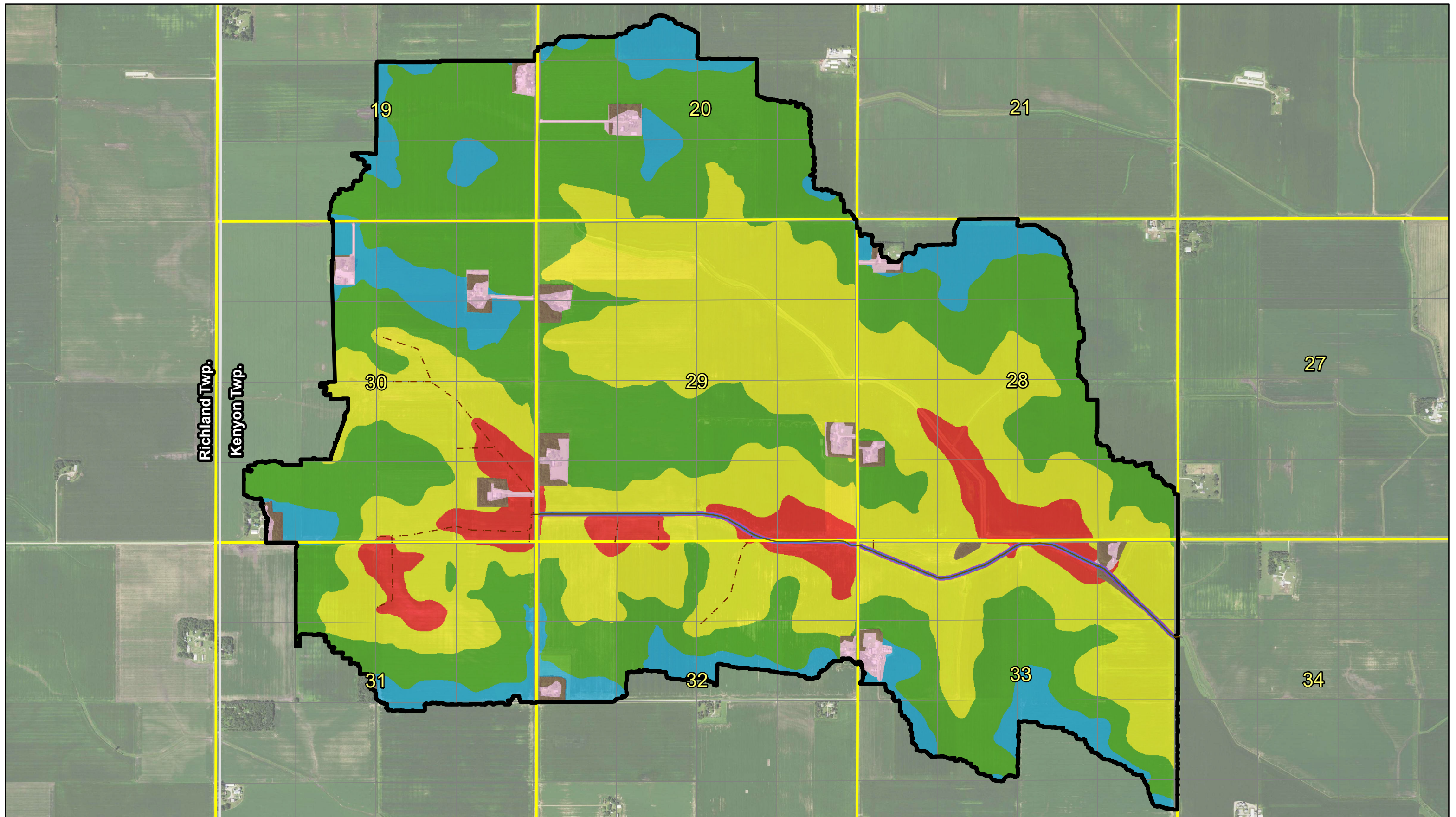
Respectfully submitted,

Bryan Murphy

Shantel Hecht

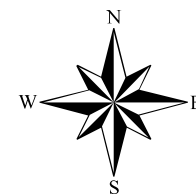
Larry Murphy

Robert Conely



Land Classifications

- | | | | | | | |
|-----------------|----------------|---------|---------|-------------|--------------|---------|
| CD 1 Open Ditch | Townships | Class 1 | Class 3 | Residential | Roads | Ditches |
| CD 1 Tile | PLSS Sections | Class 2 | Class 4 | Woodlot | Grass Strips | |
| CD 1 Watershed | 40-acre Tracts | | | | | |



Goodhue CD 1 - Land Classifications
 H2Over Viewers
 February 23, 2021

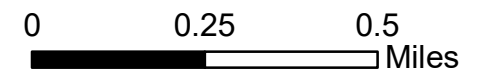


Table with columns: PIN, NAME, OWNER ADDRESS, CITY STATE ZIP, DESCRIPTION, SEC, TWP, RANGE, PARCEL ACRES, ACRES IN TRACT, TOTAL BENEFITTED ACRES, ACRES IN WATERSHED NOT BENEFITTED, NONCONVERTED WETLAND ACRES, CLASS 1 ACRES, RED = CLASS 1 BENEFIT, CLASS 2 ACRES, YELLOW = CLASS 2 BENEFIT, CLASS 3 ACRES, GREEN = CLASS 3 BENEFIT, CLASS 4 ACRES, BLUE = CLASS 4 BENEFIT, RESIDENTIAL ACRES, RESIDENTIAL BENEFIT, WOODLOT ACRES, WOODLOT BENEFIT, ROAD ACRES, ROAD BENEFIT, CLASS A GRASS STRIP ACRES, CLASS A GRASS STRIP DAMAGES, CLASS B GRASS STRIP ACRES, CLASS B GRASS STRIP DAMAGES, DITCH ACRES, TOTAL PARCEL BENEFITS, PERCENT TOTAL BENEFITS, NOTIONAL ASSESSMENT ON \$100,000 REPAIR

**STATE OF MINNESOTA
GOODHUE COUNTY BOARD OF COMMISSIONERS
SITTING AS THE DRAINAGE AUTHORITY FOR
GOODHUE COUNTY DITCH 1**

In the Matter of the Redetermination of
Benefits for Goodhue County Ditch 1

**FINDINGS AND ORDER APPROVING THE
REDETERMINATION OF BENEFITS,
ACQUIRING GRASS BUFFER, CONFIRMING
DAMAGES, AND DIRECTING PAYMENT**

The Goodhue County Board of Commissioners, sitting as the drainage authority for Goodhue County Ditch 1, pursuant to Minnesota Statutes, section 103E.351, having adopted findings and ordered a redetermination of benefits on September 1, 2020; having appointed viewers to redetermine and report the benefits and damages; having received the viewers' reports; having followed proper notice requirements in Minnesota Statutes, section 103E.351; and having held a public hearing and followed all requirements of chapter 103E, based on the record and proceedings, Commissioner _____ moved, seconded by Commissioner _____ to adopt the following Findings and Order:

Findings:

1. The Goodhue County Board of Commissioners ("**Drainage Authority**") is the drainage authority for Goodhue County Ditch 1 ("**CD 1**").
2. Goodhue County Ditch 1 was established in 1954. Benefits for Goodhue County Ditch 1 were determined concurrent with establishment in 1954, prior to the initiation of modern, intensive farming and drainage practices within Goodhue County.
3. The current benefits roll reflects the benefitted properties, benefitted areas, and benefit values as determined by viewers based on assumptions regarding the future use and drainage of benefitted properties.
4. Since the original establishment of CD 1 and the original determination of benefits and damages, land uses and drainage practices have changed to accelerate and increase the flow of water to the drainage system changing the nature and value of benefits accruing to lands from construction of CD 1.

5. Since the original determination of benefits and damages, land values have changed within the benefitted area of CD 1.
6. The Drainage Authority noticed and held an informational meeting on the proposed initiation of the redetermination of benefits for CD 1 on August 20, 2020. The informational meeting was attended by landowners who confirmed certain conditions related to benefits on the drainage system. The landowners noted that the benefits or damages of record for the existing CD 1 system do not reflect reasonable present-day land values and that the benefitted or damaged areas have changed since CD 1 was established.
7. On September 1, 2020, the Drainage Authority adopted Findings and Order Initiating the Redetermination of Benefits directing the initiation of the redetermination of benefits and damages for CD 1 pursuant to Minnesota Statutes, section 103E.351. On October 6, 2020, the Drainage Authority adopted Findings and Order Appointing Viewers which appointed H2Over Viewers, LLC: Bryan Murphy, Shantel Hecht, Larry Murphy, Robert Conely, and Ken DeGier as viewers.
8. County Administrator Scott O. Arneson issued an Administrator's Order to the viewers on October 6, 2020 and administered the viewers' oaths, which are on record with the Drainage Authority.
9. The viewers completed their report, which included a benefits and damages statement, for all property affected by the drainage system and filed their report with the Drainage Authority. The reports and benefits and damages statements are on file as part of the record with the Drainage Authority.
10. The County Administrator, under direction from the Drainage Authority and with the assistance of the viewers, prepared property owners' reports and mailed them to the owners of property identified in the viewers' reports.
11. A landowner informational meeting was held on February 4, 2021. At the landowner informational meeting, the viewers encouraged landowners to schedule individual meetings with the viewers in order to allow landowners to provide additional information.
12. The viewers filed Amendment 1 to the viewers' report with the Drainage Authority to correct an error in the mailing address for Kenyon Township in the original viewers' report. Based on additional evidence submitted by landowners following the February 4, 2021 landowner informational meeting, the viewers filed Amendment 2 to the viewers' report with the Drainage Authority.

13. The Drainage Authority set a public hearing for review of the viewers' report within 30 days after the property owners' reports were mailed.
14. A printed copy of the hearing notice was posted for at least three weeks before the date of the hearing at the front door of the courthouse of Goodhue County. Notice of the final hearing was published in the *Kenyon Leader* and *Republican Eagle* for three successive weeks prior to the hearing. Within one week after the first publication of the notice, the County Administrator's Office provided notice by mail of the time and location of the final hearing to all property owners and others affected by the redetermination of benefits and damages listed in the viewers' report.
15. Proper notice of the redetermination hearing was made in conjunction with Minnesota Statute, section 103E.351 requirements and chapters 103E. A record of the notice requirements is on file with the Drainage Authority.
16. Evidence of all actions in this matter, including findings and orders, appointments, oaths, affidavits of mailing, publication, and posting as well as hearing agendas, presentation materials, and recordings are present in the record of proceedings and are incorporated by reference.
17. The Drainage Authority held a public hearing on the redetermination of benefits on March 24, 2021 commencing at 9:00 a.m. at the County Board Room located on the 3rd Floor of the Government Center, 509 W 5th Street, Red Wing, Minnesota 55066; however, the Drainage Authority determined, based on the State Emergency Declaration related to the COVID-19 pandemic, that it was neither feasible nor prudent to hold in-person meetings during the emergency. Therefore, the hearing was conducted by alternative means (teleconference or video conference) from remote locations under Minnesota Statutes, section 13D.021. At all times during the public hearing, all members of the body and public participating in the meeting could hear all discussion and testimony and all votes of the members of the body.
18. At the public hearing, Bryan Murphy, one of the duly appointed viewers, presented the viewers' report and explained the process of completing the viewers' report. Bryan Murphy further provided detail of the viewing process and the information used by the viewers to: (1) verify the boundary of the watershed of the drainage system; (2) verify and confirm the existence of drainage benefit; and (3) determine the economic benefit to lands deriving a drainage benefit from the construction of CD 1.
19. The viewers reviewed all property within the drainage areas of the drainage system as part of the redetermination of benefits process. The viewers determined the amount of damages to be paid for the acquisition of property for the establishment of best management practices, including grass strips, necessary to control erosion, sedimentation, improve water quality, or maintain the efficiency of the drainage system

as required under Minnesota Statutes, section 103E.021. The viewers compared sales in the area in arriving at an average sales price used in establishing a payment rate.

20. The viewers used maps, LiDAR data, and other information, along with visual inspection of the watershed of the drainage system, to determine the boundaries of the benefiting area.
21. Within the watershed of the drainage system, the viewers paid particular attention to altered land use and drainage alterations which facilitate the removal of water from property directing it to the drainage system.
22. To determine the economic benefit to lands deriving a drainage benefit from the drainage system, the viewers conducted a condition comparison comparing the expected, pre-ditch, unaltered state of the watershed to the existing, altered and improved condition of the watershed. The viewers used this comparison in determining the increased market value of the properties receiving a direct drainage benefit.
23. Based on their detailed observations, the viewers determined benefit classifications, classified acres, and assigned economic benefit on a per acre basis.
24. The viewers determined that some acres within the watershed of the drainage system, i.e., existing wetlands and non-contributing basins, received no benefit from the drainage system.
25. The viewers accounted for the efficiency of the drainage system, as designed, and the proximity of lands to and the elevations of lands above the ditch.
26. The viewers applied an economic analysis using sales and income approaches to determine the increased value to each classification acre based on the drainage benefit provided by the drainage system.
27. The viewers determined the amount of economic benefit to property benefited immediately by the drainage system, or for property for which the drainage system can become an outlet for drainage, make an outlet more accessible, or otherwise directly benefit the property.
28. The viewers determined economic benefits based on: (1) an increase in the current market value of the property as a result of constructing the project; (2) an increase in the potential for agricultural production as a result of constructing the project; or (3) an increased value of the property as a result of potential different land use.
29. Within the watershed of the drainage system, the viewers determined benefits on property that are responsible for increased drainage system maintenance, or increased

drainage system capacity because the natural drainage on the property has been altered or modified to accelerate the drainage of water from the property.

30. The viewers kept an accurate account of all time engaged in viewing and examination; the nature and kind of work performed; the days each viewer was engaged in said work; the amount charged per day by each viewer; and every item of expense incurred by the viewers in said work.
31. The viewers' account of work to date has been filed with the Drainage Authority.
32. The viewers included, in their determinations, the amount of damages necessary to acquire and establish a one-rod grass buffer strip along all reaches of open ditch on CD 1.
33. Upon review of information provided to the Board during the public hearing, the Board further finds and confirms its earlier findings that the benefits and damages determined in the original proceedings, as well as the benefited and damaged areas determined in the original proceedings, do not reflect current, existing, actual benefits and benefitted areas.
34. Following the presentation of the viewers' reports at the final hearing, the Drainage Authority took comments from the public. A record of public comments was made and are incorporated into this final order.
35. The viewers' report as amended is attached as **Exhibit A**. The benefits and damages statement as amended is attached as **Exhibit B**.
36. Based on the proceedings herein, the evidence presented during the pendency of these proceedings, the testimony of the viewers, and the public comments received, the Board finds:
 - a. that the viewers' report has been made and other proceedings have been completed under Minnesota Statutes, chapter 103E;
 - b. that the viewers' report is complete and correct, as modified after the comments submitted at the landowner informational meeting;
 - c. that the redetermined benefits and damages, as reflected in the viewers' final amended report as **Exhibit A**, and as described in the benefits and damages statement as **Exhibit B**, are proper, reasonable, and conform to the drainage code; and

- d. that the acquisition of grass buffer strips as reported as damages in the viewers' report is necessary under Minnesota Statutes, section 103E.021.

Order:

Based on the foregoing Findings and the entire record of proceedings before the Drainage Authority Board, the Board, acting as the drainage authority for Goodhue County Ditch 1, hereby orders as follows:

- A. The redetermined benefits of CD 1, the final amended viewers' report attached hereto as **Exhibit A**, and the final amended benefits and damages statement attached hereto as **Exhibit B** are hereby adopted by the Board and shall be used in place of the original benefits and damages in all subsequent proceedings.
- B. The viewers are allowed payment of their account of work.
- C. The County Administrator shall ensure that the redetermined benefits replace the existing benefits previously determined for CD 1.
- D. The damages for the acquisition of the grass buffer area shall be paid and the grass buffer areas established as required by statute.

After discussion, the Board Chair called the question. The question was on the adoption of the foregoing findings and order, and there were _____ yeas, _____ nays, _____ absent, and _____ abstentions as follows:

	Yea	Nay	Absent	Abstain
ANDERSON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DROTOS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLANDERS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GRESETH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAJERUS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared the motion passed and the Findings and Order adopted.

Brad Anderson, Chairperson

Dated: March 24, 2021

* * * * *

I, Scott O. Arneson, the Goodhue County Administrator, do hereby certify that I have compared the above motion and Findings and Order with the original thereof as the same appears of record and on file with the County and find the same to be a true and correct transcript thereof. The above Findings and Final Order was filed with me, Goodhue County Administrator, on March 24, 2021.

IN TESTIMONY WHEREOF, I have hereunto set my hand this ____ day of _____, 2021.

Scott O. Arneson, County Administrator

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

PIN	NAME	OWNER ADDRESS	CITY STATE ZIP	DESCRIPTION	SEC	TWP	RANGE	PARCEL ACRES	ACRES IN TRACT
360190301	HARLAN E PETERS HEATHER C PETERS	1510 MONKEY VALLEY	KENYON MN 55946	NESW	19	109	18	190.69	39.61
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SESW	19	109	18	154.68	0.32
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SWSE	19	109	18	154.68	38.98
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SESE	19	109	18	154.68	37.45
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NESW	19	109	18	154.68	0.36
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NWSE	19	109	18	154.68	39.82
360190400	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NESE	19	109	18	154.68	33.59
360190500	MICHAEL D KASPER ANDREA A KASPER	49543 COUNTY 59 BLVD	KENYON MN 55946	NESE	19	109	18	5.32	4.69
360190700	LARRY D LURKEN	420 500TH ST	KENYON MN 55946	SESW	19	109	18	79.57	38.61
360200100	JOAN E SCHWAKE RT	307 SKOGEN LN	KENYON MN 55946	NWSE	20	109	18	152.55	0.08
360200100	JOAN E SCHWAKE RT	307 SKOGEN LN	KENYON MN 55946	SESW	20	109	18	152.55	0.08
360200100	JOAN E SCHWAKE RT	307 SKOGEN LN	KENYON MN 55946	SWNE	20	109	18	152.55	39.98
360200301	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	NESW	20	109	18	69.18	0.13
360200301	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	SWNW	20	109	18	69.18	0.05
360200301	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	SESW	20	109	18	69.18	39.90
360200400	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	NWSW	20	109	18	78.10	0.16
360200400	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	SWNW	20	109	18	78.10	38.54
360200500	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWSE	20	109	18	100.00	9.77
360200500	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESE	20	109	18	100.00	37.98
360200500	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWSE	20	109	18	100.00	10.01
360200500	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESE	20	109	18	100.00	38.90
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	SWSW	20	109	18	217.89	37.51
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	SESW	20	109	18	217.89	39.00
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	SWSE	20	109	18	217.89	29.24
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	NWSW	20	109	18	217.89	37.58
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	NESW	20	109	18	217.89	38.47
360200600	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	NWSE	20	109	18	217.89	29.90
360200601	WAYNE C WALKER JULIE WALKER	49686 COUNTY 59 BLVD	KENYON MN 55946	NWSW	20	109	18	2.11	0.71
360200601	WAYNE C WALKER JULIE WALKER	49686 COUNTY 59 BLVD	KENYON MN 55946	NESW	20	109	18	2.11	1.39
360280100	RICHARD L OVERBY TRUST IONE H OVERBY TRUST	50051 COUNTY 13 BLVD	KENYON MN 55946	SESW	28	109	18	160.00	0.16
360280100	RICHARD L OVERBY TRUST IONE H OVERBY TRUST	50051 COUNTY 13 BLVD	KENYON MN 55946	SWNE	28	109	18	160.00	40.00
360280100	RICHARD L OVERBY TRUST IONE H OVERBY TRUST	50051 COUNTY 13 BLVD	KENYON MN 55946	NENW	28	109	18	160.00	0.18
360280100	RICHARD L OVERBY TRUST IONE H OVERBY TRUST	50051 COUNTY 13 BLVD	KENYON MN 55946	NWNE	28	109	18	160.00	39.09
360280100	RICHARD L OVERBY TRUST IONE H OVERBY TRUST	50051 COUNTY 13 BLVD	KENYON MN 55946	NWSE	28	109	18	160.00	0.09
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	SWNW	28	109	18	154.84	39.20
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	SESW	28	109	18	154.84	39.93
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	NWNW	28	109	18	154.84	33.02
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	NENW	28	109	18	154.84	38.92
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	NWSW	28	109	18	154.84	0.03
360280200	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	NESW	28	109	18	154.84	0.06
360280201	TERRY R HOUGLUM ANN L HOUGLUM	50130 20TH AVE	KENYON MN 55946	NWNW	28	109	18	5.16	5.13

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360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESW	28	109	18	160.00	0.10
360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWSE	28	109	18	160.00	39.36
360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESE	28	109	18	160.00	37.18
360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESW	28	109	18	160.00	0.13
360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWSE	28	109	18	160.00	39.96
360280300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESE	28	109	18	160.00	37.92
360280400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWSW	28	109	18	155.82	37.28
360280400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESW	28	109	18	155.82	39.28
360280400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWSW	28	109	18	155.82	36.26
360280400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESW	28	109	18	155.82	39.89
360280500	RYAN D MOORE	50710 20TH AVE	KENYON MN 55946	SWSW	28	109	18	4.18	0.94
360280500	RYAN D MOORE	50710 20TH AVE	KENYON MN 55946	NWSW	28	109	18	4.18	2.91
360290100	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWNE	29	109	18	80.00	0.13
360290100	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SENE	29	109	18	80.00	38.93
360290100	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWNE	29	109	18	80.00	0.07
360290100	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NENE	29	109	18	80.00	38.01
360290100	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESE	29	109	18	80.00	0.02
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SENW	29	109	18	124.00	0.08
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SWNE	29	109	18	124.00	39.97
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NENW	29	109	18	124.00	0.06
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NWNE	29	109	18	124.00	38.99
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NESW	29	109	18	124.00	0.06
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NWSE	29	109	18	124.00	22.12
360290200	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NESE	29	109	18	124.00	21.34
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESW	29	109	18	70.51	0.19
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWSE	29	109	18	70.51	39.72
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESE	29	109	18	70.51	0.02
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESW	29	109	18	70.51	0.05
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWSE	29	109	18	70.51	18.00
360290201	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NESE	29	109	18	70.51	12.53
360290300	LORRY J KISPERT JENNIFER J KISPERT	50669 20TH AVE	KENYON MN 55946	NESE	29	109	18	5.49	5.07
360290400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWSE	29	109	18	40.00	0.11
360290400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SESE	29	109	18	40.00	39.04
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	SWNW	29	109	18	160.00	38.59
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	SENW	29	109	18	160.00	40.00
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	NWNW	29	109	18	160.00	37.60
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	NENW	29	109	18	160.00	39.01
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	NWSW	29	109	18	160.00	0.04
360290500	DENNIS H HOUGLUM	205 3RD ST	KENYON MN 55946	NESW	29	109	18	160.00	0.03
360290600	STEPHEN M SCHMITZ BRITTTNI R SCHMITZ	50744 COUNTY 59 BLVD	KENYON MN 55946	SWSW	29	109	18	10.00	4.25
360290600	STEPHEN M SCHMITZ BRITTTNI R SCHMITZ	50744 COUNTY 59 BLVD	KENYON MN 55946	NWSW	29	109	18	10.00	4.73
360290700	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	SWSW	29	109	18	122.74	21.17
360290700	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	SESW	29	109	18	122.74	26.40
360290700	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	NWSW	29	109	18	122.74	33.83
360290700	JAMES L WALKER RLT DORIS L WALKER RLT	2186 198TH ST W	FARIBAULT MN 55021	NESW	29	109	18	122.74	39.98
360290701	ALLEN M STOLEE RT ANN H STOLEE RT	220 HUSETH AVE	KENYON MN 55946	SWSW	29	109	18	27.26	13.21
360290701	ALLEN M STOLEE RT ANN H STOLEE RT	220 HUSETH AVE	KENYON MN 55946	SESW	29	109	18	27.26	13.60

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360300100	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	SENE	30	109	18	2.20	0.92
360300100	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NENE	30	109	18	2.20	1.24
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	SENE	30	109	18	157.80	37.58
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NENW	30	109	18	157.80	0.25
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NWNE	30	109	18	157.80	38.90
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NENE	30	109	18	157.80	36.22
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NWSE	30	109	18	157.80	0.03
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NESE	30	109	18	157.80	0.04
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	SENW	30	109	18	157.80	0.16
360300101	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	SWNE	30	109	18	157.80	40.00
360300200	LARRY D LURKEN	420 500TH ST	KENYON MN 55946	NENW	30	109	18	159.31	38.64
360300200	LARRY D LURKEN	420 500TH ST	KENYON MN 55946	NESW	30	109	18	159.31	0.03
360300200	LARRY D LURKEN	420 500TH ST	KENYON MN 55946	SENW	30	109	18	159.31	39.87
360300300	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	SWSE	30	109	18	80.00	39.03
360300300	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NESW	30	109	18	80.00	0.06
360300300	JON J HOUGLUM CHRISTINE L HOUGLUM	50243 COUNTY 59 BLVD	KENYON MN 55946	NWSE	30	109	18	80.00	39.99
360300400	JEFFREY J SOLBERG	50851 COUNTY 59 BLVD	KENYON MN 55946	SWSE	30	109	18	80.00	0.01
360300400	JEFFREY J SOLBERG	50851 COUNTY 59 BLVD	KENYON MN 55946	SESE	30	109	18	80.00	37.62
360300400	JEFFREY J SOLBERG	50851 COUNTY 59 BLVD	KENYON MN 55946	NWSE	30	109	18	80.00	0.05
360300400	JEFFREY J SOLBERG	50851 COUNTY 59 BLVD	KENYON MN 55946	NESE	30	109	18	80.00	38.52
360300500	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	NWSW	30	109	18	79.83	39.09
360300500	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	NESW	30	109	18	79.83	39.98
360300600	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	SWSW	30	109	18	79.94	38.16
360300600	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	SESW	30	109	18	79.94	39.07
360300600	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	SWSE	30	109	18	79.94	0.03
360300600	LYTANA DERSCHIED	159 510TH ST	KENYON MN 55946	NESW	30	109	18	79.94	0.01
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	NWSE	31	109	18	181.00	10.48
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	NESE	31	109	18	181.00	10.10
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	SWNE	31	109	18	181.00	40.00
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	SENE	31	109	18	181.00	38.60
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	NWNE	31	109	18	181.00	39.09
360310200	3 D FARMS INC	9512 270TH ST E	MEDFORD MN 55049	NENE	31	109	18	181.00	37.65
360310300	ERSCHIED LIVING TRUST PHYLLIS DERSCHIED LIVIN	26300 GOODHUE AVE	KENYON MN 55946	SENW	31	109	18	80.00	40.00
360310300	ERSCHIED LIVING TRUST PHYLLIS DERSCHIED LIVIN	26300 GOODHUE AVE	KENYON MN 55946	SWNE	31	109	18	80.00	0.04
360310300	ERSCHIED LIVING TRUST PHYLLIS DERSCHIED LIVIN	26300 GOODHUE AVE	KENYON MN 55946	NENW	31	109	18	80.00	39.12
360310300	ERSCHIED LIVING TRUST PHYLLIS DERSCHIED LIVIN	26300 GOODHUE AVE	KENYON MN 55946	NWNE	31	109	18	80.00	0.07
360310401	THE EMPRESS FARMS LLC	6299 86TH ST NE	MEDFORD MN 55049	NENW	31	109	18	78.00	0.03
360290400	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NENE	32	109	18	40.00	0.01
360320100	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	SWNE	32	109	18	27.00	0.01
360320100	DON I HERRLICH CANDACE K HERRLICH	49497 20TH AVE	KENYON MN 55946	SENE	32	109	18	27.00	25.58
360320101	LANCE M KISPERT	51343 20TH AVE	KENYON MN 55946	SENE	32	109	18	3.00	2.62
360320200	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	SWNE	32	109	18	50.00	0.01
360320200	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	SENE	32	109	18	50.00	9.94
360320200	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	NWNE	32	109	18	50.00	0.07
360320200	DONNA M MUNDSCHAU	557 BRYANT AVE	MANISTEE MI 49660	NENE	32	109	18	50.00	39.08
360320300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SENW	32	109	18	80.00	0.11
360320300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	SWNE	32	109	18	80.00	39.04

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360320300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NENW	32	109	18	80.00	0.14
360320300	DON I HERRLICH	49497 20TH AVE	KENYON MN 55946	NWNE	32	109	18	80.00	39.99
360320400	STEVEN J LARISH	1033 515TH ST	KENYON MN 55946	SWNW	32	109	18	10.00	8.66
360320500	ALLEN M STOLEE RT ANN H STOLEE RT	220 HUSETH AVE	KENYON MN 55946	SWNW	32	109	18	70.00	28.85
360320500	ALLEN M STOLEE RT ANN H STOLEE RT	220 HUSETH AVE	KENYON MN 55946	NWNW	32	109	18	70.00	38.48
360320700	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SWNW	32	109	18	80.00	0.07
360320700	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	SEW	32	109	18	80.00	38.96
360320700	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NWNW	32	109	18	80.00	0.09
360320700	MARK S DRESSEL	11636 260TH ST	KENYON MN 55946	NENW	32	109	18	80.00	39.93
360330100	U S BANK AARON HOLST	PO BOX 4661	ROCHESTER MN 55903	NESE	33	109	18	75.90	0.04
360330100	U S BANK AARON HOLST	PO BOX 4661	ROCHESTER MN 55903	SWNE	33	109	18	75.90	0.07
360330100	U S BANK AARON HOLST	PO BOX 4661	ROCHESTER MN 55903	SENE	33	109	18	75.90	38.00
360330100	U S BANK AARON HOLST	PO BOX 4661	ROCHESTER MN 55903	NWNE	33	109	18	75.90	0.05
360330100	U S BANK AARON HOLST	PO BOX 4661	ROCHESTER MN 55903	NENE	33	109	18	75.90	33.30
360330101	PAMELA K HEGSETH RT	2800 510TH ST	KENYON MN 55946	NWNE	33	109	18	4.10	0.02
360330101	PAMELA K HEGSETH RT	2800 510TH ST	KENYON MN 55946	NENE	33	109	18	4.10	3.64
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	SESE	33	109	18	240.00	37.68
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	NESW	33	109	18	240.00	0.07
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	NWSE	33	109	18	240.00	40.00
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	NESE	33	109	18	240.00	37.97
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	SEW	33	109	18	240.00	0.08
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	SWNE	33	109	18	240.00	39.95
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	NENW	33	109	18	240.00	0.08
360330200	SUSAN H SHACKLETT	5714 SOMERSET DR	LIBERTY TOWNSHIP OH 45011	NWNE	33	109	18	240.00	38.62
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	SESW	33	109	18	240.00	0.06
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	NWSW	33	109	18	240.00	38.97
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	NESW	33	109	18	240.00	39.96
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	SWNW	33	109	18	240.00	38.88
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	SEW	33	109	18	240.00	39.96
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	NENW	33	109	18	240.00	38.63
360330300	WAYNE P CLARK FAMILY FARM LP	51350 20TH AVE	KENYON MN 55946	NWNW	33	109	18	240.00	37.89
360330400	HAROLD P REMOLD ETAL	5211 COUNTY RD 5 NW	BYRON MN 55920	SESW	33	109	18	80.00	38.88
GOODHUE COUNTY HIGHWAYS / ROADS									
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SESE	28	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SESE	33	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NESE	33	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SENE	33	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NENE	33	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NWSW	34	109	18		
GOODHUE COUNTY	COUNTY 13 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWNW	34	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SESE	19	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NESE	19	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SENE	19	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWSW	20	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NWSW	20	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWNW	20	109	18		
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWNW	29	109	18		

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GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NWNW	29	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWSW	29	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NWSW	29	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SENE	30	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NENE	30	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SESE	30	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NESE	30	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NESE	31	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SENE	31	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NENE	31	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	SWNW	32	109	18
GOODHUE COUNTY	COUNTY 59 BLVD	940 W 8TH ST	ZUMBROTA MN 55992	NWNW	32	109	18

KENYON TWP ROADS

KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SWNW	28	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NWNW	28	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SWSW	28	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NWSW	28	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SENE	29	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NENE	29	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SESE	29	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NESE	29	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SENE	32	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NENE	32	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	SWNW	33	109	18
KENYON TWP	20TH AVE	3019 490TH ST	KENYON MN 55946	NWNW	33	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SESW	19	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SWSE	19	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SESE	19	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SWSW	20	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SESW	20	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SWSE	20	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SESE	20	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	SESW	21	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NENW	28	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NWNE	28	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NWNW	29	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NENW	29	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NWNE	29	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NENE	29	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NENW	30	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NWNE	30	109	18
KENYON TWP	500TH ST	3019 490TH ST	KENYON MN 55946	NENE	30	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SWSW	28	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SESW	28	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SWSE	28	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SESE	28	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SWSW	30	109	18

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SESW	30	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SWSE	30	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	SESE	30	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NWNW	31	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NENW	31	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NWNE	31	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NENE	31	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NENW	33	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NWNW	33	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NWNE	33	109	18
KENYON TWP	510TH ST	3019 490TH ST	KENYON MN 55946	NENE	33	109	18
KENYON TWP	515TH ST	3019 490TH ST	KENYON MN 55946	NWSW	32	109	18
KENYON TWP	515TH ST	3019 490TH ST	KENYON MN 55946	SWNW	32	109	18

TOTAL WATERSHED ACRES:

2,935.61

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

TOTAL BENEFITTED ACRES	ACRES IN WATERSHED NOT BENEFITTED	NONCONVERTED WETLAND ACRES	CLASS1 ACRES	RED = CLASS 1 BENEFIT	CLASS2 ACRES	YELLOW = CLASS 2 BENEFIT	CLASS3 ACRES	GREEN = CLASS 3 BENEFIT	CLASS4 ACRES	BLUE = CLASS 4 BENEFIT	RESIDENTIAL ACRES
0.11	0.00								0.11	\$32.92	
0.31	0.00						0.16	\$159.74	0.15	\$44.89	
38.97	0.00						31.66	\$31,608.55	7.31	\$2,187.52	
37.45	0.00						29.12	\$29,072.68	8.33	\$2,492.75	
0.35	0.00								0.35	\$104.74	
39.46	0.00						30.84	\$30,789.89	8.62	\$2,579.54	
33.59	0.00						33.23	\$33,176.00	0.25	\$74.81	0.02
4.69	0.00						0.04	\$39.94			3.54
11.92	0.00						9.34	\$9,324.82	2.58	\$772.07	
0.06	0.00								0.06	\$17.96	
0.02	0.00								0.02	\$5.99	
0.20	0.00								0.20	\$59.85	
0.13	0.00								0.13	\$38.90	
0.01	0.00								0.01	\$2.99	
17.52	0.00								17.52	\$5,242.86	
0.16	0.00						0.15	\$149.76	0.01	\$2.99	
10.38	0.00						6.92	\$6,908.76	3.46	\$1,035.41	
9.77	0.00						9.77	\$9,754.12			
22.84	0.00						20.43	\$20,396.80	2.41	\$721.19	
5.10	0.00						5.10	\$5,091.71			
7.21	0.00						7.21	\$7,198.28			
37.51	0.00				8.98	\$19,298.02	28.53	\$28,483.64			
39.00	0.00				2.14	\$4,598.86	30.46	\$30,410.50	6.40	\$1,915.20	
29.24	0.00				9.87	\$21,210.63	19.37	\$19,338.52			
37.57	0.00						35.15	\$35,092.88	0.04	\$11.97	1.96
38.47	0.00						24.03	\$23,990.95	10.89	\$3,258.83	2.95
29.75	0.00						26.08	\$26,037.62	3.67	\$1,098.25	
0.71	0.00										0.11
1.39	0.00										0.71
0.16	0.00				0.09	\$193.41	0.07	\$69.89			
30.80	0.00				6.54	\$14,054.46	24.26	\$24,220.58			
0.18	0.00						0.10	\$99.84	0.08	\$23.94	
21.90	0.00						15.03	\$15,005.58	6.87	\$2,055.85	
0.07	0.00				0.04	\$85.96	0.03	\$29.95			
39.20	0.00				23.78	\$51,103.22	15.42	\$15,394.94			
39.93	0.00				10.99	\$23,617.51	27.19	\$27,145.82	1.75	\$523.69	
21.59	0.00						13.50	\$13,478.06	7.38	\$2,208.47	0.42
36.28	0.00						10.25	\$10,233.34	26.03	\$7,789.48	
0.03	0.00				0.03	\$64.47					
0.06	0.00				0.06	\$128.94					
3.10	0.00										2.18

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.10	0.00		0.04	\$121.66	0.06	\$128.94				
39.36	0.00		14.69	\$44,679.64	22.65	\$48,674.85	2.02	\$2,016.72		
33.35	0.00				13.34	\$28,667.66	20.01	\$19,977.48		
0.13	0.00				0.07	\$150.43	0.06	\$59.90		
38.38	0.00				6.37	\$13,689.13	32.01	\$31,957.98		
1.08	0.00						1.08	\$1,078.25		
37.28	0.00				21.41	\$46,010.09	15.78	\$15,754.36		
39.28	0.00		20.72	\$63,019.88	18.56	\$39,885.44				
36.26	0.00		3.12	\$9,489.48	30.52	\$65,587.48	2.41	\$2,406.08		0.08
39.89	0.00		7.67	\$23,328.31	29.98	\$64,427.02	2.24	\$2,236.36		
0.94	0.00									0.23
2.90	0.00									1.81
0.13	0.00				0.13	\$279.37				
38.93	0.00				38.93	\$83,660.57				
0.07	0.00				0.07	\$150.43				
38.01	0.00				24.61	\$52,886.89	13.29	\$13,268.40	0.11	\$32.92
0.02	0.00				0.02	\$42.98				
0.08	0.00				0.08	\$171.92				
39.97	0.00				39.97	\$85,895.53				
0.06	0.00				0.06	\$128.94				
38.99	0.00				38.41	\$82,543.09	0.58	\$579.06		
0.06	0.00				0.02	\$42.98	0.04	\$39.94		
22.11	0.00				6.62	\$14,226.38	15.49	\$15,464.83		
21.34	0.00				18.85	\$40,508.65	2.31	\$2,306.25		0.08
0.17	0.02				0.14	\$300.86	0.03	\$29.95		
37.21	2.51		7.24	\$21,860.57	27.38	\$58,947.07	2.59	\$2,585.79		
0.02	0.00				0.01	\$21.49	0.01	\$9.98		
0.05	0.00						0.05	\$49.92		
18.00	0.00				3.91	\$8,402.59	14.09	\$14,067.10		
12.53	0.00				2.42	\$5,200.58	8.79	\$8,775.72		0.41
5.07	0.00									3.95
0.11	0.00		0.04	\$121.66	0.07	\$150.43				
38.32	0.72		14.39	\$43,767.19	18.58	\$39,928.42	5.35	\$5,341.31		
38.59	0.00				21.72	\$46,676.28	13.32	\$13,298.36		1.37
40.00	0.00				39.35	\$84,563.15	0.65	\$648.94		
37.60	0.00				21.10	\$45,343.90	13.15	\$13,128.63		1.62
39.01	0.00				38.66	\$83,080.34	0.35	\$349.43		
0.04	0.00				0.01	\$21.49	0.03	\$29.95		
0.03	0.00				0.03	\$64.47				
4.25	0.00									2.23
4.73	0.00									2.36
19.96	1.20		0.87	\$2,646.11	10.68	\$22,951.32	8.28	\$8,266.55		0.09
25.15	1.25				16.57	\$35,608.93	8.58	\$8,566.06		
33.83	0.00				0.37	\$795.13	33.04	\$32,986.31		0.22
39.98	0.00				3.83	\$8,230.67	36.15	\$36,091.26		
12.00	1.20		4.89	\$11,688.92	7.11	\$14,075.95				
12.36	1.24		7.47	\$22,163.85	4.89	\$10,508.61				

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

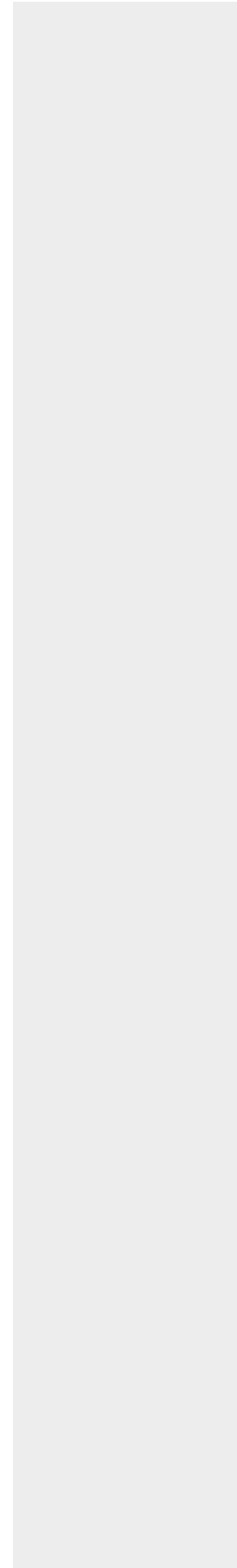
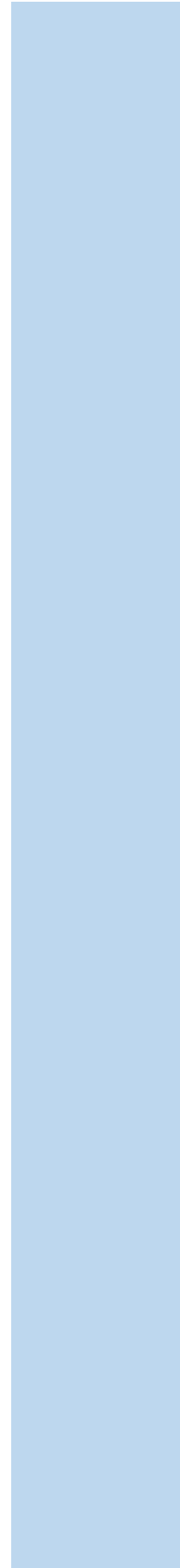
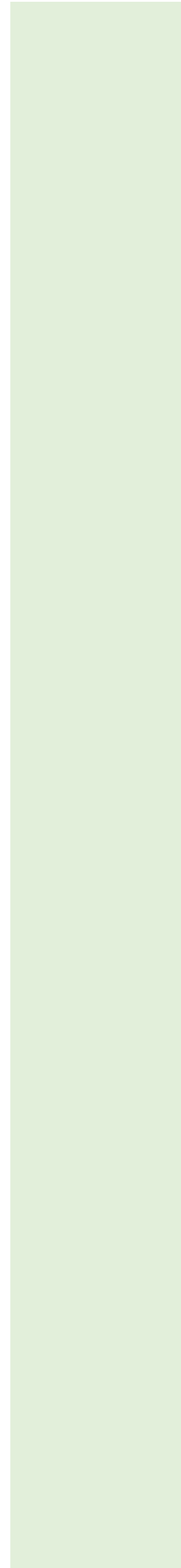
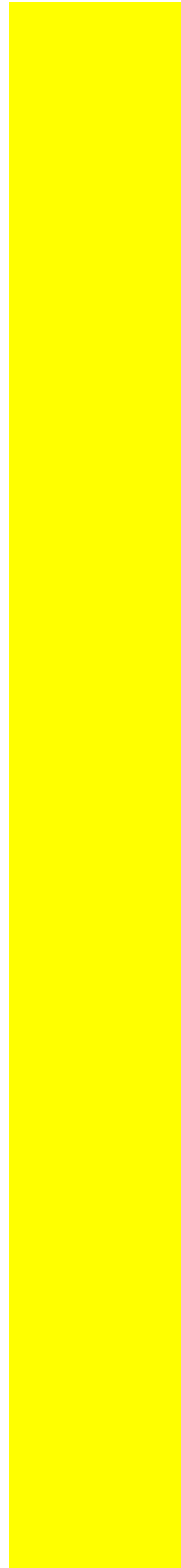
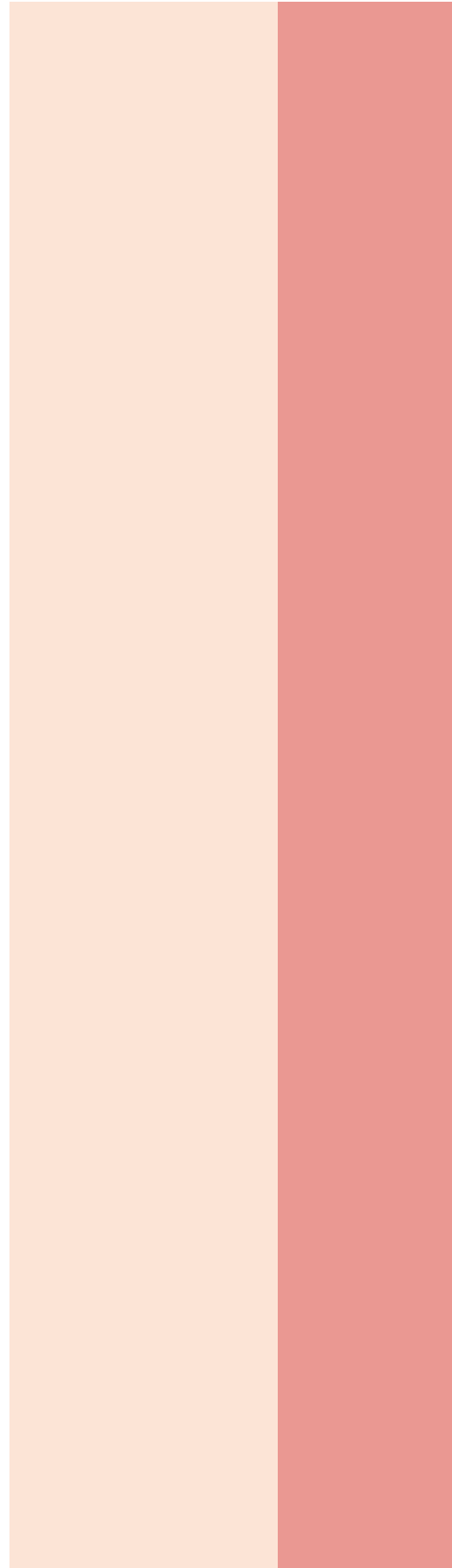
0.92	0.00									0.50
1.24	0.00									1.24
37.58	0.00			3.01	\$4,989.98	21.48	\$20,372.56	12.17	\$3,491.39	0.17
0.25	0.00					0.12	\$112.96	0.13	\$38.22	
38.90	0.00					21.30	\$20,861.47	17.60	\$4,985.68	
36.22	0.00					29.85	\$29,801.49	2.09	\$625.43	2.91
0.03	0.00			0.03	\$49.73					
0.04	0.00			0.02	\$33.16	0.02	\$17.69			
0.16	0.00			0.05	\$82.89	0.11	\$84.72			
40.00	0.00			18.06	\$29,939.87	16.46	\$12,677.16	5.48	\$1,265.74	
21.14	0.00					5.94	\$4,574.87	10.39	\$2,398.53	4.25
0.02	0.00			0.02	\$33.16					
21.14	0.00			7.81	\$12,947.42	13.32	\$10,258.80	0.01	\$2.31	
39.03	0.00	2.64	\$8,029.56	20.14	\$43,005.79	16.18	\$14,570.00			
0.06	0.00			0.04	\$66.31	0.02	\$15.40			
39.99	0.00			28.63	\$47,462.81	11.36	\$8,749.19			
0.01	0.00			0.01	\$16.58					
37.60	0.02	23.63	\$64,897.79	7.40	\$12,984.87					2.24
0.05	0.00			0.05	\$82.89					
38.52	0.00	9.62	\$22,571.41	24.79	\$41,258.96	4.11	\$3,357.11			
0.07	0.00					0.07	\$69.89			
20.07	0.00			12.85	\$21,302.73	7.22	\$5,560.66			
19.14	0.00					11.66	\$11,641.05	3.97	\$1,188.02	1.21
38.98	0.00	0.01	\$30.42	3.79	\$8,071.03	27.18	\$26,540.23	8.00	\$2,394.00	
0.03	0.00			0.03	\$64.47					
0.01	0.00					0.01	\$7.70			
2.27	0.00							2.27	\$679.30	
0.58	0.00							0.58	\$173.57	
39.99	0.00	1.68	\$5,109.72	12.23	\$26,282.27	15.78	\$15,754.36	10.18	\$3,046.37	
38.29	0.00			6.98	\$15,000.02	21.58	\$21,544.93	9.73	\$2,911.70	
39.09	0.00	18.65	\$56,723.98	18.81	\$40,422.69	1.63	\$1,627.35			
37.65	0.00	1.99	\$6,052.59	19.67	\$42,270.83	15.16	\$15,135.37	0.83	\$248.38	
15.47	0.00			5.10	\$10,959.90	9.69	\$9,674.25	0.10	\$29.93	
0.04	0.00			0.01	\$21.49	0.02	\$19.97			
39.05	0.00	2.91	\$8,850.77	18.21	\$39,133.29	17.81	\$17,781.06	0.12	\$35.91	
0.07	0.00	0.04	\$121.66	0.03	\$64.47					
0.01	0.00					0.01	\$9.98			
0.00	0.01									
0.01	0.00					0.01	\$9.98			
12.32	0.00					7.03	\$7,018.58	5.20	\$1,556.10	0.08
1.73	0.00									1.68
0.01	0.00					0.01	\$9.98			
9.93	0.00			5.20	\$11,174.80	4.26	\$4,250.80			0.08
0.07	0.00	0.01	\$30.42	0.03	\$54.65	0.03	\$23.11			
37.33	1.73	13.72	\$41,729.38	18.44	\$39,603.00	5.17	\$4,935.68			
0.08	0.00			0.02	\$33.16	0.03	\$23.11	0.03	\$6.93	
25.16	0.00			3.00	\$4,973.40	14.15	\$11,021.20	8.01	\$1,886.04	

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

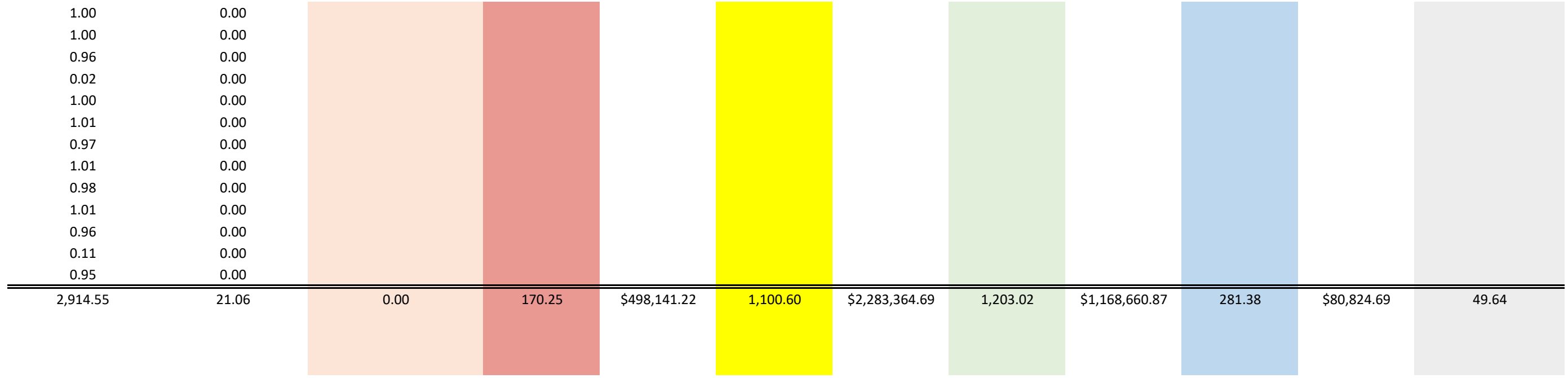
0.13	0.00			0.03	\$49.73	0.10	\$99.84			
39.80	0.17	0.98	\$2,646.97	34.16	\$62,166.27	4.66	\$4,250.80			
8.66	0.00					2.16	\$1,663.58	2.83	\$653.31	1.56
28.85	0.00			0.40	\$663.12	21.06	\$16,219.89	7.39	\$1,705.98	
38.48	0.00	1.75	\$4,106.03	27.14	\$46,068.42	8.95	\$7,454.44	0.64	\$147.74	
0.06	0.00					0.05	\$38.51	0.01	\$2.31	
27.99	0.00			1.19	\$1,972.78	16.08	\$12,434.62	10.72	\$2,603.99	
0.09	0.00	0.02	\$46.93	0.07	\$116.05					
39.92	0.00	1.75	\$4,773.42	25.01	\$48,814.84	13.16	\$11,728.34			
0.03	0.00			0.02	\$42.98	0.01	\$9.98			
0.07	0.00			0.05	\$107.45	0.02	\$19.97			
37.23	0.77			35.34	\$75,945.66	1.89	\$1,886.93			
0.05	0.00	0.01	\$30.42	0.03	\$64.47					
31.07	2.23	0.34	\$1,034.11	29.19	\$62,729.31	0.12	\$119.81			0.02
0.02	0.00									
3.38	0.26	0.07	\$212.91							1.41
4.20	0.00					2.55	\$2,545.86	1.65	\$493.76	
0.06	0.00					0.01	\$9.98	0.05	\$14.96	
16.01	0.00					3.04	\$3,035.06	12.97	\$3,881.27	
33.91	0.00			16.18	\$34,770.82	12.68	\$12,659.40	5.05	\$1,511.21	
0.08	0.00					0.05	\$49.92	0.03	\$8.98	
39.95	0.00			7.96	\$17,106.04	25.25	\$25,208.97	6.74	\$2,016.95	
0.08	0.00			0.04	\$85.96	0.04	\$39.94			
36.25	2.37	8.72	\$26,521.88	21.45	\$46,096.05	5.87	\$5,860.46			0.06
0.01	0.00							0.01	\$2.99	
9.53	0.00					3.28	\$3,274.67	6.25	\$1,870.31	
34.13	0.00			2.02	\$4,340.98	26.34	\$26,297.20	5.77	\$1,726.67	
35.46	0.00			0.88	\$1,891.12	18.31	\$18,280.25	9.14	\$2,735.15	5.89
39.95	0.00			19.44	\$41,776.56	20.04	\$20,007.44	0.47	\$140.65	
35.88	2.73	0.57	\$1,733.66	28.23	\$60,666.27	5.28	\$5,271.42			
35.25	2.63			27.23	\$58,517.27	8.02	\$8,006.97			
0.03	0.00							0.03	\$8.98	
1.11	0.00									
0.71	0.00									
1.89	0.00									
1.96	0.00									
1.97	0.00									
0.04	0.00									
0.05	0.00									
1.52	0.00									
1.52	0.00									
0.17	0.00									
1.51	0.00									
1.51	0.00									
0.25	0.00									
1.52	0.00									

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

1.52	0.00
1.52	0.00
1.52	0.00
1.52	0.00
1.52	0.00
1.52	0.00
1.51	0.00
0.01	0.00
1.52	0.00
1.52	0.00
1.51	0.00
1.52	0.00
1.00	0.00
0.89	0.00
1.00	0.00
0.99	0.00
1.05	0.00
1.04	0.00
1.05	0.00
1.05	0.00
0.57	0.00
1.05	0.00
0.52	0.00
1.00	0.00
0.55	0.00
1.00	0.00
0.96	0.00
0.96	0.00
1.00	0.00
1.00	0.00
0.96	0.00
0.04	0.00
0.72	0.00
0.01	0.00
0.98	0.00
1.02	0.00
1.02	0.00
0.99	0.00
0.56	0.00
1.01	0.00
0.97	0.00
0.97	0.00
1.00	0.00
1.00	0.00
0.95	0.00
0.37	0.00



GOODHUE CD 1
 EXHIBIT A AMENDMENT 2 FILED ON 02/24/21



GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

RESIDENTIAL BENEFIT	WOODLOT ACRES	WOODLOT BENEFIT	ROAD ACRES	ROAD BENEFIT	CLASS A GRASS STRIP ACRES	CLASS A GRASS STRIP DAMAGES	CLASS B GRASS STRIP ACRES	CLASS B GRASS STRIP DAMAGES	DITCH ACRES	TOTAL PARCEL BENEFITS
										\$32.92
										\$204.63
										\$33,796.07
										\$31,565.43
										\$104.74
\$2.40	0.09	\$9.69								\$33,369.42
\$424.36	1.11	\$119.46								\$33,262.90
										\$583.76
										\$10,096.89
										\$17.96
										\$5.99
										\$59.85
										\$38.90
										\$2.99
										\$5,242.86
										\$152.75
										\$7,944.16
										\$9,754.12
										\$21,117.99
										\$5,091.71
										\$7,198.28
										\$47,781.66
										\$36,924.56
\$234.96	0.42	\$45.20								\$40,549.15
\$353.63	0.60	\$64.58								\$35,385.01
										\$27,667.99
\$13.19	0.60	\$64.58								\$27,135.87
\$85.11	0.68	\$73.19								\$77.76
										\$158.30
										\$263.30
										\$38,275.04
										\$123.78
										\$17,061.42
										\$115.91
										\$66,498.16
\$50.35	0.29	\$31.21								\$51,287.01
										\$15,768.09
										\$18,022.82
										\$64.47
										\$128.94
\$261.33	0.92	\$99.02								\$360.34

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

									\$250.60
									\$95,371.20
									\$48,645.14
									\$210.33
									\$45,647.11
									\$1,078.25
	0.09	\$9.69							\$61,774.13
									\$102,905.32
\$9.59	0.13	\$13.99							\$77,506.63
									\$89,991.69
\$27.57	0.71	\$76.41							\$103.99
\$216.97	1.09	\$117.31							\$334.29
									\$279.37
									\$83,660.57
									\$150.43
									\$66,188.21
									\$42.98
									\$171.92
									\$85,895.53
									\$128.94
									\$83,122.15
									\$82.92
									\$29,691.21
\$9.59	0.10	\$10.76							\$42,835.25
									\$330.81
						0.01	\$61.90	0.01	\$83,393.43
						0.99	\$6,128.10	1.52	\$31.47
									\$49.92
									\$22,469.69
\$49.15	0.91	\$97.94							\$14,123.38
\$473.51	1.12	\$120.54							\$594.05
									\$272.09
									\$89,036.91
\$164.23	2.18	\$234.62				0.43	\$2,661.70	0.29	\$60,373.49
									\$85,212.09
\$194.20	1.73	\$186.19							\$58,852.92
									\$83,429.77
									\$51.44
									\$64.47
\$267.32	2.02	\$217.40							\$484.72
\$282.91	2.37	\$255.07							\$537.98
\$10.79	0.04	\$4.31				0.48	\$2,971.20	0.72	\$33,879.06
						0.50	\$3,095.00	0.75	\$44,174.99
\$26.37	0.20	\$21.53							\$33,829.34
									\$44,321.93
						0.48	\$2,971.20	0.72	\$25,764.87
						0.50	\$3,095.00	0.74	\$32,672.46

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

\$59.94	0.42	\$45.20						\$105.14
\$148.65								\$148.65
\$20.38	0.75	\$77.52						\$28,951.83
								\$151.18
\$348.84	1.37	\$147.45						\$25,847.15
								\$30,923.21
								\$49.73
								\$50.84
								\$167.61
\$393.04	0.56	\$46.50						\$43,882.77
								\$7,412.94
	0.07	\$7.53						\$33.16
								\$23,208.53
\$207.14	4.33	\$362.70				0.02	\$123.80	\$65,612.88
								\$81.72
								\$56,212.00
								\$16.58
\$145.05	2.30	\$247.54						\$78,452.50
								\$82.89
								\$67,187.47
								\$69.89
								\$26,863.39
								\$13,221.66
								\$37,035.68
								\$64.47
								\$7.70
	0.12	\$12.92						\$679.30
								\$173.57
								\$50,205.63
								\$39,456.66
								\$98,774.02
	0.58	\$62.42						\$63,707.16
	0.01	\$1.08						\$20,726.50
								\$42.53
								\$65,801.02
								\$186.13
								\$9.98
							0.01	\$0.00
\$9.59	0.01	\$1.08						\$9.98
\$201.39	0.05	\$5.38						\$8,585.34
								\$206.77
\$9.59	0.39	\$41.97						\$9.98
								\$15,477.16
						0.55	\$3,404.50	\$108.17
								\$86,268.06
								\$63.19
								\$17,880.65

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

									\$149.57
\$144.26	2.11	\$175.18				0.08	\$495.20	0.09	\$69,064.04
									\$2,636.33
									\$18,588.99
									\$57,776.63
									\$40.82
									\$17,011.39
									\$162.97
									\$65,316.60
									\$52.96
									\$127.42
	0.01	\$1.08				0.31	\$1,918.90	0.46	\$77,832.59
\$2.40	1.40	\$150.68		0.44	\$1,634.16	0.45	\$2,785.50	1.34	\$95.96
	0.02	\$2.15							\$64,036.30
\$169.02	1.90	\$204.49		0.08	\$297.12	0.03	\$185.70	0.15	\$2.15
									\$586.42
									\$3,039.62
									\$24.95
									\$6,916.33
									\$48,941.43
									\$58.90
									\$44,331.95
\$7.19	0.15	\$16.14		0.04	\$148.56	0.82	\$5,075.80	1.51	\$125.90
									\$78,501.73
									\$2.99
									\$5,144.98
									\$32,364.85
\$706.06	1.24	\$133.46							\$23,746.03
	1.80	\$193.73							\$61,924.64
						1.09	\$6,747.10	1.64	\$67,865.07
						1.05	\$6,499.50	1.58	\$66,524.24
									\$8.98
			1.11	\$1,908.51					\$1,908.51
			0.71	\$1,220.76					\$1,220.76
			1.89	\$3,249.62					\$3,249.62
			1.96	\$3,369.98					\$3,369.98
			1.97	\$3,387.17					\$3,387.17
			0.04	\$68.78					\$68.78
			0.05	\$85.97					\$85.97
			1.52	\$2,613.45					\$2,613.45
			1.52	\$2,613.45					\$2,613.45
			0.17	\$292.29					\$292.29
			1.51	\$2,596.26					\$2,596.26
			1.51	\$2,596.26					\$2,596.26
			0.25	\$429.84					\$429.84
			1.52	\$2,613.45					\$2,613.45

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

	1.52	\$2,613.45			\$2,613.45
	1.52	\$2,613.45			\$2,613.45
	1.52	\$2,613.45			\$2,613.45
	1.52	\$2,613.45			\$2,613.45
	1.52	\$2,613.45			\$2,613.45
	1.52	\$2,228.31			\$2,228.31
	1.51	\$2,478.36			\$2,478.36
	0.01	\$17.19			\$17.19
	1.52	\$2,605.59			\$2,605.59
	1.52	\$2,613.45			\$2,613.45
	1.51	\$2,187.54			\$2,187.54
	1.52	\$2,597.73			\$2,597.73
	1.00	\$1,719.38			\$1,719.38
	0.89	\$1,530.24			\$1,530.24
	1.00	\$1,719.38			\$1,719.38
	0.99	\$1,702.18			\$1,702.18
	1.05	\$1,805.34			\$1,805.34
	1.04	\$1,788.15			\$1,788.15
	1.05	\$1,805.34			\$1,805.34
	1.05	\$1,805.34			\$1,805.34
	0.57	\$980.04			\$980.04
	1.05	\$1,805.34			\$1,805.34
	0.52	\$894.08			\$894.08
	1.00	\$1,719.38			\$1,719.38
	0.55	\$945.66			\$945.66
	1.00	\$1,719.38			\$1,719.38
	0.96	\$1,650.60			\$1,650.60
	0.96	\$1,650.60			\$1,650.60
	1.00	\$1,719.38			\$1,719.38
	1.00	\$1,719.38			\$1,719.38
	0.96	\$1,650.60			\$1,650.60
	0.04	\$68.78			\$68.78
	0.72	\$1,237.95			\$1,237.95
	0.01	\$17.19			\$17.19
	0.98	\$1,684.99			\$1,684.99
	1.02	\$1,753.76			\$1,753.76
	1.02	\$1,753.76			\$1,753.76
	0.99	\$1,702.18			\$1,702.18
	0.56	\$962.85			\$962.85
	1.01	\$1,736.57			\$1,736.57
	0.97	\$1,667.79			\$1,667.79
	0.97	\$1,667.79			\$1,667.79
	1.00	\$1,719.38			\$1,719.38
	1.00	\$1,719.38			\$1,719.38
	0.95	\$1,633.41			\$1,633.41
	0.37	\$636.17			\$636.17

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

			1.00	\$1,719.38					\$1,719.38	
			1.00	\$1,719.38					\$1,719.38	
			0.96	\$1,650.60					\$1,650.60	
			0.02	\$34.39					\$34.39	
			1.00	\$1,719.38					\$1,719.38	
			1.01	\$1,736.57					\$1,736.57	
			0.97	\$1,667.79					\$1,667.79	
			1.01	\$1,736.57					\$1,736.57	
			0.98	\$1,684.99					\$1,684.99	
			1.01	\$1,736.57					\$1,736.57	
			0.96	\$1,650.60					\$1,650.60	
			0.11	\$145.90					\$145.90	
			0.95	\$1,260.06					\$1,260.06	
\$5,730.05	36.99	\$3,808.85	72.67	\$123,595.06	0.56	\$2,079.84	7.79	\$48,220.10	12.71	\$4,164,125.44

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

\$100,000.00

PERCENT TOTAL BENEFITS	NOTIONAL ASSESSMENT ON \$100,000 REPAIR
0.0008	\$0.79
0.0049	\$4.91
0.8116	\$811.60
0.7580	\$758.03
0.0025	\$2.52
0.8014	\$801.35
0.7988	\$798.80
0.0140	\$14.02
0.2425	\$242.47
0.0004	\$0.43
0.0001	\$0.14
0.0014	\$1.44
0.0009	\$0.93
0.0001	\$0.07
0.1259	\$125.91
0.0037	\$3.67
0.1908	\$190.78
0.2342	\$234.24
0.5071	\$507.14
0.1223	\$122.28
0.1729	\$172.86
1.1475	\$1,147.46
0.8867	\$886.73
0.9738	\$973.77
0.8498	\$849.76
0.6644	\$664.44
0.6517	\$651.66
0.0019	\$1.87
0.0038	\$3.80
0.0063	\$6.32
0.9192	\$919.16
0.0030	\$2.97
0.4097	\$409.72
0.0028	\$2.78
1.5969	\$1,596.93
1.2316	\$1,231.64
0.3787	\$378.67
0.4328	\$432.81
0.0015	\$1.55
0.0031	\$3.10
0.0087	\$8.65

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.0060	\$6.02
2.2903	\$2,290.31
1.1682	\$1,168.20
0.0051	\$5.05
1.0962	\$1,096.20
0.0259	\$25.89
1.4835	\$1,483.48
2.4712	\$2,471.23
1.8613	\$1,861.29
2.1611	\$2,161.12
0.0025	\$2.50
0.0080	\$8.03
0.0067	\$6.71
2.0091	\$2,009.08
0.0036	\$3.61
1.5895	\$1,589.49
0.0010	\$1.03
0.0041	\$4.13
2.0628	\$2,062.75
0.0031	\$3.10
1.9961	\$1,996.15
0.0020	\$1.99
0.7130	\$713.02
1.0287	\$1,028.67
0.0079	\$7.94
2.0027	\$2,002.66
0.0008	\$0.76
0.0012	\$1.20
0.5396	\$539.60
0.3392	\$339.17
0.0143	\$14.27
0.0065	\$6.53
2.1382	\$2,138.19
1.4498	\$1,449.85
2.0463	\$2,046.34
1.4133	\$1,413.33
2.0035	\$2,003.54
0.0012	\$1.24
0.0015	\$1.55
0.0116	\$11.64
0.0129	\$12.92
0.8136	\$813.59
1.0608	\$1,060.85
0.8124	\$812.40
1.0644	\$1,064.38
0.6187	\$618.73
0.7846	\$784.62

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.0025	\$2.52
0.0036	\$3.57
0.6953	\$695.27
0.0036	\$3.63
0.6207	\$620.71
0.7426	\$742.61
0.0012	\$1.19
0.0012	\$1.22
0.0040	\$4.03
1.0538	\$1,053.83
0.1780	\$178.02
0.0008	\$0.80
0.5573	\$557.34
1.5757	\$1,575.67
0.0020	\$1.96
1.3499	\$1,349.91
0.0004	\$0.40
1.8840	\$1,884.01
0.0020	\$1.99
1.6135	\$1,613.48
0.0017	\$1.68
0.6451	\$645.11
0.3175	\$317.51
0.8894	\$889.40
0.0015	\$1.55
0.0002	\$0.18
0.0163	\$16.31
0.0042	\$4.17
1.2057	\$1,205.67
0.9475	\$947.54
2.3720	\$2,372.02
1.5299	\$1,529.90
0.4977	\$497.74
0.0010	\$1.02
1.5802	\$1,580.19
0.0045	\$4.47
0.0002	\$0.24
0.0000	\$0.00
0.0002	\$0.24
0.2062	\$206.17
0.0050	\$4.97
0.0002	\$0.24
0.3717	\$371.68
0.0026	\$2.60
2.0717	\$2,071.70
0.0015	\$1.52
0.4294	\$429.40

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.0036	\$3.59
1.6585	\$1,658.55
0.0633	\$63.31
0.4464	\$446.41
1.3875	\$1,387.49
0.0010	\$0.98
0.4085	\$408.52
0.0039	\$3.91
1.5686	\$1,568.56
0.0013	\$1.27
0.0031	\$3.06
1.8691	\$1,869.12
0.0023	\$2.30
1.5378	\$1,537.81
0.0001	\$0.05
0.0141	\$14.08
0.0730	\$73.00
0.0006	\$0.60
0.1661	\$166.09
1.1753	\$1,175.31
0.0014	\$1.41
1.0646	\$1,064.62
0.0030	\$3.02
1.8852	\$1,885.19
0.0001	\$0.07
0.1236	\$123.55
0.7772	\$777.23
0.5703	\$570.25
1.4871	\$1,487.10
1.6298	\$1,629.76
1.5976	\$1,597.56
0.0002	\$0.22
0.0458	\$45.83
0.0293	\$29.32
0.0780	\$78.04
0.0809	\$80.93
0.0813	\$81.34
0.0017	\$1.65
0.0021	\$2.06
0.0628	\$62.76
0.0628	\$62.76
0.0070	\$7.02
0.0623	\$62.35
0.0623	\$62.35
0.0103	\$10.32
0.0628	\$62.76

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.0628	\$62.76
0.0628	\$62.76
0.0628	\$62.76
0.0628	\$62.76
0.0628	\$62.76
0.0535	\$53.51
0.0595	\$59.52
0.0004	\$0.41
0.0626	\$62.57
0.0628	\$62.76
0.0525	\$52.53
0.0624	\$62.38
0.0413	\$41.29
0.0367	\$36.75
0.0413	\$41.29
0.0409	\$40.88
0.0434	\$43.35
0.0429	\$42.94
0.0434	\$43.35
0.0434	\$43.35
0.0235	\$23.54
0.0434	\$43.35
0.0215	\$21.47
0.0413	\$41.29
0.0227	\$22.71
0.0413	\$41.29
0.0396	\$39.64
0.0396	\$39.64
0.0413	\$41.29
0.0413	\$41.29
0.0396	\$39.64
0.0017	\$1.65
0.0297	\$29.73
0.0004	\$0.41
0.0405	\$40.46
0.0421	\$42.12
0.0421	\$42.12
0.0409	\$40.88
0.0231	\$23.12
0.0417	\$41.70
0.0401	\$40.05
0.0401	\$40.05
0.0413	\$41.29
0.0413	\$41.29
0.0392	\$39.23
0.0153	\$15.28

GOODHUE CD 1
EXHIBIT A AMENDMENT 2 FILED ON 02/24/21

0.0413	\$41.29
0.0413	\$41.29
0.0396	\$39.64
0.0008	\$0.83
0.0413	\$41.29
0.0417	\$41.70
0.0401	\$40.05
0.0417	\$41.70
0.0405	\$40.46
0.0417	\$41.70
0.0396	\$39.64
0.0035	\$3.50
0.0303	\$30.26



**Benefits and Damage Statement for the Redetermination of Benefits
Goodhue County CD 1 Amendment 2**

In accordance with Minnesota Statute (MS) 103E.351, we the viewers, submit the following Viewers' Report:

The fundamental principle for the determination of benefits and damages is based upon a comparison of the conditions prior to the construction of the ditch system with the conditions that exist after the implementation of the ditch system or proposed drainage project.

The undersigned viewers, pursuant to the order of the Goodhue County Drainage Authority, did meet prior to commencing duties on the 6th day of October 2020 at the Goodhue Watershed office in Red Wing, Minnesota. Having taken the oath as required by MS 103E.305, did view, all lands affected by said proposed drainage system and further, we did determine the damages to lands affected by establishment of a grass strip, permanent and temporary damages.

We were able to determine the boundaries of the benefited area by processing and analyzing maps using "Light Detection and Ranging" (LiDAR) along with visually viewing the project area. Meetings were held with landowners, and Goodhue staff. We viewed each County Assessors' records to determine the number of acres of land in each parcel of each 40-acre tract of land. Other sources of information used were USDA-Natural Resources Conservation Service Web Soil Survey, 12 years of USDA satellite imagery, US Fish and Wildlife Service National Wetland Inventory (NWI) maps, and Goodhue County Assessors' sales data and annual report.

We have determined the extent and basis of benefits and damages as prescribed under MS 103E.315 and MS 103E.321. We have indicated in tabular form, for each lot, 40-acre tract, and fraction of a lot or tract under separate ownership that is benefited or damaged (see Exhibit A).

An easement, in the form of an additional restriction on the use of real property adjacent to the open channel of the drainage system, will be acquired and, therefore, damages will be awarded for the establishment of a permanent strip of perennial vegetation approved by the drainage authority that will not impede future maintenance of the drainage system as required in MS 103E.021. We determined these damages at two separate values. Grass Strip damages "A" acres, lands which current land use will not change, but will still have permanent restrictions of future land use. Grass Strip damages "B" acres, lands demanding a higher value based on current land use. The value determined for "A" acres is \$3714 and the value for "B" acres is \$6190.

Right of way damages, having been determined and paid in the original proceedings for establishment of the drainage system, based on the area contemplated and included in the

proceeding for the establishment or subsequent improvement of the drainage system, were not considered.

We have determined the following direct drainage benefits and indirect (outlet) benefits on and related to the redetermination of benefits for Goodhue CD 1. Benefits were determined based on the drainage system operating in its as constructed condition.

Direct Benefits – Class 1 (Mapped as Red)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 1 lands, prior to the existence of the drainage system, had a value range of \$1369 to \$1541 per acre. They consisted mostly of lowlands that may have been farmed, but not without substantial risk. With the establishment of adequate drainage to these lands, the production value and/or market value has increased. These lands consist of soils that benefit greatly from good drainage. These lands are now more suitable for intense crop production.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 1 by the rate of \$3476 per acre.

Direct Benefits – Class 2 (Mapped as Yellow)

Using the direct market value approach, giving consideration for the lands' geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 2 lands, prior to the existence of the drainage system, had a value range of \$3140 to \$3471 per acre. Although some row crops were grown in this land class, it was not without substantial risk of loss to the grower. Now that adequate drainage has been established through these lands, the production value and/or market value has increased. These lands typically consist of soils that benefit from good drainage to increase crop production.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 2 by the rate of \$2456 per acre.

Direct Benefits – Class 3 (Mapped as Green)

Using the direct market value approach, giving consideration for the lands’ geographic location in the watershed, location relative to the outlet, proximity to the ditch bottom elevation, soil types, as well as analyzing direct sales data for competitive properties in the marketplace, we determined the existing market values of land in an unimproved condition as well as in an improved condition. Though this description may not describe your lands exactly, your lands fell broadly under this category.

Class 3 lands, prior to the existence of the drainage system, had a value range of \$5675 to \$6272 per acre. These lands were mostly utilized for the production of row crops, although over saturation of the soil and surrounding lands did not allow for these lands to realize their full production potential. Now that the drainage system has been established, the land is able to utilize the system as an outlet to drainage tile systems and increased the production potential. As a result, the production value and/or market value has increased.

The viewers have determined based on these values, along with allowances for private improvement costs, that Goodhue CD 1 provides for an increased market value/benefit to agricultural/cropland acres in Class 3 by the rate of \$1141 per acre.

Indirect Benefits – Class 4 (Mapped as Blue)

Class 4 lands are lands which have not had an increase in market value after the construction of the drainage system. However, they have been altered from their pre-settlement state in such a manner that they are now tilled and farmed. As a result, they burden the drainage system’s capacity, thus increasing a sediment load and causing a need for increased maintenance. Taking into consideration the percentage of Class 4 acres in the watershed, regular ditch maintenance, and sediment loading, we determined the rate per acre that Goodhue CD 1 provides as an outlet or contribution benefit to these lands. Though this description may not describe your lands exactly, your lands fell broadly under this category. The viewers have determined the Class 4 outlet benefit rate to be \$342 per acre.

Example of how benefits were calculated:

Production and/or Market Value Before Project:	\$1,000
Production and/or Market Value After Project:	\$3,000
Increase in Production and/or Market Value:	\$2,000
Less Private Improvement Costs:	\$1,000
Net Benefits:	\$1,000

Road Benefits

The viewers have determined outlet as well as reduced maintenance cost benefits for all State, County, and Township roads located within the boundary of Goodhue CD 1 at a rate of \$1965 per acre.

Residential Land Benefits

Outlet benefits were applied to residential lands within the watershed of Goodhue CD 1. The outlet benefit was calculated based on runoff burden to the drainage system and use of the drainage system as an outlet. The viewers have determined the outlet benefits for residential lands at the rate of \$137 per acre.

Woodlot Benefits

Benefits were applied to woodlot lands within the watershed of Goodhue CD 1. These lands receive a benefit because the ditch conveys their water burden away from adjacent landowners and adds to the need for system capacity and system maintenance. The viewers have determined the benefit for woodlot lands at the rate of \$123 per acre.

Benefit Variables

Based on criteria used to determine the likelihood of future improvements, each sub catchment within the watershed of the public drainage system has been given a grade of its as constructed condition relative to its ability to utilize the public drainage system efficiently. This grading system varies the benefit amount according to the aforementioned ability within each sub catchment.

Non-benefiting Acres

Based on current land use and regulatory restrictions, permanent program restrictions (i.e. RIM or CREP) or other permanent restriction and restoration to pre-settlement landscape conditions or creation of wetland areas, we determined some areas to be non-benefited from the drainage system and restricted from taking future benefit from the drainage system. For example, we determined that lands restored to pre-settlement conditions and permanently restricted from future modification would not drain in any altered manner such that the drainage system would be burdened by the land other than such burden as nature would have provided. Further, for example, nonconverted wetlands that are so restricted from conversion by regulation that conversion is unlikely, were not determined to benefit from the system.

At the completion of our examination, we did sum up the total benefits for Goodhue CD 1. We found that the total benefits are \$4,164,125.44 and total damages are \$50,299.94. (See Exhibit A for tabular report of benefits.)

We recommend that the Goodhue County Drainage Authority hold a final hearing on the report and confirm the benefits and damages for Goodhue CD 1.

Dated this 24th day of February, 2021.

[Signature Page to Follow]

Respectfully submitted,

Bryan Murphy

Shantel Hecht

Larry Murphy

Robert Conely

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We conclude the proposed repairs are necessary to restore the full function of the drainage system and meet future stormwater management needs, and they are in the best interest of benefitted property owners.

To assist the County, concept-level design (**Figure 2**) and cost information (**Attachment B**) are provided in this memorandum. However, detailed construction plans, bid documents, and specifications will need to be prepared subsequent to the County establishing and ordering a project. Goodhue County retains the decision whether to accept, reject, or modify the Engineer's recommendation.

SYSTEM LOCATION AND ESTABLISHMENT

Location of the Public Drainage System

Goodhue County Ditch 1 (CD 1), shown in **Figure 1**, includes a 2.2-mile open channel ditch and 5 branches of public drain tile that total 2.4 miles in length. The system is located south of the City of Kenyon in Sections 28, 29, 30, 31, 32, and 33 of Kenyon Township (T109N, R18W).

The open channel flows from west to east, with the public drainage system ending on the west end of the CSAH 13 culvert. Runoff from CD 1 then flows down a private ditch, ultimately outletting into the North Branch Middle Fork Zumbro River.

Establishment of the Public Drainage System and Known System Modifications or Proceedings

Goodhue CD 1 was established in 1954 following the submission of a landowner petition. The petition was originally filed to create capacity in the waterway and lower the ditch bottom to create an outlet for drain tiles. The ditch and drain tile were constructed in 1955 according to the as-designed alignment described in the Final Engineer's Report dated October 13, 1954.

Figure 1 shows the current alignment of the channel and locations of roadway crossings determined via a review of available records, field survey, aerial imagery, and other available evidence. The historical records do not indicate any changes to the alignment of the channel. Records do show, however, modifications and repairs have been made to the ditch since its construction in 1955.

A petition for improvement of the open channel portion of the ditch was filed in September 1960, and the improvement work was done in 1961. The petitioned improvement widened the ditch bottom from 6' to 10' from Station 0+00 to the confluence with Private Ditch 42 at approximately Station 30+00. The 1961 improvement also created Private Ditch 42, which drains land to the north of CD 1. Private Ditch 42 is not a component of CD 1 and does not fall under the jurisdiction of Goodhue County.

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In 1995, landowners petitioned to have CD 1 cleaned out, and in 1996, sediment and vegetation were cleaned for the full length of the ditch.

HISTORIC AND CURRENT CONDITIONS - TILE

Currently Observed Conditions

The CD 1 drainage system was established with five main branches of drain tile as shown in **Figure 1**. Branches A and B, located west of County Road 59 at the upstream end of the system, are both over a mile long, and the other three branches are short branches that provide local drainage connections.

In order to evaluate the condition of the existing system, portions of the tile system were televised in September 2020 by Empire Pipe Services under the supervision of Houston Engineering staff. Televising began at the downstream end of each tile branch where they outlet into the open ditch. The locations are shown on **Figure 1**.

At each location, inlet grates or rodent traps at the downstream end were removed, and the televising equipment was guided to its maximum extent feasible in the upstream direction. At the completion of the survey, the grates and traps were reinstalled.

The results of the televising investigation are described in the following sections.

CD 1 Branch A

Branch A outlets at a concrete drop structure located west of County Road 59 in the road right-of-way. The tile generally travels to the southwest before terminating with two sub-branches. One sub-branch ends at the boundary of Sections 30 and 31 and the other ends in Section 31 after traveling south under 510th St. in a culvert.

Televising work at this location began at the concrete drop structure outlet. The Branch A tile outlets as a 14-inch concrete pipe. Heading upstream, the pipe switches to 14-inch corrugated metal pipe approximately 3 feet from the outlet. The fitting between the two is poor, as evidenced by broken concrete sitting at the joint. The metal section, which was likely placed by an undocumented repair, is approximately 5 feet long before it joins a 14-inch unreinforced concrete pipe. The junction at the transition is cracked longitudinally and a repair is evident in the concrete pipe.

The concrete pipe shows signs of disrepair for the next 66 feet, with longitudinal cracks on many of the tile sections and deterioration of the pipe joints. The joint at 70 feet upstream from the outlet has a large angular crack. The survey was ended 72 feet upstream because the televising equipment could not get around a bend in the pipe.

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CD 1 Branch B

Branch B also outlets at the concrete drop structure located west of County Road 59. Branch B generally travels northwest from the outlet before terminating with two sub-branches that end in the middle of Section 30.

Televising of Branch B began at the concrete drop structure. The televising crew was unable to move the televising equipment upstream due to broken concrete blocking the bottom half of the 10-inch concrete pipe near the outlet. Still imagery showed the top of the concrete pipe is decaying near the outlet as well. Significant soil erosion behind the concrete drop structure is evident above the exterior of Branch B.

Branch B provides service to a landowner in the north ½ of Section 30 who expressed concerns at the August 2020 public meeting about poor drainage in the tile.

CD 1 Branch C

Branch C is a short 450-foot long lateral that outlets into the open channel ditch at approximately Station 101+00. The tile extends south from the ditch before terminating at the southern boundary of Section 29.

Televising of Branch C began at the concrete drop structure that outlets into the ditch. An 8-inch clay pipe approximately 1 foot long was observed at the outlet. The pipe then transitions to an 8-inch smooth PVC pipe, with the PVC pipe offset downward by 2 inches. Rocks and grass were visible at the top of the disjointed pipes. The televising equipment was unable to travel past the offset joint and the televising was ended.

CD 1 Branch D

Branch D is a 450-foot long lateral that outlets into the ditch at approximately Station 94+30. The tile extends south from the ditch outlet before terminating at the southern boundary of Section 29.

Televising of Branch D was attempted at the pipe's outlet into the ditch. The televising crew was unable to access the 6" clay pipe and the survey was immediately terminated. The outlet was completely underwater and backfilled with broken soil.

CD 1 Branch E

Branch E is an 1,800-foot long lateral that outlets into the ditch at approximately Station 78+00. The tile extends south from the ditch into the NE ¼ of Section 32.

Televising of Branch E began at the concrete drop inlet. Beginning at the outlet, an 8-inch RCP pipe was observed. At 15 feet upstream from the outlet, the tile transitions to an 8" corrugated HPDE pipe in good condition. Traveling upstream, some roots are visible growing through the pipe wall, but they

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are present at a relatively low density. Generally, the 400 feet upstream of the outlet are in good condition.

At 415 feet from the outlet, the tile transitions to a 6" HPDE tile. Small deflections at the top of the tile were observed at 435', 490', and 620' from the outlet. A greater deflection was observed at 648' which caused the survey to be terminated.

Hydraulic Capacity

Existing Conditions vs. ACSIC

The evaluation of the as-constructed and subsequently improved condition (ACSIC) of a public drain tile system includes an evaluation of the pipe flow efficiency for the size, material, and grade of pipe used in the original ACSIC construction. Pipe flow efficiency is measured using the Manning's Equation, which accounts for the size, material, and grade of each pipe.

The Manning's Equation can be used to assess reductions in flow capacity that may have occurred over time. The pipe material is accounted for by using a roughness coefficient. Based on the pipe televising survey conducted in September 2020, all of the branches of CD 1 have experienced displacement via pipe settling and deformation, reduction in pipe smoothness due to decay, and blockages of flow. These factors reduce the effective radius of the pipe and increase the roughness coefficient compared to the ACSIC condition.

The Manning's Equation also accounts for the flow area available in the pipe. Deformations and blockages reduce the flow area and thus reduce the carrying capacity of the tile. Reductions in flow increase the residency times of ponded water within the surrounding watershed. The displacements and flow restrictions are especially critical when pipes are running full—which is when the surrounding watershed most in need of the pipe as an outlet for drainage.

For each of the five branches on the CD 1 public tile system (see **Figure 1** for tile locations), we estimated the Manning's n values and effective flow areas for the ACSIC condition determined from historical reports and for the current condition as determined by the September 2020 tile televising survey. By estimating the effective diameters of the drain tiles, we can calculate the reduction in carrying capacity of each of the tile lines when flowing full. Calculations are summarized in **Table 1**.

Table 1 – ACSIC and Current Flow Capacities

Line	Condition	Pipe Size (in.)	Manning's n Value	Pipe Slope (ft/ft)	Effective Area (square feet)	Effective Diameter (inches)	Velocity (feet per second)	Flow (cfs)	Percent Reduction (%)
A	As-Built	14	0.013	0.005	1.07	14.0	3.6	3.8	
A	Current	14	0.018	0.005	1.07	14.0	2.6	2.8	28%
B	As-Built	10	0.013	0.003	0.55	10.0	2.1	1.1	
B	Current	10	0.015	0.003	0.41	8.6	1.6	0.7	41%
C	As-Built	8	0.012	0.004	0.35	8.0	2.4	0.8	
C	Current	8	0.012	0.004	0.28	7.2	2.2	0.6	25%
D	As-Built	6	0.012	0.007	0.20	6.0	2.6	0.5	
D	Current	6	0.012	0.007	0.14	5.0	2.3	0.3	37%
E	As-Built	8	0.022	0.005	0.35	8.0	1.4	0.5	
E	Current	8	0.022	0.005	0.34	7.9	1.4	0.5	4%

The tile capacity calculations show that due to the deterioration of pipe walls and restrictions of flows, a number of the tile branches have likely experienced substantial reductions in carrying capacity. The two tile lines that drain the largest surface areas (Branches A and B)—which serve areas where concerns have been expressed at a recent public information meeting —have estimated capacity reductions of 28% and 41%, respectively.

Based on the televised conditions and the capacities indicated in **Table 1**, the tile branches of Goodhue County Ditch 1 are in disrepair due to flow restrictions. To restore the function of the drainage system, each of the CD 1 tile branches needs to be replaced in their entirety.

Design Drainage Coefficient

An evaluation of an existing drain tile system also includes determining the daily capacity relative to its contributing drainage area (i.e. "drainage coefficient"). Drain tiles have historically been installed to draw down standing water and high water tables in a reasonable amount of time to allow for cultivation. If a drain tile's diameter is too small for its respective watershed, the lack of carrying capacity may prevent areas of the watershed from properly draining. The required capacity has generally increased since the time of the system's construction, due to climatic changes (increased precipitation) and modern agricultural practices.

The drawdown capacity of a drain tile network is evaluated with the drainage coefficient, which is equal to the expected drawdown in inches per day assuming the drain tile is flowing full. A low drainage coefficient calculated based on a tile's ACSIC condition is an indication it may be insufficiently sized for its current demands.

Drainage coefficients for each of the five branches of Goodhue County CD 1 were calculated based on the design pipe material, size, and slope, and the drainage areas were estimated using the ArcGIS software. Coefficients for the ACSIC conditions are summarized in **Table 2**.

Table 2 – Drainage Coefficients for CD 1 Tile Branches

Branch	Diameter (Inches)	Q (cfs)	Drainage Area (acres)	Coefficient (in/day)
A	14"	3.81	300	0.30
B	10"	1.12	212	0.13
C	8"	0.83	107	0.18
D	6"	0.50	21	0.57
E	8"	0.51	61	0.20

The NRCS recommended drainage coefficient for Minnesota drainage systems in row crop lands is 0.50 in/day. Each of the CD 1 branches, with the exception of Branch D, appears to be undersized for modern drainage needs.

Minnesota Statute 103E.701 Subd. 1 limits the size at which a tile may be replaced under a repair proceeding to the existing size, or the next larger size that is readily available. Each of the existing tile sizes is readily available with the exception of the 14-inch tile size for Branch A. If that branch were repaired using a 15" tile size, the drainage coefficient will be 0.39, which is closer to the NRCS recommend 0.5-inch drainage coefficient. The landowners on this branch should weigh the added cost required for an improvement proceedings prior to petitioning for either an improvement or a repair on Branch A.

HISTORIC AND CURRENT CONDITIONS – OPEN CHANNEL

As-Constructed and Subsequently Improved Grade and Geometry

The As-Constructed and Subsequently Improved Condition (ACSIC) establishes the condition to which the ditch can be legally repaired consistent with Minnesota Statute 103E.701. The ACSIC includes the original geometry of the ditch as constructed in 1955 and all subsequent repairs made legally.

Ideally, we would be able to use original as-built drawings to determine the constructed alignment, grade, and geometry. However, since as-built plans were not regularly recorded for public drainage systems in the mid-20th century, it has been common engineering practice to use profile drawings from the original design and field-obtained test pits and borings to verify the ACSIC.

For CD 1, the original design plan and profile were located during the review of historical documents. Profile elevations were provided in an arbitrary datum, and so to determine the ACSIC in a modern

datum, elevations from the historical profile were referenced to soil borings collected in the NAVD88 vertical datum during field survey. Soil boring depths were estimated by observing where material transitions from accumulated sediment to native mineral soil.

A total of five crossings were included in the original design and construction of CD 1. However, two of those were field crossings to be constructed as directed by the landowners, and based on findings, they appear to have not been constructed. Field survey for this study included locating current culvert crossings, determining their size, and surveying invert elevations.

Open Channel ACSIC Determination

A total of 19 soil borings were collected along CD 1, as shown in **Figure 2**. A statistical comparison of the soil borings and repair profile elevations was performed for the length of CD 1. Through the comparison process, a datum adjustment factor was calculated to convert the design profile from the local datum to NAVD88.

A good correlation was found between the soil borings and the historical profile by applying a constant value of 1111.55 to adjust the historical profile's datum to NAVD88. The ACSIC was established according to this adjustment value for the full length of the CD 1 open channel with one exception. The ACSIC elevation of the County Road 59 culvert was set at 1234.36 and a slope of 0.53% was assumed to Station 110+26. **Table 3** provides a summary of the datum adjustment and proposed profile for the full length of the CD 1 open channel ditch.

The 1954 Engineer's Report indicated the open channel was to be constructed with 2:1 (Horizontal : Vertical) side slopes. The 1961 Improvement proceeding widened the bottom from 6' to 10' in width from Station 0+00 to the field crossing at 30+00, and the channel bottom was designed to be 4' in width from Station 30+00 to the upstream end at approximately Station 114+44.

Elevations from the historical plans match those used in this study, and thus the ACSIC has a bottom width of 10' from Station 0+00 to the confluence with Private Ditch 42 at Station 30+00 and a bottom width of 4' from Station 30+00 to the upstream end at County Road 59.

Table 3 – CD 1 Datum Adjustment and Proposed Profile

Current CD 1 Station	Soil Boring Elevation	Repair Profile Elevation	Proposed Profile Elevation	Deviation of Soil Boring from Proposed Profile
0+00	-----	91.90	1203.45	-----
5+07	1204.66	92.91	1204.46	-0.20
10+06	1204.92	93.91	1205.46	0.54
15+08	1205.52	94.92	1206.47	0.95*
20+07	1206.32	95.91	1207.46	1.14*
30+10	1209.25	97.92	1209.47	0.22
35+12	1210.80	98.94	1210.49	-0.31
40+13	1212.80	100.44	1211.99	-0.81*
50+13	1214.99	103.44	1214.99	0.00
55+15	1216.53	104.94	1216.49	-0.04
61+18	1218.48	106.57	1218.12	-0.36
65+20	1219.48	107.65	1219.20	-0.28
70+20	1221.31	109.00	1220.55	-0.76*
75+20	1222.87	110.35	1221.90	-0.97*
85+26	1224.68	113.07	1224.62	-0.06
90+24	1226.09	114.41	1225.96	-0.13
95+25	1227.29	115.77	1227.32	0.03
100+25	1228.26	117.08	1228.63	0.37
105+29	1229.54	118.69	1230.24	0.70*
110+26	1231.60	120.28	1231.83	0.23
115+00	-----	-----	1234.36	-----

*Outlier not used in the determination of the channel bottom.

Currently Observed Conditions in the CD 1 Open Channel

Field survey data, including photographs and elevations, were collected in October 2020 as part of this study. The survey data established the existing conditions and elevations of the open channel system and located culverts and other crossings along the ditch system. Soil borings were also completed to assist in determining the repair profile. Additionally, at the request of Goodhue County, HEI prepared a Ditch Inspection Memo dated June 2020 based on aerial drone footage of the open channel portion of CD 1.

The field survey and the June 2020 ditch inspection report show parts of the CD 1 open channel are in disrepair. Excessive woody vegetation growth, including trees growing in the bottom of the channel, was observed from the CSAH 13 crossing (Station 0+00) to 20th Ave. (Station 60+72). Tree growth also restricted flow at the bridge crossing of CSAH 13.

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Several of the existing culvert crossings are not functioning as originally constructed due to elevations above the ACSIC profile or being sized too small to handle design flows. The 120" CMP at 20th Ave. was observed to be above the channel bottom and appeared to be causing water to pool upstream. The 84" CMP field crossing at Station 31+42 was found to be in disrepair.

Soil borings taken during the field survey verified excessive sedimentation throughout the CD 1 open channel system. Sediment depths of up to 2' were observed at some locations. Several areas of excessive sedimentation were located upstream of perched culvert crossings, providing additional support for their replacement.

PROPOSED REPAIR

CD 1 Open Channel

To restore the function of the CD 1 open channel drainage system to the condition as it was originally constructed requires a repair of the full extent of the Main Trunk open channel to the As-Constructed and Subsequently Improved Condition as described in the *Analysis of Current Function in Historical Context* section above. The proposed repair should include a removal of vegetation where needed to allow the open channel to flow freely.

The three culverts established as part of the CD 1 system were assessed for hydraulic capacity, relationship to the proposed channel bottom, and condition. Proposed culvert sizes were selected based on the ability to pass the 2-year discharge (calculated with the USGS Regression Equations) without overtopping the banks and similarity with the sizes of upstream and downstream culverts. The 20th Avenue local road crossing was also assessed for its ability to pass the 10-year discharge without overtopping the road, and the County Road 59 culvert was assessed for the 50-year peak discharge.

Based on the hydraulic calculations and conditions of the existing culverts, we recommend the replacement of two of the three culverts. The existing 84" corrugated metal pipe (CMP) field crossing at Station 31+42 is oversized based on the design discharge and replacing it with a 72" CMP culvert at the existing grade will meet the design criteria. The 120" CMP culvert under 20th Avenue at Station is 60+57 is also oversized, and we recommend replacing it with a 72" CMP at the ACSIC grade to match the capacity of the downstream crossing.

The existing 36" reinforced concrete pipe (RCP) and headwall at the Station 114+86 crossing of County Road 59 appear to be an original installation shown on the 1954 plan set since the Goodhue County Public Works has no documents indicating the record was replaced. Visual inspection showed the culvert is in good condition, and hydraulic modeling showed it is adequately sized. The culvert's present condition is sufficient to convey flows of the public drainage system and does not need to be modified or replaced as part of a proposed repair.

Table 4 lists the CD 1 culverts and proposed replacement actions, culvert sizes, and materials. Attachment A provides additional detail on the sizing criteria.

Table 4 – Culvert Sizing

Maintenance Responsibility	Crossing	Location	Existing	Recommendation	Notes
Private	Field Crossing	Station 31+42	84" CMP	Replace with 72" CMP culvert at existing grade	Existing culvert is oversized and in disrepair.
Kenyon Township	20th Avenue	Station 60+57	120" CMP	Replace with 72" CMP culvert at ACSIC grade	Existing culvert is above the ACSIC grade and in disrepair.
Goodhue County	County Road 59	Station 114+86	36" RC	No Action	Existing culvert is original installation with headwall.

Hydraulic Impacts

County Ditch 1 has significant sedimentation upstream of 20th Avenue and two culverts on the system are located above the ACSIC grade. The proposed repairs will reduce peak water levels for smaller rain events, but they are not expected to significantly impact peak water levels for the 100-year flood event.

All proposed culverts are comparable in size to upstream and downstream locations. Capacities of the recommended replacements are not larger than the ACSIC channel and thus they will not result in an increase in channel capacity.

Regulatory Considerations

Wetlands

There are three regulatory programs that may be triggered by a drainage system repair project, including the Minnesota Department of Natural Resources (MnDNR) Public Waters Permitting Program, the federal Clean Water Act (CWA), as implemented by the US Army Corps of Engineers (USACE), and the state Wetland Conservation Act (WCA), as implemented by the Local Government Unit, which in this case is Goodhue County. The following is a review of the repair project relative to these three regulatory programs.

As seen in Figure 3, CD 1 does not intersect any state-listed Public Waters, Public Water Wetlands, or Public Watercourses.

The CD 1 public drainage system intersects wetlands identified in the MnDNR National Wetland Inventory (NWI) as shown in **Figure 3**. Under the two wetland regulatory programs, (Minnesota WCA and Federal CWA) activities related to repair of a public drainage system are generally exempt from permitting and mitigation requirements. These activities related to public drainage system maintenance and repair, and include:

- Excavation in wetlands when limited to removal of accumulated sediment or debris such as trees, logs, stumps, beaver dams, blockage of crossings, and trash, provided the removal does not result in alteration of the original cross-section of the wetland or watercourse;
- Removing those materials placed by beaver;
- Removing or moving materials blocking installed roadway crossings and related drainage structures; and
- Temporary or seasonal water level management activities done for the purpose of performing maintenance.

Under the federal CWA, drainage system maintenance or repair is exempt from regulation. Under the state WCA, activities related to maintenance or repair of a public drainage system are exempt from replacement, include:

- Maintenance or repair of a public drainage system which drains Type 1, 2, 6, 7, or 8 wetlands; and
- Maintenance or repair of a public drainage system which drains Type 3, 4, or 5 wetlands that have existed for 25 years or less.

Based on a review of the NWI data and aerial photography to confirm wetland types, the wetlands identified within proximity to CD 1 are Type 1 wetlands (Figure 3). There do not appear to be any Type 3, 4, or 5 wetlands within the CD 1 area, therefore the drainage system repair project will meet the exemption criteria of the state WCA and no wetland permitting is required.

Threatened and Endangered Species

Public drainage systems may encounter situations where Minnesota's Endangered Species Statute (MS 84.0895) and the associated Rules apply. The endangered species program regulates activities that take, import, transport, or sell any portion of an endangered or threatened species where these acts may be allowed by permit issued by the DNR. The statutes exempt the accidental, unknowing destruction of designated plants. However, it is the responsibility of the Engineer when preparing a final report to complete due diligence to avoid impacts to threatened and endangered species.

Based on the MnDNR's Natural Heritage Information System (NHIS) data (Houston Engineering License Agreement LA-944). The Engineer did not observe any state-listed threatened vertebrate or invertebrate animal species within a 1-mile radius of the CD 1 system.

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST

A Preliminary Opinion of Probable Construction Cost (POPCC) was developed for the recommended repairs to the open channel portion of CD 1. The POPCC is included as **Attachment B**. The estimated cost is shown in **Table 5**.

Table 5 – Preliminary Opinion of Probable Construction Cost Summary

Category	Cost
Construction Costs	\$252,860
<i>Public Road Crossings</i>	\$25,920
<i>Public Drainage Infrastructure</i>	\$226,940
Engineering**	\$42,140
Legal and Administrative	\$20,000
Total Repair Project Cost	\$315,000

A contingency of 20% has been added to the construction costs. Engineering is equal to 20% of the total construction cost before the contingency is applied.

CONCLUSIONS / RECOMMENDATIONS

We recommend the County complete a repair of the CD 1 open channel system to the ACSIC as depicted in Figure 2 to restore the function of the CD 1 public drainage system to the condition as it was originally constructed. We conclude the proposed repairs are necessary to meet current and future stormwater management needs, and that the repairs are in the best interest of the property owners. The recommended repairs are believed to balance the need to provide serviceable drainage and stormwater management with the desire to minimize environmental impacts while implementing the best value alternative.

To assist the Drainage Authority, concept-level design and cost information for the open channel repair of CD 1 are included in this memorandum. However, detailed construction plans, bid documents, and specifications will need to be prepared subsequent to the Drainage Authority establishing and ordering a project. The Drainage Authority retains the decision whether to accept, reject, or modify the Engineer's recommendation.

The five public tile branches (Branches A through E) are also in need of repair, consisting of replacement in their entirety. Prior to initiating a repair of any of the five public tile branches, the Drainage Authority should consider whether each branch provides public value and determine if they are likely to receive an improvement petition on the system. Branches A and B provide drainage to multiple landowners and clearly provide a public benefit. However, Branches C, D, and E are shorter branches that individually serve only single parcels of land. For this reason, they may not be providing a public value and may be better managed by the landowner.

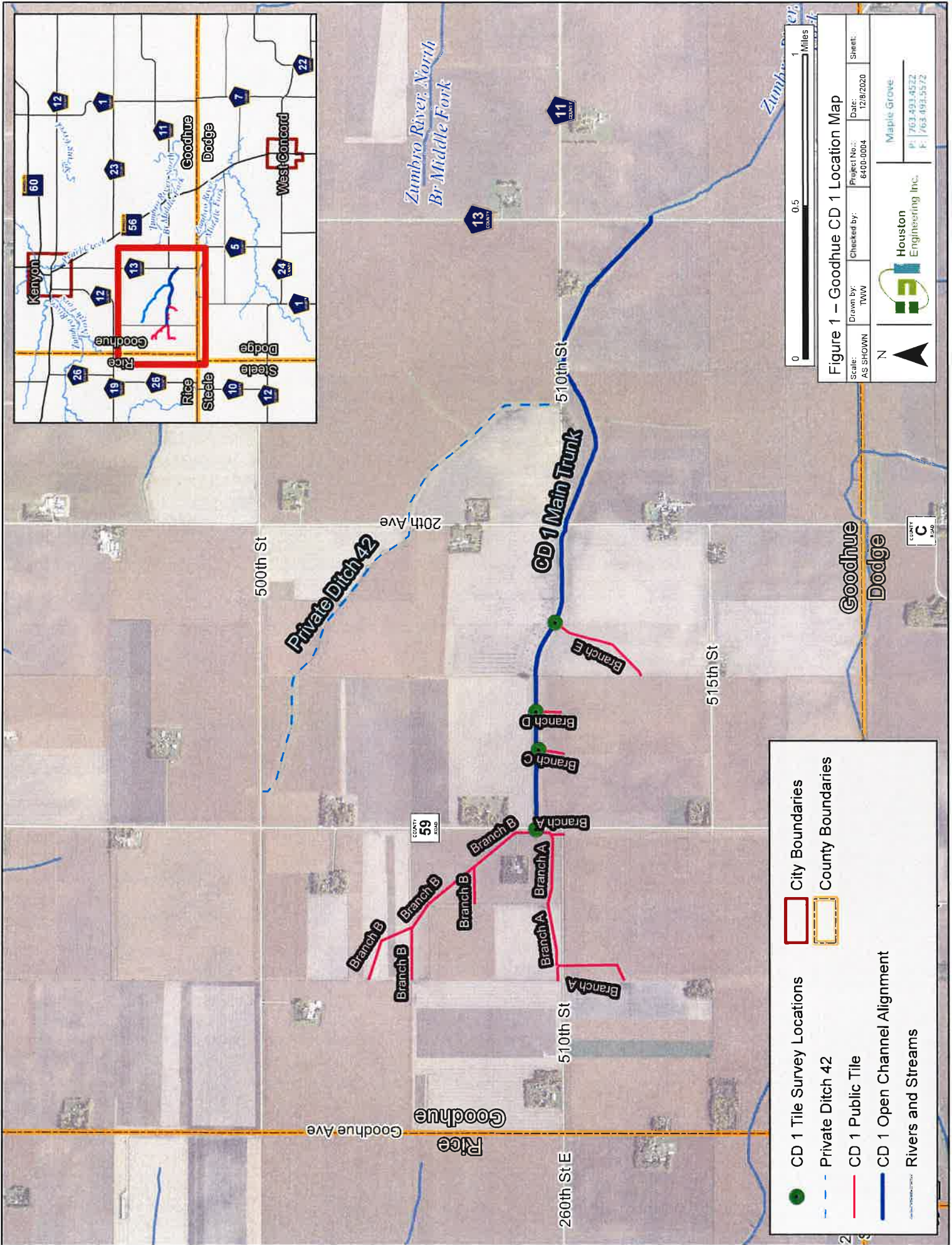
FINAL

Based on public feedback and the calculated drainage coefficients, we understand there may be interest from the landowners on Branches A and B to initiate an improvement proceeding. We recommend the Drainage Authority obtain further input from the landowners on their likelihood of initiating an improvement proceeding to increase their drainage capacity. Branch B is sized substantially smaller than modern drain tile sizing standards and increasing the size of the tile will likely result in a substantial increase in drainage benefit. Conversely, if Branch A were repaired, its drainage coefficient would be 0.39 inches per day, close to the NRCS recommended coefficient of 0.5 inch per day. A petition for improvement on this branch would be less likely to be cost effective.

LIST OF ATTACHMENTS

Attachment A: Sizing Criteria for Culvert Replacement

Attachment B: Preliminary Opinion of Probable Construction Cost

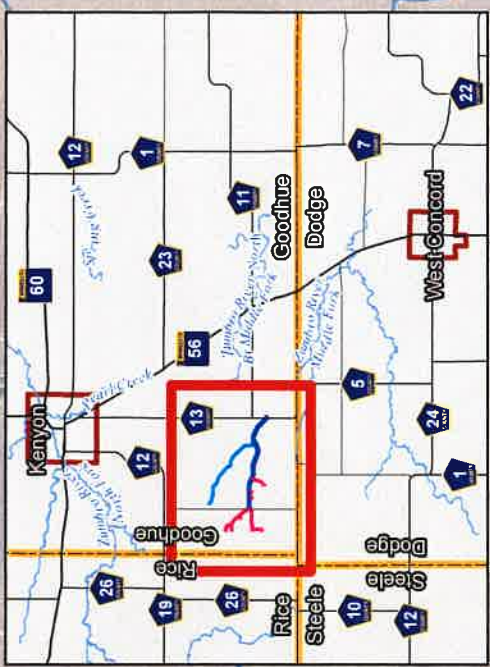


	CD 1 Tile Survey Locations		City Boundaries
	Private Ditch 42		County Boundaries
	CD 1 Public Tile		
	CD 1 Open Channel Alignment		
	Rivers and Streams		

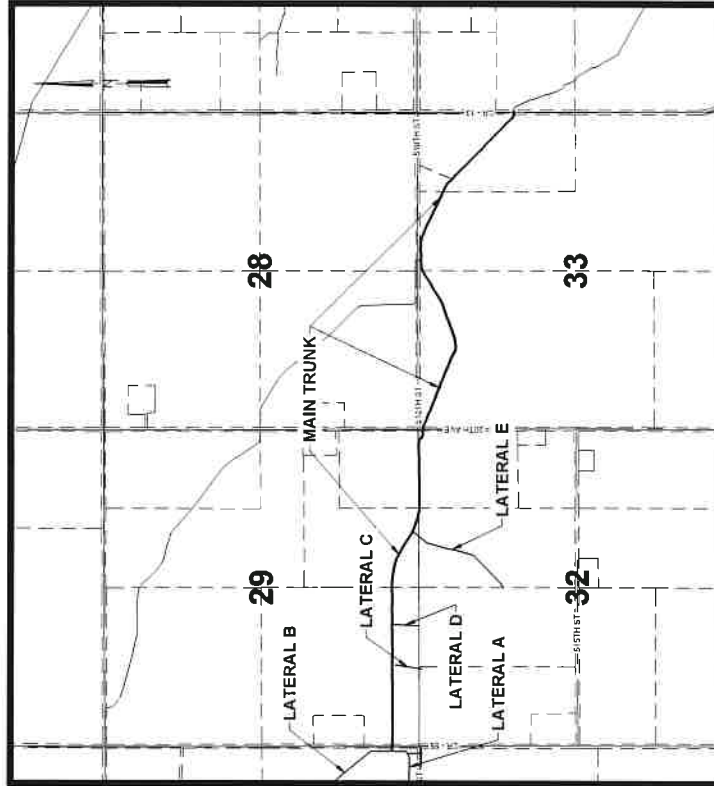
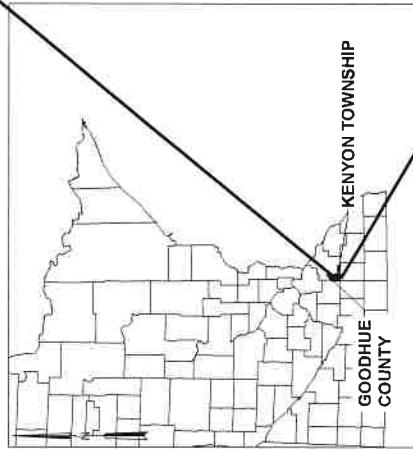
Figure 1 – Goodhue CD 1 Location Map

Scale: AS SHOWN	Drawn by: TWW	Checked by: TWW	Project No.: 6400-0004	Date: 12/8/2020	Sheet:
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 Houston Engineering Inc.	Maple Grove
	P: 763.493.4522 F: 763.492.5572



GOODHUE COUNTY DITCH 1 REPAIR REPORT
GOODHUE COUNTY
KENYON TOWNSHIP
JANUARY 2021



Sheet List Table	
Sheet Number	Sheet Title
1	TITLESHEET
2	MAIN TRUNK PLAN & PROFILE
3	MAIN TRUNK PLAN & PROFILE
4	MAIN TRUNK PLAN & PROFILE
5	MAIN TRUNK PLAN & PROFILE
6	DETAILS 1
7	DETAILS 2
8	DETAILS 3
9	SWPPP NARRATIVE
10	SWPPP NARRATIVE

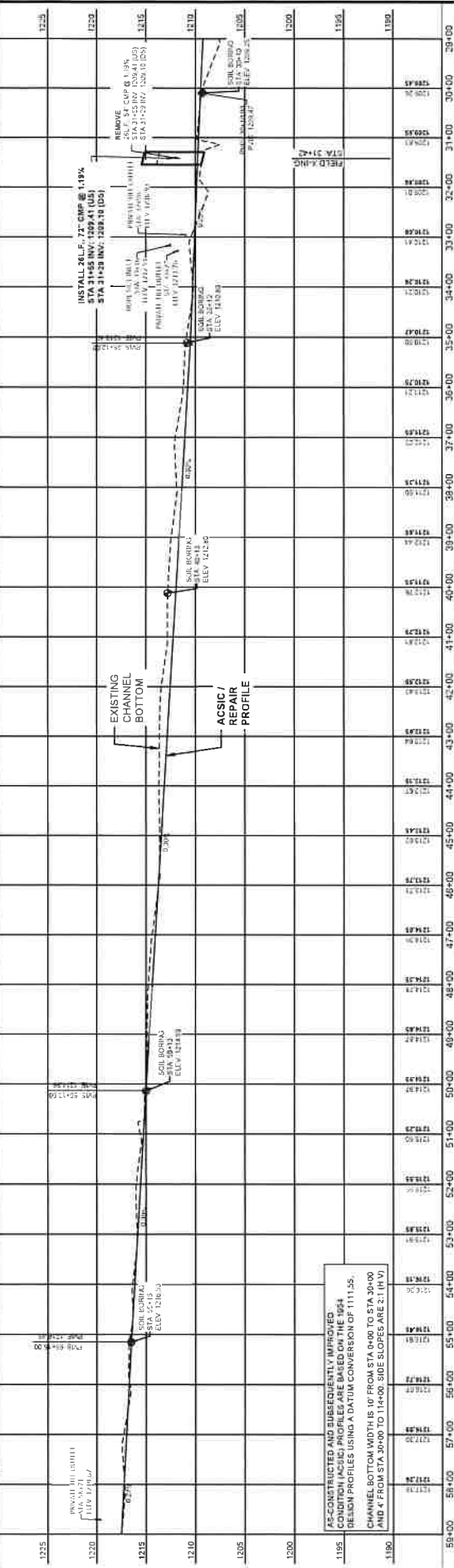
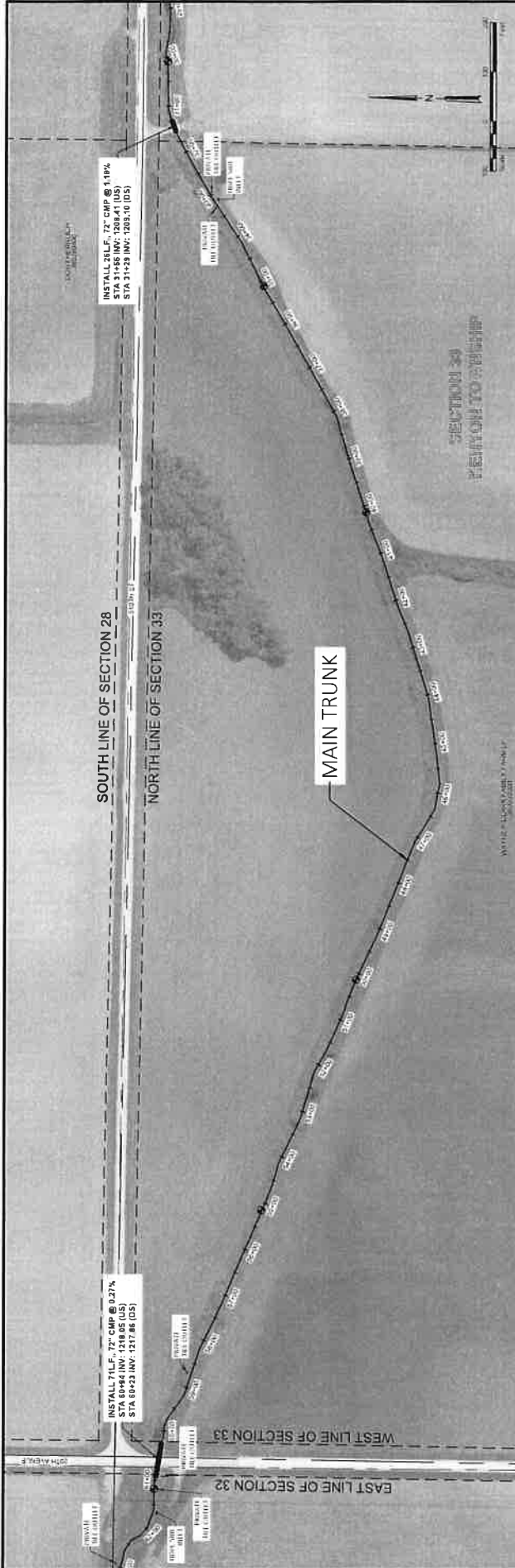
PREPARED BY:



HOUSTON
ENGINEERING INC.

MAPLE GROVE, MINNESOTA

PRELIMINARY
Not for Construction



Station	Elevation	Profile Type
1190	1187.78	EXISTING CHANNEL BOTTOM
1190	1187.78	ACSIC / REPAIR PROFILE
1195	1190.00	EXISTING CHANNEL BOTTOM
1195	1190.00	ACSIC / REPAIR PROFILE
1200	1192.22	EXISTING CHANNEL BOTTOM
1200	1192.22	ACSIC / REPAIR PROFILE
1205	1194.44	EXISTING CHANNEL BOTTOM
1205	1194.44	ACSIC / REPAIR PROFILE
1210	1196.66	EXISTING CHANNEL BOTTOM
1210	1196.66	ACSIC / REPAIR PROFILE
1215	1198.88	EXISTING CHANNEL BOTTOM
1215	1198.88	ACSIC / REPAIR PROFILE
1220	1201.10	EXISTING CHANNEL BOTTOM
1220	1201.10	ACSIC / REPAIR PROFILE
1225	1203.32	EXISTING CHANNEL BOTTOM
1225	1203.32	ACSIC / REPAIR PROFILE



PRELIMINARY
Not for Construction

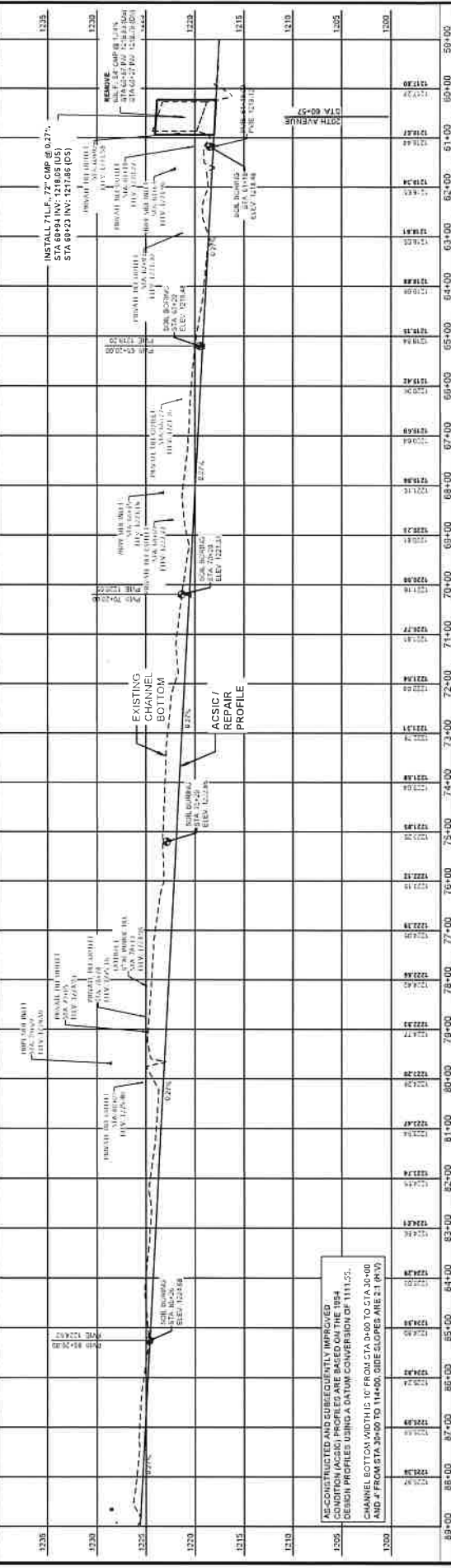
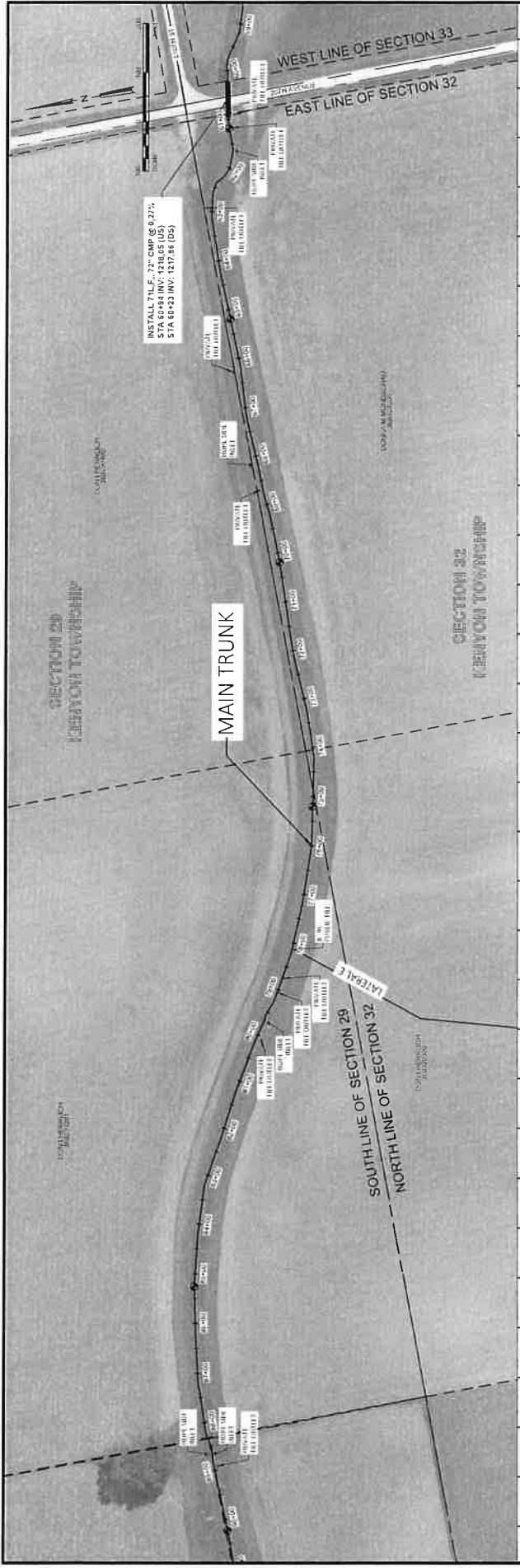
CD1 REPAIR REPORT
GOODHUE COUNTY
KENYON TOWNSHIP SECTIONS 28, 29, 32 & 33

MAIN TRUNK PLAN & PROFILE
PROJECT NO. 6400-0004

SHEET 3 of 10

AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED
CONDITION (ACSIC) PROFILES ARE BASED ON THE 1954
BENCHMARK PROFILES USING A DATUM CONVERSION OF 1111.55.
CHANNEL BOTTOM WIDTHS 10' FROM STA 0+00 TO STA 30+00
AND 4' FROM STA 30+00 TO 114+00. SIDE SLOPES ARE 2:1 (H:V)

No.	Revision	Date



AS CONSTRUCTED AND SUBSEQUENTLY IMPROVED
 CONDITION (AC/SIC) PROFILES ARE BASED ON THE 1954
 DESIGN PROFILES USING A DATUM CONVERSION OF 111.55.
 CHANNEL BOTTOM WIDTH IS 10' FROM STA 0+00 TO STA 30+00
 AND 4' FROM STA 30+00 TO 114+00. ODD SLOPES ARE 2:1 (R/V)

Station	Elevation	Notes
1230	1200.00	
1231	1201.00	
1232	1202.00	
1233	1203.00	
1234	1204.00	
1235	1205.00	
1236	1206.00	
1237	1207.00	
1238	1208.00	
1239	1209.00	
1240	1210.00	
1241	1211.00	
1242	1212.00	
1243	1213.00	
1244	1214.00	
1245	1215.00	
1246	1216.00	
1247	1217.00	
1248	1218.00	
1249	1219.00	
1250	1220.00	
1251	1221.00	
1252	1222.00	
1253	1223.00	
1254	1224.00	
1255	1225.00	
1256	1226.00	
1257	1227.00	
1258	1228.00	
1259	1229.00	
1260	1230.00	
1261	1231.00	
1262	1232.00	
1263	1233.00	
1264	1234.00	
1265	1235.00	

PROJECT NO. 6400-0004
 SHEET 4 of 10

CDI REPAIR REPORT
 GOODHUE COUNTY
 KENTON TOWNSHIP SECTIONS 28, 29, 32 & 33

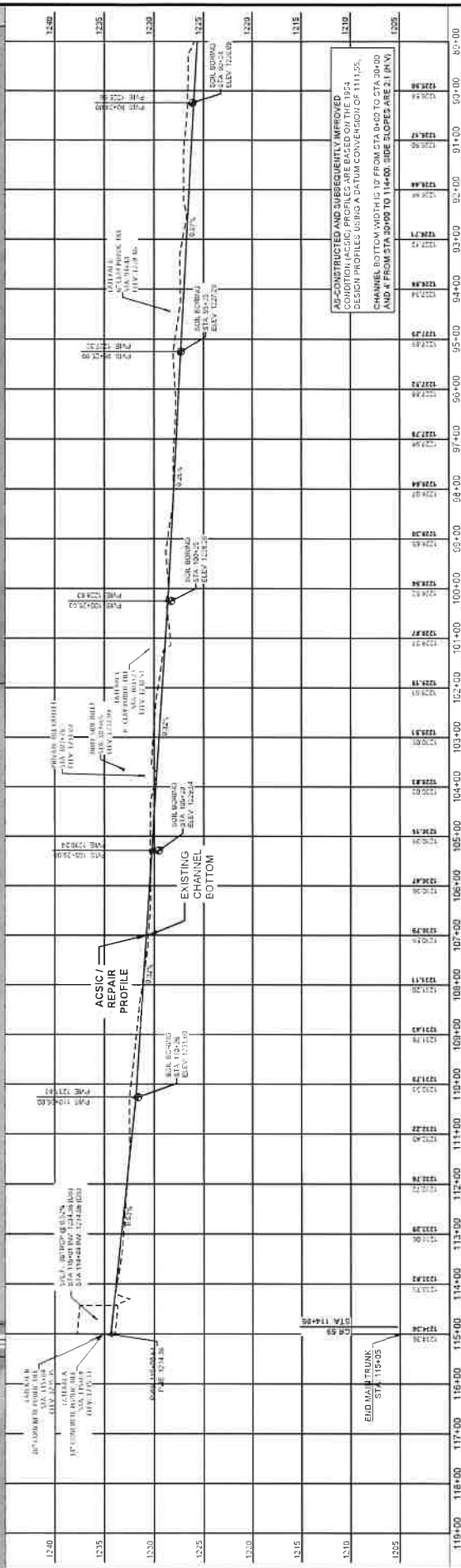
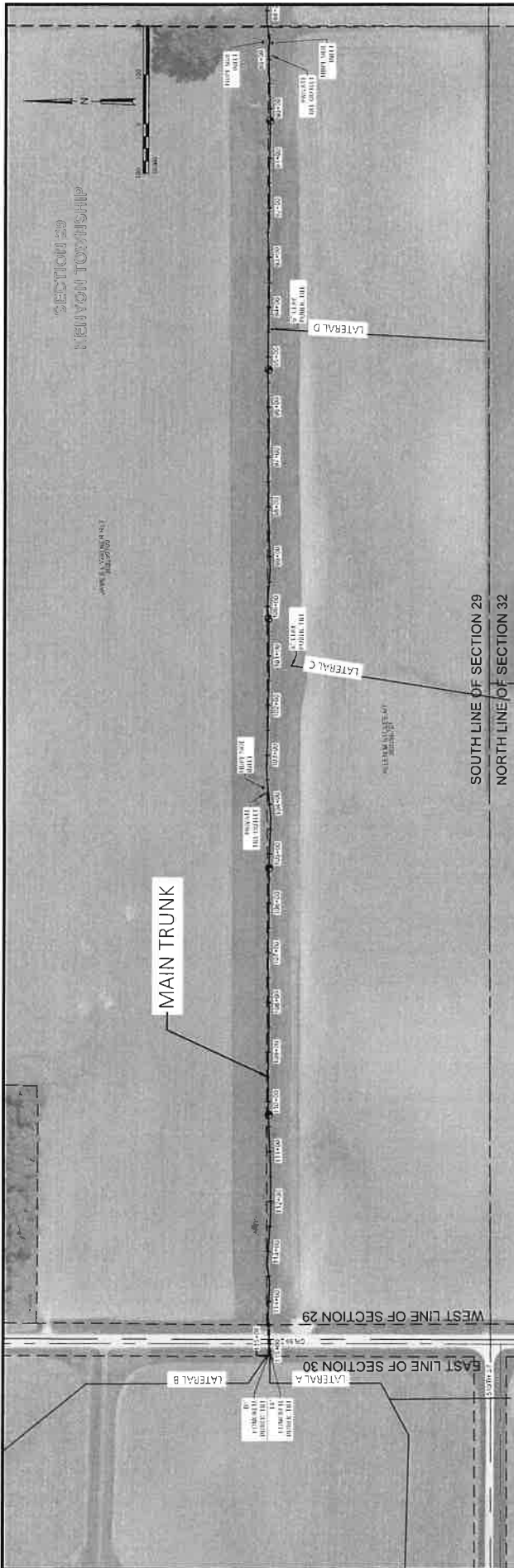
Maple Grove
 01-15-2021
 Scale AS SHOWN

HOUSTON
 ENGINEERING INC.

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 Not for Construction

CDI REPAIR REPORT
 GOODHUE COUNTY
 KENTON TOWNSHIP SECTIONS 28, 29, 32 & 33

PROJECT NO. 6400-0004
 SHEET 4 of 10



AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED
 CONDITION ACSIC PROFILES ARE BASED ON THE 1954
 DESIGN PROFILES USING A DATUM CONVERSION OF 111.55'.
 CHANNEL BOTTOM WIDTH IS 10' FROM STA 8+00 TO STA 30+00
 AND 4' FROM STA 10+00 TO 114+00. SIDE SLOPES ARE 2:1 (H:V).

Station	Elevation	Station	Elevation	Station	Elevation	Station	Elevation
110+00	1214.36	115+00	1214.36	120+00	1214.36	125+00	1214.36
111+00	1213.75	116+00	1213.75	121+00	1213.75	126+00	1213.75
112+00	1213.14	117+00	1213.14	122+00	1213.14	127+00	1213.14
113+00	1212.53	118+00	1212.53	123+00	1212.53	128+00	1212.53
114+00	1211.92	119+00	1211.92	124+00	1211.92	129+00	1211.92
115+00	1211.31	120+00	1211.31	125+00	1211.31	130+00	1211.31
116+00	1210.70	121+00	1210.70	126+00	1210.70	131+00	1210.70
117+00	1210.09	122+00	1210.09	127+00	1210.09	132+00	1210.09
118+00	1209.48	123+00	1209.48	128+00	1209.48	133+00	1209.48
119+00	1208.87	124+00	1208.87	129+00	1208.87	134+00	1208.87
120+00	1208.26	125+00	1208.26	130+00	1208.26	135+00	1208.26
121+00	1207.65	126+00	1207.65	131+00	1207.65	136+00	1207.65
122+00	1207.04	127+00	1207.04	132+00	1207.04	137+00	1207.04
123+00	1206.43	128+00	1206.43	133+00	1206.43	138+00	1206.43
124+00	1205.82	129+00	1205.82	134+00	1205.82	139+00	1205.82
125+00	1205.21	130+00	1205.21	135+00	1205.21	140+00	1205.21
126+00	1204.60	131+00	1204.60	140+00	1204.60	145+00	1204.60
127+00	1203.99	132+00	1203.99	150+00	1203.99	150+00	1203.99

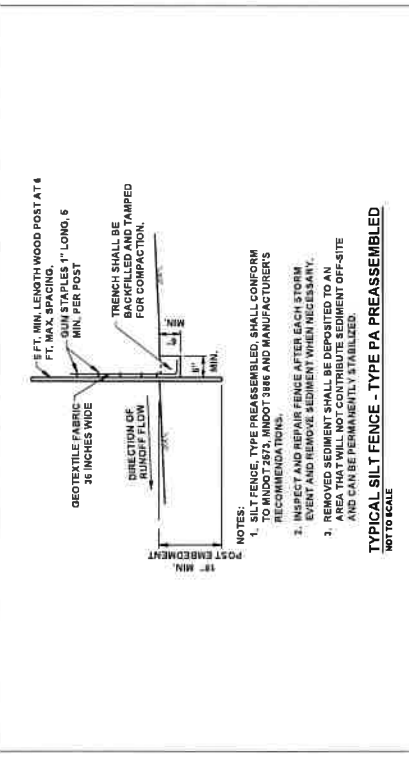
PRELIMINARY
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CD1 REPAIR REPORT
 GOODHUE COUNTY
 KENYON TOWNSHIP SECTIONS 29, 32 & 33

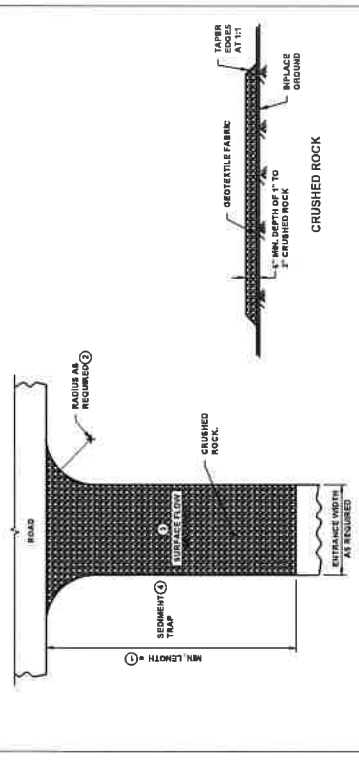
Project No. 6400-0004

Sheet 5 of 10



- NOTES:**
1. SILT FENCE, TYPE PREASSEMBLED, SHALL CONFORM TO MNDOT 2872, MNDOT 3886 AND MANUFACTURER'S RECOMMENDATIONS.
 2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
 3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN APPROPRIATE LOCATION OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

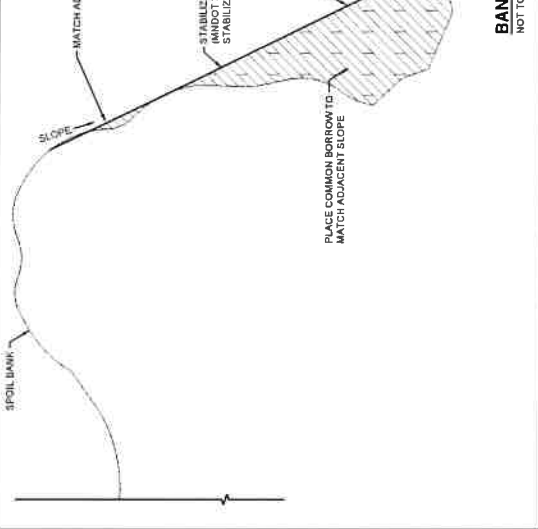
TYPICAL SILT FENCE - TYPE PA PREASSEMBLED
NOT TO SCALE



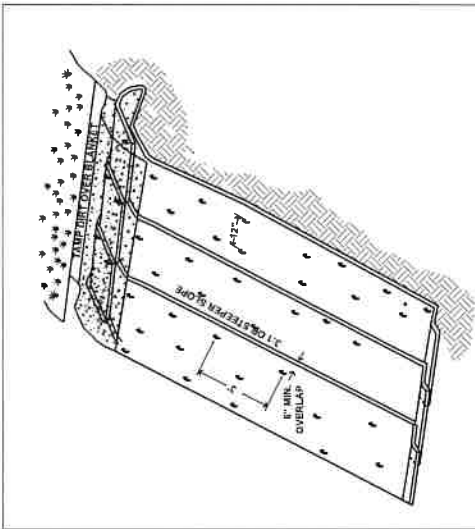
CRUSHED ROCK CONSTRUCTION EXIT
NOT TO SCALE

- NOTES:**
SEE MNDOT SPEC. 2012 & 302.
- ① MINIMUM LENGTH SHALL BE THE GREATER OF 50 FEET OR A LENGTH SUFFICIENT TO ALLOW A MINIMUM OF 3 TRIP OPERATIONS ON THE PROVIDED PAV. MINIMUM LENGTH SHALL BE CALCULATED AS FOLLOWS: $L = 100 \times \frac{V}{S}$ WHERE L IS LENGTH IN FEET, V IS VEHICLE SPEED IN MPH, AND S IS STOPPING SLOPE IN PERCENT.
 - ② PROVIDE RADIAL OR WHEEL PAID SUFFICIENTLY TO PREVENT VEHICLE TIRES FROM TRACKING OFF OF THE ROAD SURFACE.
 - ③ PROVIDE 2' WIDE TYPED AREAS FLOWING TOWARD CONSTRUCTION SITE. PROVIDE RUNOFF FROM DRAINAGE DIRECTLY TO PUBLIC ROAD OVER CONSTRUCTION EXIT BY CROWNING THE EXIT OR INTERCEPTED RUNOFF.
 - ④ IF RUNOFF FROM CONSTRUCTION EXITS WILL DRAIN OFF OF PROJECT SITE, PROVIDE EROSION TRIP MATS TO PREVENT TRACKING OF SEDIMENT.
 - ⑤ IF A TIRE WASH OFF IS REQUIRED THE CONSTRUCTION EXITS SHALL BE GRADED TO DRAIN THE WASH OFF TO A COLLECTION POINT.
 - ⑥ MAINTENANCE OF CONSTRUCTION EXITS SHALL OCCUR WHEN THE EFFECTIVENESS OF SEDIMENT REMOVAL HAS BEEN REQUIRED. MAINTENANCE SHALL CONSIST OF REMOVING SEDIMENT AND FILLING MATERIAL TO RESTORE EFFECTIVENESS.

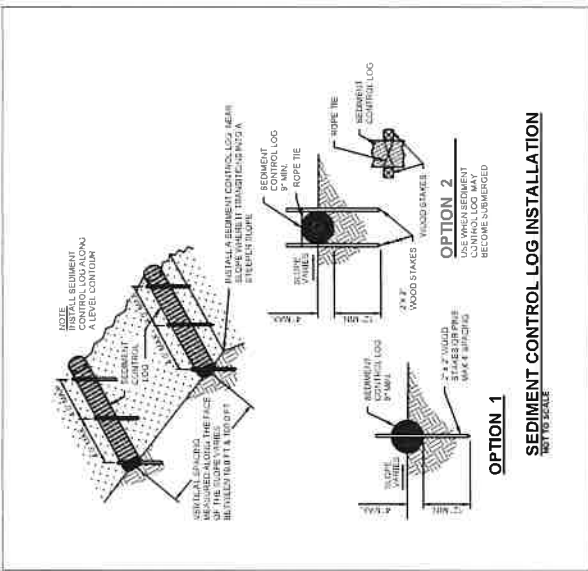
STABILIZED CONSTRUCTION EXIT
NOT TO SCALE



BANK SLOUGH REPAIR
NOT TO SCALE

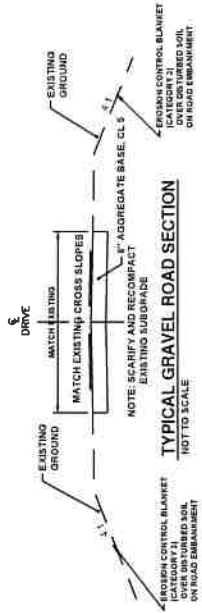


EROSION CONTROL BLANKET FOR BANK REPAIR
NOT TO SCALE



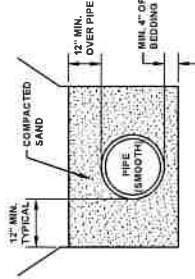
SEDIMENT CONTROL LOG INSTALLATION
NOT TO SCALE

<p>PRELIMINARY Not for Construction</p>		<p>CD1 REPAIR REPORT GOODHUE COUNTY KENYON TOWNSHIP SECTIONS 28, 29, 32 & 33</p>	<p>PROJECT NO. 6400-0004</p>	<p>SHEET 6 of 10</p>
<p>Scale AS SHOWN</p>	<p>Checked by CO</p>	<p>Drawn by EIA</p>	<p>Date 01-15-2021</p>	<p>Details 1</p>
<p>Available From P: 702-441-8227 F: 702-441-8222</p>	<p>Houston Engineering Inc.</p>	<p>CD1 REPAIR REPORT GOODHUE COUNTY KENYON TOWNSHIP SECTIONS 28, 29, 32 & 33</p>	<p>PROJECT NO. 6400-0004</p>	<p>SHEET 6 of 10</p>



TYPICAL GRAVEL ROAD SECTION
NOT TO SCALE

NOTE: SCARIFY AND RECOMPACT EXISTING SUBGRADE



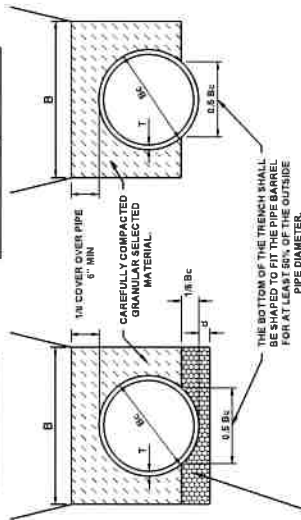
NOTES:
1. IF PIPE SPRING LINE IS LESS THAN 4\"/>

PIPE BEDDING DETAIL - HDPE/CMP PIPE
NOT TO SCALE

STANDARD PLATES
THE FOLLOWING MDDOT STANDARD PLATES, APPROVED BY THE DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT:

PLATE NO.	PLATE NAME
3127	METAL APPROX. FOR S. PIPE
3128	METAL APPROX. CONNECTION
3129A	METAL APPROX. FOR CORRUGATED POLYETHYLENE PIPE
3130	RIPRAP AT CSP OUTLETS

PIPE DIAMETER	B
36" OR LESS	$B_c + 24"$
42" TO 54"	$1.5 \times B_c$
60" OR OVER	$B_c + 36"$



STD. TRENCH CONDITION

OVER EXCAVATED TRENCH CONDITION

NOTE: FOR ROCK OR OTHER INCOMPRESSIBLE MATERIALS, THE TRENCH SHOULD BE OVEREXCAVATED A MINIMUM OF 1" AND REILLED WITH GRANULAR MATERIAL.

CLASS C PIPE BEDDING

REINFORCED CONCRETE PIPE BEDDING
NOT TO SCALE



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Drawn by: EJA
Checked by: CO
Date: 01-15-2021
Scale: AS SHOWN

CD1 REPAIR REPORT
GOODHUE COUNTY
KENYON TOWNSHIP SECTIONS 28, 29, 32 & 33

DETAILS 2
PROJECT NO. 6400-0004
SHEET 7 of 10

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) NARRATIVE (CONTINUED)

POLLUTION PREVENTION MANAGEMENT MEASURES

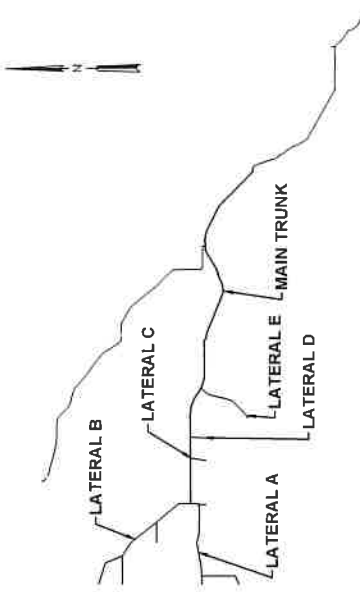
- 1. THE FOLLOWING POLLUTION PREVENTION MANAGEMENT MEASURES SHALL BE IMPLEMENTED ON THE SITE AND SHOULD BE A PERMANENT:
- 1. BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS, PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS MUST BE STORED UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS TO PREVENT WIND-DRIVEN PARTICLES FROM BEING BLOWN OFF). STORAGE MEASURES SHALL BE DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
- 2. HAZARDOUS MATERIALS, TOXIC WASTE, USED OIL, DIESEL FUEL, GASOLINE, GREASE, OILS, ANTIFREZES, CHEMICALS, PAINTS, AND OTHER LIQUIDS MUST BE PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS/DRIVE AREAS MUST BE PROVIDED TO PREVENT VANDALISM, STORAGE AND CONTAINMENT OF HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CHRG 15.01 USING SECONDARY CONTAINMENT AS APPLICABLE.
- 3. SOIL WASTE MUST BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. 11.0205.
- 4. HAZARDOUS MATERIALS MUST BE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. HAZARDOUS WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH 7041.
- 5. HAZARDOUS MATERIALS SHALL BE TAKEN TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED OILS, GREASE, FUELS, ANTIFREZES, CHEMICALS, PAINTS, AND OTHER LIQUIDS TO THE LOADED OR UNLOADED INCLUDING THE USE OF DUMP TRUCKS OR ABSORBENTS UNLESS INFEASIBLE. FUELING MUST BE CONDUCTED IN A CONTAINED AREA UNLESS INFEASIBLE. WASHWATER SHALL BE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED WASTES. SPILLED MATERIALS, REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. § 115.061, USING DRY CLEAN UP METHODS WHERE POSSIBLE.
- 6. WASHING THE EXTERIOR OF VEHICLES OR EQUIPMENT ON THE PROJECT SITE MUST BE CONFINED TO A DESIGNATED WASH AREA. WASHWATER SHALL BE COLLECTED AND WASTE FROM THE WASHING ACTIVITY MUST BE PROPERLY DISPOSED OF, STORED AND PROPERLY USE THE SOAP, DETERGENTS, OR SOLVENTS. NO ENGINE DEGREASING IS ALLOWED ON SITE.
- 7. EXHAUSTIVE CONTAINMENT SHALL BE PROVIDED FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHING OPERATIONS (CONCRETE, STEEL, PAINT, FURK, RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS RELATED TO THE CONSTRUCTION). WASHWATER SHALL BE COLLECTED AND STORED IN A WASHWATER TRAP AND THE CONTAINMENT MUST BE DESIGNED SO THAT IT DOES NOT RESULT IN RUNOFF FROM THE WASHING OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH MINN. R. 11.0205. SIGNS MUST BE PLACED AT THE WASH AREA TO INSTRUCT OPERATORS TO PROPERLY DISPOSE WASTES TO OBTAIN THE PROPER FACILITIES FOR DISPOSAL OF WASHWATER AND OTHER WASHWATER WASTES.
- 8. IN THE EVENT OF A SPILL, THE CONTRACTOR WILL MAKE THE APPROPRIATE NOTIFICATION TO THE MPCA CONSISTENT WITH THE FOLLOWING PROCEDURES:
 SPILLS OF PETROLEUM IN A QUANTITY GREATER THAN 5 GALLONS MUST BE REPORTED IMMEDIATELY TO THE MINNESOTA DUTY OFFICER.
 SPILLS OF ANY QUANTITY OF ALL OTHER CHEMICALS OR MATERIALS WHICH MAY CAUSE POLLUTION OF THE STATE MUST BE REPORTED IMMEDIATELY TO THE MINNESOTA DUTY OFFICER.

FINAL STABILIZATION

FINAL STABILIZATION IS NOT COMPLETE UNTIL ALL OF THE FOLLOWING REQUIREMENTS ARE COMPLETE:

- 1. ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND ALL SOILS ARE STABILIZED BY A UNIFORM PERMANENT VEGETATIVE COVER WITH A MINIMUM 40% PERCENT OF THE EXPECTED FINAL GROWTH DENSITY OVER THE ENTIRE PERTURBED SURFACE AREA, OR OTHER EQUIVALENT MEANS NECESSARY TO PREVENT SOIL FAILURE UNDER BROUVE CONDITIONS.
- 2. ALL TEMPORARY SYNTHETIC AND STRUCTURAL EROSION PREVENTION AND SEDIMENT CONTROL BMPs (SUCH AS SILT PENS) HAVE BEEN REMOVED. BMPs DESIGNED TO DECOMPOSE ON SITE (SUCH AS SOME COMPOST LOGS) MAY BE LEFT IN PLACE.
- 3. FOR CONSTRUCTION PROJECTS ON AGRICULTURAL LAND (E.G., FIELDS, CROSS CROPS, FIELDS, PASTURE OR RANGE LAND) THE DISTURBED LAND HAS BEEN RETURNED TO ITS PRECONSTRUCTION AGRICULTURAL USE.

AMENDMENTS



EROSION AND SEDIMENT CONTROL QUANTITY SUMMARY AND BMP SCHEDULE		
DESCRIPTION	UNITS	QUANTITY
SEEDING & MULCH	ACRE	6

*SILT FENCE, SEDIMENT CONTROL LOG AND BLANKET TO BE INSTALLED AT LOCATIONS SPECIFIED BY ENGINEER

PRELIMINARY
Not for Construction

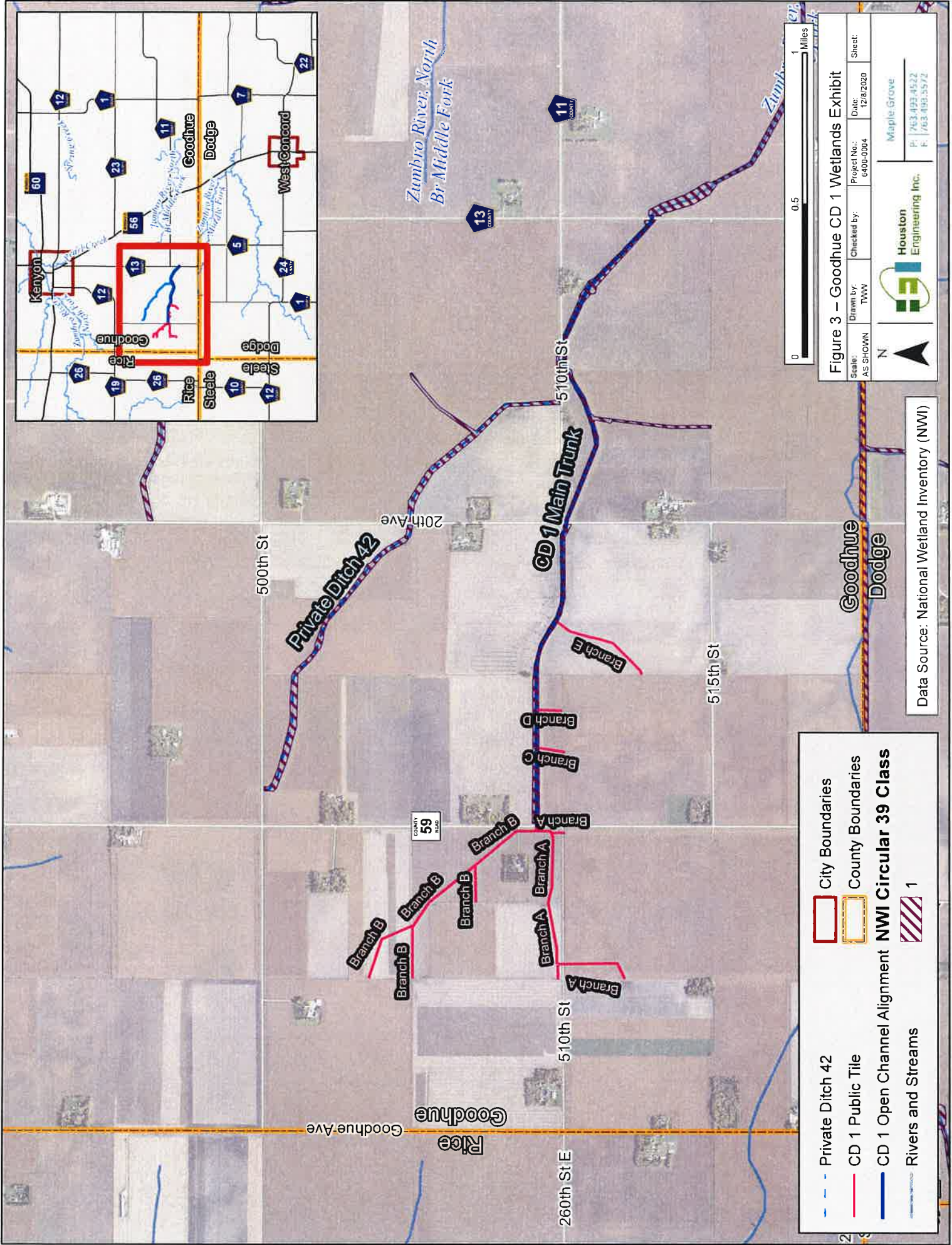


Drawn by: Maple Grove
 Date: 01-15-2021
 Scale: AS SHOWN
 Checked by: CC

CD1 REPAIR REPORT
 GOODHUE COUNTY
 KENYON TOWNSHIP SECTIONS 28, 29, 32 & 33

SWPPP NARRATIVE
 PROJECT NO. 6400-0004

SHEET
 10 of 10



	Private Ditch 42
	CD 1 Public Tile
	CD 1 Open Channel Alignment NWI Circular 39 Class
	City Boundaries
	County Boundaries
	Rivers and Streams
	NWI Circular 39 Class
	1

Data Source: National Wetland Inventory (NWI)

Figure 3 – Goodhue CD 1 Wetlands Exhibit

Scale: AS SHOWN	Drawn by: TWV	Checked by: TWV	Project No.: 6400-004	Date: 12/8/2020	Sheet: 1
			Maple Grove P: /63.493.4522 F: /63.493.3572		

0 0.5 1 Miles

Attachment A: Culvert Design Criteria

Crossing	Type	Existing Size	Design Standard	2-Year Q (cfs)	10-Year Q (cfs)	50-Year Q (cfs)
31+42	Field	84" CMP	2-Yr in Banks	66	----	----
60+57	20th Ave.	120" CMP	10-Yr Doesn't Overtop Road	56	149	----
114+86	GR-59	36" RCP	50-Yr Doesn't Overtop Road	34	----	159

Design discharges were determined based on watersheds delineated by the USGS StreamStats program and Peak-Flow Statistics calculated using the USGS regression equations developed by Lorenz, Sanocki, and Kocian, 2009.

Reference:

Lorenz, D.L, Sanocki, C.A., and Kocian, M.J., 2009. Techniques for Estimating the Magnitude and Frequency of Peak Flows on Small Streams in Minnesota Based on Data Through Water Year 2005: U.S. Geological Survey Scientific Investigations Report 2009-5250, 54 p.

Attachment B: Preliminary Opinion of Probable Construction Cost

Public Drainage System Infrastructure					
Item Number	Description	Units	Est'd Quantity	Unit Price	Extension
1	Mobilization	Lump Sum	1	\$30,000	\$30,000
2	Traffic Control	Lump Sum	1	\$10,000	\$10,000
3	Temporary and Permanent Removals	Lump Sum	1	\$2,000	\$2,000
4	Tree Clearing	Acre	1.8	\$8,500	\$15,300
5	Excavation of Open Channel (P)	Linear Foot	11,310	\$5	\$56,550
6	Spoil Management (P)	Linear Foot	11,310	\$2.50	\$28,275
7	Resloping at Bank Sloughing Areas	Lump Sum	1	\$10,000	\$10,000
8	Removal of Existing Culvert	Linear Foot	26	\$15	\$390
9	72" CM Pipe Culvert	Linear Foot	26	\$200	\$5,200
10	SWPPP Documentation & Reporting	Lump Sum	1	\$2,500	\$2,500
11	Seeding and Mulch (P)	Acre	5.62	\$5,000	\$28,100
12	Erosion Control Blanket Cat. 3	Square Yard	100	\$4	\$400
13	Sediment Control Log	Linear Foot	100	\$4	\$400
Public Drainage Subtotal					\$189,115
Public Road Crossings					
Item Number	Description	Units	Est'd Quantity	Unit Price	Extension
1	Removal of Existing Culvert	Linear Foot	60	\$15	\$900
2	72" CM Pipe Culvert	Linear Foot	71	\$200	\$14,200
3	72" Galvanized Apron	Each	2	\$2,000	\$4,000
4	Gravel Roadway Patch	Each	1	\$2,000	\$2,000
5	Seeding and Mulch	Acre	0.02	\$5,000	\$100
6	Erosion Control Blanket Cat. 3	Square Yard	100	\$4	\$400
Public Road Crossing Subtotal					\$21,600
Construction Subtotal					\$210,715
Engineering					\$42,143
Legal/Admin					\$20,000
Contingency					\$42,143
TOTAL PROJECT COST					\$315,001

Technical Memorandum

To: Lisa Hanni
Goodhue County

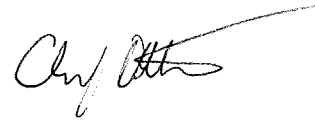
From: Christopher Otterness, P.E.
Houston Engineering, Inc.

Subject: Goodhue CD 1 Tile Branches A, C, D

Date: March 17, 2021

Project: HEI 6400-0004

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



3/17/21

Christopher Otterness
Reg. No. [41961.]

Date

INTRODUCTION

Goodhue County contracted with Houston Engineering, Inc. to prepare an Engineer's Report for the repair of the Goodhue County Ditch 1 public drainage system and a tile inspection report for the five branches of drain tile in the public drainage system. Following development of the repair report, the Goodhue County Board of Commissioners requested HEI to prepare a preliminary opinion of construction cost for the repair of tile branches A, C, D, and E. This memorandum provides a summary of the estimated costs.

ANALYSIS

The tile inspection report showed Branches A, B, C, and D were in poor condition and in need of repair. Branch E was found to be in fair condition and not in need of repair at this time, and a review of the historical records indicated the section labeled as Branch F is not part of the public drainage system. A petition for the improvement of Branch B has been submitted to the Goodhue County Board, and costs for the improvement and separable maintenance costs (i.e. equivalent cost of the repair of the system) will be determined as part of the preliminary engineer's report. Therefore, the scope of this memo is only for Branches A, C, and D.

A preliminary opinion of construction cost was prepared for repairing the tile in Branches A, C, and D based on the existing tile diameters. The one exception is the increase in all 14" diameter tile in Branch A to 15" diameter, which is allowed under Mn Statute 103E (i.e. Drainage Law). Construction costs include a 20% contingency, and engineering costs are estimated at 20% of the unadjusted construction cost.

The total estimated cost, including contingency, engineering, and legal and administrative costs, is \$255,230. Costs are summarized in the following table.

Title Branches A, C, D Preliminary Opinion of Probable Construction Cost Summary	
Category	Cost
Construction Costs	\$205,930
Engineering, Legal and Administrative	\$49,300
Repair Cost	\$255,230

Preliminary Opinion of Probable Construction Costs
Goodhue CD1 Tile Branch A, C, D Repair
Date: 3-3-2021

Item	Item Description	Unit	Quantity	Unit Cost	Extension
1	Mobilization	LUMP SUM	1	\$ 25,000.00	\$25,000.00
2	Traffic Control	LUMP SUM	1	\$ 5,000.00	\$5,000.00
3	Water Control	LUMP SUM	1	\$ 10,000.00	\$10,000.00
4	Connect to Existing Lateral	EACH	9	\$ 1,200.00	\$10,800.00
5	Crush Tile and Leave in Place	LIN FT	380	\$ 2.00	\$760.00
6	Hickenbottom Inlet	EACH	7	\$ 1,200.00	\$8,400.00
7	6" Non-PERF TILE (Branch D)	LIN FT	450	\$ 15.00	\$6,750.00
8	8" Non-PERF TILE (Branch C)	LIN FT	455	\$ 18.00	\$8,190.00
9	6" Non-PERF TILE (Branch A)	LIN FT	296	\$ 15.00	\$4,440.00
10	8" Non-PERF TILE (Branch A)	LIN FT	1351	\$ 18.00	\$24,318.00
11	10" Non-PERF TILE (Branch A)	LIN FT	220	\$ 20.00	\$4,400.00
12	12" Non-PERF TILE (Branch A)	LIN FT	1045	\$ 22.00	\$22,990.00
13	15" Non-PERF TILE (Branch A)	LIN FT	1545	\$ 24.00	\$37,080.00
14	Gravel Road Patch	EACH	1	\$ 2,000.00	\$2,000.00
15	Silt Fence Type PA or Bioroll	LIN FT	100	\$ 5.00	\$500.00
16	Erosion Control Blanket Category 3	SQ YD	200	\$ 5.00	\$1,000.00
		Construction Total			\$171,628.00
		Contingency		20%	\$34,300.00
		Engineering		20%	\$34,300.00
		Legal			\$15,000.00
		Total			\$255,228.00

**STATE OF MINNESOTA
GOODHUE COUNTY BOARD OF COMMISSIONERS
SITTING AS THE DRAINAGE AUTHORITY FOR
GOODHUE COUNTY DITCH 1**

**In the Matter of the Repair
to Goodhue County Ditch 1**

FINDINGS AND ORDER FOR REPAIR

The Goodhue County Board of Commissioners, sitting as the drainage authority for Goodhue County Ditch 1, having received an inspection report pursuant to Minnesota Statutes, section 103E.705, subdivision 3 by Houston Engineering, Inc. recommending repair in excess of the levy assessment limits in Statutes, section 103E.705, subdivision 6, having received repair reports under Statutes, section 103E.715, having noticed and conducted a public hearing on the engineer’s repair reports, and based on the record and proceedings, Commissioner _____ moved, seconded by Commissioner _____ to adopt the following Findings and Order:

Findings:

1. The Goodhue County Board of Commissioners (“Board”) is the public drainage authority under Minnesota Statutes, chapter 103E for Goodhue County Ditch 1 (“CD 1”).
2. CD 1 is located in Township 109 North, Range 18 West, Sections 28, 29, 32, and 33.
3. CD 1 was established in 1954. A majority of the construction was completed in 1955, with the construction contract completed in March of 1956.
4. In 1961, CD 1 was improved concurrent with the installation of a private ditch, known locally as Private Ditch 42, to widen the downstream end of the drainage system from 6-foot wide to 10-foot wide. Since CD 1 was established and improved, it has undergone only minor repairs.
5. Minnesota Statutes, section 103E.705, subdivision 1 obligates the Board to maintain CD 1, provide the repairs necessary to make the drainage system efficient, and have the

drainage system inspected on a regular basis by an inspection committee of the drainage authority or a drainage inspector appointed by the drainage authority.

6. Minnesota Statutes, section 103E.705, subdivision 3 requires each drainage system that the Board designates for examination to have a drainage inspection report made in writing to the Board after examination, designating portions that need repair, and obligates the Board to consider the drainage inspection report at its next meeting and repair all or any part of the drainage system as provided in Statutes, chapter 103E.
7. Minnesota Statutes, section 103E.705, subdivision 6 prohibits the Board from levying an assessment for repairs or maintenance on one drainage system in one calendar year for more than 20 percent of the benefits of the drainage system, \$1,000 per mile of open ditch in the ditch system, or the dollar amount requiring the solicitation of sealed bids under section 471.345, subdivision 3, whichever is greater.
8. On June 3, 2020, the Board contracted with Professional Engineer Chris Otterness ("Otterness") and Houston Engineering, Inc. ("HEI") to prepare a record investigation and inspection report for CD 1. The purpose of the record investigation was to determine whether sufficient records establishing the as originally constructed or subsequently improved alignment, cross-section, profile, or right-of-way of CD 1 exist to order a repair. The purpose of the inspection report was to meet the Board's obligations under Minnesota Statutes, section 103E.705.
9. HEI completed its investigation of the drainage system records and the existing conditions on the drainage system and documented its findings in a Final Technical Memorandum dated June 26, 2020 ("2020 Inspection Report"). The 2020 Inspection Report was filed thereon with the Goodhue County LUM Director, County Surveyor & Recorder, Lisa M. Hanni, LS ("Hanni") and presented to the Board for review.
10. In its 2020 Inspection Report, HEI found that the Board's records include a 1954 Final Engineer's Report, aerial photography, and spot elevations from 2019 field survey provided by Goodhue County staff. HEI concluded that the records are adequate to establish the channel alignment, right-of-way, and cross-section necessary for a repair of CD 1.
11. HEI concluded that the 1954 Final Engineer's Report establishes the alignment of the open channel portion of CD 1 and that the 2019 survey verified that no changes have been made to the ditch alignment. The 1954 Final Engineer's Report states the bottom width of the ditch was designed 6-feet wide from Station 0+00 to 30+00 and 4-feet wide from Station 30+00 to Station 114+84. The record shows a 1961 improvement proceeding concurrent with installation of a private ditch ("Private Ditch 42") widened the bottom to 10 feet with 2:1 side slopes.

12. HEI found in its 2020 Inspection Report that sediment, deadfalls, and other vegetative debris is prevalent through the system, particularly in lower portions of the Main Trunk. HEI reported several bank locations have experienced sloughing, causing the top of the open channel to widen. HEI concluded that the channel bottom is unstable, with the channel bottom migrating within the ditch right-of-way.
13. HEI reported that two culverts are in noticeable disrepair, located at Station 30+00 and Station 60+72. HEI also noted that one of the box culverts at the outlet appears to be substantially blocked with sediment.
14. The 2020 Inspection Report concluded that CD 1 is in disrepair due to vegetative growth, flow impediments, and channel instability. HEI recommended the Board initiate a repair proceeding to restore the function and capacity of CD 1. HEI also concluded that it did not see a compelling reason for landowners to petition to improve the CD 1 Main Trunk open channel and noted that the Inspection Report did not include any of the CD 1 lateral tile branches.
15. A landowner informational meeting was noticed and held on August 20, 2020 at the Wanamingo Community Room, 402 Main Street, Wanamingo, Minnesota. At the landowner informational meeting, Hanni presented the history of CD 1; Otterness, presented the 2020 Inspection Report, and Kale Van Bruggen, attorney with Rinke Noonan Law Firm for the Board in its capacity as the CD 1 drainage authority ("Van Bruggen"), provided an overview of Minnesota Statutes, chapter 103E requirements for inspections, repairs, redetermination of benefits, and improvements.
16. At the landowner informational meeting, landowners provided comments regarding the current condition of access and township road culverts, the open portions of the CD 1 system, and the lateral tiles. Support for proceeding with a repair of the open ditch portions of the CD 1 drainage system concurrent with conducting a redetermination of benefits was expressed by multiple landowners in attendance. Several landowners also voiced support for inspecting the lateral tile portions of CD 1 in order to ascertain the source of present failures, verify the overall condition of the tile, and quantify the existing capacity of the tile lines in order to inform a decision for landowners on whether to petition for improvement to one or more tiles.
17. Based on the 2020 Inspection Report, the Board found that CD 1 Main Trunk was in need of repair and that the estimated costs of the repair will exceed the greater of 20 percent of the benefits of the drainage system, \$1,000 per mile of open ditch in the ditch system, or the dollar amount requiring the solicitation of sealed bids under Minnesota Statutes, section 471.345, subdivision 3.
18. On September 1, 2020, the Board adopted Findings & Order Directing Repair by Petition Proceedings and appointed Otterness as the engineer to examine the drainage system

and make a repair report in conformance with Minnesota Statutes, section 103E.715, subdivision 2. The Board directed HEI to inspect the lateral tiles by televising portions of the tile to identify the source of failures, as necessary, to verify the overall condition of the tile, and to quantify and report on the existing capacity of these tile lines.

19. On January 15, 2021, Otterness filed Goodhue CD 1 Tile Inspection and Ditch Repair Report with Hanni ("Repair Report"). The report was shared concurrently with Goodhue County Administrator Scott Arneson and the Goodhue County Finance Director, Brian Anderson. The Board, in consultation with the Goodhue County Administrator's office, ordered a public hearing on the Repair Report.
20. Notice of the hearing on the Repair Report was provided by mail to the owners of property and political subdivisions likely to be affected by the repair in the repair report in accordance with Minnesota Statutes, section 103E.715, subdivision 3.
21. On February 26, 2021, Jon Houglum, Larry Lurken, LyTana Derscheid, and Jeffrey Solberg filed a petition to improve CD 1, Branch B. After review of the petition and bond, Van Bruggen, recommended accepting the petition and bond and the Board appointed Otterness as the project engineer for the improvement proceedings. The improvement proceedings are pending before the Board as separate proceedings from these repair proceedings.
22. On March 17, 2021, Otterness filed a Technical Memorandum for Goodhue CD 1 Tile Branches A, C, and D ("March 17, 2021 Technical Memorandum") which provided a summary of the estimated costs to repair tile branches A, C, and D. The Repair Report and March 17, 2021 Technical Memorandum noted that Branch E is in fair condition and is not in need of Repair. The March 17, 2021 Technical Memorandum noted that the tile lateral previously labeled as "Branch F" is not part of the public drainage system.
23. A public hearing before the Board on the repair of CD 1 was held on March 24, 2021 at 9:00 a.m. at the County Board Room located on the 3rd Floor of the Goodhue County Government Center, 509 W 5th Street, Red Wing, Minnesota 55066; however, based on the State Emergency Declaration related to the COVID-19 pandemic, it was determined that it was neither feasible nor prudent to hold in-person meetings during the emergency. Therefore, the hearing was conducted by alternative means (video conference) from remote locations under the conditions contained in Minnesota Statutes, section 13D.021.
24. At the public hearing, Otterness presented the engineer's Repair Report and March 17, 2021 Technical Memorandum. The Repair Report noted that to restore the function of CD 1, a repair of the CD 1 open channel to the as constructed and subsequently improved condition grade was recommended. The Repair Report also recommended a repair of the tile portions of the system. The Repair Report noted that if any portions of the tile system

were to be petitioned for improvement, that those portions of tile should not be repaired until the improvement proceedings were concluded.

25. The Repair Report concluded that the proposed repairs to the Main Trunk and Branches A, B, C, and D are necessary to restore the full function of CD 1 and meet future stormwater management needs, and that the repairs are in the best interest of benefited property owners.
26. The Repair Report estimated the cost of the repairs to be \$315,000 for repair of the open channel portion of CD 1. The March 17, 2021 Technical Memorandum estimated the cost of repairs of Branches A, C, and D to be \$255,230.
27. Following the presentation of the engineer's repair reports, the Board took comments from the public. A record of public comments was made and are incorporated into this Order.
28. The Board finds, consistent with the engineer's reports, the public comments received at the public hearing on the engineer's reports, and the entire record of proceedings, that CD 1 is out of repair; that the condition of CD 1 impedes the flow of water and reduces the hydraulic efficiency of the drainage system below that established by the original construction and/or subsequent improvement of the drainage system.
29. The Board finds that although Branch B of CD 1 is out of repair, that it would be inefficient to order the repair of Branch B while the improvement proceedings for Branch B are pending before the Board.
30. The Board finds that Branch E is not out of repair and that repairs to Branch E are not necessary and in the best interested of affected landowners at this time.
31. The Board further finds that cost savings to the repair and to the drainage system can be achieved if the bidding for the repair of Branches A, C, and D is reserved to be conducted consistent with bidding for the improvement of Branch B, if the improvement is ordered, and that therefore it is reasonable to delay directing the preparation for public bidding and award of a contract for repair of Branches A, C, and D until the improvement proceedings for Branch B are concluded.
32. The Board finds that from the Repair Report and the evidence presented that the Repairs recommended are necessary for the best interests of the affected property owners.

Order:

Based on the foregoing Findings and the entire record of proceedings before the Board, the Board, acting as the drainage authority for CD 1, hereby orders as follows:

- A. That the Board's Findings and Order Directing Repair by Petition Proceedings to repair CD 1 in the location specified in these findings and recommended in the engineer's reports is granted.
- B. That consistent with the engineer's recommendations, the Main Trunk of CD 1 and Branches A, C, and D shall be repaired.
- C. The Goodhue County Administrator and the Board chair, with the assistance of Otterness, Van Bruggen, and county staff shall proceed and prepare and award a contract for the repair of the Main Trunk portions of the drainage system consistent with the procedures required by Minnesota Statutes, Chapter 103E and under Minnesota law. The contract must be for the repair described in the repair report and as determined necessary by the drainage authority in these findings and order, and be prepared in the manner provided in Minnesota Statutes, chapter 103E for the original drainage system construction.
- D. The Goodhue County Administrator and the Board chair, with the assistance of Otterness, Van Bruggen, and County staff shall reserve proceeding to prepare and award a contract for the repair of the Branch A, C, and D portions of the drainage system until the conclusion of the pending improvement proceedings for Branch B.
- E. In the event the petition to improve Branch B is approved, the Goodhue County Administrator and the Board chair, with the assistance of Otterness, Van Bruggen, and County staff are authorized to proceed to prepare and award a contract for the repair of the Branch A, C, and D portions of the drainage system concurrent with awarding a contract to improve Branch B consistent with the procedures required by Minnesota Statutes, Chapter 103E and under Minnesota law. The contract must be for the repair described in the repair report and as determined necessary by the drainage authority in these findings and order, and be prepared in the manner provided in Minnesota Statutes, chapter 103E for the original drainage system construction.
- F. In the event the petition to improve Branch B is denied, then after all appeals periods have expired or been resolved, the Goodhue County Administrator and the Board chair, with the assistance of Otterness, Van Bruggen, and County staff are authorized to proceed to prepare and award a contract for the repair of the Branch A, C, and D portions of the drainage system consistent with the procedures required by Minnesota Statutes, Chapter 103E and under Minnesota law. The contract must be for the repair described in the repair report and as determined necessary by the drainage authority in these findings and order, and be prepared in the manner provided in Minnesota Statutes, chapter 103E for the original drainage system construction.

- G. The cost of all repairs shall be paid from the funds in the maintenance account for CD 1 and/or by assessments made to the properties benefited by the drainage system in the drainage system records.

After discussion, the Board Chair called the question. The question was on the adoption of the foregoing Findings and Order, and there were _____ yeas, _____ nays, _____ absent, and _____ abstentions as follows:

	Yea	Nay	Absent	Abstain
ANDERSON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DROTOS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLANDERS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAJERUS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NESSETH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upon vote, the Chair declared the motion passed and the Findings and Order adopted.

Brad Anderson, Chairperson

Dated: March 24, 2021

* * * * *

I, Scott O. Arneson, Goodhue County Administrator, do hereby certify that I have compared the above motion and Findings and Order with the original thereof as the same appears of record and on file with the Goodhue County Board of Commissioners and find the same to be a true and correct transcript thereof. The above Order was filed with me, Goodhue County Administrator on March 24, 2021.

IN TESTIMONY WHEREOF, I hereunto set my hand this ____ day of _____, 2021.

Scott O. Arneson
Goodhue County Administrator



Maple Grove Office
7550 Meridian Circle North, Suite 120
Maple Grove, MN 55369
P: (763) 493-4522 | F: (763) 493-5572

CLIENT/OWNER SERVICES AGREEMENT

PROJECT NAME: Goodhue County Ditch 1 Main Trunk Repair Construction Assistance
HOUSTON JOB NO.: R006400-0004 HOUSTON PROJ. MGR.: Chris Otterness
CLIENT/OWNER NAME: Goodhue County
CLIENT/OWNER ADDRESS: 509 West 5th Street Red Wing, MN 55066
CLIENT/OWNER PHONE NO.: 651-385-3197 CLIENT/OWNER CONTACT: Lisa Hanni

This Client/Owner Services Agreement ("Agreement") is made and entered into effective as of this 17th day of March, 2021, by and between HOUSTON ENGINEERING, INC. ("Houston") and Goodhue County ("Client").

Recitals

- A. Client has requested Houston to perform certain professional services in connection with a project generally referred to as Goodhue County Ditch 1 Main Trunk Repairs ("Project").
B. Houston desires to provide the professional services requested by Client in accordance with this Agreement.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Houston and Client agree as follows:

- 1. Services. Houston shall perform the services set forth in Attachment A ("Services") in accordance with the terms and conditions of this Agreement.
2. Term of Agreement. This Agreement shall commence on the date first stated above, and Houston is authorized to commence performance of the Services as of that date. This Agreement shall terminate on the 31st day of December, 2020, unless terminated earlier pursuant to the terms and conditions of this Agreement.

3. Attachments. The Attachments below, which have been marked for inclusion, are hereby specifically incorporated into and made a part of this Agreement:

- [X] ATTACHMENT A - SERVICES (Houston assumes no responsibility to perform any services not specifically listed.)
[X] ATTACHMENT B - GENERAL TERMS AND CONDITIONS
[] ATTACHMENT C -
[] ATTACHMENT D -
[] FEE SCHEDULE - DATED
[] ALTA/NSPS LAND TITLE SURVEY RIDER

4. Compensation.

- \$ Lump Sum Fee - Based on the Services defined herein (INSPECTION REPORT ONLY)
\$ 39,850 Estimated Fee - Client invoiced on an hourly basis commensurate with the attached Fee Schedule
\$ Percentage of Estimated Construction Cost
\$ Other - Attendance to Public Information Meeting (by request)

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the date first above written:

CLIENT/OWNER
BY:
AUTHORIZED REPRESENTATIVE
TITLE:

HOUSTON ENGINEERING, INC.
BY: [Signature]
AUTHORIZED REPRESENTATIVE
TITLE: Principal / Project Manager

PLEASE SIGN AND RETURN ONE COPY TO HOUSTON AT THE ADDRESS ABOVE

ATTACHMENT A. PROPOSED SCOPE OF WORK

Goodhue County (County) as Drainage Authority has asked Houston Engineering (HEI) to prepare a scope of work and cost estimate for construction management services related to the Repair of the open channel portion of Goodhue County Ditch 1 (CD 1). Goodhue County is specifically requesting final engineering plans and specifications, public bidding process services, construction staking and as-built survey, and construction observation services.

TASK 1 – FINAL PLANS AND SPECIFICATIONS

HEI will use the plan and profile drawings of the As-Constructed and Subsequently Improved profile (ACSIC) developed under the CD 1 Repair Report to prepare construction plans that include repair profiles and proposed field and road crossing culvert replacements. HEI will also prepare a cover sheet and design details that will enable a contractor to construct the proposed repair as designed. Also included in the plan set will be a Stormwater Pollution Prevention Plan (SWPPP), and HEI may assist the project contractor in applying for the NPDES Construction General Permit.

HEI will also prepare construction documents and specifications that are suitable for the public bidding process. We will tailor our standard project specifications and contract documents to the specific needs of the CD 1 repair project. Work under this task will also include a finalization of the opinion of probable construction cost prepare during the Repair Report process.

DELIVERABLES

- One set of final construction plans, including cover sheet, plan and profile sheets, and details (includes one draft for review)
- Stormwater Pollution Prevention Plan
- Project specifications (includes one draft for review)
- Final Engineer's Opinion of Probable Construction Cost

ASSUMPTIONS

1. The project scope will be consistent with the recommendations specified in the Goodhue County Ditch 1 Repair Report dated 1-15-2021.
2. The Construction plan set is expected to include an estimated 10 sheets.
3. Construction specifications will use HEI's internal construction specification template.
4. No permitting from the MnDNR or U.S. Army Corps of Engineers is required.

5. Work through wetlands is considered “no-loss” and will require no permitting under the Wetland Conservation Act (WCA).
6. Acquisition of easements will not be required for the project.

TASK 2 – PUBLIC BIDDING PROCESS

HEI will lead the public bidding process using the Quest CDN virtual bidding website. Tasks in the public bidding process include:

- Quest CDN bid setup
- Responding to bidder questions
- Setting up and facilitating a virtual pre-bid meeting
- Opening and tabulating bids
- Preparing a winning bid recommendation

DELIVERABLES

- Bid package
- Bid award recommendation memorandum

ASSUMPTIONS

1. Goodhue County will coordinate the placement of advertisements for bidding the project in their official publication. HEI will manage the remainder of the bid process.
2. All meetings related to the bid process will be completed via virtual means.

TASK 3 – CONSTRUCTION ADMINISTRATION, STAKING, AND AS-BUILT SURVEY

Once the project contract is awarded, HEI will coordinate contractor submittals and execution of the construction agreement. Services under this task include reviewing pay applications and preparing payment recommendations, coordinating and processing field and change orders, and coordinating the project closeout process.

An HEI survey crew will provide construction staking at a spacing of approximately 200-feet prior to the start of construction. After construction is complete, an as-built record drawing will be completed using data collected during and after construction. As-built survey will consist of collecting channel and culvert invert elevations after their construction is complete.

DELIVERABLES

- Processing of up to 3 pay requests

- Review and processing of contract documents, including up to 2 change orders
- Final acceptance and payment recommendation
- Staking at approximately 200-foot intervals prior to construction
- Final as-built survey and record drawings

ASSUMPTIONS

1. Contractor is responsible for replacement of any disturbance of taking they cause.

TASK 4 – CONSTRUCTION OBSERVATION

During construction, HEI will provide on-site construction services to efficiently coordinate with the contractor and ensure the repair project is installed according to the plans and specifications. We recognize the need to balance project oversight with fiscal responsibility, so we recommend HEI provide part-time construction observation services focused on the installation of culverts and startup and completion of construction tasks. HEI will coordinate with the contractor to determine when on-site inspection is warranted.

Construction observation services will include a pre-construction meeting and weekly construction progress meetings the County will be invited to attend. Again balancing efficiency with fiscal concerns, HEI will coordinate all weekly meetings with on-site observation of key project construction tasks.

HEI will provide Goodhue County staff with regular informal updates and construction observation reports on a daily and weekly basis when on-site. HEI uses both the ESRI Collector App and Builterra construction management programs during field inspections and will be able to provide the County with real-time updates on construction progress and answer questions or address issues quickly and efficiently.

DELIVERABLES

- Coordination with contractor
- Weekly construction meetings (assume 6, including pre-construction meeting and punch-list walk-through)
- Daily and weekly construction observation reports when on-site
- Part-time construction observation for the project. Assuming a construction schedule of 20 workdays, we estimate 80 hours of construction observation.

ESTIMATED COMPENSATION

The following table outlines our cost proposal for construction services related to the Goodhue CD 1 open-channel Repair Project. HEI will complete Tasks 1 through 3 at a not-to-exceed cost of **\$26,950** without prior authorization from Goodhue County. Because the timeline of the construction observation phase is highly dependent on the scale of the project and contractor efficiency and timeline, we cannot provide a not-to-exceed cost for Task 4. Instead, we have provided an estimate cost for budgeting purposes.

Project Task	Proposed Cost
Task 1 - Plans and Specifications	\$4,550
Task 2 - Public Bidding Process	\$3,250
Task 3 - Construction Admin, Staking, and As-Built Survey	\$19,150
Tasks 1-3 Not-to-Exceed Cost	\$26,950
Task 4 - Construction Observation	\$12,900
Total Cost (with Construction Observation)	\$39,850

General Terms and Conditions

1. STANDARD OF CARE

Houston shall perform its Services in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances in the region where the Project is located.

2. PAYMENT TERMS

Invoices will be submitted periodically (customarily on a monthly basis) and are due and payable upon receipt. Client agrees to pay a service charge on all accounts 30 days or most past due at a rate equal to one percent (1%) each month but in no event shall such service charge exceed the maximum amount allowed by law. Acceptance of any payment from Client without accrued service charges shall not be deemed to be a waiver of such service charges by Houston. In the event Client is past due with respect to any invoice Houston may, after giving five (5) days written notice to Client, suspend all services without liability until Client has paid in full all amounts owing Houston on account of services rendered and expenses incurred, including service charges on past due invoices. Payment of invoices is not subject to discount or offset by Client.

3. CHANGES OR DELAYS

If the Project requires conceptual or process development services, such services often are not fully definable in the initial planning. If, as the Project progresses, facts develop that in Houston's judgment dictate a change in the Services to be performed, Houston shall inform Client of such changes and the parties shall negotiate, in good faith, with respect to any change in scope and adjustment to the time of performance and compensation and modify the Agreement accordingly. In the event the parties are unable to reach an agreement, either party may terminate this Agreement without liability by giving fourteen (14) days written notice to the other party. In the event of termination, the final invoice will include all Services and expenses associated with the Project up to the effective date of termination, and will also include equitable adjustment to reimburse Houston for any termination settlement costs incurred relating to commitments that had become firm before termination plus a 10 percent markup on those settlement costs.

4. PAYMENT

Where the method of payment under the Agreement is based upon cost reimbursement (e.g., hourly rate, time and materials, direct personnel expense, per diem, etc.), the following shall apply: (a) the minimum time segment for charging work is one-quarter hour; (b) labor (hours worked) and expenses will be charged at rates commensurate with the attached fee schedule or, if none is attached, with Houston's current fee schedule (at the time of the work); (c) when applicable, rental charges will be applied to cover the cost of pilot-scale facilities or equipment, apparatus, instrumentation, or other technical machinery. When such charges are applicable, Client will be advised at the start of an assignment, task, or phase; and (d) invoices based upon cost reimbursement will be submitted showing labor (hours worked) and total expense. If requested by Client, Houston shall provide supporting documentation at Client's cost, including labor and copying costs.

5. TERMINATION

Either party may terminate this Agreement, in whole or in part, by giving fourteen (14) days written notice to the other party, if the other party fails to fulfill its obligations under this Agreement through no fault of the terminating party. In such event, and subject to the limitations set forth in this Agreement, the non-defaulting party may pursue its rights and remedies as contemplated by this Agreement and as allowed by law.

6. LIMITATION OF LIABILITY

In no event shall Houston be liable for incidental, indirect or consequential damages of any kind. Houston's maximum cumulative liability with respect to all claims and liabilities under this Agreement, whether or not insured, shall not exceed the greater of \$50,000 or the total compensation received by Houston under this Agreement. The disclaimers and limitations of liability set forth in this Agreement shall apply regardless of any other contrary provision set forth and regardless of the form of action, whether in contract, tort or otherwise. Each provision of this Agreement which provides for a limitation of liability, disclaimer of warranty or condition or exclusion of damages is severable and independent of any other provision and is to be enforced as such. Client hereby releases Houston from any and all liability over and above the limitations set forth in this paragraph.

7. INSURANCE

Houston shall obtain and maintain during the term of this Agreement, at its own expense, workers' compensation insurance and comprehensive general liability insurance in amounts determined by Houston and will, upon request, furnish insurance certificates to Client. The existence of any such insurance shall not increase Houston's liability as limited by paragraph 6 above.

8. HAZARDOUS SUBSTANCES

Client shall furnish or cause to be furnished to Houston all documents and information known by Client that relate to the identity, location, quantity, nature, or characteristics of any asbestos, pollutant or hazardous substance, however defined ("Hazardous Substances") at, on or under the Project site. Houston is not, and has no responsibility as a handler, generator, operator, treater, storer, transporter, or disposer of Hazardous Substances found or identified at the Project. Client agrees to bring no claim for fault, negligence, breach of contract, indemnity, or other action against Houston, its principals, employees, agents, and consultants, if such claim in any way would relate to Hazardous Substances in connection with the Project. Client further agrees, to the fullest extent permitted by law, to defend, indemnify, and hold harmless Houston, its principals, employees, agents, and consultants from and against all claims, damages, losses, and expenses, direct or indirect, or consequential damages, including but not limited to fees and charges for attorneys and court and arbitration costs, arising out of or resulting from the performance of Houston's Services hereunder, or claims brought against Houston by third parties arising from Houston's Services or the services of others and/or work in any way associated with Hazardous Substance activities. This indemnification shall survive termination of this Agreement.

9. INDEMNIFICATION

Client shall indemnify, and hold harmless Houston, together with its officers, directors, agents, consultants and employees from and against any and all claims, costs, losses and damages, including attorneys' fees and other costs of litigation or dispute resolution arising directly or indirectly from Client's breach of this Agreement or Client's fault, negligent acts or omissions or intentional misconduct in connection with this Agreement or the Project. Subject to the limitations set forth in this Agreement, Houston shall indemnify and hold harmless Client, together with its officers, directors, agents, consultants and employees from and against any and all claims, costs, losses and damages, including attorneys' fees and other costs of litigation or dispute resolution arising directly or indirectly from Houston's breach of this Agreement or Houston's fault, negligent acts or omissions or intentional misconduct in connection with this Agreement or the Project. The indemnification obligations set forth in this paragraph shall survive termination of this Agreement.

10. WARRANTY

Except as specifically set forth in this Agreement, Houston has not made and does not make any warranties or representations whatsoever, express or implied, as to Services performed or products provided including, without limitation, any warranty or representation as to: (a) the merchantability or fitness or suitability of the Services or products for a particular use or purpose whether or not disclosed to Houston; and (b) delivery of the Services and products free of the rightful claim of any person by way of infringement (including, but not limited to, patent or copyright infringement) or the like. Houston does not warrant and will not be liable for any design, material or construction criteria furnished or specified by Client and incorporated into the Services provided hereunder.

11. PROJECT SITE

Client shall furnish such reports, data, studies, plans, specifications, documents, and other information regarding surface and subsurface site conditions required by Houston for proper performance of its Services. Houston shall be entitled to rely upon Client provided documents and information in performing the Services required under this Agreement. Houston assumes no responsibility or liability for the accuracy or completeness of any such documents or information. Houston will not direct, supervise, or control the work, means or methods of contractors or their subcontractors in connection with the Project. Houston's Services will not include a review or evaluation of the contractor's or subcontractor's safety measures. The presence of Houston, its employees, agents or subcontractors on a site shall not imply that Houston controls the operations of others nor shall it be construed to be an acceptance by Houston of any responsibility for job-site safety.

12. CONFIDENTIALITY

Houston shall maintain as confidential and not disclose to others without Client's prior consent all information obtained from Client that was not otherwise previously known to Houston or in the public domain and is expressly designated by Client in writing to be "CONFIDENTIAL." The provisions of this paragraph shall not apply to information in whatever form that (a) is published or comes into the public domain through no fault of Houston, (b) is furnished by or obtained from a third party who is under no obligation to keep the information confidential, or (c) is required to be disclosed by law on order of a court, administrative agency, or other authority with proper jurisdiction. Client agrees that Houston may use and publish Client's name and a general description of Houston's services with respect to the Project in describing Houston's experience and qualifications to other clients or potential clients.

13. RE-USE OF DOCUMENTS

All documents, including drawings and specifications, prepared or furnished by Houston (and Houston's affiliates, agents, subsidiaries, independent professional associates, consultants, and subcontractors) pursuant to this Agreement are instruments of service in respect of the Project, and Houston shall retain ownership thereof, whether or not the Project is completed. Client may make and retain copies for information and reference in connection with the Project; however, such documents are not intended or represented to be suitable for re-use by Client or others on extensions of the Project or on any other project. Any re-use without written verification or adaptation by Houston for the specific purpose intended will be at Client's sole risk and without liability to Houston or Houston's affiliates, agents, subsidiaries, independent professional associates, consultants, and subcontractors with respect to any and all costs, expenses, fees, losses, claims, demands, liabilities, suits, actions, and damages whatsoever arising out of or resulting therefrom. Any such verification or adaptation will entitle Houston to further compensation at rates to be agreed upon by Client and Houston.

14. REMEDIES

Subject to the limitations set forth in this Agreement, in the event any party is in default of this Agreement, the non-defaulting party shall be entitled to pursue all rights and remedies available to it under this Agreement or as allowed by law.

15. PROPRIETARY DATA

The technical and pricing information in connection with the Services provided by Houston is confidential and proprietary and is not to be disclosed or otherwise made available to third parties by Client without the express written consent of Houston.

16. GOVERNING LAW

The validity, construction and performance of this Agreement and all disputes between the parties arising out of or related to this Agreement shall be governed by the laws, without regard to the law as to choice or conflict of law, of the State of North Dakota. Client consents to jurisdiction as to all issues concerning or relating to this Agreement or the Project with the federal or state district courts designated for Cass County, North Dakota.

17. DATA PRACTICES ACT REQUESTS

Houston considers certain information developed during the execution of services as "not public" and "protected" from public disclosure under the various local, state and federal data practices laws. Client shall reimburse Houston for any and all costs and expenses, including attorneys' fees associated with any requests for release of information under any such laws.

18. FORCE MAJURE

Houston shall not be liable for any loss, damage or delay resulting out of its failure to perform hereunder due to causes beyond its reasonable control including, without limitation, acts of nature or the Client, acts of civil or military authority, terrorists threats or attacks, fires, strikes, floods, epidemics, quarantine restrictions, war, riots, delays in transportation, transportation embargos, extraordinary weather conditions or other natural catastrophe or any other cause beyond the reasonable control of Houston. In the event of any such delay, Houston's performance date(s) will be extended for that length of time as may be reasonably necessary to compensate for the delay.

19. WAIVER OF JURY

In the interest of expediting any disputes that might arise between Houston and Client, Client hereby waives its rights to a trial by jury of any dispute or claim concerning this Agreement, the Services, the Project and any other documents or agreements contemplated by or executed in connection with this Agreement.

20. NOTICES

Any and all notices, demands or other communications required or desired to be given under this Agreement shall be in writing and shall be validly given or made if personally served; sent by commercial carrier service; or if deposited in the United States Mail, certified or registered, postage prepared, return receipt requested. If such notice or demand is served personally, notice shall be deemed constructively made at the time of such personal service. If such notice, demand or other communication is given by mail or commercial carrier service, such notice shall be conclusively deemed given three (3) days after deposit thereof in the United States Mail or with a commercial carrier service. Notices, demand or other communications required or desired hereunder shall be addressed to the individuals indicated in this Agreement at the addresses indicated in this Agreement. Any party may change its address or authorized recipient for purposes of this paragraph by written notice given in the manner provided above.

21. MISCELLANEOUS

This Agreement shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice-to-proceed, or like document regarding the Services. If any provision of this Agreement is determined to be invalid or unenforceable in whole or part by a court of competent jurisdiction, the remaining provisions hereof shall remain in full force and effect and be binding upon the parties hereto. The parties agree to reform this Agreement to replace any such invalid or unenforceable provision with a valid and enforceable provision that as closely as possible expresses the intention of the stricken provision. This Agreement, including but not limited to the indemnification provisions, shall survive the completion of the Services under this Agreement and the termination of this Agreement. This Agreement gives no rights or benefits to anyone other than Houston and Client and has no third party beneficiaries except as may be specifically set forth in this Agreement. This Agreement constitutes the entire agreement between the parties and shall not in any way be modified, varied or amended unless in writing signed by the parties. Prior negotiations, writings, quotes, and understandings relating to the subject matter of this Agreement are merged herein and are superseded and canceled by this Agreement. Headings used in this Agreement are for the convenience of reference only and shall not affect the construction of this Agreement. This Agreement and the rights and duties hereunder may not be assigned by Client, in whole or in part, without Houston's prior written approval. No failure or delay on the part of Houston in exercising the right, power or remedy under this Agreement shall operate as a waiver thereof; nor shall any single or partial exercise of any rights, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder. The remedies provided in this Agreement are cumulative and not exclusive of any remedies provided by law.